



Product Catalog

TDK-Lambda Power Supplies, DC-DC Converters and EMI Filters

TRUSTED • INNOVATIVE • RELIABLE

Company Overview

At TDK-Lambda, a “Power Supply” is more than just an electronic device. It is the “heart” of our customers’ systems and the core element of safety and reliability.

TDK-Lambda Corporation, a group company of TDK Corporation, is a leading global power supply company providing highly reliable power supplies worldwide. TDK-Lambda Corporation meets the various needs of customers with our entire range of activities, from research and development to manufacturing, sales, and service with bases in five key areas, covering Japan, EMEA, North America, China, and SE Asia.

Since 1948, as a leading global manufacturer, we have been developing and producing innovative and highly reliable power supplies for a wide spectrum of applications. TDK-Lambda is one of the oldest and most trusted manufacturers of high quality power supply solutions used in critical applications.

<https://www.us.lambda.tdk.com/>

Organization

- Founded in 1948; offering long term financial stability
- An independently recognized market leader
- Worldwide recognition for high reliability
- Outstanding customer support
- International organization with strong local presence
- Local design capability
- Experts in power supply solutions
- Local inventory / local buffer

Benefits of using TDK-Lambda

- World Class Design and Engineering Support
- Leaders in Development of Advanced Technologies
- Global Presence for Local Support
- Faster Time to Market (Value Add)
- Low Cost Manufacturing (Reduced System Cost)
- Increase Customer Productivity with High Level Assembly and Turnkey Solutions (Value Add)
- Lower Development Risk
- Extensive Catalog of Innovative Field Proven Designs
- Comprehensive In-House Qualification/Testing
- Highly Experienced Global Logistics Capability
- Vendor Reduction – Single Source for Custom and Standard Solutions
- Long Term Financial Stability

Key Market Segments Include:

- Medical and Life Science
- Industrial
- Factory/Building Automation
- Process Control
- Robotics
- Test and Measurement
- Transportation
- Renewable Energy
- LED Applications & Signage
- Avionics & Defense/COTS
- Semiconductor Fabrication Equipment
- Information & Communications Technology
- Broadcasting
- Food and Beverage

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The Power to Shape Your World

The choice and application of the power supply is an important one. Working with TDK-Lambda can help you save time and money, from design concept to years after your system or product is first installed.

Why TDK-Lambda?

- Over the last 74 years, TDK-Lambda has developed a worldwide reputation and heritage for high quality, robust power products.
- We at TDK-Lambda stand behind our products with industry leading warranties of up to a lifetime (limited).
- Our research and development budget is one of the largest in the industry, helping you design-in reliable, cutting edge technology, ahead of your competition.
- A broad range of product enables our customers to choose the right model for the application, and assists with their vendor reduction programs.
- Multiple manufacturing and design facilities across the globe. We can provide crucial local support when programs move between Asia, North America, and Europe. With those multiple factories we also have proven risk mitigation against natural disasters. Plus, our manufacturing sites are ISO9001, ISO14001 and ISO13485 certified.
- Our technical support can get your product to market faster. Please call 1-800-LAMBDA-4 (1-800-526-2324), or email: tlambda.powersolutions@tdk.com



TDK-Lambda offers a broad range of standard power supplies for many applications. This Catalog is designed to provide easy navigation of product selection by application and product type. The product ranges are sorted into special categories on the next page. Data sheets are supplied to make a selection of possible models for your application. For additional technical data, please follow the web link at the bottom or upper right hand corner of each data sheet.

Each product page contains the following symbols to indicate the main applications that each product is designed for. The symbols are intended to give a quick guideline for many applications. For assistance in finding a product for your application, please contact our technical support department.



Medical



Industrial



COTS



Test



COMM



LED



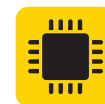
Railway



Broadcast



Renewable



Semi-Fab

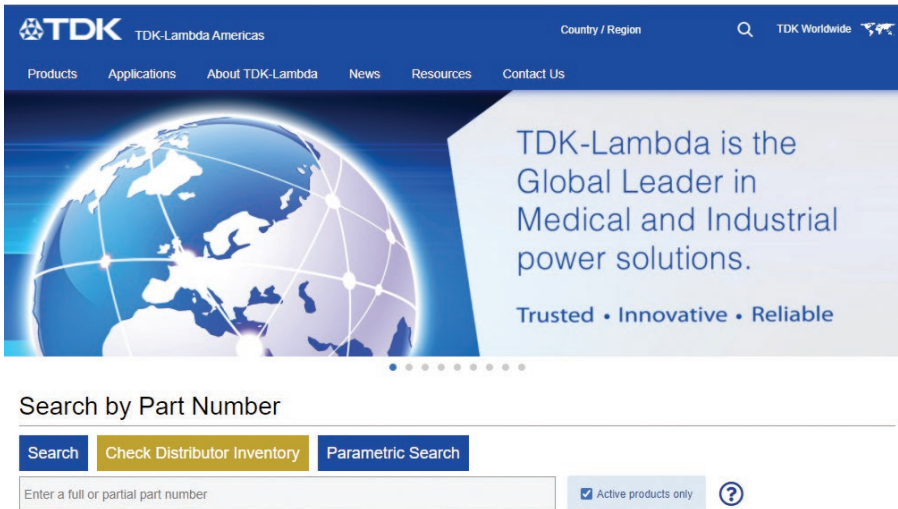


Robotics

Thank you for your interest in TDK-Lambda products

Need Technical Information?

The TDK-Lambda website (<https://www.us.lambda.tdk.com/>) has a huge library of data:



- Installation Manuals
- Detailed Specifications
- Evaluation Data
- Outline Drawings & 3D Files
- MTBF Predictions
- Reliability Data
- Application Notes
- Power Guy Videos
- Educational Blogs

TDK-Lambda Product Center:

TPS3000-24

Sales Region Worldwide (except Japan)

Series TPS

Model

Status Production

Feature

- SEMI F47 Complies with SEMI F47
- MIL-STD Designed to meet MIL-STD-810F
- PMBus PMBus

Options

Option Lineup [Please refer to here.](#)

Recommended EMC Filter [?](#)

Accessories [Please refer to the catalog](#)

Electrical Characteristics

Input	3-phase
Input Voltage Range[AC]	350 to 528Vac
Input Voltage Range[DC]	
Efficiency	92% Typ.
Rated Output Voltage[DC]	24Vdc
Output Voltage Range[DC]	19.2 to 28.5Vdc
Maximum Output Current	133.3A
Maximum Output Power	3200W

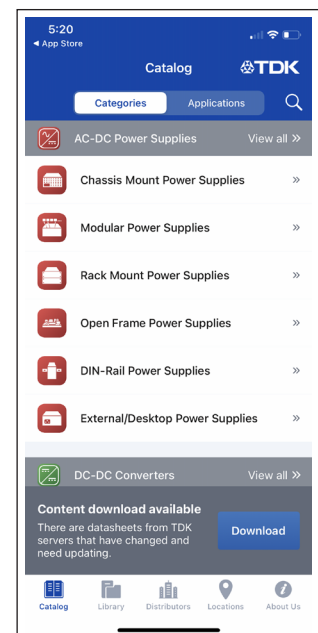
Documents

- Data Sheet
- 3D Outline(STEP)
- MTBF Data
- MTBF Data
- Immunity Data
- Instruction Manual
- Selection Guide
- EU Declaration of Conformity
- CB 80950 Certificate
- CB 80950 Report
- EN 80950 Certificate
- UL 60950 Report
- Precautions for Use

Technical Support Tools

- Video: TPS3000 Product Overview

TDK-Lambda App:



Download here:



iTunes Store

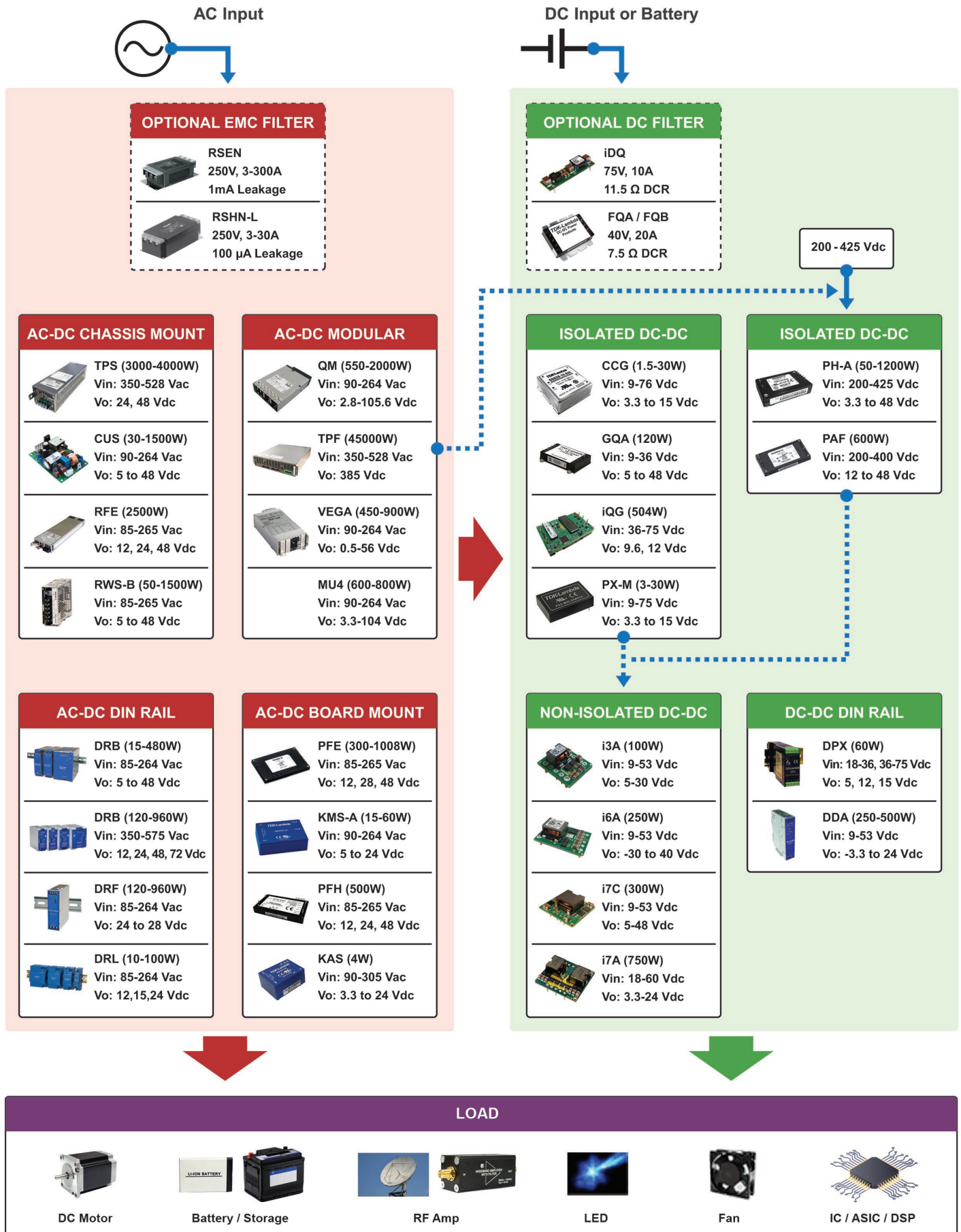


Android Store

Want Technical Support?

- Please call 1-800-LAMBDA-4 (1-800-526-2324) to speak to our inside technical support team, or email tlp.powersolutions@tdk.com.
- TDK-Lambda's Field Application Engineers are available for in-depth technical consultation at your facility. Please contact your local TDK-Lambda Salesperson to schedule a visit.

The Complete Power Solution





AC-DC Power Supplies



Applications

- Industrial
- Healthcare / Medical
- Test & Measurement
- Communications
- Broadcast
- Display and Signage
- Transportation
- Defense / COTS
- Renewables
- Food and Beverage
- Automation
- Robotics
- Semiconductor

Features

- Very broad product offering
- High reliability & quality
- Single & three phase input models
- Industrial & medical safety approvals
- Convection, conduction & forced air cooled
- Enclosed, open frame & module type
- High MTBF, long life
- High efficiency
- Long warranties (up to lifetime)

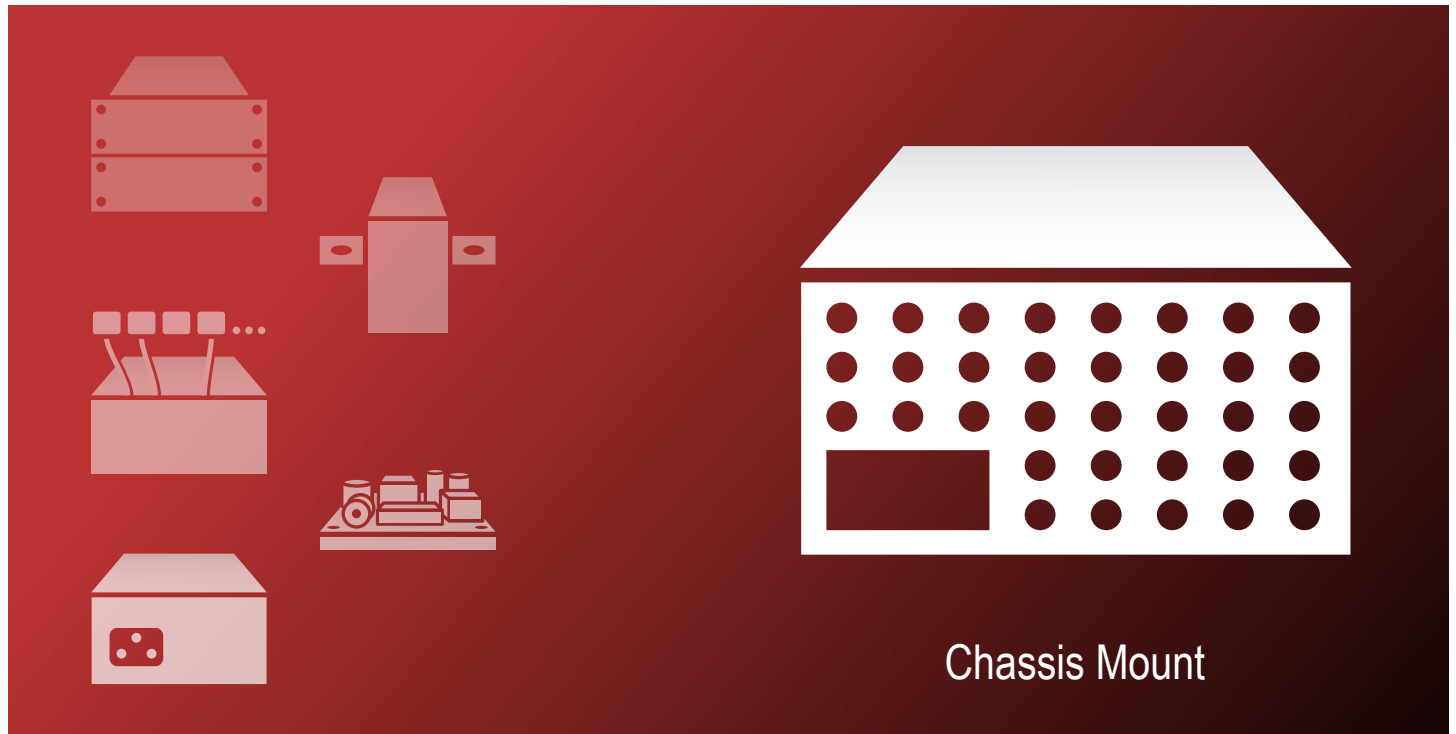
AC/DC Product Index by Wattage

Wattage	Number of Outputs	Series	Page	Wattage	Number of Outputs	Series	Page
4W	1	KAS	72	300W	1	DTM300-D	90
5-25W	1	KPSB	73	300-1000W	1	PFE300SA/500F/1000FA	76
5-25W	1	KWS-A	74	300-1500W	1	HWS300-1500	20
10-30W	1	ZWS10-30B	54	350-420W	1	CUS350M	21
10-100W	1	DRL	96	350-1000W	1	CUS350MP	66
15-60W	1	KMS-A	75	350-1150W	1-8	NV350/700	40
15-100W	1	DRB	97	400W	1	CUS400M	67
15-150W	1	HWS15A-150A/A	11	450-900W	1-10	Vega	41
25-150W	1	LS	12	480W/380ms holdup	1	ZBM20 (Hold Up Module)	68
25-30W	1	WMM30	80	500W	1	CUS500M1	69
25-36W	1	DTM36-C8	81	500W	1	PFH500F	77
30-60W	1	CUS30/60M	55	500W	1	XMS500A	70
30-1500W	1	HWS/HD	14	500-1500W	1	LZSA	22
33-302W	1	ZWS-BAF	56	550-900W	1-10	Vega-Lite	42
35W	2,3	CUT35	57	600W	1	CUS600M and CUS600M1	71
40-65W	1	CSW65	16	600W	1	GXE600	24
40-65W	1	DTM65-C8	82	600-800W	5	MU4	43
40-65W	1	DTM65-D	83	600-1200W	1	QS	23
40-80W	1	DT62-80D	84	550-2000W	1-18	QM	45
50-600W	1	RWS-B	17	680-1000W	1	CUS800M and CUS1000M	27
70W	1	DTM70	85	720-1000W	1	CPFE1000F	25
75W	2,3	CUT75	58	720-1000W	1	CPFE1000Fi	26
79-153W	1	CUS200LD	18	1000-1500W	1	RWS1000/1500-B	28
100W	1	CUS100ME	59	1000-1500W	1	RWS1000/1500-B/ME	29
100-150W	1	DT100-150-D	86	1500W	1	CUS1500M	30
110W	1	DTM110-C8	87	1600W	1	RFE1600	31
120-480W	1	DRB120-480	98	1600W	1	HFE1600	49
120-960W	1	DRB120-3 - DRB960-3	99	1800W	1	HWS1800T	32
120-960W	1	DRF120-960	101	2500W	1	HFE2500	50
150W	1	CUS150M	60	2500W	1	RFE2500	33
150-160W	1	DTM160	88	3000W	1	HWS3000G	34
150-200W	1	LS200	19	3000W	1	HWS3000GT	35
150-240W	1	ZWS-BP	61	3200W	1	TPS3000	36
175-200W	1-5	NV175	62	4080W	2	TPS4000	37
200-800W	1	Z+	107	4500-45000W	1	TPF45000-385	51
200-800W	1	Z+ HV	108	4000	1	ALE 402	93
200-250W	1	CUS200M	63	8000	1	ALE 802	93
240W	1	ZWS240RC-24	64	12000	1	ALE LC1202	93
250W	1	CUS250M	65	30000	1	ALE 303	93
250W	1	DTM250-D	89				

Listed by Wattage



AC-DC Chassis Mount



Applications

- Embedded (built-in) power supplies for a broad range of applications
- Suitable for Industrial Applications, Automation, Test Equipment
- High Reliability and low cost products available

Features

- 5 to 4500W output power
- Single-phase wide range input 85 – 265VAC
Three-phase input 170 – 265VAC & 350 – 528VAC
- Power factor correction meets EN61000-3-2 class A harmonics
- Input/output connection with screw terminals or PCB connectors
- Enclosed or open frame case style
- Safety meets EN/IEC/UL 62638-1 standard
CE and UKCA marks

AC-DC Chassis Mount Index by Wattage

Wattage	Number of Outputs	Series	Page
15-150W	1	HWS15A-150A/A	11
25-150W	1	LS	12-13
30-1500W	1	HWS/HD	14-15
40-65W	1	CSW65	16
50-600W	1	RWS-B	17
79-153W	1	CUS200LD	18
100W	1	CUS100ME	59
150W	1	CUS150M	60
150-200W	1	LS200	19
175-200W	1-5	NV175	62
250W	1	CUS250M	65
300-1500W	1	HWS300-1500	20
350-420W	1	CUS350M	21
350-1150W	1-8	NV350/700	38
400W	1	CUS400M	67
450-900W	1-10	Vega	39
500W	1	CUS500M1	69
500W	1	XMS500A	70
550-900W	1-10	Vega-Lite	40
500-1500W	1	LZSA	22
550-2000W	1-18	QM	41
600-1200W	1	QS	23
600W	1	GXE600	24
600W	1	CUS600M	71
720-1000W	1	CPFE1000F	25
720-1000W	1	CPFE1000Fi	26
720-1000W	1	CUS800M and CUS1000M	27
1000-1500W	1	RWS1000/1500-B	28
1000-1500W	1	RWS1000/1500-B/ME	29
1500W	1	CUS1500M	30
1600W	1	RFE1600	31
1800W	1	HWS1800T	32
2500W	1	RFE2500	33
3000W	1	HWS3000G	34
3000W	1	HWS3000GT	35
3200W	1	TPS3000	36
4080W	1	TPS4000	37

Listed by Wattage

10-150W Single Output Industrial Power Supplies



Industrial



Test



COMM



LED



Broadcast



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/hws-a>

The ultra reliable, conservatively rated HWS-A series of 10W to 150W AC-DC power supplies has a limited lifetime warranty ⁽¹⁾, unique to the industry. The series accepts a wide range 85 to 265Vac (300Vac peak for 5s) input with output voltages from 3.3V to 48V. The products are certified to IEC 62368-1, UL 508 and EN 62477-1 OVC III (HWS150A) and are SEMI F47 compliant . They also meet Class B conducted and radiated emissions without additional filtering or shielding.

Features	Benefits
• Limited Lifetime Warranty ⁽¹⁾	• Low Cost of Ownership
• Very Conservative Electrolytic Capacitor Ratings	• Long Service Life
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• Low Off-Load Power Consumption	• Energy Saving
• UL 508 Certified	• Suitable For Industrial Control Equipment

Model Selector								
Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current(A)	Maximum Output Power (W)	Line Reg (mV)	Load Reg (mV)	Overvoltage (V)	Efficiency (115/230Vac)(%)
HWS15A-3/A	3.3	2.97 - 3.96	3	10	20	120	4.13 - 4.95	70 / 71
HWS30A-3/A	3.3	2.97 - 3.96	6	20	20	120	4.13 - 4.95	75 / 77
HWS50A-3/A	3.3	2.97 - 3.96	10	33	20	120	4.13 - 4.95	76 / 78
HWS100A-3/A	3.3	2.97 - 3.96	20	66	20	120	4.13 - 4.95	82 / 84
HWS150A-3/A	3.3	2.97 - 3.96	30	99	20	120	4.13 - 4.95	82 / 84
HWS15A-5/A	5	4.0 - 6.0	3	15	20	120	6.25 - 7.25	77 / 79
HWS30A-5/A	5	4.0 - 6.0	6	30	20	120	6.25 - 7.25	80 / 82
HWS50A-5/A	5	4.0 - 6.0	10	50	20	120	6.25 - 7.25	82 / 84
HWS100A-5/A	5	4.0 - 6.0	20	100	20	120	6.25 - 7.25	84 / 86
HWS150A-5/A	5	4.0 - 6.0	30	150	20	120	6.25 - 7.25	85 / 87
HWS15A-12/A	12	9.6 - 14.4	1.3	16	48	150	15 - 17.4	80 / 83
HWS30A-12/A	12	9.6 - 14.4	2.5	30	48	150	15 - 17.4	84 / 86
HWS50A-12/A	12	9.6 - 14.4	4.3	52	48	150	15 - 17.4	83 / 85
HWS100A-12/A	12	9.6 - 14.4	8.5	102	48	150	15 - 17.4	86 / 88
HWS150A-12/A	12	9.6 - 14.4	13	156	48	150	15 - 17.4	85 / 88
HWS15A-15/A	15	12.0 - 18.0	1	15	60	150	18.8 - 21.8	81 / 84
HWS30A-15/A	15	12.0 - 18.0	2	30	60	150	18.8 - 21.8	85 / 87
HWS50A-15/A	15	12.0 - 18.0	3.5	53	60	150	18.8 - 21.8	83 / 86
HWS100A-15/A	15	12.0 - 18.0	7	105	60	150	18.8 - 21.8	86 / 88
HWS150A-15/A	15	12.0 - 18.0	10	150	60	150	18.8 - 21.8	86 / 89
HWS15A-24/A	24	19.2 - 28.8	0.65	16	96	150	30 - 34.8	82 / 85
HWS30A-24/A	24	19.2 - 28.8	1.3	31	96	150	30 - 34.8	86 / 88
HWS50A-24/A	24	19.2 - 28.8	2.2	53	96	150	30 - 34.8	84 / 87
HWS100A-24/A	24	19.2 - 28.8	4.5	108	96	150	30 - 34.8	87 / 89
HWS150A-24/A	24	19.2 - 28.8	6.5	156	96	150	30 - 34.8	88 / 90
HWS15A-48/A	48	38.4 - 52.8	0.33	16	192	200	55.2 - 64.8	80 / 80
HWS30A-48/A	48	38.4 - 52.8	0.65	31	192	200	55.2 - 64.8	82 / 83
HWS50A-48/A	48	38.4 - 52.8	1.1	53	192	200	55.2 - 64.8	84 / 86
HWS100A-48/A	48	38.4 - 52.8	2.1	101	192	200	55.2 - 64.8	88 / 90
HWS150A-48/A	48	38.4 - 52.8	3.3	158	192	200	55.2 - 64.8	89 / 91

25-150W Single Output General Purpose Power Supplies



Industrial



Test



COMM



LED



Broadcast

 [Full Datasheet](#)

<https://product.tdk.com/en/power/ls>

The LS series offers economically priced 25 to 150W power supplies for general purpose light industrial use. With output voltages ranging from 3.3 to 48V, the products have a five-year warranty ⁽³⁾ and conservatively rated electrolytic capacitor temperatures for longer field life. These compact products have a wide -25 to +70°C temperature range and are capable of withstanding a 300Vac surge for up to five seconds.

Features	Benefits
• Compact Package Sizes	• Space Saving in End Equipment
• Low Cost	• Suitable for General Purpose Light Industrial Use
• Withstands 300Vac Input Surges	• Can Operate on Unstable Input Voltages
• Conservative Electrolytic Capacitor Temperatures	• Long Field Life
• Five Year Warranty ⁽³⁾	• Lower Cost of Ownership

Model Selector							
Model	Voltage (V)	Adjustable Range (V)	Max Current (A)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ) %
LS25-3.3	3.3	2.85 - 3.6	6	66	16.5	80	72
LS35-3.3	3.3	2.85 - 3.6	7	66	16.5	80	73
LS50-3.3	3.3	3.0 - 3.6	10	40	20	80	75
LS75-3.3	3.3	3.0 - 3.6	15	40	20	80	75
LS100-3.3	3.3	3.0 - 3.6	20	66	16.5	80	74
LS150-3.3	3.3	3.0 - 3.6	30	66	16.5	80	74
LS25-5	5	4.75 - 5.5	5	50	25	80	77
LS35-5	5	4.75 - 5.5	7	50	25	80	77
LS50-5	5	4.75 - 5.5	10	40	20	80	80
LS75-5	5	4.75 - 5.5	12	40	20	80	79
LS100-5	5	4.75 - 5.5	16	50	25	80	77
LS150-5	5	4.75 - 5.5	26	50	25	80	78
LS25-12	12	10.8 - 13.2	2.1	60	60	120	79
LS35-12	12	10.8 - 13.2	3	60	60	120	81
LS50-12	12	10.8 - 13.2	4.2	96	48	120	84
LS75-12	12	10.8 - 13.2	6	96	48	120	84
LS100-12	12	10.8 - 13.2	8.5	60	60	120	81
LS150-12	12	10.8 - 13.2	12.5	60	60	120	93
LS25-15	15	13.5 - 16.5	1.7	75	75	120	82
LS35-15	15	13.5 - 16.5	2.4	75	75	120	83
LS50-15	15	13.5 - 16.5	3.4	120	60	120	85
LS75-15	15	13.5 - 16.5	5	120	60	120	85
LS100-15	15	13.5 - 16.5	7	75	75	120	82
LS150-15	15	13.5 - 16.5	10	75	75	120	84
LS25-24	24	22 - 27.2	1.1	120	120	120	84
LS35-24	24	22 - 27.2	1.5	120	120	120	84
LS50-24	24	22 - 27.2	2.2	192	96	120	86
LS75-24	24	22 - 27.2	3.2	192	96	120	86
LS100-24	24	22 - 27.2	4.5	120	120	120	84
LS150-24	24	22 - 27.2	6.5	120	120	120	86
LS25-36	36	32 - 40	0.75	150	150	150	85
LS35-36	36	32 - 40	1	150	150	150	84
LS50-36	36	32 - 40	1.4	288	144	150	86
LS75-36	36	32 - 40	2.1	288	144	150	86
LS100-36	36	32 - 40	3	150	150	150	84
LS150-36	36	32 - 40	4.3	150	150	150	86
LS25-48	48	42 - 54	0.57	180	180	200	85
LS35-48	48	42 - 54	0.8	180	180	200	84
LS50-48	48	42 - 54	1.1	384	192	200	86
LS75-48	48	42 - 54	1.6	384	192	200	87
LS100-48	48	42 - 54	2.3	180	180	200	84
LS150-48	48	42 - 54	3.3	180	180	200	87

20-1500W Single Output Industrial Power Supplies



Industrial



COTS



Test



LED



Broadcast



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/hws-hd>

The ultra reliable, conservatively rated HWS/HD series of 20W to 1500W AC-DC power supplies has a limited lifetime warranty⁽¹⁾, unique to the industry. Based on the HWS-A and HWS series, the models offer pcb coating and start-up in -40°C ambient temperatures as standard for harsh environments. They accept a wide range 85 to 265Vac input with output voltages from 3.3V to 60V and are certified to IEC 62368-1. The HWS/HD also meet conducted and radiated emission standards without additional filtering or shielding.

Features	Benefits
• Pcb Coating and -40°C Ambient Start-up	• Operation in Harsh Environments
• Limited Lifetime Warranty ⁽¹⁾	• Low Cost of Ownership
• Very Conservative Electrolytic Capacitor Ratings	• Long Service Life
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance

HWS	300	-	3	/	HD	
Series	Nominal power level and product size		Output voltage 3 (3.3V), 5, 6, 7 (7.5V) 12, 15, 24, 36, 48, 60		blank	No options
					/HDA	The cover option for HWS50A-150A is special order only
					Preferred	

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Peak Current (A) ⁽²⁾	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Overvoltage (V)	Efficiency (115/230Vac) (%)
HWS30A-3/HD	3.3	2.97 - 3.96	6	-	40	20	120	4.13 - 4.95	75 / 77
HWS50A-3/HD	3.3	2.97 - 3.96	10	-	40	20	120	4.13 - 4.95	82 / 84
HWS100A-3/HD	3.3	2.97 - 3.96	20	-	40	20	120	4.13 - 4.95	82 / 84
HWS150A-3/HD	3.3	2.97 - 3.96	30	-	40	20	120	4.13 - 4.95	78 / 81
HWS300-3/HD	3.3	2.64 - 3.96	60	-	30	20	120	4.13 - 4.95	74 / 77
HWS600-3/HD	3.3	2.64 - 3.96	120	-	30	20	120	4.13 - 4.95	75 / 78
HWS1000-3/HD	3.3	2.64 - 3.96	200	-	40	20	120	4.12 - 4.62	71 / 73
HWS1500-3/HD	3.3	2.64 - 3.96	300	-	60	36	150	4.12 - 4.62	72 / 75
HWS30A-5/HD	5	4.0 - 6.0	6	-	40	20	120	6.25 - 7.25	80 / 82
HWS50A-5/HD	5	4.0 - 6.0	10	-	40	20	120	6.25 - 7.25	82 / 84
HWS100A-5/HD	5	4.0 - 6.0	20	-	40	20	120	6.25 - 7.25	84 / 86
HWS150A-5/HD	5	4.0 - 6.0	30	-	40	20	120	6.25 - 7.25	85 / 87
HWS300-5/HD	5	4.0 - 6.0	60	-	30	20	120	6.25 - 7.25	79 / 82
HWS600-5/HD	5	4.0 - 6.0	120	-	30	20	120	6.25 - 7.25	80 / 83
HWS1000-5/HD	5	4.0 - 6.0	200	-	40	20	120	6.25 - 7.0	76 / 78
HWS1500-5/HD	5	4.0 - 6.0	300	-	60	36	150	6.25 - 7.0	77 / 81
HWS1000-6/HD	6	4.8 - 7.2	167	-	60	36	150	7.5 - 8.4	79 / 81
HWS1000-7/HD	7.5	6.0 - 9.0	134	160	60	36	150	9.37 - 10.5	80 / 82
HWS30A-12/HD	12	9.6 - 14.4	2.5	-	96	48	150	15.0 - 17.4	84 / 86
HWS50A-12/HD	12	9.6 - 14.4	4.3	-	96	48	150	15.0 - 17.4	83 / 85
HWS100A-12/HD	12	9.6 - 14.4	8.5	-	96	48	150	15.0 - 17.4	86 / 88
HWS150A-12/HD	12	9.6 - 14.4	13	-	96	48	150	15.0 - 17.4	85 / 88
HWS300-12/HD	12	9.6 - 14.4	27	-	72	48	150	15.0 - 17.4	80 / 83
HWS600-12/HD	12	9.6 - 14.4	53	-	72	48	150	15.0 - 17.4	80 / 83
HWS1000-12/HD	12	9.6 - 14.4	88	100	100	48	150	15.0 - 17.4	82 / 85
HWS1500-12/HD	12	9.6 - 14.4	125	-	72	48	150	15.0 - 17.4	82 / 85
HWS30A-15/HD	15	12.0 - 18.0	2	-	120	60	150	18.8 - 21.8	85 / 87
HWS50A-15/HD	15	12.0 - 18.0	3.5	-	120	60	150	18.8 - 21.8	83 / 86
HWS100A-15/HD	15	12.0 - 18.0	7	-	120	60	150	18.8 - 21.8	86 / 88
HWS150A-15/HD	15	12.0 - 18.0	10	-	120	60	150	18.8 - 21.8	86 / 89
HWS300-15/HD	15	12.0 - 18.0	22	-	90	60	150	18.8 - 21.8	80 / 83
HWS600-15/HD	15	12.0 - 18.0	43	-	90	60	150	18.8 - 21.8	81 / 84
HWS1000-15/HD	15	12.0 - 18.0	70	80	120	60	150	18.8 - 21.8	83 / 85
HWS1500-15/HD	15	12.0 - 18.0	100	-	90	60	150	18.8 - 21.8	83 / 87
HWS30A-24/HD	24	19.2 - 28.8	1.3	-	192	96	150	30.0 - 34.8	86 / 88
HWS50A-24/HD	24	19.2 - 28.8	2.2	-	192	96	150	30.0 - 34.8	84 / 87
HWS100A-24/HD	24	19.2 - 28.8	4.5	-	192	96	150	30.0 - 34.8	87 / 89
HWS150A-24/HD	24	19.2 - 28.8	6.5	-	192	96	150	30.0 - 34.8	88 / 90
HWS300-24/HD	24	19.2 - 28.8	14	16.5	144	96	150	30.0 - 34.8	82 / 85
HWS600-24/HD	24	19.2 - 28.8	27	31	144	96	150	30.0 - 34.8	82 / 85
HWS1000-24/HD	24	19.2 - 28.8	46	58.5	150	96	150	30.0 - 34.8	85 / 87
HWS1500-24/HD	24	19.2 - 28.8	65/70 ⁽³⁾	105	144	96	200	30.0 - 34.8	84 / 88
HWS1000-36/HD	36	28.8 - 43.2	30.7	39	150	144	200	45.0 - 49.7	85 / 88
HWS1500-36/HD	36	28.8 - 43.2	42/46.5 ⁽³⁾	70	150	144	200	45.0 - 49.7	84 / 88
HWS30A-48/HD	48	38.4 - 52.8	0.65	-	384	192	200	55.2 - 64.8	86 / 87
HWS50A-48/HD	48	38.4 - 52.8	1.1	-	384	192	200	55.2 - 64.8	84 / 86
HWS100A-48/HD	48	38.4 - 52.8	2.1	-	384	192	200	55.2 - 64.8	88 / 90
HWS150A-48/HD	48	38.4 - 52.8	3.3	-	384	192	200	55.2 - 64.8	89 / 91
HWS300-48/HD	48	38.4 - 52.8	7	-	288	192	200	55.2 - 64.8	82 / 85
HWS600-48/HD	48	38.4 - 52.8	13	-	288	192	200	55.2 - 64.8	83 / 86
HWS1000-48/HD	48	38.4 - 52.8	28	29.2	300	192	200	55.2 - 60.0	86 / 88
HWS1500-48/HD	48	38.4 - 52.8	32	-	288	192	200	55.2 - 64.8	86 / 90
HWS1000-60/HD	60	48.0 - 66.0	18.4	23.4	360	240	400	69.0 - 75.0	85 / 88

40-65W 90-305VAC AC-DC Power Supplies



Industrial



Broadcast



Test



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/csw>

Accepting a very wide 90 to 305Vac input, the CSW65 series can operate from 115V, 230V and 277V nominal inputs. These models are available in a U-channel construction and have cover and/or DIN rail mounting clip options. All models are certified to IEC/EN/UL/CSA 62368-1 and with less than 150mW off-load power consumption, these units also comply with DOE Efficiency Level VI requirements.

Features

- Accepts 115/230/277VAC Nominal Inputs
- <150mW Off-Load Power Consumption
- DOE Efficiency Level VI, ErP Tier 2
- Class 2 24V Model to UL1310
- DIN Rail Mount Option

Benefits

- Suitable for US Building Wiring
- Energy Saving
- Meets US and EU Energy Saving Legislation
- Suitable for Building Automation Requiring NEC Class 2
- Easy to Mount

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage (V)	Average Efficiency (%)	*Ripple & Noise (mV)
CSW65-5	5	8.0	40	6 - 8	87.2	100
CSW65-12	12	5.42	65	13.2 - 15.6	89	120
CSW65-15	15	4.34	65	16.5 - 19.5	89	150
CSW65-18	18	3.62	65	19.8 - 23.4	89	180
CSW65-24	24	2.71	65	26.4 - 31.2	89	240
CSW65-28	28	2.33	65	30.8 - 36.4	89	280
CSW65-48	48	1.36	65	52.8 - 62.4	89	280
CSW65-54	54	1.21	65	59.4 - 64.8	89	280

*Ripple and noise are measured at oscilloscope 20MHz bandwidth by a 10uF electrolytic capacitor and a 0.1uF ceramic capacitor in parallel at output connector.

CSW	65	-24	/A
	Output Power	5 5V Output Voltage 12 12V Output Voltage 15 15V Output Voltage 18 18V Output Voltage 24 24V Output Voltage 28 28V Output Voltage 48 48V Output Voltage 54 54V Output Voltage	Blank U-Channel /A U-Channel & Cover /D U-Channel, Cover & DIN Rail Bracket

50W to 600W Single Output General Purpose Power Supplies



Industrial



Test



COMM



LED



Broadcast



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/rws-b>

The RWS50B to RWS600B AC-DC power supplies are designed to provide solid performance at an economical price. 50, 100, 150, 300 and 600W ratings are available with output voltages from 5V to 48V. All models are certified to IEC62368-1 with UL508 on select models. These 7-year warranty⁽¹⁾ products meet both Class B radiated and conduction EMI standards. The 300W models have a remote on/off option and the 600W have options for remote on/off, parallel operation, DC Good and remote sense.

Features

- Seven Year Warranty⁽¹⁾
- Conservatively Rated Electrolytic Capacitors
- Class B Conducted and Radiated EMI
- UL508 Certified on Select Models

Benefits

- Low Cost of Ownership
- Long Field Life
- Easier System EMC Compliance
- Suitable for Industrial Control Equipment

Model Selector

Model	Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Output Power (W)	Ripple & Noise (mV)	Input Current (A) 115/230Vac	Efficiency (typ)% 115/230Vac	UL508 Certification
RWS50B-5	5	4.5 - 5.75	10	50	120	1.0 / 0.65	78 / 79	Yes
RWS100B-5	5	4.5 - 5.75	14	70	120	0.9 / 0.45	77.5 / 79	Yes
RWS150B-5	5	4.5 - 5.75	21	105	120	1.3 / 0.7	77.5 / 79.5	Yes
RWS300B-5	5	4.5 - 5.75	50	250	120	3.1 / 1.6	75 / 78.5	-
RWS600B-5	5	4.5 - 5.75	100	500	120	6.2 / 3.2	74 / 77.5	-
RWS50B-12	12	10.8 - 13.8	4.3	51.6	150	1.0 / 0.65	83 / 84	Yes
RWS100B-12	12	10.8 - 13.8	8.5	102	150	1.2 / 0.6	83 / 84	Yes
RWS150B-12	12	10.8 - 13.8	13	156	150	1.8 / 0.9	84.5 / 87.5	Yes
RWS300B-12	12	10.8 - 13.8	25	300	150	3.6 / 1.9	79.5 / 82.5	Yes
RWS600B-12	12	10.8 - 13.8	50	600	150	6.6 / 3.6	82 / 84.5	-
RWS100B-15	15	13.5 - 17.25	6.8	102	150	1.2 / 0.6	84 / 85	-
RWS150B-15	15	13.5 - 17.25	10	150	150	1.8 / 0.9	84.5 / 87.5	-
RWS300B-15	15	13.5 - 17.25	20	300	150	3.6 / 1.9	81.5 / 84.5	Yes
RWS600B-15	15	13.5 - 17.25	40	600	150	6.6 / 3.6	82 / 84.5	-
RWS50B-24	24	21.6 - 27.6	2.2	52.8	150	1.0 / 0.65	86 / 87	Yes
RWS100B-24	24	21.6 - 27.6	4.5	108	150	1.2 / 0.6	86 / 87.5	Yes
RWS150B-24	24	21.6 - 27.6	6.5	156	150	1.8 / 0.9	86.5 / 89.5	Yes
RWS300B-24	24	21.6 - 27.6	12.5	300	150	3.6 / 1.9	85 / 88	Yes
RWS600B-24	24	21.6 - 27.6	25	600	150	6.6 / 3.6	85 / 88.5	Yes
RWS150B-28	28	25.2 - 32.2	5.4	151.2	180	1.8 / 0.9	86.5 / 89.5	-
RWS300B-36	36	32.4 - 41.4	8.4	302.4	200	3.6 / 1.9	85 / 88	Yes
RWS600B-36	36	32.4 - 41.4	16.7	601.2	200	6.6 / 3.6	85 / 88.5	-
RWS50B-48	48	43.2 - 52.8	1.1	52.8	200	1.0 / 0.65	87 / 88	-
RWS100B-48	48	43.2 - 52.8	2.1	100.8	200	1.2 / 0.6	86 / 87	-
RWS150B-48	48	43.2 - 52.8	3.3	158.4	200	1.8 / 0.9	86.5 / 89.5	-
RWS300B-48	48	43.2 - 52.8	6.3	302.4	200	3.6 / 1.9	85 / 88	Yes
RWS600B-48	48	43.2 - 52.8	12.5	600	200	6.6 / 3.6	85 / 88.5	-

79-153W Single Output Power Supplies



Industrial



Test



LED



Broadcast



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-ld>

Designed for light industrial, LED signage, broadcast, IT, and test & measurement equipment, the CUS200LD can deliver up to 120W convection, 150W conduction cooled and 206W peak power. The series is available with nominal output voltages of 3.3V, 4.2V, 5V, 7.5V, 12V, 15V, 24V, 28V and 48Vdc. The 31mm height makes it suitable for mounting in low profile LED displays and enclosures.

Features	Benefits
• Convection or Conduction Cooled	• Quiet Operation
• Up to 206W Peak Power Capability	• Provides Short Term Current for Capacitive or Inductive Loads
• Low 31mm Height	• Suitable for Low Profile Enclosures
• -40°C Ambient Temperature Start Up	• Outdoor Enclosure Usage

Model Selector											
Model	Output Voltage (V)	Output Adjustment (V)	Max Current Convection (A)	Max Power Convection (W)	Max Current Conduction (A)	Max Power Conduction (W)	Peak Current ⁽¹⁾ (A)	Load Regulation (mv)	Line Regulation (mv)	Over Voltage (V)	Efficiency ⁽²⁾ (%)
CUS200LD-3	3.3	2.97 - 3.63	24	79.2	30.0	99.0	40.0	26	13	3.8 - 5.44	82 / 83
CUS200LD-4	4.2	3.78 - 4.62	24	100.8	30.0	126.0	40.0	33	16	4.83 - 6.51	85 / 87
CUS200LD-5	5	4.5 - 5.5	24	120	30.0	150.0	40.0	40	20	5.75 - 7.5	87 / 89
CUS200LD-7R5	7.5	6.375 - 8.25	16	120	20.0	150.0	26.6	60	30	8.63 - 10.87	88 / 90
CUS200LD-12	12	10.8 - 13.2	10	120	12.5	150.0	16.7	96	48	13.8 - 17.4	87 / 89
CUS200LD-15	15	13.5 - 16.5	8	120	10.0	150.0	13.4	120	60	17.25 - 21.75	87 / 89
CUS200LD-24	24	21.6 - 26.4	5	120	6.3	151.2	8.4	192	96	27.6 - 34.8	87 / 89
CUS200LD-28	28	25.2 - 30.8	4.3	120.4	5.4	151.2	7.2	224	112	32.2 - 40.6	87 / 90
CUS200LD-48	48	43.2 - 52.8	2.5	120	3.2	151.2	4.2	384	192	55.2 - 69.6	88 / 90

150-200W Single Output General Purpose Power Supplies



Industrial



Test



COMM



LED



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/ls>

The LS series offers economically priced 150 to 200W power supplies for general purpose light industrial use. With output voltages ranging from 3.3 to 48V, the products have a five-year warranty ⁽¹⁾ and conservatively rated electrolytic capacitor temperatures for longer field life. Two case styles are available - enclosed with internal fan, or a U-channel construction which can be operated either with external airflow or convection cooled at a lower power level. These compact products have a wide -25 to +70°C temperature range and are capable of withstanding a 300Vac surge for up to five seconds.

Features

- Compact Package Sizes
- Low Cost
- Withstands 300Vac Input Surges
- Conservative Electrolytic Capacitor Temperatures
- Five Year Warranty ⁽¹⁾

Benefits

- Space Saving in End Equipment
- Suitable for General Purpose Light Industrial Use
- Can Operate on Unstable Input Voltages
- Long Field Life
- Lower Cost of Ownership

Model Selector

Model	Voltage (V)	Adjustable Range (V)	Max Current (A) ⁽²⁾	Max Current Convection (A) ⁽³⁾	Peak Current (A) ⁽⁴⁾	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ) % ⁽⁵⁾
LS200-3.3	3.3	3.0 - 3.6	40	N/A	-	40	16	80	67 / 68
LS200-3.3/L	3.3	3.0 - 3.6	40	26	-	40	16	80	67 / 68
LS200-5	5	4.75 - 5.5	40	N/A	-	40	20	80	72 / 75
LS200-5/L	5	4.75 - 5.5	40	26	-	40	20	80	72 / 75
LS200-7.5	7.5	6.8 - 8.2	26.7	N/A	-	40	20	80	74 / 77
LS200-7.5/L	7.5	6.8 - 8.2	26.7	17.3	-	40	20	80	74 / 77
LS200-12	12	10.8 - 14.4	16.7	N/A	-	96	48	120	76 / 79
LS200-12/L	12	10.8 - 14.4	16.7	11.6	-	96	48	120	76 / 79
LS200-15	15	13.5 - 16.5	13.4	N/A	-	120	60	120	80 / 83
LS200-15/L	15	13.5 - 16.5	13.4	9.3	-	120	60	120	80 / 83
LS200-24	24	22 - 28.8	8.4	N/A	10.4	192	96	120	82 / 84
LS200-24/L	24	22 - 28.8	8.4	5.8	10.4	192	96	120	82 / 84
LS200-36	36	32 - 40	5.6	N/A	6.9	288	144	150	82 / 85
LS200-36/L	36	32 - 40	5.6	3.9	6.9	288	144	150	82 / 85
LS200-48	48	42 - 57.6	4.2	N/A	-	384	192	200	82 / 85
LS200-48/L	48	42 - 57.6	4.2	2.9	-	384	192	200	82 / 85

LS200

-24

/L

3.3	3.3V Output Voltage
5	5V Output Voltage
7.5	7.5V Output Voltage
12	12V Output Voltage
15	15V Output Voltage
24	24V Output Voltage
36	36V Output Voltage
48	48V Output Voltage

Blank	Enclosed with internal fan
/L	U-Channel without internal fan

300-1500W Single Output Industrial Power Supplies



Industrial



Test



LED



Broadcast



COMM



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/hws>

The ultra reliable, conservatively rated HWS series of 300W to 1500W AC-DC power supplies has a limited lifetime warranty ⁽¹⁾, unique to the industry. The series accepts a widerange 85 to 265Vac input with output voltages from 3.3V to 48V. The products are certified to IEC 62368-1, UL 508 (select models) and are SEMI F47 compliant . They also meet conducted and radiated emission standards without additional filtering or shielding.

Features	Benefits
• Limited Lifetime Warranty ⁽¹⁾	• Low Cost of Ownership
• Very Conservative Electrolytic Capacitor Ratings	• Long Service Life
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• UL 508 Certified on Select Models	• Suitable For Industrial Control Equipment

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Peak Current (A) ⁽²⁾	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Overvoltage (V)	Efficiency (115/230Vac) (%)
HWS300-3	3.3	2.64 - 3.96	60	-	30	20	120	4.13 - 4.95	74 / 77
HWS600-3	3.3	2.64 - 3.96	120	-	30	20	120	4.13 - 4.95	75 / 78
HWS1000-3	3.3	2.64 - 3.96	200	-	40	20	120	4.13 - 4.95	71 / 73
HWS1500-3	3.3	2.64 - 3.96	300	-	60	36	150	4.12 - 4.95	72 / 75
HWS300-5	5	4.0 - 6.0	60	-	30	20	120	6.25 - 7.25	79 / 82
HWS600-5	5	4.0 - 6.0	120	-	30	20	120	6.25 - 7.25	80 / 83
HWS1000-5	5	4.0 - 6.0	200	-	40	20	120	6.25 - 7.0	76 / 78
HWS1500-5	5	4.0 - 6.0	300	-	60	36	150	6.25 - 7.0	77 / 81
HWS1000-6	6	4.8 - 7.2	167	-	60	36	150	7.5 - 8.4	79 / 81
HWS1500-6	6	4.8 - 7.2	250	300	60	36	150	7.5 - 8.4	79 / 82
HWS1000-7	7.5	6.0 - 9.0	134	160	60	36	150	9.38 - 10.5	80 / 82
HWS1500-7	7.5	6.0 - 9.0	200	240	60	40	150	9.37 - 10.5	81 / 83
HWS300-12	12	9.6 - 14.4	27	-	96	48	120	15.0 - 17.4	80 / 83
HWS600-12	12	9.6 - 14.4	53	-	96	48	120	15.0 - 17.4	80 / 83
HWS1000-12	12	9.6 - 14.4	88	100	100	48	150	15.0 - 17.4	83 / 85
HWS1500-12	12	9.6 - 14.4	125	-	72	48	150	15.0 - 17.4	82 / 85
HWS300-15	15	12.0 - 18.0	22	-	120	60	150	18.8 - 21.8	82 / 85
HWS600-15	15	12.0 - 18.0	43	-	120	60	150	18.8 - 21.8	82 / 85
HWS1000-15	15	12.0 - 18.0	70	80	120	60	150	18.8 - 21.8	83 / 85
HWS1500-15	15	12.0 - 18.0	100	-	90	60	150	18.7 - 21.8	83 / 87
HWS300-24	24	19.2 - 28.8	14	16.5	192	96	150	30.0 - 34.8	82 / 85
HWS600-24	24	19.2 - 28.8	27	31	192	96	150	30.0 - 34.8	82 / 85
HWS1000-24	24	19.2 - 28.8	44	50	150	96	150	30.0 - 34.8	85 / 87
HWS1500-24	24	19.2 - 28.8	65/70 ⁽³⁾	105	144	96	200	30.0 - 34.8	84 / 88
HWS1000-36	36	28.8 - 43.2	29.3	33.3	150	144	200	45.0 - 49.7	85 / 88
HWS1500-36	36	28.8 - 43.2	42/46.5 ⁽³⁾	70	150	144	200	45.0 - 49.7	84 / 88
HWS300-48	48	38.4 - 52.8	7	-	384	192	200	55.2 - 64.8	82 / 85
HWS600-48	48	38.4 - 52.8	13	-	384	192	200	55.2 - 64.8	82 / 85
HWS1000-48	48	38.4 - 52.8	22	25	300	192	200	55.2 - 64.8	86 / 88
HWS1500-48	48	38.4 - 52.8	32	-	288	192	200	55.2 - 64.8	86 / 90
HWS1000-60	60	48.0 - 66.0	17.6	20	360	240	400	69.0 - 75.0	85 / 88
HWS1500-60	60	48.0 - 66.0	25.6/28 ⁽³⁾	42	360	240	400	69.0 - 75.0	86 / 90

Single Output 350W/420W Medical & ITE Power Supplies



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

With efficiencies up to 94%, the medical and ITE certified CUS350M is rated at 350W with convection cooling and up to 420W with airflow. The CUS350M is ideal for applications where audible noise cannot be tolerated, including hospital, dental, broadcast and professional audio equipment. A 5V 0.5A standby output, Power Good signal, 12V 0.3A fan supply and remote on/off are provided as standard on the /F suffix models.

Features

- 350W Convection Cooled
- Up to 420W with Forced Air
- Medical Certifications (2 x MOPP)
- Class B Conducted EMI
- 5V Standby Voltage, DC Good Signal, 12V Fan Supply and Remote On/Off
- Compact 7.5 x 3.4 x 1.6" Size

Benefits

- Quiet Operation
- Can Utilize System Airflow
- Suitable for B and BF Rated Equipment
- Easier System EMC Compliance
- Provides Flexibility in the System
- Space Saving in End Equipment

Model Selector

Model	Voltage (V)	Adjustment Range (V)	Max Current (A) Convection	Max Power (W) Convection	Max Current (A) Forced Air	Max Power (W) Forced Air	Ripple Noise (mV)	Efficiency (typ)% 115/230Vac
CUS350M-12/F	12	11.4 - 12.6	29.0	348.0	34.5	414.0	120	91 / 93
CUS350M-18/F	18	17.1 - 18.9	19.4	349.2	23	414	180	91 / 94
CUS350M-24/F	24	22.8 - 25.2	14.7	352.8	17.5	420	240	91 / 94
CUS350M-36/F	36	34.2 - 37.8	9.7	349.2	11.5	414	240	91 / 94
CUS350M-48/F	48	45.6 - 50.4	7.3	350.4	8.7	417.6	480	91 / 94

CUS350M-	12	/	F
Output voltage 12, 18, 24, 36, 48		/F Fan supply and Power Good signal (preferred model) Blank No Fan supply and Power Good signal	

500-1500W Industrial Power supplies



Industrial



COTS



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/lzsa>

The LZSA series offers a unique feature set not commonly found with standard off-the-shelf supplies. Compliance to the MIL-STD-810E standards for shock and vibration and board coating make the LZSA power supplies ideal for use in a variety of harsh environment applications. They also comply with the tough ring wave lightning surge test per IEEE C62.41. Features include remote on/off, remote sense, frequency synchronization and a wide operating temperature range of -40°C to +71°C. The series also has a wide adjustment range which can be programmed using an external voltage or resistance.

Features	Benefits
• Rugged Mechanical Design With Coating on PCBs	• High Reliability in Harsh Environments
• Superior Thermal Design	• Long Life Even at 71°C Operation
• Wide Range, Programmable Output Adjustment	• Reduces The Need For custom Outputs
• Input Voltage Transient Protection	• Reduced System Filtering

Model Selector					
Part Number for Ordering	Model Number*	Nominal Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)
LZSA-1000-2	LZS-A1000-2	12	10 - 15.75	84	1008
LZSA-500-3	LZS-A500-3	24	18 - 29.4	21	504
LZSA-1000-3	LZS-A1000-3	24	18 - 29.4	42	1008
LZSA-1500-3-001	LZS-A1500-3-001	24	18 - 29.4	63	1512 (3)
LZSA-1500-4	LZS-A1500-4	48	36 - 56	31.5	1512 (3)

* This part number is listed on the LZSA rating label and safety files

600-1200W Single Output Modular Power Supplies

Features

- Full Medical Isolation (MoPP)
- Suitable for B and BF Rated Equipment
- Low Speed, Low Audible Noise Fans
- Dual Fusing
- High Current 5V/2A Standby
- Class B Conducted & Radiated EMI
- PMBus™ Communications Option
- 7 Year Warranty



[Full Datasheet](#)

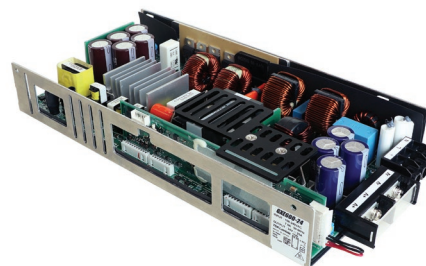
<https://product.tdk.com/en/power/qs>

Specifications

Model		QS
Input Voltage Range	VAC	90-264Vac. QS5H limited to 700W output power below 180Vac input
Input Frequency Range	Hz	47 - 63Hz (440Hz with reduced PFC)
Inrush Current	A	QS5 & QS5H <40A, QS7 <45A at 25°C and 264Vac (cold start)
Touch Current	µA	<100µA
Leakage Current (maximum)	µA	<300µA
Power Factor Correction	-	> 0.95 (at 100% load), Meets EN61000-3-2, Class A and Class C
Efficiency	-	Up to 91%, model dependent
Temperature Coefficient	%/°C	<0.016%/°C
Overcurrent Protection	-	Hiccup, auto recovery
Overvoltage Protection	-	Latching. Output shut down, cycle AC to reset
Overtemperature Protection	-	Converter: auto restart (fan off); Output modules: cycle AC to reset
Hold up time	ms	QS5: 10ms, QS7: 20ms minimum at full load
Ripple and Noise	%	1%. 0 - 70°C, > 20% load
Line regulation	%	<0.1%
Load Regulation	%	<1% (<3.5% for QS5H-1080-12 & QS7-1080-12)
Remote Sense Compensation	-	Yes, 0.5V compensation., not to exceed maximum output adjustment
Remote On/Off	-	Output: Via isolated opto-coupler diode, Converter: See optional standby/signals
AC Fail Signal	-	See optional standby/signals
DC Good Signal	-	Via isolated opto-coupler transistor
Remote on/off	-	Output only: Inhibit. Converter & Output: See options section
PMBus™ Interface	-	See optional standby/signals
Standby Voltage	-	See optional standby/signals
Operating Temperature	°C	-40°C start up; -20 to +70°C, derate linearly to 50% load from 50 to 70°C
Storage Temperature	°C	-30 to +70°C
Humidity (Non condensing)	%RH	5 - 95%RH
Cooling	-	QS5/QS5H: One variable, low speed internal fan. QS7: Two variable, low speed internal fans
Audible Noise	-	QS5/QS5H ("S" Input option): 40.3 dBA @ 25°C / 54.9 dBA @ 50°C. QS5/QS5H ("I" Input option): 36.9 dBA @ 25°C / 51 dBA @ 50°C. QS7: 43.6 dBA @ 25°C / 57.3 dBA @ 50°C, per BS ISO 3744:2010
Withstand Voltage	-	Input to Output: 4kVAC (production tested to 4.3kVDC) (2xMoPP), Input to Ground: 1.5kVAC (1xMoPP), Output to Ground: 1.5kVAC (1xMoPP). Output to Output / Signals 200Vdc
Vibration	-	Conforms to EN60068-2-6, IEC68-2-6, MIL-STD-810G, Method 514.6, Pro I
Shock	-	Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987, MIL-STD-810G, Method 516.6, Pro I, IV
Safety Agency Certifications	-	IEC/UL/CSA/EN UL 60950-1, IEC/UL/CSA/EN 60601-1, ANSI/AAMI ES60601-1 & CE Mark. IEC/EN61010 included in 60950 report
Altitude	m	5,000m, operational and storage
Emissions	-	EN61000-6-3:2007, EN60601-1-2:2015 4th Edition, EN55011B, EN55032B, Class B radiated and conducted
Immunity	-	EN61000-6-2:2005, EN60601-1-2:2015
Size (W x H x D)	in, mm	QS5: 5 x 2.5 x 10.6", 127 x 63.3 x 270mm. QS7: 6.9 x 2.5 x 10.6", 176 x 63.3 x 270mm
Weight	g	See Installation Manual
Warranty	Yrs	Seven Years

(1) See website for detailed specifications

Single Output 600W Programmable Medical and Industrial Power Supplies



Medical



Industrial



Test



Broadcast



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/gxe>

With efficiencies up to 95%, the medical and industrial certified GXE600 is rated at 600W with convection cooling for low audible noise. The output voltage and current can be programmed and set for constant current or constant voltage characteristics. The Modbus RTU serial protocol is used for data transmission due its high interference immunity within noisy industrial environments. The parameters for fault programming (protection level and recovery characteristics) and the slew rate timing can be changed. Remaining electrolytic capacitor life, operating hours and alarm history can be read through the RS-485 interface, aiding remote preventative maintenance. As standard the GXE600 has a 5V 1A standby voltage, isolated DC Good and AC Fail signals, remote on/off and paralleling capability for up to five units.

Features	Benefits
• Convection Cooled	• Quiet Operation
• Up to 95% Efficient	• Lower Operating Costs
• RS-485 Read-Write Communication (Modbus RTU protocol)	• Applicable for Communication in Industrial Applications
• Constant Voltage & Constant Current Modes	• Versatile Use
• Monitoring & Programming Functions	• Allows Remote Monitoring and Operation
• Digital or Analog Programming	• Easier System Integration
• Seven Year Warranty ⁽¹⁾	• Low Cost of Ownership

Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment Manual (V)	Output Adjustment Programming ⁽²⁾ (V)	Maximum Current (A)	Maximum Power (W)	Efficiency (typ %) 115 / 230Vac
GXE600-24	24	19.2 - 28.8	4.8 - 28.8	25	600	92 / 95
GXE600-48	48	38.4 - 57.6	9.6 - 57.6	12.5	600	92 / 95

GXE600-	24	/	A
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Output voltage 24, 48

blank	U channel chassis
/A	U channel chassis with cover
/HD	U channel chassis, ruggedized & pcb coating
/HDA	U channel chassis with cover, ruggedized & pcb coating

720-1000W Conduction Cooled Power Supplies



Industrial



COTS



Test



LED



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/cpfe>

The CPFE1000F series of industrial AC-DC conduction cooled power supplies have an integral baseplate and offer output powers of up to 1008W. Features include voltage and current monitoring, remote on/off, remote sense, a standby supply, I²C monitoring and a wide operating temperature range of -40°C to +70°C. The CPFE1000F also complies with MIL-STD-810F vibration and MIL-STD-810E shock.

Features

- Fanless
- Integral Baseplate Cooling
- Wide Range AC Input
- I²C Interface

Benefits

- Longer Field Life and No Fan Noise
- Conducts Heat Outside of the System Enclosure
- Supports Global Use
- Allows Remote Monitoring

Model Selector

Model	Nominal Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Max Power (W) at 50°C
CPFE1000F-12	12	9.6 - 14.4	60	720
CPFE1000F-28	28	22.4 - 33.6	36	1008
CPFE1000F-48	48	38.4 - 57.6	21	1008

Derating Ambient Temperature ⁽¹⁾

Model	Input Voltage	Output Power (W)			
		50°C	60°C	70°C	85°C
CPFE1000F-12	85 - 170Vac	720	720	576	360
	170 - 265Vac	720	720	670	595
CPFE1000F-28	85 - 170Vac	1008	864	720	-
	170 - 265Vac	1008	1008	958	883
CPFE1000F-48	85 - 170Vac	1008	864	720	-
	170 - 265Vac	1008	1008	958	883

720-1000W Conduction Cooled Power Supplies



Industrial



Test



LED



COMM



Broadcast



Renewable

[Full Datasheet](#)

<https://product.tdk.com/en/power/cpfe>

The CPFE1000FI series industrial AC-DC power supplies offer output power up to 1008W in a conduction cooled low profile package. Features include voltage and current programming, remote on/off, remote sense, a standby supply, i²C communication, and wide operating temperature range of -40°C to +70°C. The CPFE1000FI is designed to meet MIL-STD-810F vibration and shock.

Features	Benefits
• Smaller Size Than CPFE1000F	• Easier Integration For Industrial Systems
• Base Plate Cooled, No Fan Required	• Quiet Operation, Long Field Life
• Protective Coating Option	• Enables Use In Harsh Environments
• I ² C Interface	• Allows Remote Monitoring

Model Selector

Model	Nominal Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Max Power (W) @ 45°C
CPFE1000FI-12	12	9.6 - 14.4	60	720
CPFE1000FI-28	28	22.4 - 33.6	36	1008
CPFE1000FI-48	48	38.4 - 57.6	21	1008

Part Numbering Scheme

CPFE1000FI	-	28	-
Series Name		12, 28, 48V	blank U channel, no cover or coating /C U channel and cover, no coating /P Pcb only, no U channel or cover /H Pcb coating

Example: CPFE1000FI-28/CH

Output Power vs. Ambient Temperature ⁽¹⁾

Model	Input Voltage	Output Power (W)					
		30°C	40°C	45°C	50°C	60°C	70°C
CPFE1000FI-12/H, /P, /PH, /C, /CH	90V - 135Vac	720	720	720	720	720	720
	170V - 265Vac	720	720	720	720	720	720
CPFE1000FI-28/H, /P, /PH	90V - 135Vac	1008	1008	1008	1008	952	896
	170V - 265Vac	1008	1008	1008	1008	1008	1008
CPFE1000FI-28/C, /CH	90V - 135Vac	1008	952	952	896	840	784
	170V - 265Vac	1008	1008	1008	1008	1008	1008
CPFE1000FI-48/H, /P, /PH	90V - 135Vac	1008	1008	1008	1008	960	864
	70V - 265Vac	1008	1008	1008	1008	1008	1008
CPFE1000FI-48/C, /CH	90V - 135Vac	1008	960	960	912	864	816
	170V - 265Vac	1008	1008	1008	1008	1008	1008

3.3" x 6.7" 680W to 1000W AC-DC Power Supplies



Medical



Industrial



Test



LED



Broadcast



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

The very compact CUS800M and CUS1000M AC-DC power supplies are packaged in a 3.3" x 6.7" footprint and can deliver up to 800W or 1000W with efficiencies up to 95.5%. All models have medical (IEC 60601-1) and audio/video, information and communication technology equipment (IEC 62368-1) certifications. A variable speed fan, 5V 2A standby voltage, remote on/off, remote sense and a Power Good signal is standard.

Features

- Medical Certifications (2 x MOPP)
- $\leq 0.250\text{mA}$ Leakage Current
- Class B Conducted and Radiated EMI
- Compact 3.3 x 6.7 x 1.67" Size
- Variable Speed Cooling Fan

Benefits

- Generally required for B and BF Type Medical Equipment
- Simpler System Compliance
- Easier System EMC Compliance
- Space Saving in End Equipment
- Lower Audible Noise

Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment (V)	Maximum Current (A)	Peak Current (A)	Maximum Power (W)	Maximum Peak Power (W)	Efficiency 115 / 230Vac (%)
CUS800M-12	12	11.7 - 12.6	56.7	66.7	680.4	800.4	90.8 / 92.5
CUS1000M-12	12	11.7 - 12.6	66.7	83.4	800.4	1000.8	92 / 93.6
CUS800M-24	24	23.4 - 25.9	33.4	-	801.6	-	92 / 94
CUS1000M-24	24	23.4 - 25.9	41.7	-	1000.8	-	93 / 95
CUS800M-36	36	35.1 - 38.8	22.2	-	799.2	-	92.5 / 94.6
CUS1000M-36	36	35.1 - 38.8	27.8	-	1000.8	-	93.3 / 95.3
CUS800M-48	48	46.8 - 51.8	16.7	-	801.6	-	92.2 / 94
CUS1000M-48	48	46.8 - 51.8	20.9	-	1003.2	-	93.5 / 95.5

CUS1000M

-

12

CUS800M (680 to 800W)
CUS1000M (804 to 1000W)

Output voltage
12, 24, 36, 48

1000W to 1500W Single Output General Purpose Power Supplies



Industrial



Test



COMM



LED



Broadcast



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/rws-b>

The RWS1000/1500-B are 1000W and 1500W rated AC-DC power supplies, designed to provide solid performance at an economical price. The series accepts a wide range 85 to 265Vac input with output voltages from 12V to 48V. They are certified to IEC62368-1 and EN62477-1 (OVC III). These 7-year warranty⁽¹⁾ products meet both class B radiated and conducted EMI standards. Option model features include an isolated 5V 1A standby voltage, remote on/off and an output-low/fan-fail isolated signal. Up to five units can be connected in parallel for additional power.

Features	Benefits
• Seven Year Warranty ⁽¹⁾	• Low Cost of Ownership
• Conservative Electrolytic Capacitor Ratings	• Long Service Life
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• Configurable Output Screw Terminal Block Orientation	• Simplified Cable Connections
• Compact, Enclosed Construction	• Space Saving in End Equipment

Model Selector

Model	Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Output Power (W)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ at 115/230Vac) (%)
RWS1000B-12	12V	10.2-13.8V	84	1008	96	48	150	82 / 85
RWS1500B-12	12V	10.2-14.4V	125	1500	96	48	150	81 / 85
RWS1000B-15	15V	12.8-17.2V	67	1005	120	60	150	82 / 85
RWS1500B-15	15V	12.8-18.0V	100	1500	120	60	150	82 / 85
RWS1000B-24	24V	20.4-28.8V	42	1008	144	96	180	85 / 88
RWS1500B-24	24V	20.4-28.8V	63	1512	144	96	180	85 / 88
RWS1000B-36	36V	30.6-41.4V	28	1008	216	144	250	85 / 88
RWS1500B-36	36V	30.6-43.2V	42	1512	216	144	250	85 / 88
RWS1000B-48	48V	40.8-57.6V	21	1008	288	192	300	85 / 88
RWS1500B-48	48V	40.8-57.6V	32	1536	288	192	300	85 / 88

RWS1000B-	12	/	S
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Output voltage 12, 15, 24, 36, 48

blank	Air enters over input/output terminals
/R	Remote On/Off
/FO	PF signal and parallel
/RFO	Remote ON/OFF, Power Fail signal and parallel operation
/RF	Reverse Fan, air exits over input/output terminals
/CO2	Conformal coating
/S	Standby 5V

1000W to 1500W Single Output Medical Power Supplies



Medical

[Full Datasheet](#)

<https://product.tdk.com/en/power/rws-b>

The RWS1000/1500-B/ME are 1000W and 1500W rated AC-DC medical power supplies, designed to provide solid performance at an economical price. The series accepts a wide range 85 to 265Vac input with output voltages from 12V to 48V. These 7-year warranty⁽¹⁾ products are certified to the IEC60601-1 safety and IEC60601-1-2 Ed.4 immunity standards. The output to ground isolation (1x MOPP) is 1,500Vac, making the power supplies suitable for B and BF rated equipment.

Features	Benefits
• Seven Year Warranty ⁽¹⁾	• Low Cost of Ownership
• Conservative Electrolytic Capacitor Ratings	• Long Service Life
• Class A Conducted and Radiated EMI	• Easier System EMC Compliance
• Configurable Output Screw Terminal Block Orientation	• Simplified Cable Connections
• Medical Certifications (2 x MOPP)	• Suitable for B & BF Rated Equipment

Model Selector								
Model	Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Output Power (W)	Load Reg (mV)	Line Reg (mV)	Ripple & Noise (mV)	Efficiency (typ) % 115/230 Vac
RWS1000B-12/ME	12V	10.2-13.8V	84	1008	96	48	150	82 / 85
RWS1500B-12/ME	12V	10.2-14.4V	125	1500	96	48	150	81 / 85
RWS1000B-15/ME	15V	12.8-17.2V	67	1005	120	60	150	82 / 85
RWS1500B-15/ME	15V	12.8-18.0V	100	1500	120	60	150	82 / 85
RWS1000B-24/ME	24V	20.4-28.8V	42	1008	144	96	180	85 / 88
RWS1500B-24/ME	24V	20.4-28.8V	63	1512	144	96	180	85 / 88
RWS1000B-36/ME	36V	30.6-41.4V	28	1008	216	144	250	85 / 88
RWS1500B-36/ME	36V	30.6-43.2V	42	1512	216	144	250	85 / 88
RWS1000B-48/ME	48V	40.8-52.8V	21	1008	288	192	300	85 / 88
RWS1500B-48/ME	48V	40.8-52.8V	32	1536	288	192	300	85 / 88

RWS1000B-	12	/	ME
	Output voltage 12, 15, 24, 36, 48		Medical

Option combinations are available, please contact your local sales office.

1500W Medical and Industrial Power Supplies



Medical



Industrial



Test



LED



COMM



Broadcast



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

The CUS1500M are 1500W rated AC-DC power supplies with output voltages from 12V to 48V. They are certified to IEC60601-1 3rd edition (medical) and IEC62368-1 with compliance to the EN60601-1-2:2015 Edition 4 immunity requirements. The series is also certified to EN62477-1 (OVC III). These 7-year warranty⁽¹⁾ products feature low acoustic noise (<45dBA) and meet both class B radiated and conduction EMI standards. Features include an isolated 5V 1A standby voltage, remote on/off and an output-low/fan-fail isolated signal. Up to five units can be connected in parallel for additional power.

Features	Benefits
• Low Audible Noise Fan (<45dBA)	• Quiet Operation
• Medical Certification (2 x MoPP)	• Suitable for B and BF Rated Equipment
• Class B Conducted and Radiated EMI	• Easier System Compliance
• Compact 127 x 63 x 261mm (5 x 2.48 x 10.28") Package	• Space Saving in End Equipment
• Seven Year Warranty ⁽¹⁾	• Low Cost of Ownership

Model Selector								
Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)	Load Reg (mV)	Line Reg (mV)	Ripple & Noise (mV)	Efficiency (%) (115/230Vac)
CUS1500M-12	12	10.2 - 14.4	125	1500	96	48	150	82 / 85
CUS1500M-15	15	12.8 - 18	100	1500	120	60	150	82 / 85
CUS1500M-24	24	20.4 - 28.8	63	1512	144	96	180	85 / 88
CUS1500M-36	36	30.6 - 43.2	42	1512	216	144	250	85 / 88
CUS1500M-48	48	40.8 - 52.8	32	1536	288	192	300	85 / 88

CUS1500M-	12	/	RF
Output voltage 12, 15, 24, 36, 48			blank Dual fuses, air enters over input/output terminals /CO Pcb coating /SF Single input fuse (Line) /RF Reverse fan, air exits over input/output terminals

Option combinations are available, please contact your local sales office

1600W 1U Industrial Power Supplies



Industrial



COTS



Test



COMM



Broadcast



[Full Datasheet](#)

<https://product.tdk.com/en/power/rfe>

The RFE1600 AC-DC industrial power supplies are high efficiency and are 1U in height. They have internal ORing MOSFETs and current share for parallel operation. Communication is possible with the power supplies using the optional isolated PMBus™ (I²C) interface. AC fail, DC good, remote output adjust, remote on/off and a 12V auxiliary output are fitted as standard.

Features

- Internal ORing MOSFET and Current Share
- Up to 1600W in 1U Height
- Full Array of Signals Available
- PMBus™ (I²C)
- Analog Output Adjustment

Benefits

- Suitable For N+1 Redundancy
- Utilizes Less System Space
- Easy Remote Monitoring
- Industry Standard Communication Interface
- Simple External Resistance or Voltage Connection

Model Selector

Model	Output Voltage (V)	Adjustment Range (V) ⁽¹⁾	Max Current (A) (Vin>170Vac)	Max Power (W) (Vin>170Vac)	Max Current (A) (100<Vin<170Vac) ⁽²⁾	Max Power (W) (100<Vin<170Vac) ⁽²⁾
RFE1600-12	12	9.6 - 13.2	133	1596	100	1200
RFE1600-24	24	19.2 - 29	67	1608	50	1200
RFE1600-32	32	25.6 - 38.4	47	1504	37.5	1200
RFE1600-48	48	38.4 - 58	33	1584	25	1200

RFE1600-	12	/	S
	Output voltage 12, 24, 32, 48		blank No PMBus™ / I²C S PMBus™ / I²C interface

1800W 208Vac 3-Phase Industrial Power Supplies



Industrial



Test



Broadcast



COMM



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/hws>

The ultra reliable, conservatively rated HWS1800T series of 1800W AC-DC power supplies has a limited lifetime warranty, unique to the industry. The series accepts a 3-phase 170 - 265Vac input with output voltages from 3.3V to 60V. The products are certified to IEC 62368-1 and are SEMI F47 compliant. They also meet conducted and radiated emission standards without additional filtering or shielding. Up to five units may be connected in parallel to support high power requirements. A remote programming function allows the output voltage to be adjusted by up to 20% to 120% of nominal using an external voltage or resistor. Peak power capability is available on output voltages 6V and higher.

Features

- Limited Lifetime Warranty
- Very Conservative Electrolytic Capacitor Ratings
- Output Voltage Programming
- Peak Power Capability

Benefits

- Low Cost of Ownership
- Long Service Life
- Enables Remote Voltage Adjustment
- Size and Cost Reductions Compared to Continuously Rated Products

Model Selector

Model	Voltage (V)	Adjustmet Range (V) ⁽¹⁾	Maximum Current (A)	Peak Current (A) ⁽²⁾	Load Reg (mV)	Line Reg (mV)	Overvoltage (V)	Efficiency (200Vac) (%)
HWS1800T-3	3.3	2.64 - 3.96	300	-	60	36	4.12 - 4.62	75
HWS1800T-5	5	4.0 - 6.0	300	-	60	36	6.25 - 7.0	81
HWS1800T-6	6	4.8 - 7.2	250	300	60	36	7.5 - 8.4	82
HWS1800T-7	7.5	6.0 - 9.0	200	240	60	40	9.37 - 10.5	84
HWS1800T-12	12	9.6 - 14.4	125	150	72	48	15.0 - 17.4	84
HWS1800T-15	15	12.0 - 18.0	100	120	90	60	18.7 - 21.8	84
HWS1800T-24	24	19.2 - 28.8	75	105	144	96	30.0 - 34.8	88
HWS1800T-36	36	28.8 - 43.2	50	70	216	144	45.0 - 49.7	88
HWS1800T-48	48	38.4 - 52.8	37.5	52.5	288	192	55.2 - 60.0	90
HWS1800T-60	60	48.0 - 66.0	30	42	360	240	69.0 - 75.0	90

HWS1800T

-

3

Series

Output voltage
3 (3.3V), 5, 6, 7 (7.5V),
12, 15, 24, 36, 48, 60

2500W 1U Industrial Power Supplies



Industrial



COTS



Test



COMM



Broadcast



 Full Datasheet

<https://product.tdk.com/en/power/rfe>

The RFE2500 AC-DC industrial power supplies are high efficiency and 1U in height. They have internal ORing MOSFETs and current share for parallel operation. Communication is possible with the power supplies using the optional isolated PMBus™ (I²C) interface. AC fail, DC good, remote output adjust, remote on/off and a 12V auxiliary output are fitted as standard.

Features	Benefits
• Internal ORing FETs and Current Share	• Suitable For N+1 Redundancy
• Up to 2500W in 1U Height	• Utilizes Less System Space
• Full Array of Signals Available	• Easy Remote Monitoring
• PMBus™ (I²C)	• Industry Standard Communication Interface
• Analog Output Adjustment	• Simple External Resistance or Voltage Connection

Model Selector						
Model	Output Voltage (V)	Adjustment Range (V) ⁽¹⁾	Max Current (A) (Vin>180Vac) ⁽²⁾	Max Power (W) (Vin>180Vac) ⁽²⁾	Max Current (A) (100<Vin<170Vac) ⁽²⁾	Max Power (W) (100<Vin<170Vac) ⁽²⁾
RFE2500-12	12	9.6 - 13.2	200	2400	125	1500
RFE2500-24	24	19.2 - 29	96	2304	62.5	1500
RFE2500-48	48	38.4 - 58	52	2496	31.25	1500

RFE2500-	12	/	S
	Output voltage 12, 24, 48		blank No PMBus™ / I²C S PMBus™ / I²C interface

3,000W Programmable CVCC AC-DC Power Supplies



Industrial



Test



LED



Broadcast



COMM



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/hws-g>

The compact HWS3000G AC-DC power supplies can deliver 1,500W with a low-line input voltage of 85 to 132Vac and 3,000W at high-line 170 to 265Vac. The nominal output voltages (24V, 48V, 60V or 130V) and output current are fully programmable (CV/CC) from zero up to their maximum rating. This can be achieved using a serial RS485 interface (MODBus protocol) or analog 1-5V or 4-20mA signal. Up to three units can be connected in series and / or ten units in parallel. The HWS3000G is packaged in a compact 270 x 150 x 61mm (10.6 x 5.9 x 2.4") footprint and has conservatively rated electrolytic capacitor temperatures for long field life. The warranty period is seven years⁽¹⁾.

Features	Benefits
• Serial or Analog Programming (CV/CC)	• Choice of Programming Interfaces
• Series and/or Parallel Operation	• Scalable Voltage and Current
• Compact 270 x 150 x 61mm (10.6 x 5.9 x 2.4") Footprint	• Space Saving in End Equipment
• Single and Three Phase Models (See Related Products)	• Global Use
• Seven Year Warranty ⁽¹⁾	• Low Cost of Ownership

Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment (Potentiometer) (V)	Output Adjustment (Programming) (V)	Output Current (A) (85 - 132Vac Input) (Programming)	Output Current (A) (170 - 265Vac Input) (Programming)	Max Power (85 - 132Vac) (W)	Max Power (170 - 265Vac) (W)	Efficiency (115 / 230Vac) (%)
HWS3000G-24	24	19.2 - 28.8	0 - 28.8	0 - 62.5	0 - 125	1500	3000	89 / 91
HWS3000G-48	48	38.4 - 52.8	0 - 52.8	0 - 31.3	0 - 62.6	1502.4	3004.8	90 / 92
HWS3000G-60	60	48.0 - 66.0	0 - 66.0	0 - 25	0 - 50	1500	3000	90 / 92
HWS3000G-130	130	104.0 - 156.0	0 - 156.0	0 - 11.6	0 - 23.2	1508	3016	91 / 93

HWS3000G	-	24
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Series

Output voltage
24, 48, 60, 130

Related Products

Type	Part Number(s)	Description
3kW Programmable Power Supplies	HWS3000GT	3 phase 170- 265Vac input
100-800W Programmable Power Supplies	Z+ Low Voltage	Z+ 10V to 100V Programmable Power Supplies
100-800W Programmable Power Supplies	Z+ High Voltage	Z+ 160V to 650V Programmable Power Supplies

Three phase input 3,000W Programmable CVCC AC-DC Power Supplies



Industrial



Test



LED



Broadcast



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/hws-g>

The compact HWS3000GT AC-DC power supplies can deliver 3,000W with a 3-three phase input voltage of 170- 265Vac. The nominal output voltages (24V, 48V, 60V or 130V) and output current are fully programmable from zero up to their maximum rating. This can be achieved using a serial RS485 interface (MODBus protocol) or analog 1-5V or 4-20mA signal. Up to three units can be connected in series and / or ten units in parallel. The HWS3000GT is packaged in a compact 270 x 150 x 61mm (10.6 x 5.9 x 2.4") footprint and has conservatively rated electrolytic capacitor temperatures for long field life. The warranty period is seven years⁽¹⁾.

Features

- Serial or Analog Programming (CV/CC)
- Series and/or Parallel Operation
- Compact 270 x 150 x 61mm (10.6 x 5.9 x 2.4") Footprint
- Single and Three Phase Models (See Related Products)
- Seven Year Warranty⁽¹⁾

Benefits

- Choice of Programming Interfaces
- Scalable Voltage and Current
- Space Saving in End Equipment
- Global Use
- Low Cost of Ownership

Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment (Potentiometer) (V)	Output Adjustment (Programming) (V)	Output Current (A) (3-phase 170 - 265Vac Input) (Programming)	Max Power (3-phase 170 - 265Vac Input) (W)	Efficiency (220 / 230Vac) (%)
HWS3000GT-24	24	19.2 - 28.8	0 - 28.8	0 - 125	3000	91
HWS3000GT-48	48	38.4 - 52.8	0 - 52.8	0 - 62.6	3004.8	92
HWS3000GT-60	60	48.0 - 66.0	0 - 66.0	0 - 50	3000	92
HWS3000GT-130	130	104.0 - 156.0	0 - 156.0	0 - 23.2	3016	93

HWS3000GT

-

24

Series

Output voltage
24, 48, 60, 130

Related Products

Type	Part Number(s)	Description
3kW Programmable Power Supplies	HWS3000G	Single phase 85 - 265Vac input
100-800W Programmable Power Supplies	Z+ Low Voltage	Z+ 10V to 100V Programmable Power Supplies
100-800W Programmable Power Supplies	Z+ High Voltage	Z+ 160V to 650V Programmable Power Supplies

3200W 3-Phase Input Industrial Power Supplies



Industrial



COTS



Test



COMM



Broadcast



[Full Datasheet](#)

<https://product.tdk.com/en/power/tps>

The TPS3000 series industrial AC-DC power supplies offer output power up to 3,200W in a 2U high package with 3 phase supply input. Features include voltage and current programming, remote on/off, remote sense, a standby supply, PMBus™ communication, built in ORing FET and wide operating temperature range of -40°C to +70°C. The TPS3000 is also designed to meet MIL-STD-810F vibration and shock.

Features

- 400/440/480Vac (Nominal) 3 Phase Delta or Wye
- Fully Regulated, Wide Range Voltage Adjustment
- Voltage and Current Programming
- -40°C (start up) to +70°C Operation
- 92% Typical Efficiency
- PMBus™ Communication
- Built in ORing FET for Parallel Operation

Benefits

- Global Use
- Versatile Application
- Flexible Control and Adjustment
- Suitable for Rugged Environments
- Less Energy Used
- Remote Output Programming and Monitoring
- Suitable for N + 1 Redundancy

Model Selector

Model	Nominal Output Voltage (V)	Adjustment Range (V) ⁽¹⁾	Maximum Current (A)	Maximum Power (W)	Max Current (A) ⁽²⁾	Maximum Power (W) ⁽²⁾
TPS3000-24	24	19.2 - 28.5	125	3000	133.3	3200
TPS3000-48	48	38.4 - 56.5	66.7	3200	66.7	3200

*Wider range adjustment as stated on the UL safety files are possible, although some parameters might not meet some of the listed specifications.

Related Products

Type	Part Number	Description
EMC filter	RTMN-5020	High attenuation 20A 500Vac 3-phase input two stage filter

Specifications

Model			TPF3000
Input			
Input Voltage range	Vac	350 - 528, Delta or Wye 3 phase (Note: Safety certified for 400-480Vac only)	
Input Frequency	Hz	47 - 63 (Note: Safety certified for 50 to 60Hz only)	
Input Current (At nominal Vin)	A	6 per phase (steady state)	
Inrush Current at 400-480Vac (Cold Start)	A	<15 per phase (excluding initial filter capacitor charging <2ms)	
Dropped Phase Power	W	Output Power 1290; output power increases with input voltage	
Leakage Current	mA	<3	
Power Factor (400-480Vac)	-	0.92 typical at rated load, nominal Vin	
Harmonics	-	Not applicable	
Hold Up Time (typ)	ms	>10 at 80% of rated current, nominal input/output voltage	
Efficiency (Typical)	%	92	
Conducted & Radiated EMI	-	EN55022 Class A, FCC part 15 Class-A	
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, 60950-1, CE Mark and UKCA	
Voltage Dips	-	SEMI F47-0706	

2000 to 4080W 3-Phase Input Industrial Power Supplies



COTS



Industrial



Test



COMM



Broadcast



[Full Datasheet](#)

<https://product.tdk.com/en/power/tps>

The TPS series industrial AC-DC power supplies offer output power up to 4,080W in a 2U high package with 3 phase supply input. Features include voltage and current programming, remote on/off, remote sense, a standby supply, PMBus™ communication, built in ORing FET and wide operating temperature range of -40°C to +70°C. The TPS4000 is also designed to meet MIL-STD-461F/G RE102 EMI and MIL-STD-810F vibration and shock. Designed to meet MIL-STD 1399 section 300B (Electric Power Characteristics)

Features	Benefits
• 400/440/480Vac (Nominal) 3 Phase Delta or Wye	• Global Use
• Fully Regulated, Wide Range Voltage Adjustment	• Versatile Application
• Voltage and Current Programming	• Flexible Control and Adjustment
• -40°C (start up) to +70°C operation	• Suitable for Rugged Environments
• 92% Typical Efficiency	• Less Energy Used
• PMBus™ Communication	• Remote Output Programming and Monitoring
• Built in ORing FET for parallel operation	• Suitable for N + 1 Redundancy

Model Selector						
Model	Nominal Output Voltage (V)	Adjustment Range (V)	Max Current (A)	Max Power (W)	Max Current at Nominal Voltage (A)	Max Power at Nominal Voltage (V)
TPS4000-12	12	9.6 - 14.1	166	2000	170	2040
TPS4000-24	24	19.2 - 28.5	166	4000	170	4080
TPS4000-48	48	38.4 - 58	83.3	4000	85	4080

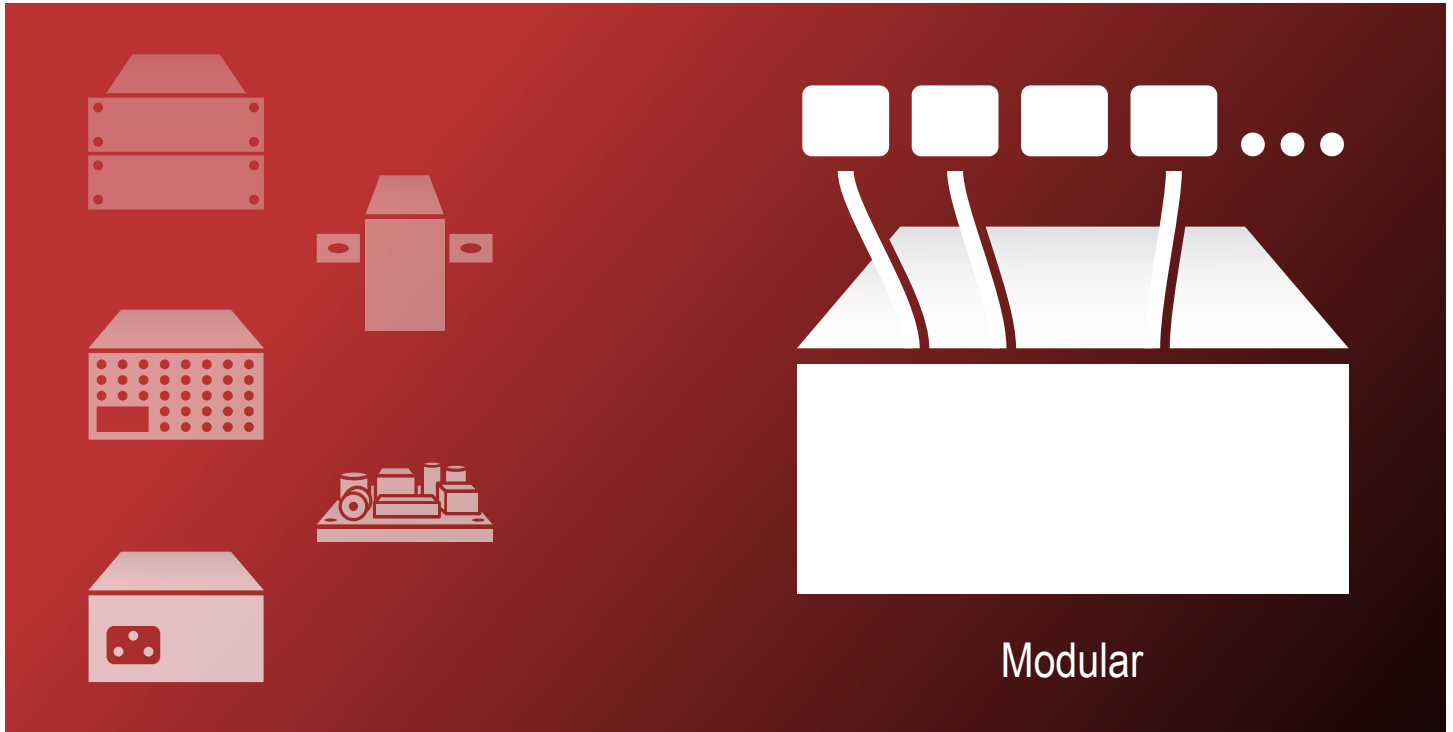
*Wider range adjustment as stated on the UL safety files are possible, although some parameters might not meet some of the listed specifications.

Related Products		
Type	Part Number	Description
EMC filter	RTMN-5020	High attenuation 20A 500Vac 3-phase input two stage filter

Specification				
Model		TPS4000-12	TPS4000-24	TPS4000-48
Input				
Input Voltage Range (Operating)	Vac	350 - 528, Delta or Wye 3 phase		
Nominal Input Voltage Range	Vac	400 - 480, Delta or Wye 3 phase (Note: Safety certified for 360-528Vac only)		
Input Frequency	Hz	47 - 63		
Input Current (At nominal Vin)	A	5	8	8
Inrush Current at 400-480Vac (Cold Start)	A	<25 per phase (excluding initial filter capacitor charging <2ms)		
Dropped Phase Power	W	12V: 1200, 24-48V: 1600 Not recommended for long term operation		
Leakage Current	mA	<3		
Power Factor (400-480Vac, typ at full load)	-	0.88	0.92	
Harmonic Compliance	-	Not applicable		
Hold Up Time (typ)	ms	>10 at 80% of rated current, nominal input/output voltage		
Efficiency (Typical)	-	85	92	92
Conducted & Radiated EMI	-	EN55032-A Conducted and radiated (In end system)		
Immunity	-	EN61000, see immunity table. MIL-STD-461F/G CS101, CS114 (Army Ground), CS115, CS116		
Line Dip	-	SEMI F47-0706 at 480Vac nominal (Criteria B)		
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, 60950-1, CE and UKCA Marks		



AC-DC Modular



Applications

Many but especially:

- Equipment needing several different or uncommon output voltages
- Systems with different output voltage requirements in same package style

Features

- 350W to 2000W output power
- 1 to 18 separate output voltages
- Single-phase, wide-range input
- Broad range of output voltages from 0.5V to 105.6VDC
- Signal options on primary and secondary side
- Filter options with low leakage current for medical applications
- Cooling with integrated low noise fans or external airflow (customer air)
- Safety approvals for international use
- Fast time to market
- Easy to configure with Quick Product Finder on TDK-Lambda website
- Combining outputs in parallel (for increased current or N+1 redundancy) and series (for increased output voltage) is possible with many of the product ranges, contact technical support for details

AC/DC Modular Index by Wattage

Wattage	Number of Outputs	Series	Page
350-1150W	1-8	NV350/700	40
450-900W	1-10	Vega	41
550-900W	1-10	Vega-Lite	42
600-800W	1-5	MU4	43-44
550-2000W	1-18	QM	45-46

Listed by Wattage

350W-1150W Modular Power Supplies

Features

- 1U Form Factor
- Up to 90% Efficient
- Active Power Factor Correction
- Universal Input (90 - 264VAC)
- Up to 8 Outputs (6 for the NV350)
- No Minimum Loads
- Medical Certifications
- Peak power rating of up to 1450W



[Full Datasheet](#)

<https://product.tdk.com/en/power/nv>

Specifications

Model		NV3	NV7
Output Power	W	350W (660W >180VAC input)	700W (1150W >150VAC input)
Peak Power (Up to 10s)	W	520W (740W >180VAC input)	850W (1450W >150VAC input)
Input Voltage range	VAC	90 - 264VAC (47 - 63Hz, 440Hz with reduced PFC)	
Inrush Current (25°C, Cold Start)	A	<15	<40
Power Factor Harmonics	-	EN61000-3-2 Compliant	
Line Regulation	-	< 0.1% for 90-264VAC input change	
Load Regulation (0-100% change)	-	B, BH Modules: < 1%, DB modules output 2: <2%, DA Modules: <3%	
Cross Regulation	-	< 0.1% for 100% load change on any output, (DA module CH1<0.2%, CH2<3%)	
Ripple & Noise	mV	1% or 50mV, whichever is greater	
Efficiency	-	Up to 90%, configuration dependant	
Minimum Load	A	None	
Overcurrent Protection	-	110 - 150%, hiccup mode (Primary limited)	
Overvoltage Protection	V	Yes	
Overtemperature Protection	-	Yes, recycle AC to reset	
Hold Up Time (Typ at 90VAC Input)	ms	>16ms (12ms for NV700 with >700W output power)	
Leakage Current ⁽¹⁾	µA	130µA 120VAC, 60Hz, 260µA 240VAC 60Hz	
Remote Sense	-	Standard on single output modules and output 1 on DB module only	
Module Good	-	Open collector, on indicates output is good (N/A on DA modules)	
Module Inhibit	-	TTL logic level high inhibits the module (both outputs on DB outputs) ⁽²⁾	
AC Fail (Specify as option)	-	High on fail	
Operating Temperature	-	0 to +70°C. Derate linearly to 50% load from 50°C to 70°C ⁽³⁾	
Storage Temperature	-	-40 to +85°C	
Humidity (non condensing)	-	5 - 95% RH	
Cooling	-	Internal fan or 1m/s with system supplied air (NV3 only)	
Isolation	-	Input to Output 4.3kVAC, 5.7kVDC ⁽⁵⁾⁽⁷⁾ , (2 x MOPPs (3rd edition 60601)), Input to Output 4.3kVDC ⁽⁶⁾ , (2 x MOOPs (3rd edition 60601)), Input to Ground 2.3kVDC, Output to Ground 200VDC ⁽⁸⁾	
Vibration (non operating)	-	2G, 10-500Hz (sweep & endurance at resonance) in all 3 planes	
Shock	-	30G per IEC68-2-27	
Safety Agency Certifications	-	UL/CSA/IEC/EN 60950-1, UL/CSA/IEC/EN 60601-1, ANSI/AAMI ES60601-1; IEC/EN 61010-1; CE Mark	
Immunity	-	EN50082-2: EN61000-4-2, -3, -4, -5, -6, -8, -11	
Conducted Emissions and Flicker	-	EN55011, EN55022 Class B (per CISPR.22), EN61000-3-3	
Radiated Emissions	-	EN55011, EN55022 Class B (per CISPR.22) ⁽⁴⁾	
Weight (Typ)	g	800	1160
Size	in	1.6 x 3.75 x 10.8"	1.6 x 4.92 x 10.8
Warranty	yrs	Three Years	

(1) Worse case: <300µA 264VAC, 63Hz (normal condition, <500µA single fault condition)

(2) Output 2 remote on/off inhibits just Output 2 of DB module

(3) -20°C cold start, derate from 45°C for NV7 when input voltage < 100VAC

(4) See application note for Class B

(5) C, CC, CM modules only

(6) Units with any other module or primary option fitted

(7) Type tested to 4kVAC (equivalent to 5.7VDC), production tested to 4.3 kVDC

(8) CM modules are rated 500VAC output to ground.

450-900W Multiple Output Modular Power Supply

Features

- Up to 11 Outputs
- Forward/Reverse/Low Noise/System Air Cooling
- Output Voltages From 0.5V - 62V
- 48VDC Input Option
- Medical Approval Options
- MIL-STD-810 Shock and Vibration
- PFC compliant to EN61000-3-2
- Safety Agency Approvals EN, cULus, BSI, CE



[Full Datasheet](#)

<https://product.tdk.com/en/power/vega>

Specifications				
Model		VEGA 450	VEGA 650	VEGA 900
Input Voltage Range (47-440Hz with reduced PFC)	-	90 - 264VAC 47-63Hz ⁽¹⁾ or 34-75VDC	90-264VAC 47-63Hz ⁽¹⁾	150-264VAC 47-63Hz
Input Current (Typ. at 90VAC)	A	7.7A	11A	9.2A at 150VAC
Efficiency (Typ.)	%	75% at 230VAC (or 48VDC) and full load, configuration dependent		
Nominal Output Voltages	VDC	0.5 - 62 (See configuration guide)		
Output Voltage Adjustment	-	Wide range, via potentiometer or remote adjust pin, module dependent		
Minimum Load	A	0A		
Max Output Power	W	450 ⁽²⁾	650	900
Max Ripple & Noise (pk-pk)	mV	<1% (or 50mV which ever is greater) using EIAJ test method & 20MHz bandwidth		
Regulation (load, line, cross)	%	Less than 0.5%		
Hold Up Time	ms	16ms min at 90VAC (150VAC for 900W, 10ms for 450WDC input)		
Over Voltage Protection	%	120 - 150% (See website for more details)		
Overload/Short Circuit	%	105-125%, constant current characteristic, 150% max short circuit current.		
Remote ON/OFF Control	-	A TTL compatible signal will turn ON/OFF all output modules (optional)		
Remote Sense	V	Compensates for total of 0.75V total line drop (optional on dual output modules)		
Isolation (3)	-	Input-Output 4.3kVDC ⁽³⁾ ; (2 x MOPPs (3rd edition 60601)), Input-Ground 2.3kVDC; Output-Ground 200VDC		
Conducted EMI	-	EN55022 Class B, (as per CISPR .22), Class A for 48V input		
Radiated EMI	-	EN55022 Class B, (as per CISPR .22)		
Operating Temperature	°C	0°C to 50°C, derate ea. output @ 2.5%/°C from 50°C to 65°C. ⁽⁴⁾ Consult factory for 70°C operation. -20°C startup requires a 30 min. warm-up period.		
Cooling	-	Forced Air Cooled		
Dynamic Load Response	-	<6% or 300mV of set voltage for 50% load change (above 25% load), recovery to within 1% of nominal within 500 μs		
Safety Agency Approvals (601-1 not available on 48V input)	-	UL/CSA/IEC/EN 60950-1, UL/CSA/IEC/EN62368-1, UL/CSA/IEC/EN 60601-1, ANSI/AAMI ES60601-1, IEC/EN 61010-1, CE Mark		
Vibration	G	MIL-STD-810E, Method 514.4, Pro I, Cat 1, 9		
Shock	G	2G, 10-200Hz sweep for 1hr to search for resonant. 6G random, 6-Axis to IEC68-2-64		
Switching Frequency	kHz	MIL-STD-810F, Method 516.5, Pro I, IV, VI; 20G per IEC68-2-27		
Weight (Typ.)	lbs	200		
Size (L×W×H)	in(mm)	3.0 lbs. + 0.25 lbs. / used slot; maximum # of slots =5		
Warranty	yrs	10.6" x 5" x 2.5" (270.65mm x 126.5mm x 62.8mm)		
		3 Years		

Consult datasheet and application notes for detailed specifications and test methods.

(1) Will operate with 130-330VDC, CE Mark safety approval only applies.

(2) DC Input <44V input 370W

(3) 4kVAC Type tested (non-production test). Refer to CB Report

(4) 450WDC 1.5%/°C

550-900W Multiple Output Modular Power Supply

Features

- Suitable for higher volume applications
- Up to 11 Outputs
- Output Voltages From 1.8 - 56V
- Medical Approval Options
- MIL-STD-810 Shock and Vibration
- PFC compliant to EN61000-3-2
- Safety Agency Approvals EN, cULus, BSI, CE



[Full Datasheet](#)

<https://product.tdk.com/en/power/vega>

Specifications

Model			VEGA Lite 550	VEGA Lite 750
Input Voltage Range	(1)	-	85-264VAC 47-63Hz(2)	85-264VAC 47-63Hz(2)
Efficiency (Typ.)		%	75% at 230VAC and full load, configuration dependent	
Nominal Output Voltages		VDC	1.8 - 56V (See page 2)	
Output Voltage Adjustment		-	Wide range, via potentiometer or remote adjust pin, module dependent	
Minimum Load		A	0A	
Max Output Power	(3)	W	700 ⁽³⁾	900 ⁽³⁾
Max Ripple & Noise (pk-pk)		mV	<1% (or 50mV which ever is greater) using EIAJ test method & 20MHz bandwidth	
Regulation (load, line, cross)		%	Less than 0.5%	
Hold Up Time		ms	16ms min at 100VAC and full load	
Over Voltage Protection		%	120% - 150% (See website for more details)	
Overload/Short Circuit		%	105-125%, constant current characteristic, 150% max short circuit current	
Remote ON/OFF Control		-	A TTL compatible signal will turn ON/OFF all output modules (optional)	
Remote Sense		V	Compensates for total of 0.75 volts total line drop (optional on dual output modules)	
Isolation	(4)	-	Input-Output 4.3kVDC ⁽⁴⁾ ; (2 x MOPPs (3rd edition 60601)); Input-Ground 2.3kVDC; Output-Ground 200VDC	
Conducted EMI		-	EN55022 Class B, (as per CISPR .22)	
Radiated EMI		-	EN55022 Class B, (as per CISPR .22)	
Operating Temperature		°C	0°C to 50°C, derate ea. output @ 2.5%/°C from 50°C to 65°C. Consult factory for 70°C operation. -20°C startup requires a 30 min. warm-up period.	
Cooling		-	Internal fan	
Dynamic Load Response		-	<6% or 300mV of set voltage for 50% load change (above 25% load), recovery to within 1% of nominal within 500 microseconds.	
Safety Agency Approvals		-	UL/CSA/IEC/EN 60950-1, UL/CSA/IEC/EN62368-1, UL/CSA/IEC/EN 60601-1, ANSI/AAMI ES60601-1, IEC/EN 61010-1, CE Mark	
Vibration		G	MIL-STD-810E, Method 514.4, Pro I, Cat 1, 9 2G, 10-200Hz sweep for 1hr to search for resonant. 6G random, 6-Axis to IEC68-2-64	
Shock		G	MIL-STD-810F, Method 516.5, Pro I, IV, VI; 20G per IEC68-2-27	
Switching Frequency		kHz	200	
Weight (Typ.)		lbs	3.0 lbs. + 0.25 lbs. / used slot; maximum # of slots =5	
Size (L×W×H)		in(mm)	10.6" x 5" x 2.5" (270.65mm x 126.5mm x 62.8mm)	
Warranty		yrs	3 Years	

Consult datasheet and application notes for detailed specifications and test methods.

- (1) 440Hz with reduced PFC, consult factory
- (2) Will operate with 130-330VDC, CE Mark safety approval only applies.
- (3) See input derating curves
- (4) 4kVAC type tested (non-production test). Refer to CB report

600W / 800W 1U Modular Power Supplies



Medical



Industrial



Test



COMM



Broadcast



Renewable

[Full datasheet](#)

<https://product.tdk.com/en/power/mu>

The 1U high modular MU4 Series AC-DC power supply measures 41 x 89 x 254mm, providing 600 to 800W and up to 5 outputs with a seamless 3.3 – 104V range, the MU4 employs a patent pending intelligent fan control circuit, rated down to 36dBA for low audible noise requirements. The series has 2 MOPP (4kVac) input to output, 1 MOPP (1.5kVac) input to ground, and 1 MOPP (1.5kVac) output to ground isolation, making it suitable for BF (body floating) rated equipment. Optional PMBus™ communication is available, while the modular construction allows for flexible non-standard output voltage combinations, omitting engineering charges and minimizing the risk of development delays. Creating MU4 products is very easy using the online configurator: <https://config.emea.tdk-lambda.com/>. It provides an optimized module selection with your choice of remote on/off and AC fail signals. Entering your parameters of choice (voltages/currents/standby) will yield an eight character code for easy order placement.

Features

- Extremely low audible noise fan
- BF ready medical isolation (MOPP)
- Up to 5 outputs
- PMBus™ communication option
- 7 year warranty

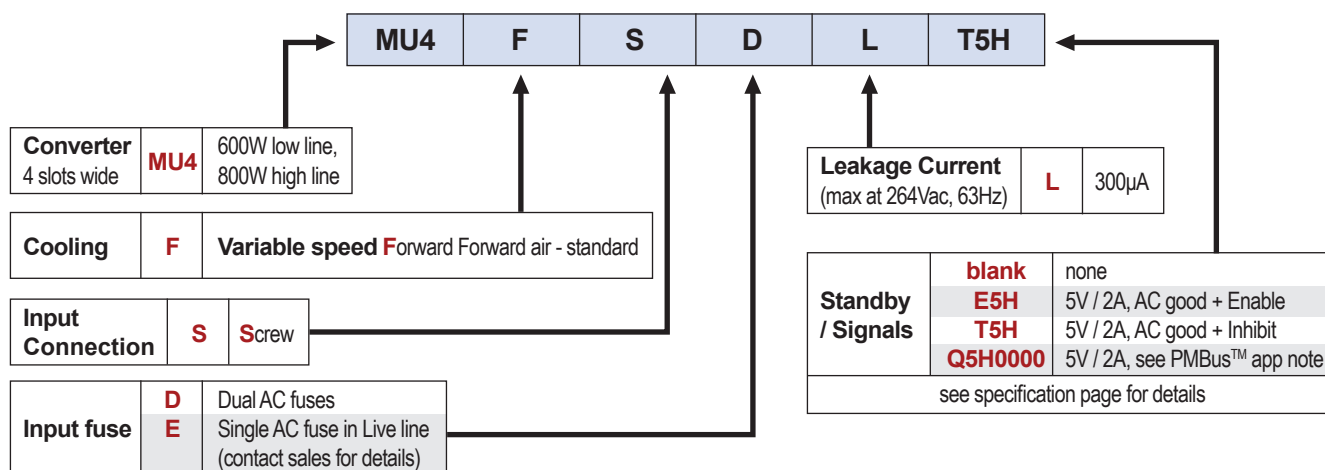
Benefits

- Enhanced patient / user experience
- Eases design into systems (including BF)
- Eliminates need for additional supplies
- Remote monitoring and control
- Low cost of ownership

How To Create A Product Description

The extensive range of output modules and options make it possible to achieve almost any combination of Volts and Amps. You can create your own MU configuration online at <https://config.emea.tdk-lambda.com/>. This method checks your configuration and offers the optimum solution. Alternatively, you can do this manually by using the guide below.

1. Calculate total output power to select the appropriate converter, then select the required Cooling, Input Connection, Input Fuse, Leakage Current and Controls/Signals from the following table:
2. Select Output Modules using the output voltages tables and the module specifications.
3. Contact TDK-Lambda to validate configuration and issue a part number.

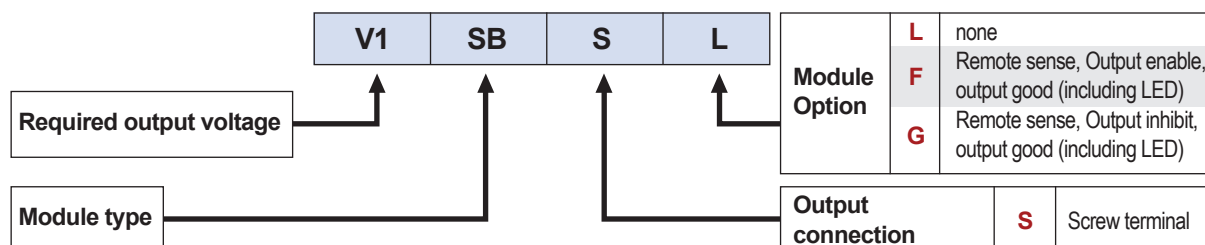


Possible Outputs - see individual module data for full specifications

Module Name	Slots Used	Output Voltage Range	Maximum Output Current	Maximum Output Power
SB	1	3.3V - 6V	30A	150W
ZC	2	3.3V - 6V	54A	260W
SB	1	6V - 15V	20A	240W
YC	2	6.6V - 12V	30A	300W
YC	2	12V - 30V	20A	480W
SB	1	15V - 30V	10A	240W
SB	1	30V - 52V	5A	240W
YC	2	30V - 60V	10A	480W
YC	2	60V - 104V	5A	480W

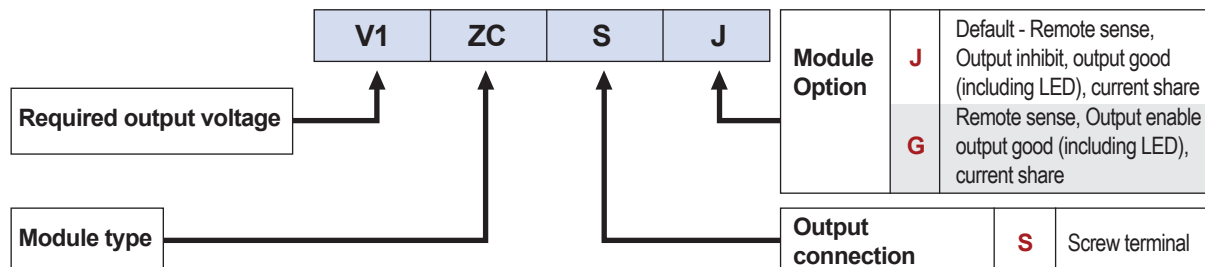
Choose your required output voltage (from the table above)

For example, if you need 12V / 20A with remote sense, you would choose **12 BSF** or **G** as your required module.



If you need 48V / 10A with remote sense, you would choose **48YCSG** or **F** as your required module.

If you need 3.3V / 54A with remote sense, as shown below you would choose **3.3ZCSJ** as your required module.



Full description example **MU4FSDLT5H 12SBSF 3.3ZCSJ 24SBSG** calls out the following:

600W low line / 800W high line converter, variable speed forward air fan, screw input terminals, dual AC fuses, 300uA leakage current, 5V/2A standby, AC good signal, Inhibit remote on/off

Outputs (screw terminals): 12V/20A with remote sense, enable remote on/off, output good ; 3.3V/54A with remote sense, inhibit remote on/off, output good, current share ; 24V/10A with remote sense, inhibit remote on/off, output good.

550-2000W Multiple Output Modular Power Supplies

Features

- Full Medical Isolation (MOPP)
- Low Speed, Low Audible Noise Fan
- Up to 18 Outputs
- Industry Leading Flexibility
- 7 Year Warranty
- Suitable for B and BF Rated Equipment
- PMBus™ Communication Option



[Full Datasheet QM4](#)

[Full Datasheet QM5](#)

<https://product.tdk.com/en/power/qm>

Specifications

Model		QM4		QM5	QM5H
Input Voltage Range	VAC	550W output: 90 - 264VAC 650W output: 180 - 264VAC		700W output: 90 - 264VAC 800W output: 180 - 264VAC	700W output: 90 - 264VAC 1200W output: 180 - 264VAC
Input Frequency Range	Hz	47 - 63Hz (440Hz with reduced PFC)			
Inrush Current	A	<40A at 25°C & 264VAC (cold start)			
Input Current (Max)	A	7.1A / 4.2A (90/180VAC)		9A / 5.2A (90/180VAC)	9A / 7.8A (90/180VAC)
Touch Current	µA	<100µA (with 4 or fewer modules) (1)			
Power Factor Correction	-	> 0.95 (at 100% load), Meets EN61000-3-2			
Efficiency	-	up to 91% , 240VAC & above 50% rated power, configuration dependent			
Overcurrent Protection	-	Hiccup/constant current style - Module dependent (1)			
Overvoltage Protection	-	Latching. Output shut down, cycle AC to reset (1)			
Overtemperature Protection	-	Converter: auto restart (fan off); Modules: individually protected			
Hold up time	ms	550W output: > 16ms 650W output: > 10ms		700W output: > 16ms 1200W output: > 10ms	
Leakage Current (maximum)	µA	L option: 212µA; R option: 77µA (264VAC, 63Hz) (2)			
Remote Sense Compensation	-	Module dependent (1)			
Remote On/Off	-	Module & Converter option dependent (1)			
AC Fail Signal	-	Available with all Signal Option Types			
DC Good Signal	-	Open collector, standard on all output modules			
Remote on/off	-	Converter: Inhibit or Enable (Signal Option Type dependent). Modules: Inhibit.			
PMBus™ Interface	-	Power supply on/off, fan speed/warning, temperature read back/warning, run time and manufacturing data			
Standby Output	-	5V/250mA / 5V/2A / 12V/1A (Standby Option Type dependent)			
Operating Temperature	°C	-20 to +70°C, derate linearly to 50% load from 50 to 70°C; -40°C start up.			
Storage Temperature	°C	-40°C to +70°C (max 12 months)			
Humidity (Non condensing)	%RH	5 - 95%RH			
Cooling	-	One variable, low speed internal fan			
Audible Noise	dBA	40.3 dBA @ 25°C / 54.9 dBA @ 50°C QM5I: 36.9 dBA @ 25°C / 51 dBA @ 50°C per BS ISO 3744:2010			
Withstand Voltage	-	Input to Output: 4kVAC (production tested to 4.3kVDC) (2xMoPP), Input to Ground: 1.5kVAC (1xMoPP), Output to Ground: 1.5kVAC (1xMoPP), Output to Output: 200VDC			
Vibration	-	Conforms to EN60068-2-6, IEC68-2-6, MIL-STD-810G, Method 514.6, Pro I			
Shock	-	Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987, MIL-STD-810G, Method 516.6, Pro I, IV			
Safety Agency Certifications	-	IEC/EN/UL/CSA 62368-1, IEC/EN/UL/CSA 60950-1, IEC/EN/UL/CSA 60601-1 ANSI/AAMI ES60601-1 & CE Mark. IEC/EN61010 included in 60950 report			
Altitude	m	5,000m			
Emissions	-	EN61000-6-3:2007, EN60601-1-2:2015 4th Edition, EN55011B, EN55032B, Class B radiated & conducted			
Immunity	-	EN61000-6-2:2005, EN60601-1-2:2015			
Size (W x H x D)	in	4.3 x 2.5 x 10.6"		5 x 2.5 x 10.6"	5 x 2.5 x 10.6"
	mm	108 x 63.3 x 270mm		127 x 63.3 x 270mm	127 x 63.3 x 270mm
Weight	g	See Application Notes			
Warranty	yrs	Seven Years			

(1) See website for detailed specifications

(2) Must also add the leakage current from modules and options

550-2000W Multiple Output Modular Power Supplies

Features

- Full Medical Isolation (MOPP)
- Low Speed, Low Audible Noise Fan
- Up to 18 Outputs
- Industry Leading Flexibility
- 7 Year Warranty
- Suitable for B and BF Rated Equipment
- PMBus™ Communication Option



Medical



Industrial



Test



COMM



Broadcast



Renewable



RoHS

[Full Datasheet QM7](#)

[Full Datasheet QM8](#)

<https://product.tdk.com/en/power/qm>

Specifications

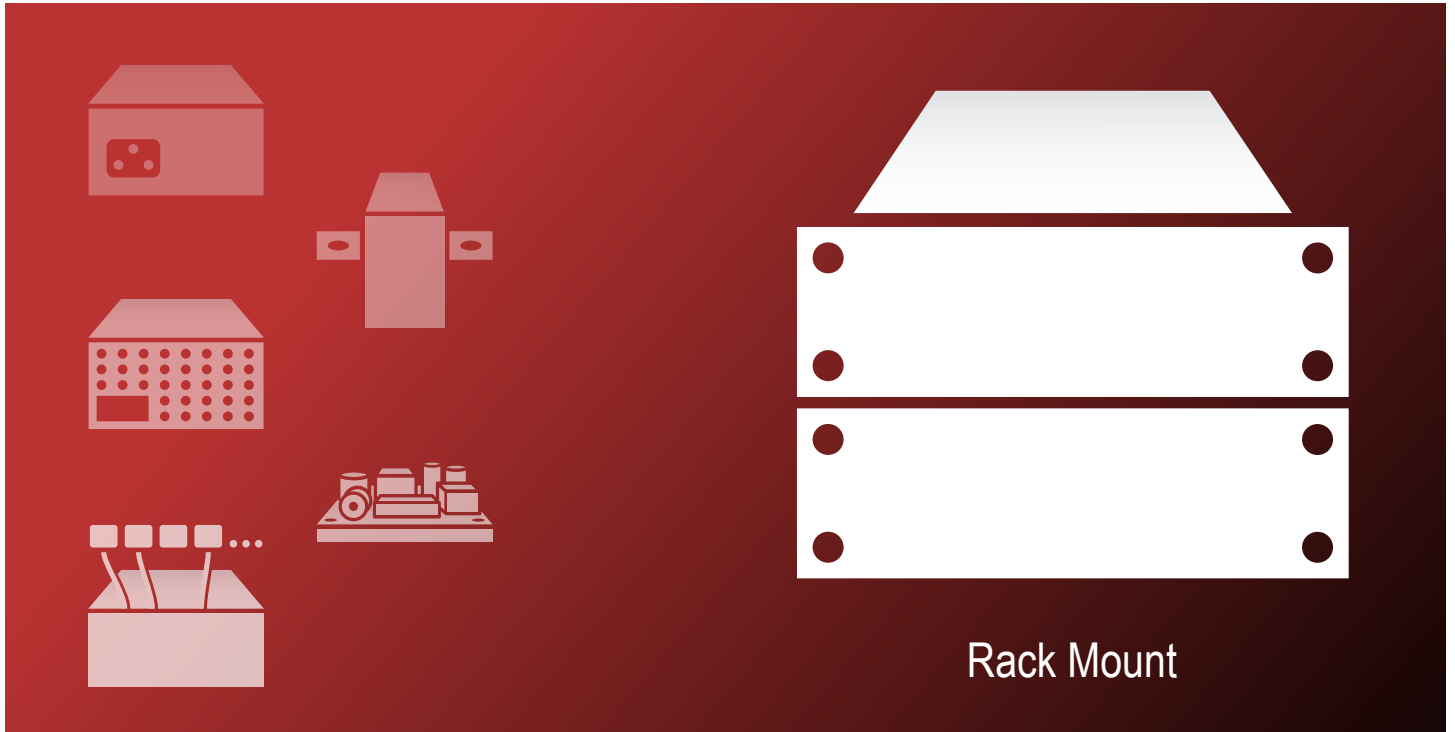
Model		QM7	QM8	QM8B
Input Voltage Range	VAC	1200W output 90 - 264 VAC 1500W output: 150 - 264VAC	1200W output 90 - 264 VAC 1500W output: 180 - 264VAC	1200W output 90 - 264 VAC 2000W output: 180 - 264VAC
Input Frequency Range	Hz	47 - 63Hz (440Hz with reduced PFC)		
Inrush Current	A	<45A at 25°C & 264VAC (cold start)		
Input Current (Max)	A	15.5A / 11.6A (90/150VAC)	15.5A / 9.6A (90/180VAC)	15.5A / 12.9A (90/180VAC)
Touch Current	µA	<100µA (with 4 or fewer modules) (1)		
Power Factor Correction	-	> 0.95 (at 100% load), Meets EN61000-3-2		
Efficiency	-	up to 91% , 240VAC & above 50% rated power, configuration dependent		
Overcurrent Protection	-	Hiccup/constant current style - Module dependent (1)		
Overvoltage Protection	-	Latching. Output shut down, cycle AC to reset (1)		
Overtemperature Protection	-	Converter: auto restart (fan off); Modules: individually protected		
Hold up time	ms	1200W output: > 20ms 1500W output: > 16ms	1200W output: > 20ms 1500W output: > 16ms	1200W output: > 20ms 2000W output: > 16ms
Leakage Current (maximum)	µA	L option: 214µA; R option: 77µA (264VAC, 63Hz) (2)		
Remote Sense Compensation	-	Module dependent (1)		
Remote On/Off	-	Module & Converter option dependent (1)		
AC Fail Signal	-	Available with all Signal Option Types		
DC Good Signal	-	Open collector, standard on all output modules		
Remote on/off	-	Converter: Inhibit or Enable (Signal Option Type dependent). Modules: Inhibit.		
PMBus™ Interface	-	Power supply on/off, fan speed/warning, temperature read back/warning, run time and manufacturing data		
Standby Output	-	5V/250mA / 5V/2A / 12V/1A (Standby Option Type dependent)		
Operating Temperature	°C	-20 to +70°C, derate linearly to 50% load from 50 to 70°C; -40°C start up.		
Storage Temperature	°C	-40°C to +70°C (max 12 months)		
Humidity (Non condensing)	%RH	5 - 95%RH		
Cooling	-	Two variable, low speed internal fans		
Audible Noise	dBA	43.6 dBA @ 25°C 57.3 dBA @ 50°C per BS ISO 3744:2010		
Withstand Voltage	-	Input to Output: 4kVAC (production tested to 4.3kVDC) (2xMoPP), Input to Ground: 1.5kVAC (1xMoPP), Output to Ground: 1.5kVAC (1xMoPP), Output to Output: 200VDC		
Vibration	-	Conforms to EN60068-2-6, IEC68-2-6, MIL-STD-810G, Method 514.6, Pro I		
Shock	-	Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987, MIL-STD-810G, Method 516.6, Pro I, IV		
Safety Agency Certifications	-	IEC/EN/UL/CSA 62368-1, IEC/EN/UL/CSA 60950-1, IEC/EN/UL/CSA 60601-1 ANSI/AAMI ES60601-1 & CE Mark. IEC/EN61010 included in 60950 report		
Altitude	m	5,000m		
Emissions	-	EN61000-6-3:2007, EN60601-1-2:2015 4th Edition, EN55011B, EN55032B, Class B radiated & conducted		
Immunity	-	EN61000-6-2:2005, EN60601-1-2:2015		
Size (W x H x D)	in	6.9 x 2.5 x 10.6"	7.9 x 2.5 x 10.6"	
	mm	176 x 63.3 x 270mm	200 x 63.3 x 270mm	
Weight	g	See Application Notes		
Warranty	yrs	Seven Years		

(1) See website for detailed specifications

(2) Must also add the leakage current from modular and options



AC-DC Rack Mount



Applications

- High Reliability applications with n+1 redundancy
- High Power applications for cabinet mounting
- Broadcast, RF-Amplifiers, Telecoms
- Distributed Power

Features

- 19" rack with hot-swap power modules – up to 10kW in 1U
- Modules have integrated ORing MOSFETs for redundant operation
- Individual IEC connectors or terminal blocks for mains input
- Parallel operation between racks with active current sharing for higher output power levels
- 12V, 24V, 32V, 48V and 385V supplies for bus-voltages in distributed power architecture and other applications

AC/DC Rack Mount Index by Wattage

Wattage	Number of Outputs	Series	Page
1600W	1	HFE1600	49
2500W	1	HFE2500	50
200-800W	1	Z+ Low Voltage	107
200-800W	1	Z+ High Voltage	108
600-15000	1	<i>Genesys™</i>	109-114
1000-15600	1	<i>GENESYS+™</i>	115-122
4000-50000	1	ALE-Rack Mount	93
4500-45000	1	TPF45000	51
300-1000	1	SFL Electronic Loads	123
2500	1	EZA2500 (DC/DC)	157
11000	1	EZA11K-320240 (DC/DC)	158
2000-3000	1	GENESYS™ AC and GENESYS™ AC PRO	124-125

Listed by Wattage

1600W 1U Front End Power Supplies



Industrial



COTS



Test



COMM



Broadcast



[Full Datasheet](#)

<https://product.tdk.com/en/power/hfe>

The HFE1600 AC-DC industrial power supplies can be operated in a hot-swap redundant configuration, or used to provide up to 7,600W of bulk power. Up to five power supplies can be fitted in a variety of 19" 1U high racks, for configuration as a single or dual output. The HFE supplies have internal ORing MOSFETs and current share for automatic parallel operation. Communication is possible with the power supplies using the optional isolated PMBus™ (I²C) interface or a plug-in LAN module. AC fail, DC good, remote output adjust, remote on/off and a 12V auxiliary output are fitted as standard.

Features

- Internal ORing MOSFET and Current Share
- Up to 7600W in 1U Rack
- Full Array of Signals Available
- PMBus™ (I²C) and LAN options
- Analog Output Adjustment

Benefits

- Suitable For N+1 Redundancy
- Utilizes Less System Space
- Easy Remote Monitoring
- Industry Standard Communication Interfaces
- Simple External Resistance or Voltage Connection

Model Selector

Model	Output Voltage (V)	Adjustment Range (V) ⁽¹⁾	Max Current (A) (Vin>170Vac)	Max Power (W) (Vin>170Vac)	Max Current (A) (100<Vin<170Vac) ⁽²⁾	Max Power (W) (100<Vin<170Vac) ⁽²⁾
HFE1600-12	12	9.6 - 13.2	133	1596	100	1200
HFE1600-24	24	19.2 - 29	67	1608	50	1200
HFE1600-32	32	25.6 - 38.4	47	1500	37.5	1200
HFE1600-48	48	38.4 - 58	33	1584	25	1200

HFE1600-	12	/	S
	Output voltage 12, 24, 32, 48		blank No PMBus™ / I ² C S PMBus™ / I ² C interface

Model Selector (Racks and LAN)

Model	Description	Maximum Rack Current
HFE1600-S1U	Five slot 19" rack, IEC320-C16 input connectors (5)	266A each side (532A total)
HFE1600-S1U-TB	Five slot 19" rack, terminal block input connectors (5)	266A each side (532A total)
HFE1600/BP	One slot blanking panel, four provided with each rack	-
HFE/C15U	AC Power cord, 2.0m long, one per power supply required	-
HFE1600-D1U	Four slot (two isolated pairs), dual output 19" rack, IEC320 input	266A each side (532A total)
HFE1600-D1U-TB	Four slot (two isolated pairs), dual output 19" rack, terminal block input	266A each side (532A total)
HFE1600-LAN	Plug in LAN module. Takes up one rack slot. For use with /S power supplies only.	-

2500W 1U Front End Power Supplies



Industrial



COTS



Test



COMM



Broadcast



[Full Datasheet](#)

<https://product.tdk.com/en/power/hfe>

The HFE2500 AC-DC industrial power supplies can be operated in a hot-swap redundant configuration, or used to provide up to 9,500W of bulk power. Up to four power supplies can be fitted in a variety of 19" 1U high racks, for configuration as a single output. The HFE supplies have internal ORing MOSFETs and current share for automatic parallel operation. Communication is possible with the power supplies using the optional isolated PMBus™ (I²C) interface or a plug-in LAN module. AC fail, DC good, remote output adjust, remote on/off and a 12V auxiliary output are fitted as standard.

Features

- Internal ORing MOSFET and Current Share
- Up to 9500W in 1U Rack
- Full Array of Signals Available
- PMBus™ (I²C) and LAN options
- Analog Output Adjustment

Benefits

- Suitable For N+1 Redundancy
- Utilizes Less System Space
- Easy Remote Monitoring
- Industry Standard Communication Interfaces
- Simple External Resistance or Voltage Connection

Model Selector

Model	Output Voltage (V)	Adjustment Range (V) ⁽¹⁾	Max Current (A) (Vin>180Vac)	Max Power (W) (Vin>180Vac)	Max Current (A) (100<Vin<170Vac) ⁽²⁾	Max Power (W) (100<Vin<170Vac) ⁽²⁾
HFE2500-12	12	9.6 - 13.2	200	2400	125	1500
HFE2500-24	24	19.2 - 29	104	2496	62.5	1500
HFE2500-48	48	38.4V - 58	52	2496	31.25	1500

HFE2500-	12	/	S
	Output voltage 12, 24, 48		blank No PMBus™ / I ² C S PMBus™ / I ² C interface

Model Selector (Racks and LAN)

Model	Description	Maximum Rack Current
HFE2500-S1U	Four slot 19" rack, IEC320-C20 input connectors (4)	320A each side (640A total)
HFE2500-S1U-TB	Four slot 19" rack, Terminal Block input connectors (4)	320A each side (640A total)
HFE2500/BP	One slot blanking panel, three panels come with each rack	
HFE/C19-U-O	AC Power cord, 2.0m long, one per supply required	
HFE2500-LAN	Plug in LAN Module. Takes up one rack slot. For use with /S power supplies only.	

45kW 3-Phase Input Non-isolated 385Vdc Power Supplies



Industrial



Test



LED



Semi-Fab



[Full Datasheet](#)

<https://product.tdk.com/en/power/tpf>

The TPF45000-385 non-isolated modular power supply offers output power levels up to 45kW and accepts 400/440/480Vac 3 phase delta or Wye inputs. Providing a regulated 385Vdc output, the product can be used to provide a high voltage source to power isolated DC-DC converters used in distributed power architecture systems. With an operating efficiency of 98%, waste heat is dramatically reduced, avoiding the need for water cooling. PMBus™ and USB interfaces are available for monitoring and control. Containing ten 4,500W modules, the TPF45000 can be scaled down for lower power requirements.

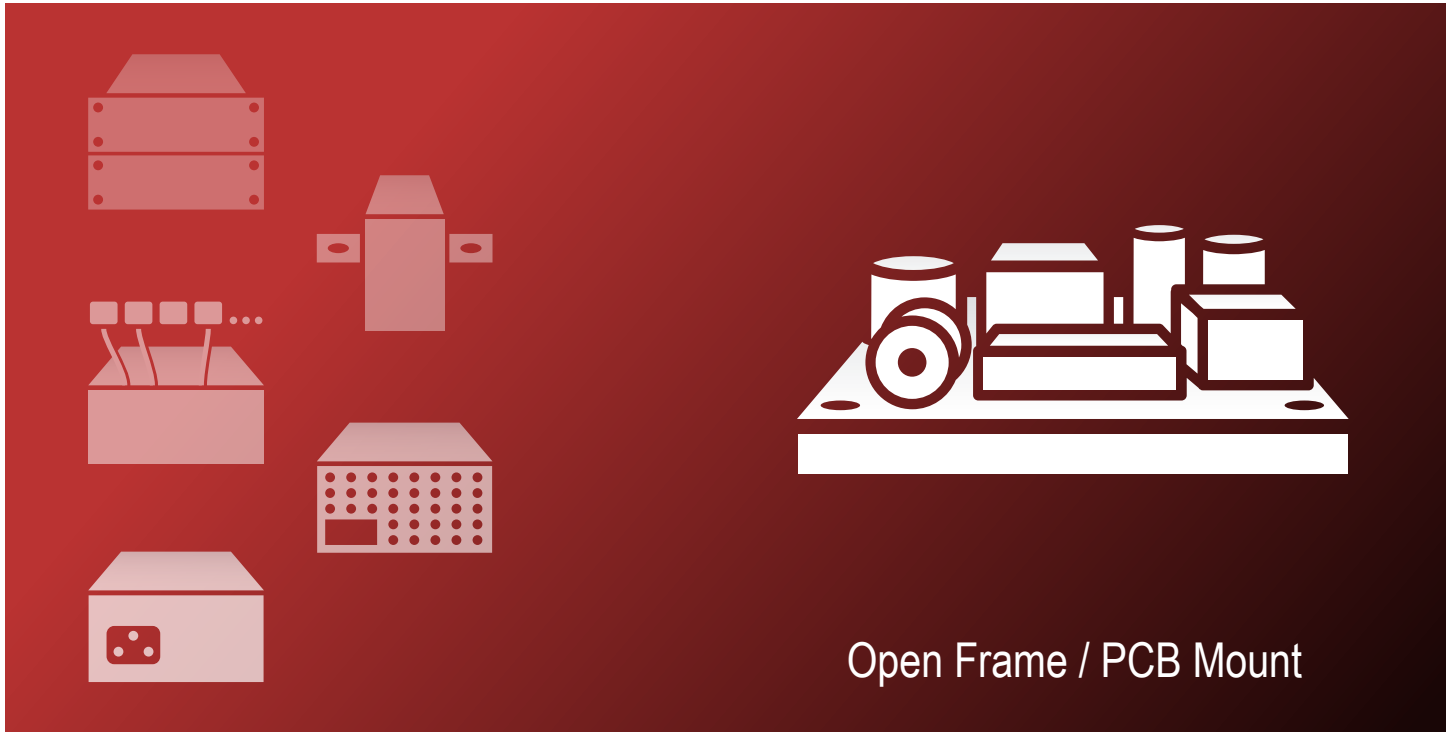
Features	Benefits
• 400/440/480 Vac (Nominal) 3 Phase Delta or Wye Inputs	• Global Use
• PMBus™ and USB Interfaces	• Flexible Control and Monitoring
• -20°C (Start-Up) to +50°C Operation	• Suitable for Industrial Environments
• 98% Efficient	• Less Energy Used
• Less than 30kg Weight	• Easier Handling

Model Selector						
Model	Nominal Output Voltage (V)	Adjustment Range (V)	Rated Current (A)	Maximum Current (A) ⁽¹⁾	Rated Power (W)	Maximum Power (W) ⁽¹⁾
TPF45000-385	385	Fixed	110	117	42,000	45,000
Optional model configurations*						
TPF45000-385-1	385	Fixed	11	11.7	4,200	4,500
TPF45000-385-2	385	Fixed	22	23.4	8,400	9,000
TPF45000-385-3	385	Fixed	33	35.1	12,600	13,500
TPF45000-385-4	385	Fixed	44	46.8	16,800	18,000
TPF45000-385-5	385	Fixed	55	58.5	21,000	22,500
TPF45000-385-6	385	Fixed	66	70.2	25,200	27,000
TPF45000-385-7	385	Fixed	77	81.9	29,400	31,500
TPF45000-385-8	385	Fixed	88	93.6	33,600	36,000
TPF45000-385-9	385	Fixed	99	105.3	37,800	40,500

* Contact factory for availability. Minimum order quantities may apply



AC-DC Open Frame / PCB Mount



Applications

Power Modules

- Industrial
- Medical
- Test & Measurement
- Communications
- Broadcast
- Lighting
- Distributed Power Architectures

Features

- 5 to 1000W output power
- Single-phase wide range input 85 – 265VAC
- Flexibility for different cooling concepts
- Single & Multiple Outputs
- ITE & Medical Safety Approvals

AC/DC Open Frame Index by Wattage

Wattage	Number of Outputs	Series	Page
10-30W	1	ZWS10-50C	54
30-60W	1	CUS30/60M	55
33-302W	1	ZWS-BAF	56
35W	3	CUT35	57
75W	2, 3	CUT75	58
100W	1	CUS100ME	59
150W	1	CUS150M	60
150-240W	1	ZWS-BP	61
175-200W	1-5	NV175	62
200-250W	1	CUS200M	63
240W	1	ZWS240RC-24	64
250W	1	CUS250M	65
350-1000W	1	CUS350MP	66
400W	1	CUS400M	67
480W/380ms holdup	1	ZBM20 (Hold Up Module)	68
500W	1	CUS500M1	69
500W	1	XMS500	70
600W	1	CUS600M	71

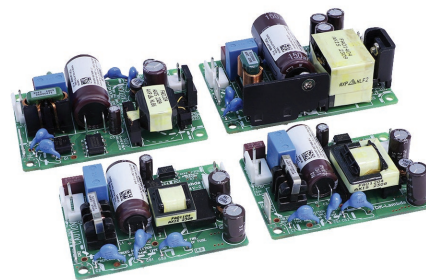
Listed by Wattage

AC/DC PCB Mount Index by Wattage

Wattage	Number of Outputs	Series	Page
4W	1	KAS	72
5-25W	1	KPSB	73
5-25W	1	KWS-A	74
15-60W	1	KMS-A	75
300-1000W	1	PFE300SA/500F/1000FA	76
500W	1	PFH500F	77

Listed by Wattage

10 to 60W Single Output, High Reliability Power Supplies



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/zws-c>

The ZWS-C industrial grade power supplies are used in a wide range of applications where equipment down-time cannot be tolerated during years of operation. Globally, process control, machinery, semiconductor fabrication and test and measurement equipment manufacturers depend upon the ZWS series to provide a reliable source of power. Conservatively rated electrolytic capacitor temperatures offer improved field life-times of up to 15 years. Available in four power levels, 10W, 15W, 30W and 50W, the series provides a choice of 5V, 12V, 15V, 24V and 48V (50W only) outputs. These compact products meet class B conducted and radiated EMI in either a Class I or Class II (double insulated) construction, without the need for external filtering. In addition to a double sided board coating option, L bracket and cover configurations are available, or terminal pins for printed circuit board mounting.

Features

- Up to 15 Year Electrolytic Capacitor Lifetimes
- Curve B Radiated and Conducted EMI
- Enclosure, Board Coating and Connection Options
- Can be used in Class I and Class II installations
- 5 year Warranty

Benefits

- Improved Field Life
- Easier System Compliance
- Simplified Mounting and Installation
- Flexible Utilisation
- Low Cost of Ownership

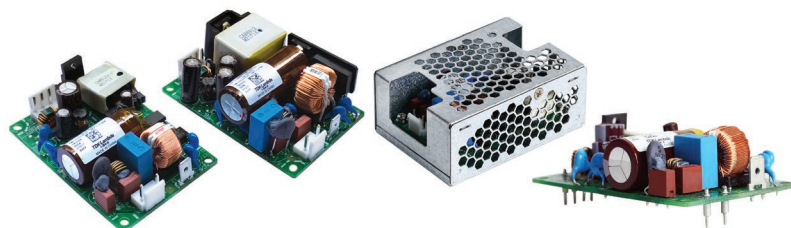
Model Selector

Model	Output Voltage (V) (Fixed)	Maximum Current (A) (100 / 200Vac)	Maximum Output Power (W) (100 / 200Vac)	Load Regulation (mV)	Over Voltage Protection (V)	Efficiency (Typ) (%) (100 / 200Vac)
ZWS10C-5	5	2	10	40	>5.75	77 / 78
ZWS15C-5	5	3	15	40	>5.75	76 / 78
ZWS30C-5	5	4	20	120	>5.75	80 / 82
ZWS50C-5	5	6 / 7	30 / 35	120	>5.75	80 / 81
ZWS10C-12	12	0.9	10.8	96	>13.8	82 / 83
ZWS15C-12	12	1.3 / 1.7	15.6 / 20.4	96	>13.8	80 / 83
ZWS30C-12	12	2.5 / 2.92	30 / 35	120	>13.8	84 / 86
ZWS50C-12	12	4.3 / 5	51.6 / 60	288	>13.8	83 / 86
ZWS10C-15	15	0.7	10.5	120	>17.25	83 / 84
ZWS15C-15	15	1.0 / 1.35	15 / 20.3	120	>17.25	81 / 84
ZWS30C-15	15	2.0 / 2.33	30 / 35	120	>17.25	85 / 87
ZWS50C-15	15	3.5 / 4	52.5 / 60	150	>17.25	84 / 87
ZWS10C-24	24	0.5	12	151	>26.88	84 / 85
ZWS15C-24	24	0.7 / 0.85	16.8 / 20.4	151	>26.88	82 / 85
ZWS30C-24	24	1.25 / 1.46	30 / 35	192	>27.6	86 / 88
ZWS50C-24	24	2.1 / 2.5	50.4 / 60	192	>27.6	85 / 87
ZWS50C-48	48	1.1 / 1.25	52.8 / 60	384	>55.2	86 / 88

ZWS	50	C	-	5	/A
Nominal power: 10, 15, 30, 50		Output voltage: 5, 12, 15, 24, 48			
					</

Contact factory for availability

Single Output 30 to 60W Medical & ITE Power Supplies



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

https://product.tdk.com/en/power/cus30_60m

The CUS30M and CUS60M are 2" x 3" footprint AC/DC power supplies with outputs ranging from 5V to 48V. They are certified to IEC60601-1 3rd edition (medical), IEC62368-1, EN60335-1 and EN61558-1 with compliance to EN60601-1-2:2015 Edition 4 immunity requirements. Rated at 30W and 60W, these compact products meet class B conducted and radiated EMI in either a Class I or Class II (double insulated) construction, without the need for external filtering.

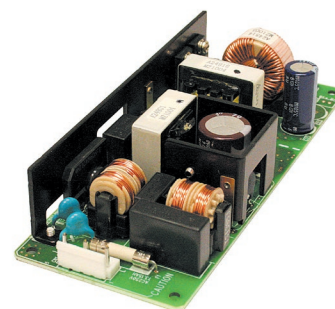
Features	Benefits
• 30 to 60W Convection Cooled	• Quiet Operation
• Medical Certification (2 x MoPP)	• Suitable for B and BF Rated Equipment
• Class B Conducted and Radiated EMI	• Easier System Compliance
• Suitable for Class I and II Installations	• Flexible Utilisation
• Compact 2" x 3" Footprint	• Space Saving in End Equipment
• Enclosure, Mounting and Connection Options	• Versatile Application

Model Selector								
Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV) ⁽¹⁾	Efficiency (typ) % ⁽²⁾	Average Active Efficiency (typ) % ⁽²⁾
CUS60M-5	5	6	30	100	20	120	81 / 81	81 / 79.5
CUS30M-12	12	2.5	30	120	48	120	87 / 88	87 / 87
CUS60M-12	12	5	60	120	48	120	87 / 88	87 / 86
CUS30M-15	15	2	30	120	60	150	87 / 88	87 / 87
CUS60M-15	15	4	60	120	60	150	87.5 / 87	87 / 86.5
CUS30M-18	18	1.7	30.6	144	72	150	87 / 88	87 / 87
CUS60M-18	18	3.35	60.3	144	72	150	88 / 88	87 / 87
CUS30M-24	24	1.25	30	192	96	150	88 / 90	87 / 87
CUS60M-24	24	2.5	60	192	96	150	89 / 90	88 / 87
CUS30M-36	36	0.84	30.24	288	144	200	88 / 90	88 / 89
CUS30M-48	48	0.63	30.24	384	192	200	88 / 90	88 / 89
CUS60M-48	48	1.25	60	384	192	200	90 / 91	90 / 89

Options	
Suffix	Description
Blank	Open frame, JST connectors
/A	Cover, JST connectors. See website for derating
/CO	Open frame, JST connectors, pcb coating
/M	Open frame, Molex 5195-03 & -04 mating connectors
/P	Open frame, JST connectors, Pcb mount
/SF	Open frame, JST connectors, single fuse, (Line only)

Option combinations are available, please contact your local sales office

33 to 302W Single Output, High Reliability Power Supplies



LED



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/zws-baf>

The ZWS-BAF industrial grade power supplies are used in a wide range of applications where equipment down-time cannot be tolerated during years of operation. Globally, process control, test and measurement equipment, machinery, semiconductor fabrication, communications and large LED display manufacturers depend upon the ZWS-BAF to provide a reliable source of power. Conservatively rated electrolytic capacitor temperatures offer improved field life-times of up to 10 years. Available in five power levels, 50W, 75W, 100W, 150W and 300W, the series provides a choice of 3.3 to 48V outputs. A variety of mechanical configurations are available, in addition to a double sided board coating option.

Features

- 10 Year Electrolytic Capacitor Lifetimes
- Convection Cooled
- Curve B Radiated and Conducted EMI
- 5 year Warranty

Benefits

- Improved Field Life
- Reduced Dirt and Dust Contamination
- Easier System Compliance
- Low Cost of Ownership

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Output Power (W)	Maximum Ripple & Noise (mV)	Over Current Protection (A)	Over Voltage Protection (V)	Efficiency (Typ) (%) (100/200Vac)
ZWS50BAF-3	3.3	2.97-3.63	10	33	160	>10.5	3.79-4.95	76 / 78
ZWS75BAF-3	3.3	2.97-3.63	15	49.5	160	>15.7	3.79-4.95	76 / 78
ZWS100BAF-3	3.3	2.97-3.63	20	66	160	>21.0	3.79-4.95	82 / 84
ZWS150BAF-3	3.3	2.97-3.63	30	99	160	>31.5	3.79-4.95	82 / 84
ZWS50BAF-5	5	4.5-5.5	10	50	160	>10.5	5.75-7.0	82 / 84
ZWS75BAF-5	5	4.5-5.5	15	75	160	>15.7	5.75-7.0	82 / 84
ZWS100BAF-5	5	4.5-5.5	20	100	160	>21.0	5.75-7.0	84 / 86
ZWS150BAF-5	5	4.5-5.5	30	150	160	>31.5	5.75-7.0	85 / 87
ZWS50BAF-12	12	10.8-13.2	4.3	51.6	180	>4.51	13.8-16.2	83 / 85
ZWS75BAF-12	12	10.8-13.2	6.3	75.6	180	>6.61	13.8-16.2	83 / 85
ZWS100BAF-12	12	10.8-13.2	8.5	102	180	>8.93	13.8-16.2	86 / 88
ZWS150BAF-12	12	10.8-13.2	12.5	150	180	>13.13	13.8-16.2	85 / 88
ZWS300BAF-12	12	10.8-13.2	25	300	180	>26.25	13.8-16.2	86 / 89
ZWS50BAF-15	15	13.5-16.5	3.5	52.5	180	>3.67	17.3-20.3	83 / 86
ZWS75BAF-15	15	13.5-16.5	5	75	180	>5.25	17.3-20.3	84 / 86
ZWS100BAF-15	15	13.5-16.5	6.7	100.5	180	>7.04	17.3-20.3	86 / 88
ZWS150BAF-15	15	13.5-16.5	10	150	180	>10.5	17.3-20.3	86 / 89
ZWS300BAF-15	15	13.5-16.5	20	300	180	>23.1	17.3-20.3	86 / 89
ZWS50BAF-24	24	21.6-26.4	2.1	50.4	180	>2.2	27.6-32.4	84 / 87
ZWS75BAF-24	24	21.6-26.4	3.2	76.8	180	>3.36	27.6-32.4	84 / 87
ZWS100BAF-24	24	21.6-26.4	4.3	103.2	180	>4.52	27.6-32.4	87 / 89
ZWS150BAF-24	24	21.6-26.4	6.3	151.2	180	>6.62	27.6-32.4	88 / 90
ZWS300BAF-24	24	21.6-26.4	12.5	300	180	>14.7	28.8-33.6	88 / 91
ZWS300BAF-36	36	32.4-39.6	8.4	302.4	300	>9.87	55.2-64.86	88 / 91
ZWS50BAF-48	48	39.5-52.8	1.1	52.8	240	>1.15	55.2-64.86	84 / 86
ZWS75BAF-48	48	39.5-52.8	1.6	76.8	240	>1.68	55.2-64.86	85 / 86
ZWS100BAF-48	48	39.5-52.8	2.1	100.8	240	>2.21	55.2-64.86	88 / 90
ZWS150BAF-48	48	39.5-52.8	3.2	153.6	240	>3.36	55.2-64.86	89 / 91
ZWS300BAF-48	48	39.5-52.8	6.3	302.4	300	>7.35	55.2-64.86	88 / 91

Dual and Triple Output 35W Low Profile Power Supplies



Medical



Industrial



Test



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/cut>

The triple output CUT35 power supplies have two independent, isolated, converters, one for the main 5V output, and one for the auxiliary outputs. This topology provides several benefits - no minimum loading, enhanced load & line regulation and the ability to connect the auxiliary outputs in series to generate either a 24V or 30V output. The series is certified to both the IEC60601-1 and IEC62368-1 safety standards. Several mechanical configurations are available - open frame, an attached baseplate or with a baseplate and cover enclosure.

Features	Benefits
• 2 x 4 Footprint With a Low 1.06" (27mm) Height	• Space Saving in End Equipment
• Output 1 Isolated From Outputs 2 & 3	• Flexible Utilization
• No Minimum Loading	• Reduced Load Regulation
• Open Frame, Baseplate or Enclosed Formats	• Versatile Mounting
• Three Year Warranty	• Low Cost of Ownership

Model Selector								
Model		Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Power (W)	Load Reg (mV)	Line Reg (mV) ⁽¹⁾	Ripple Noise (mV) ⁽¹⁾
CUT35-522	V1	5	5 - 5.25	3.0	15.0	100	50	120
	V2	+12	Fixed	1.2	20.4	600	240	150
	V3	-12	Fixed	0.9		600	240	150
CUT35-522	V1	5	5 - 5.25	3	15	100	50	120
	V2	24	Fixed	0.85	20.4	750	300	150
	(Leave common terminal unconnected)							
CUT35-5FF	V1	5	5 - 5.25	3	15	100	50	120
	V2	+15	Fixed	1	19.5	750	300	150
	V3	-15	Fixed	0.65		750	300	150
CUT35-5FF	V1	5	5 - 5.25	3	15	100	50	120
	V2	30	Fixed	0.65	19.5	750	300	150
	(Leave common terminal unconnected)							

CUT35-	522	/	A
Output voltage See model selector			blank Open frame /A Cover and baseplate /B Baseplate with no cover

75W Dual or Triple Output Low Profile Power Supplies



Medical



Industrial



Test



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/cut>

The triple output CUT75 power supplies have two independent, isolated, converters, one for the main 5V output, and one for the auxiliary outputs. This topology provides several benefits - no minimum loading, enhanced load & line regulation and the ability to connect the auxiliary outputs in series to generate either a 24V or 30V output. The series is certified to both the IEC60601-1 and IEC62368-1 safety standards. Several mechanical configurations are available - open frame, an attached baseplate or with a baseplate and cover enclosure. Screw terminal blocks for the input and output connectors can also be selected.

Features	Benefits
• 3 x 5 Footprint With a Low 1.06" (27mm) Height	• Space Saving in End Equipment
• Output 1 Isolated From Outputs 2 & 3	• Flexible Utilization
• No Minimum Loading	• Reduced Load Regulation
• Open Frame, Baseplate or Enclosed Formats	• Versatile Mounting
• Three Year Warranty	• Low Cost of Ownership

Model Selector								
Model		Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Power (W)	Load Reg (mV)	Line Reg (mV) ⁽¹⁾	Ripple Noise (mV) ⁽¹⁾
CUT75-522	V1	5	5 - 5.25	8.0	40.0	100	50	120
	V2	+12	Fixed	3.0	36.0	600	240	150
	V3	-12	Fixed	1.0		600	240	150
CUT75-522	V1	5	5 - 5.25	8.0	40.0	100	50	120
	V2	24	Fixed	1.0	24.0	750	300	150
	(Leave common terminal unconnected)							
CUT75-5FF	V1	5	5 - 5.25	8.0	40.0	100	50	120
	V2	+15	Fixed	2.5	37.5	750	300	150
	V3	-15	Fixed	1.0		750	300	150
CUT75-5FF	V1	5	5 - 5.25	8.0	40	100	50	120
	V2	30	Fixed	1.0	30	750	300	150
	(Leave common terminal unconnected)							

CUT75-	522	/	A
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Output voltage see model selector

blank	Open frame with JST connectors
/A	Cover with JST connectors
/B	Baseplate with JST connectors
/T	Open frame with screw connections
/TA	Cover with screw connections
/TB	Baseplate with screw connections

Preferred model

2 x 4" 100W AC-DC Power Supplies



Full Datasheet

<https://product.tdk.com/en/power/cus-m>

The compact CUS100ME is packaged in the industry standard 2x4" footprint. The series can deliver 100W convection cooled at 50°C or up to 75W at 85°C with forced air. Conduction cooled, the CUS100M can deliver 100W at 70°C and 50W at 80°C. With Medical & ITE certifications, the unit can used in both Class I & Class II (no ground wire) applications, and meets Class B Conducted and Radiated EMI. Enclosure options include a baseplate, U channel or U channel with a cover. Enclosure options include a baseplate, U channel or U channel with a cover.

Features	Benefits
• Up to 100W Utilizing Convection or Conduction Cooling	• Quiet Operation
• Operation in Ambient Temperatures of up to 85°C	• Suitable for High Ambient Temperature Environments
• Medical Certifications (2 x MOPP)	• Suitable for B and BF Type Medical Equipment
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• Suitable for Class I and Class II installations	• Flexible Utilisation
• Compact 2 x 4 x 1.24" Size	• Space Saving in End Equipment
• Enclosure & Cooling Options	• Versatile Application

Model Selector				
Model	Nominal Output Voltage (V)	Factory Set ⁽¹⁾ Output Voltage Capability (V)	Maximum Current Convection (A)	Maximum Power Convection (W)
CUS100ME-12	12	12 - 13.2	8.33	100
CUS100ME-15	15	15 - 16.5	6.66	100
CUS100ME-18	18	18 - 19.8	5.55	100
CUS100ME-24	24	24 - 26.4	4.16	100
CUS100ME-28	28	28 - 30.8	3.57	100
CUS100ME-36	36	36 - 39.6	2.77	100
CUS100ME-48	48	48 - 50	2.08	100

CUS100ME-	12	/	U	E	M
Output voltage 12, 15, 18, 24, 28, 36, 48			blank open frame U U channel A U channel with cover B baseplate	blank dual fuses E ⁽²⁾ single input fuse in line	blank JST connectors M ⁽²⁾ Molex connectors

Examples: CUS100ME-24/UEM, CUS100ME-12V5/A

2 x 4" 150W AC-DC Power Supplies



Medical



Industrial



Test



LED



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

The compact CUS150M is packaged in the industry standard 2x4" footprint. The series can deliver 150W with forced air in ambient temperatures of up to 50°C or 120W convection cooled at 40°C. Conduction cooled, the CUS150M can deliver 150W at 50°C, 100W at 70°C and 50W at 80°C. With Medical & ITE certifications, the unit can be used in both Class I & Class II (no ground wire) applications, and meets Class B Conducted and Radiated EMI. Enclosure options include baseplate, U channel, cover or top fan construction.

Features	Benefits
• Up to 150W Utilizing Convection or Conduction Cooling	• Quiet Operation
• Operation in Ambient Temperatures of up to 85°C	• Suitable for High Ambient Temperature Environments
• Medical Certifications (2 x MOPP)	• Suitable for B and BF Type Medical Equipment
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• Suitable for Class I and Class II installations	• Flexible Utilisation
• Compact 2 x 4 x 1.24" Size	• Space Saving in End Equipment
• Enclosure & Cooling Options	• Versatile Application

Model Selector

Model	Nominal Output Voltage (V)	Factory Set ⁽¹⁾ Output Voltage Capability (V)	Fan Supply (V)	Maximum Current Convection (A) ⁽²⁾	Maximum Current Forced Air (A)	Maximum Power Convection (W) ⁽²⁾	Maximum Power Forced Air (W)
CUS150M-12 or /B	12	12 - 13.2	11.6	10	12.5	120	150
CUS150M-12/A or /U	12	12 - 13.2	11.6	12.5	12.5	150	150
CUS150M-12/F	12	-	11.6	12.5	Internal fan	150	Internal fan
CUS150M-15 or /B	15	15 - 16.5	9.8	8	10	120	150
CUS150M-15/A or /U	15	15 - 16.5	9.8	10	10	150	150
CUS150M-15/F	15	-	9.8	10	Internal fan	150	Internal fan
CUS150M-18 or /B	18	18 - 19.8	11.6	6.66	8.33	120	150
CUS150M-18/A or /U	18	18 - 19.8	11.6	8.33	8.33	150	150
CUS150M-18/F	18	-	11.6	8.33	Internal fan	150	Internal fan
CUS150M-24 or /B	24	24 - 26.4	11.6	5	6.25	120	150
CUS150M-24/A or /U	24	24 - 26.4	11.6	6.25	6.25	150	150
CUS150M-24/F	24	-	11.6	6.25	Internal fan	150	Internal fan
CUS150M-28 or /B	28	28 - 30.8	10.8	4.28	5.35	120	150
CUS150M-28/A or /U	28	28 - 30.8	10.8	5.35	5.35	150	150
CUS150M-28/F	28	-	10.8	5.35	Internal fan	150	Internal fan
CUS150M-36 or /B	36	36 - 39.6	11.6	3.33	4.16	120	150
CUS150M-36/A or /U	36	36 - 39.6	11.6	4.16	4.16	150	150
CUS150M-36/F	36	-	11.6	4.16	Internal fan	150	Internal fan
CUS150M-48 or /B	48	48 - 50	11.6	2.5	3.12	120	150
CUS150M-48/A or /U	48	48 - 50	11.6	3.12	3.12	150	150
CUS150M-48/F	48	-	11.6	3.12	Internal fan	150	Internal fan

150 to 240W High Reliability Power Supplies with 200% Peak Power



Industrial



Test



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/zws-bp>

The ZWS-BP industrial grade power supplies are used in a wide range of applications where equipment down-time cannot be tolerated during years of operation. Globally, process control, test and measurement equipment, machinery, semiconductor fabrication, communications and printer manufacturers depend upon the ZWS-BP to provide a reliable source of power. Conservatively rated electrolytic capacitor temperatures offer improved field life-times of up to 10 years. They are available in 150W or 240W power levels (each with a 200% peak power capability for up to 5 seconds with a 40% duty cycle) with a choice of 24V, 36V and 48V outputs. A variety of mechanical configurations are available, in addition to a double sided board coating option.

Features

- Up to 200% Peak Power Capability
- 10 Year Electrolytic Capacitor Lifetimes
- Convection Cooled
- 5 year Warranty

Benefits

- Suitable for Powering Capacitive, Inductive and Thermal Printer Loads
- Improved Field Life
- Reduced Dirt and Dust Contamination
- Low Cost of Ownership

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Output Power (W)	Peak Current (A)	Peak Power (W) ⁽¹⁾	Efficiency (Typ) (%) (100/200Vac)
ZWS150BP-24	24	21.6 - 26.4	6.3	151.2	12	288	87 / 90
ZWS240BP-24	24	21.6 - 26.4	10	240	20	480	88 / 91
ZWS150BP-36	36	32.4 - 39.6	4.2	151.2	8	288	87 / 90
ZWS240BP-36	36	32.4 - 39.6	6.7	241.2	13.4	482.4	88 / 91
ZWS150BP-48	48	39.6 - 52.8	3.2	153.6	6	288	87 / 90
ZWS240BP-48	48	39.6 - 52.8	5	240	10	480	88 / 91

ZWS	240	BP	-	24	/	
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Nominal power:
150, 240

Output voltage:
24, 36, 48

Suffix	Description	Models
Blank	Open frame, JST connectors	ZWS150 - 240BP
/A	L-bracket, cover, JST connectors	ZWS150 - 240BP
/L	L-bracket, JST connectors	ZWS150 - 240BP
/CO2	Double sided PCB coating	ZWS150 - 240BP
/R	Remote on/off	ZWS150 - 240BP
/T	Screw terminal connections	ZWS240BP
/TA	Screw terminals, L bracket & cover	ZWS240BP

Preferred option

Option combinations are available, please contact your local sales office

175-200W, 3" x 5" Power Supplies

Features

- 1-5 Outputs
- Up to 90% Efficient
- Active Power Factor Correction
- Universal Input (90 - 264VAC)
- No Minimum Loads
- Medical Approvals (Basic Insulation Input-Output)



[Full Datasheet](#)

<https://product.tdk.com/en/power/nv>

Specifications

Model		NV175	
Input Voltage range	-	90 - 264VAC (47 - 63Hz, 440Hz with reduced PFC)	
Inrush Current	A	<40A at 25C and 230VAC input, Cold Start	
Power Factor Harmonics	-	EN61000-3-2 Compliant (0.97 typical)	
Regulation Total	-	1%; Including Line (for 90-264VAC input change), Load (for 0-100% load change) and Cross (for 0-100% load change on any other output) regulation	
Ripple & Noise	mV	1% or 50mV (Which ever is greater)	
Efficiency	-	Up to 90%, configuration dependant	
Minimum Load	A	None	
Overcurrent Protection	-	>105%	
Overvoltage Protection	V	CH1 & CH2, 120-130%, Cycle AC line to reset	
Overtemperature Protection	-	Yes	
Hold Up Time (Typ)	ms	>16ms at 90VAC Input	
Leakage Current (max)	μA	123μA 120VAC 60Hz, 257μA 240VAC 60Hz, <300μA 264VAC 63Hz (Type Test results)	
Remote Sense	-	On Outputs CH1 & CH2, 0.5V compensation maximum	
DC Good	-	CH1 Only, High on Fail (90% of nominal ±5%)	
Remote On/Off (Specify N option)	-	-N1 or -N2 option: TTL level high = Off, -N3 or -N4 option: open circuit = Off (except standby)	
Operating Temperature (1)(7)	-	0 to +70°C. Derate linearly to 50% load from 50°C to 70°C	
Storage Temperature	-	-40 to +85°C	
Humidity (non condensing)	-	5 - 95% RH	
Cooling	-	Forced air, 2m/s from input to output (Approx 10 CFM)	
Isolation (4)	-	Input to Ground 2.3kVDC, Input to Output 4.3kVDC, Output to Ground 200VDC	
Vibration (non operating)	-	Conforms to MIL-STD-810E, Method 514.4, Pro I, Cat 1,9; EN60068-2-6, IEC68-2-6	
Shock	-	Conforms to MIL-STD-810E/F, Method 516.5, Pro I, IV, VI; EN60068-2-27, EN60068-2-47, IEC68-2-47, IEC68-2-47, JIS C0041-1987	
Safety Agency Approvals	-	UL/CSA/IEC/EN 60950-1, UL/CSA/IEC/EN 60601-1, ANSI/AAMI ES60601-1, IEC/EN 61010-1, CE Mark	
Immunity	-	EN61000-6-2:2001, EN61000-4-2, -3, -4, -5, -6, -8, -11	
Conducted Emissions and Flicker	-	EN55022 Class B (per CISPR.22), EN61000-3-3	
Radiated Emissions (2)	-	EN55022 Class A (per CISPR.22)	
Weight (Typ)	g	250g	
Size (without cover) (3)	in	3" x 5" x 1.25"; N option version 3.7" x 5" x 1.25"	
Warranty	yrs	Three Years	

(1) -20°C cold start

(2) See application note for Class B

(3) Including underside component leads

(4) Input-Output: Reinforced IEC60950-1, Basic IEC 60601-1.

See NV175-M for reinforced medical insulation

Single Output 200 to 250W Medical & ITE Power Supplies



Medical



Industrial



Test



COMM



Broadcast



[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

With efficiencies up to 94%, the medical and ITE certified CUS200M is rated at 200W with convection cooling and up to 250W with airflow. The CUS200M is ideal for applications where audible noise cannot be tolerated, including hospital, dental, broadcast and professional audio equipment. A 5V 0.6A standby output, DC Good signal and remote on/off are provided as standard.

Features

- 200W Convection Cooled
- Up to 250W with Forced Air
- Medical Certifications (2 x MOPP)
- Class B Conducted and Radiated EMI
- 5V Standby Voltage, DC Good Signal and Remote On/Off
- Compact 3 x 5 x 1.5" size
- Enclosure Options

Benefits

- Quiet Operation
- Can Utilize System Airflow
- Suitable for B and BF Rated Equipment
- Easier System EMC Compliance
- Provides Flexibility in the System
- Industry Standard Size For Alternative Power Requirements
- Versatile Application

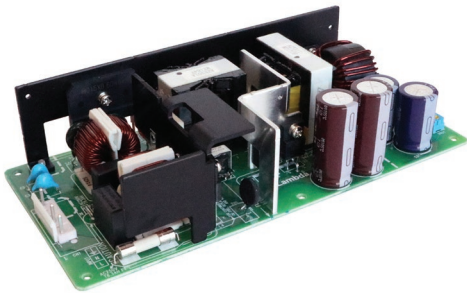
Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment (V)	Maximum Current Convection (A)	Maximum Current Forced Air (A)	Maximum Power Convection (W)	Maximum Power Forced Air (W)
CUS200M-12	12	11.7 - 12.6	16.7	16.7	200.4	200.4
CUS200M-18	18	17.6 - 18.9	11.2	14	201.6	252.0
CUS200M-24	24	23.5 - 25.2	8.4	10.5	201.6	252.0
CUS200M-36	36	35.2 - 37.8	5.5	7	198.0	252.0
CUS200M-48	48	47 - 50.4	4.2	5.3	201.6	254.4

Options

Suffix	Description
Blank	Open frame
/A	Chassis and cover
/L	L bracket chassis

240W 24V Output Power Supply
with EN62477-1 OVC III



[Full Datasheet](#)

<https://product.tdk.com/en/power/zws-rc>

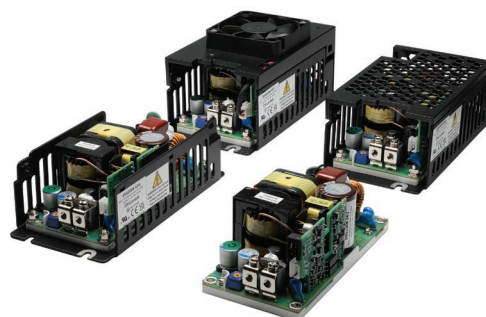
The ZWS240RC industrial grade power supplies are used in applications where equipment down-time cannot be tolerated during years of operation. Developed for robotic and machine controllers, the ZWS240RC is certified to EN62477-1 Over Voltage Category (OVC) III. This enables direct connection to the incoming AC distribution panel, saving the cost and space of an isolation transformer. Conservatively rated electrolytic capacitor temperatures offer field life-times of up to 12 years.

Features	Benefits
• Certified to IEC/EN62477-1 OVC III	• Allows Direct Connection to the Distribution Panel
• 12 Year Electrolytic Capacitor Lifetimes	• Improved Field Life
• Convection Cooled	• Reduced Dirt and Dust Contamination
• Curve B Radiated and Conducted EMI	• Easier System Compliance
• 5 year Warranty	• Low Cost of Ownership

Model Selector				
Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Output Power (W)
ZWS240RC-24	24	21.6 - 26.4	10	240

ZWS	240RC	-	24	-							
240RC = 240W		Output voltage: 24									
				<table><tr><th>Suffix</th><th>Description</th></tr><tr><td>Blank</td><td>Open frame, no remote on/off</td></tr><tr><td>/R</td><td>Remote on/off</td></tr></table>		Suffix	Description	Blank	Open frame, no remote on/off	/R	Remote on/off
Suffix	Description										
Blank	Open frame, no remote on/off										
/R	Remote on/off										

2 x 4" 250W AC-DC Power Supplies



Medical



Industrial



Test



LED



Broadcast



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

The compact CUS250M is packaged in the industry standard 2x4" footprint. The series can deliver 250W with forced air or conduction cooling in ambient temperatures of up to 45°C. With Medical & ITE certifications, the unit can be used in both Class I & Class II (no ground wire) applications, and meets Class B Conducted and Radiated EMI with generous margins. Input voltage range includes operation down to 80Vac (see instruction manual for ratings). Other options include a 5V standby voltage, remote on/off, DC_OK and AC_Fail signals, with a U channel, cover or top fan mechanical construction.

Features	Benefits
• Up to 250W Utilizing Convection and Conduction Cooling	• Quiet Operation
• Operation in Ambient Temperatures of up to 85°C	• Suitable for High Ambient Temperature Environments
• Medical Certifications (2 x MOPP)	• Suitable for B and BF Type Medical Equipment
• Class B Conducted and Radiated EMI with Significant Margins	• Easier System EMC Compliance
• Certified for Class I and Class II installations	• Flexible Utilisation
• Compact 2 x 4 x 1.56" / 50.8 x 101.6 x 39.5mm Size	• Space Saving in End Equipment
• Enclosure & Cooling Options	• Versatile Application
• EN60335-1 Compliant	• Suitable for Household and Similar Electrical Appliances

Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment ⁽¹⁾ (V)	Fan Supply (V)	Maximum Current Forced Air (A)	Maximum Power Forced Air (W)
CUS250M-12	12	12 - 13.2	11.4	20.83	250
CUS250M-15	15	15 - 16.5	11.4	16.66	250
CUS250M-18	18	18 - 19.8	11.4	13.88	250
CUS250M-24	24	24 - 26.4	11.4	10.41	250
CUS250M-28	28	28 - 30.8	11.4	8.92	250
CUS250M-36	36	36 - 39.6	11.4	6.94	250
CUS250M-48	48	48 - 52.8	11.4	5.2	250

CUS250M-	12	/	U	M	-	J
	Output voltage 12, 15, 18, 24, 28, 36, 48			blank JST connectors M ⁽²⁾ Molex type input connectors		
			blank Open frame (with integral baseplate) U U channel A U channel with cover F U channel, cover and top mounted fan C M3 inserts for underside mounting		blank Dual fuses E ⁽²⁾ Single input fuse in line	
						blank No options G 5V 0.1A standby supply, remote on/off (enable), DC_OK, AC_Fail J 5V 0.1A standby supply, remote on/off (inhibit), DC_OK, AC_Fail

Notes:

See website for detailed specifications, test methods and installation manual.

Specification parameters apply at 25°C ambient temperature unless otherwise stated.

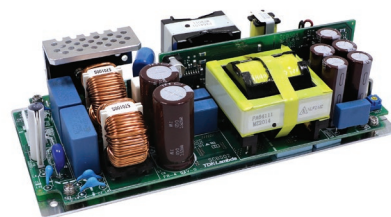
(1) Output voltage is user adjustable or can be factory set.

Non-standard output versions may be subject to minimum order quantities and variations to specification.

For all non-standard output voltage settings please consult Sales.

(2) Subject to Minimum Order Quantities. Please contact Sales

350 / 500W Medical Power Supplies with a 1,000W Peak Capability



Medical



Industrial



Test

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus350mp>

The CUS350MP-1000 AC-DC power supplies are rated up to 350W (1,000W peak) with convection cooling for applications requiring low audible noise, or up to 500W (1,000W peak) with external airflow. The series is certified to IEC60601-1 3rd edition (medical), IEC62368-1 and IEC62477-1 (OVCIII) with compliance to the EN60601-1-2:2015 Edition 4 immunity requirements. With efficiencies of up to 94%, waste heat is reduced allowing the power supply to operate reliably in a compact 88 x 183 x 44mm package size. A 5V 0.3A standby voltage and remote on/off are fitted as standard. The high peak power rating makes the CUS350MP-1000 suitable for use in printers and equipment utilizing DC motors.

Features	Benefits
• Up to 350W Convection Cooled or 500W With External Airflow	• Low Audible Noise
• High Peak Power Rating up to 800W for 5s or 1,000W for 1s	• Size and Cost Reductions Compared to Continuously Rated Products
• Medical Certification (2 x MoPP)	• Suitable for B and BF Rated Equipment
• Class B Conducted and Radiated EMI	• Easier System Compliance
• Compact 88 x 183 x 44mm (3.46 x 7.2 x 1.73") Package	• Space Saving in End Equipment
• Five Year Warranty	• Low Cost of Ownership

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Max Current Convection (A)	Max Power Convection (W)	Max Current Forced Air (A)	Max Power Forced Air (W)	Max Peak Current (A)	Max Peak Power (W)
CUS350MP-1000-24	24	24 - 26.4	14.6	350.4	20.8	499.2	41.7	1000.8
CUS350MP-1000-30	30	27 - 30	11.65	349.5	16.6	498.0	33.3	999.0
CUS350MP-1000-36	36	36 - 42	9.7	349.2	13.8	496.8	27.7	997.2
CUS350MP-1000-48	48	45 - 48	7.3	350.4	10.4	499.2	20.9	1003.2

CUS350MP-1000-	24	/	TA
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Output voltage 24, 30, 36, 48

blank	Dual fuses, baseplate mounted
/A	With cover
/T	Screw terminals
TA	With cover and screw terminals
/CO2	Pcb coating
/SF	Single input fuse (Line)

3 x 5" 400W AC-DC Power Supplies



Medical



Industrial



Test



LED



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

The compact CUS400M is packaged in the industry standard 3x5" footprint. The series can deliver 400W with forced air or 250W when convection cooled with a 400W peak power for extended periods of time (minutes). Cooling is also assisted via conduction through the base into the equipment chassis. With Medical & ITE certifications, the units can be used in both Class I & Class II (no ground wire) applications, and meets Class B Conducted and Radiated EMI. Options include a standby voltage, signals and multiple case options.

Features	Benefits
• 250W Convection / Conduction Cooled with 400W Peak for Extended Time Periods	• Quiet Operation
• 400W with Forced Air	• Can Utilise System Airflow or Integrated Fan
• Medical Certifications (2 x MOPP)	• Suitable for B and BF Type Medical Equipment
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• Suitable for Class I and Class II installations	• Flexible Utilisation
• Compact 3 x 5 x 1.55" Size	• Space Saving in End Equipment
• Enclosure & Signal Options	• Versatile Application

Model Selector							
Model	Nominal Output Voltage (V)	Output Adjustment (V)	Maximum Current Convection (A)	Maximum Current Forced Air (A)	Peak Current (A) Convection cooled $\geq 115V_{ac}$ input (See derating curve section)	Maximum Power Convection (W)	Maximum Power Forced Air (W)
CUS400M-12	12	12 - 13.2	20.83	33.33	33.33	250	400
CUS400M-15	15	15 - 16.5	16.67	26.67	26.67	250	400
CUS400M-19	19	19 - 20.9	13.16	21.05	21.05	250	400
CUS400M-24	24	24 - 26.4	10.42	16.67	16.67	250	400
CUS400M-28	28	28 - 30.8	8.93	14.29	14.29	250	400
CUS400M-36	36	36 - 39.6	6.94	11.11	11.11	250	400
CUS400M-48	48	48 - 49.9	5.21	8.33	8.33	250	400

CUS400M-	12	/	U	M	E	X5	-
Output voltage 12, 15, 19, 24, 28, 36, 48				blank dual fuses E single input fuse in line (AC input only)		blank Standard leakage current (<250uA) R Reduced leakage current <150uA (Contact Technical Sales)	
blank open frame with plastic baseplate C open frame with plastic baseplate and M3 threaded inserts for under side mounting U U channel chassis B open frame with metal baseplate A U channel chassis with cover F U channel chassis, cover and top fan				Blank JST Connectors M Molex type input connector			
				blank No options X2 5V 2.0A standby supply, remote on/off (enable), remote sense, DC-OK, AC Fail X3 12V 0.83A standby supply, remote on/off (enable), remote sense, DC-OK, AC Fail X5 5V 2.0A standby supply, remote on/off (inhibit), remote sense, DC-OK, AC Fail X6 12V 0.83A standby supply, remote on/off (inhibit), remote sense, DC-OK, AC Fail			

Example: CUS400M-15V25/FEX5 = 15.25V factory output voltage set point, U chassis, cover and fan, single fuse, X5 standby and signals

12V, 15V and 24V 20A Buffer (Hold-Up) Modules



Industrial



Test



Semi-Fab



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/zbm>

The ZBM20 20A buffer modules are ideal for providing short term hold-up or peak power for loads powered by 12V, 15V or 24Vdc output AC-DC power supplies. During normal operation, energy is stored in the ZBM20's electrolytic capacitors. When the AC power is interrupted for a short period of time, the ZBM20 continues to power the load, allowing equipment to shutdown in a safe and controlled manner. The ZBM20 can be set to fixed or variable buffer mode. In fixed mode it will provide power when the input voltage drops to below a preset level, in variable mode (24V model only) when the input decreases by 1V. Multiple buffer modules can be paralleled for additional hold-up time. Product status can be accessed remotely via a DC OK relay. The output voltage can also be inhibited to avoid an unsafe discharge of the stored energy.

Features

- Provides 380ms Additional Hold-Up Time at Max Buffer Power
- Utilizes Electrolytic Capacitors to Store Energy
- Five Year Warranty
- Parallel Capable
- Output Remote On/Off Function

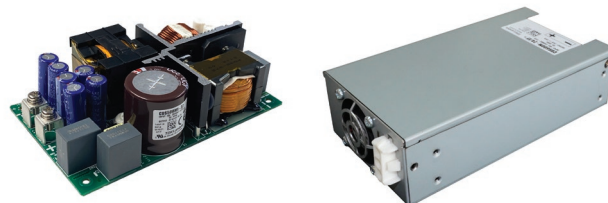
Benefits

- Avoids Loss of Data During AC Power Interruptions
- No Batteries to Service or Maintain
- Lower Cost of Ownership
- Hold-Up Time Can Be Extended
- Avoids Unsafe Discharge of Stored Energy

Model Selector

Model	Output Voltage Fixed Mode (V) (1)	Output Voltage Dynamic Mode (V) (1)	Maximum Current (A)	Average Buffer Power (W)
ZBM20-12	11	-	20	220
ZBM20-15	13.8	-	20	276
ZBM20-24	22.4	Vin-1	20	448

3 x 5" 500W AC-DC Power Supplies



Medical



Industrial



Test



LED



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

The compact CUS500M1 is packaged in the industry standard 3x5" footprint and can deliver 500W when forced air cooled or 300W convection cooled with a 500W peak. Certified to Medical & ITE safety standards, the CUS500M1 can be used in both Class I & Class II (no ground wire) applications⁽¹⁾. An enclosed model (/EF suffix) is available with an internal fan.

Features

- 300W (500W Peak) Convection Cooled
- 500W with Forced Air
- Medical Certifications (2 x MOPP)
- Class B Conducted and Radiated EMI
- Suitable for Class I and Class II installations ⁽¹⁾
- Compact 3 x 5 x 1.46" Size
- Enclosure and end fan models

Benefits

- Quiet Operation
- Can Utilize System Airflow or Integrated Fan
- Suitable for B and BF Type Medical Equipment
- Easier System EMC Compliance
- Flexible Utilization
- Space Saving in End Equipment
- Versatile Application

Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment (V)	Maximum Current Convection (A)	Maximum Current Forced Air (A)	Peak Current (A)	Maximum Power Convection (W)	Maximum Power Forced Air (W)
CUS500M1-12	12	None	25.0	41.7	41.7	300	500.4
CUS500M1-19	19	None	15.8	26.4	26.4	300.2	501.6
CUS500M1-24	24	None	12.5	20.9	20.9	300	501.6
CUS500M1-28	28	None	10.7	17.9	17.9	299.6	501.2
CUS500M1-32	32	None	9.4	15.7	15.7	300.8	502.4
CUS500M1-36	36	None	8.3	13.9	13.9	298.8	500.4
CUS500M1-48	48	None	6.3	10.5	10.5	302.4	504.0

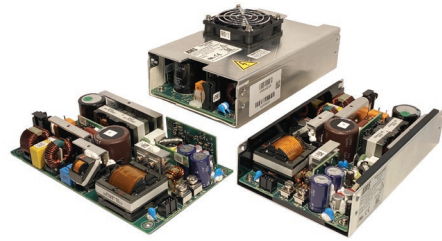
CUS500M1-	12	/	EF
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Output voltage 12, 19, 24, 28, 32, 36, 48

blank Open frame construction
/EF Enclosed with end fan (exhaust air)

Other options are available, please contact sales

500W Configurable AC-DC Power Supplies



Medical



Industrial



Test



COMM



Broadcast



Renewable

[Full Datasheet](#)

<https://product.tdk.com/en/power/xms>

The configurable XMS500A is packaged in a 4x7" footprint and can deliver 500W. With Medical & ITE certifications, the unit can be used in both Class I & Class II (no ground wire) applications. A large number of options are available including mechanical construction, input fusing, cooling, standby voltage, fan supply voltage, fan leakage current, AC Fail, Inhibit and Enable signals.

Features

- 500W with Forced Air
- BF Ready Medical isolation (MOPP)
- Class I / II with Level B EMI
- Defibrillator Proof
- Compact 4 x 7.1 x 1.46" Size
- Enclosure & Other Options

Benefits

- Can Utilize System Airflow or Integrated Fan
- Suitable for B and BF Type Medical Equipment
- Easier System EMC Compliance
- Suitable for BFD Applications
- Space Saving in End Equipment
- Versatile Application

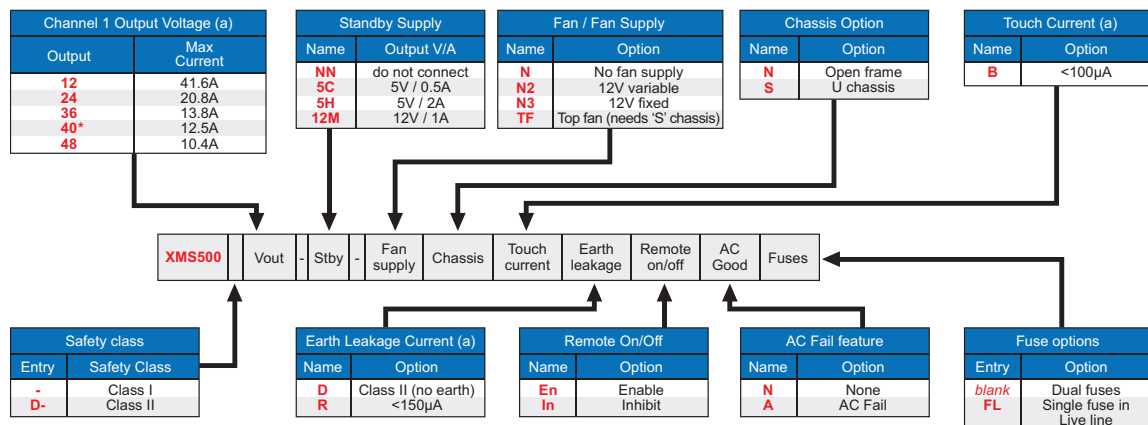
Quick Selector (Standard models)*

Output		Cover / Chassis / Fan type	Class I		Class II	
Volts	Current		Product Description	Order Code	Product Description	Order Code
12V	41.6A	Open Frame	XMS500-12-5H-N2NBRInA	XMS5001M	XMS500D-12-5H-N2NBDInA	XMS50024
		U chassis	XMS500-12-5H-N2SBRInA	XMS5003X	XMS500D-12-5H-N2SBDInA	XMS5004F
		Top fan	XMS500-12-5H-TFSBRInA	XMS5005Y	XMS500D-12-5H-TFSBDInA	XMS5006G
24V	20.8A	Open Frame	XMS500-24-5H-N2NBRInA	XMS50070	XMS500D-24-5H-N2NBDInA	XMS5008H
		U chassis	XMS500-24-5H-N2SBRInA	XMS50091	XMS500D-24-5H-N2SBDInA	XMS500BN
		Top fan	XMS500-24-5H-TFSBRInA	XMS500C6	XMS500D-24-5H-TFSBDInA	XMS500DP
36V	13.8A	Open Frame	XMS500-36-5H-N2NBRInA	XMS500FR	XMS500D-36-5H-N2NBDInA	XMS500G8
		U chassis	XMS500-36-5H-N2SBRInA	XMS500HS	XMS500D-36-5H-N2SBDInA	XMS500JT
		Top fan	XMS500-36-5H-TFSBRInA	XMS500KB	XMS500D-36-5H-TFSBDInA	XMS500LV
48V	10.4A	Open Frame	XMS500-48-5H-N2NBRInA	XMS500MC	XMS500D-48-5H-N2NBDInA	XMS500NW
		U chassis	XMS500-48-5H-N2SBRInA	XMS500PX	XMS500D-48-5H-N2SBDInA	XMS500RY
		Top fan	XMS500-48-5H-TFSBRInA	XMS500SG	XMS500D-48-5H-TFSBDInA	XMS500T0

*Note: Additional variants available - see 'How To Create A Product Description'

Standard models include: '5H' standby (5V / 2A), 'N2' fan supply (12V / 0.3A variable supply voltage) [except on Top fan variants], 'B' touch current (<100µA), 'In' remote on/off (inhibit) and 'A' AC Fail. Class I standard models include 'R' earth leakage (<150µA).

How To Create A Product Description



(a) - additional variants available, consult sales office

*Confirm availability of required product with sales office

3 x 5" 600W AC-DC Power Supplies



Medical



Industrial



Test



LED



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/cus-m>

The compact CUS600M is packaged in the industry standard 3x5" footprint and can deliver 600W with forced air or 400W with a 600W peak power with convection cooling. With Medical & ITE certifications, the unit can be used in both Class I & Class II (no ground wire) applications⁽¹⁾. A 5V 2A standby voltage, remote on/off, remote sense and a Power Good signal is standard on the CUS600M. Options include an internal fan and output adjustment. The CUS600M1 models offer a reduced feature set for cost optimization.

Features	Benefits
• 400W (600W Peak) Convection Cooled	• Quiet Operation
• 600W with Forced Air	• Can Utilize System Airflow or Integrated Fan
• Medical Certifications (2 x MOPP)	• Suitable for B and BF Type Medical Equipment
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• Suitable for Class I and Class II installations ⁽¹⁾	• Flexible Utilization
• Compact 3 x 5 x 1.46" Size	• Space Saving in End Equipment
• Enclosure & Other Options	• Versatile Application

Model Selector							
Model	Nominal Output Voltage (V)	Output Adjustment (V) (Specify /ADJ option suffix*) ⁽²⁾	Maximum Current Convection (A)	Maximum Current Forced Air (A)	Peak Current (A)	Maximum Power Convection (W)	Maximum Power Forced Air (W)
CUS600M-12	12	11.7 - 12.9	33.4	50.0	50.0	400.8	600.0
CUS600M-19	19	18.5 - 20.5	21.1	31.6	31.6	400.9	600.4
CUS600M-24	24	23.4 - 25.9	16.7	25.0	25.0	400.8	600.0
CUS600M-28	28	27.3 - 30.2	14.3	21.5	21.5	400.4	602.0
CUS600M-32	32	31.2 - 34.5	12.5	18.8	18.8	400.0	601.6
CUS600M-36	36	35.1 - 38.8	11.1	16.7	16.7	399.6	601.2
CUS600M-48	48	46.8 - 51.8	8.4	12.6	12.6	403.2	604.8

CUS600M-			12	/	EF	
Features	CUS600M-	CUS600M1-	Output voltage 12, 19, 24, 28, 32, 36, 48		blank Open frame construction /EF Enclosed with end fan (exhaust air)* /ADJ Output adjustment potentiometer** /SF Single input fuse in line**	
Standby Voltage	Yes	Not Available				
Remote On/Off						
Remote Sense						
Power Good Signal						

* /EF model has /ADJ included (CUS600M only)

** Not available for CUS600M1 models

Other options are available, please contact sales

4W Wide Input AC-DC PCB-Mount Power Supplies



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/kas>

The encapsulated KAS board mount power supplies are certified to IEC/CSA/UL/EN 62368-1, designed to meet IEC/EN 60335-1 and meet EN 55032 Class B for conducted and radiated emissions. With a wide input range of 90-305Vac requiring no earth ground (Class II), the KAS series is ideally suited for a wide range of applications including security systems, building automation, professional household appliances, portable equipment and products requiring a separate standby voltage.

Features

- 90 - 305Vac Input
- Wide Temperature Range (-40 to +70°C)
- Low No Load Power Consumption
- Class II Double Insulated Input

Benefits

- Operates From 115V, 230V and 277Vac Nominal Inputs
- Suitable For Industrial Applications
- Energy Saving During System Standby
- No Ground Connection Needed

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Ripple & Noise (mVpk-pk)	Line Regulation (mV)	Load Regulation (mV)	Efficiency (%)	Maximum Load Capacitance (uF)
KAS4-3P3	3.3	1.2	4	250	±16.5	±49.5	68	5,000
KAS4-5	5	0.8	4	250	±25	±75	72	4,200
KAS4-8	8	0.5	4	200	±40	±120	74	1,470
KAS4-9	9	0.444	4	200	±45	±135	75	1,330
KAS4-12	12	0.333	4	150	±24	±60	76	680
KAS4-14	14	0.286	4	150	±28	±70	76	470
KAS4-15	15	0.267	4	100	±30	±75	76	330
KAS4-24	24	0.167	4	100	±48	±120	77	120

5-25W AC-DC Board Mount Power Supplies



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/kpsb>

The cost effective, board mount KPSB series offers high efficiency levels in very compact 39.5 x 19.4mm (6W) and 50.8 x 28mm (25W) footprints. Featuring an open frame or encapsulated construction, these light weight converters are Class II double insulated, allowing operation without an earth ground connection. Optional JST plug in connectors are available.

Features

- High Efficiency, Up to 87%
- Class B EMI
- Low No Load Power Consumption
- Wide Operating Temperature
- Class II, Wide Range Input (90-264Vac)

Benefits

- Lower Operating Costs, Improved Thermal Performance
- No External Filter Components Required
- Energy Saving
- Operation In Harsh Environments
- Global Application, No Earth Required

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage (V)	Efficiency (%) (230VAC)	Load Capacitance (uF)
KPSB6-3R3	3.3	1.5	5	6.45 - 7.14	75	1500
KPSB6-5	5	1.2	6	6.45 - 7.14	78	1200
KPSB6-9	9	0.67	6	10.5 - 12.1	81	670
KPSB6-12	12	0.5	6	14.3 - 15.8	81	500
KPSB6-15	15	0.4	6	17.1 - 19.5	81	400
KPSB6-24	24	0.25	6	28.5 - 31.5	83	250
KPSB25-5	5	4	20	6.8 (Typ)	81	81000
KPSB25-12	12	2.1	25	15 (Typ)	84	40900
KPSB25-15	15	1.67	25	18 (Typ)	85	19800
KPSB25-24	24	1.05	25	30 (Typ)	86	6600
KPSB25-36	36	0.7	25	47 (Typ)	87	4000
KPSB25-48	48	0.52	25	56 (Typ)	87	2170

KPSB	25	-24	-J
	Output power	Output voltage	Blank Pcb mount -E Encapsulated pcb mount -J JST plug-in connectors

Single output 5-25W AC-DC Board Mount Power Supplies



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/kws-a>

The industrial grade KWS-A series of 5W, 10W, 15W and 25W board mount power supplies offer high efficiency levels of up to 88% in compact package sizes and footprints. The KWS-A has a wide operating temperature range of -40 (start up) to +85°C with derating above 45/55°C and less than 0.5W off-load power consumption. These converters are Class II double insulated, allowing operation without an earth ground connection.

Features

- High Efficiency, Up to 88%
- Class B EMI with an External X Capacitor
- Low No Load Power Consumption
- Wide Operating Temperature
- Class II, Wide Range Input (85-265Vac)

Benefits

- Lower Operating Costs, Improved Thermal Performance
- Minimal External Components Required
- Energy Saving
- Operation In Harsh Environments
- Global Application, No Earth Required

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Load Reg (mV)	Line Reg (mV)	Ripple /Noise (mV)	Efficiency (typ)% 115/230Vac
KWS5A-5	5	1	5	40	20	200	76 / 74
KWS10A-5	5	2	10	40	20	200	76 / 77
KWS15A-5	5	3	15	40	20	200	77 / 78
KWS25A-5	5	5	25	40	20	200	81 / 82
KWS5A-12	12	0.45	5.4	96	48	240	78 / 75
KWS10A-12	12	0.9	10.8	96	48	240	80 / 81
KWS15A-12	12	1.3	15.6	96	48	240	81 / 83
KWS25A-12	12	2.2	26.4	96	48	240	84 / 86
KWS5A-15	15	0.35	5.3	120	60	240	79 / 75
KWS10A-15	15	0.7	10.5	120	60	240	81 / 82
KWS15A-15	15	1	15	120	60	240	82 / 84
KWS25A-15	15	1.7	25.5	120	60	240	85 / 87
KWS5A-24	24	0.22	5.3	150	96	240	80 / 77
KWS10A-24	24	0.5	12	150	96	240	82 / 84
KWS15A-24	24	0.7	16.8	150	96	240	82 / 85
KWS25A-24	24	1.1	26.4	150	96	240	86 / 88

KWS25A

-24

Series Name and Output Power

KWS5A - 5W
KWS10A - 10W
KWS15A - 15W
KWS25A - 25W

Output Voltage

5, 12, 15 or 24V

15-60W Medical AC-DC PCB-Mount Power Supplies



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/kms-a>

The encapsulated KMS-A PCB-Mount power supplies are certified to IEC/ES/EN 60601-1, IEC/EN 62368-1 and meet EN55011 Class B for conducted and radiated emissions. Requiring no earth ground, the KMS-A series is ideally suited for a wide range of medical and industrial applications, including dental, home healthcare and test and measurement.

Features	Benefits
• 4kVac Input to Output Isolation (2 x MoPP)	• Suitable for B & BF Applications Worldwide
• Wide Temperature Range (up to -40 to +80°C)	• Suitable for Harsh Environments
• Low No Load Power Consumption	• Energy Saving
• Class II Double Insulated Construction	• No Ground Connection Needed
• Epoxy Encapsulated	• Improved Shock and Vibration Performance

Model Selector						
Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Ripple & Noise (mVpk-pk)	Efficiency (at 230Vac) (%)	Maximum Load Capacitance (uF)
KMS15A-5	5	3	15	120	79	7,000
KMS30A-5	5	5	25	100	84	6,800
KMS60A-5	5.1	10	51	100	86	10,000
KMS15A-9	9	1.666	15	120	80	5,000
KMS60A-9	9	6.666	60	100	87	5,000
KMS15A-12	12	1.25	15	120	84	1,500
KMS30A-12	12	2.5	30	150	89	1,600
KMS60A-12	12	5	60	120	88	5,000
KMS15A-15	15	1	15	150	84	1,000
KMS30A-15	15	2	30	150	86	1,200
KMS60A-15	15	4	60	150	86	4,000
KMS15A-24	24	0.625	15	240	85	470
KMS30A-24	24	1.25	30	240	86	470
KMS60A-24	24	2.5	60	240	87	2,000

KMS	15A	-24	/SC
	15A 15W Output Power 30A 30W Output Power 60A 60W Output Power	-5 5V Output (5.1V for 60W Model) -9 9V Output (15W and 60W Models) -12 12V Output -15 15V Output -24 24V Output	Blank PCB mount standard model /SC Screw terminals (Not sold in the Americas)

300-1008W AC-DC Power Modules



Industrial



COTS



Test



COMM



LED



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/pfe>

The high efficiency PFE series of AC-DC 300W to 1008W power modules are for use in environments where convection or forced air cooling is not viable. Suitable for use in outdoor enclosures or liquid cooled applications, these pcb mounted power modules accept a wide range AC input and deliver an adjustable, regulated output. High ambient temperatures can be tolerated as the conduction cooled baseplate can withstand -40 up to 100°C temperatures. The fully featured PFE500F and PFE1000FA modules offer a parallel connection for increased power, a 12V auxiliary supply and remote on/off. The semi-regulated 48V output PFE700SA provides a very high power density and up to 92% efficiency.

Features

- Compact Low Profile Package Sizes
- High Efficiency
- Up to 100°C Rated Baseplate Temperature
- Conduction Cooled Via Baseplate

Benefits

- Space Saving in End Equipment
- Less Waste Heat to Manage and Reduced AC Power Consumption
- Suitable for Rugged Environments
- For Use in Convection Cooled or Sealed Enclosures

Model Selector

Model	Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Output Power (W)	Ripple / Noise (mV)	Input Current (A) 115/230Vac	Efficiency (typ) % 115/230Vac
PFE300SA-12	12	9.6 - 14.4	25	300	120	3.3 / 1.6	84 / 86
PFE500SA-12	12	9.6 - 14.4	33	396	120	4.2 / 2.1	84 / 86
PFE500F-12	12	9.6 - 14.4	42	504	120	6.8 / 3.4(1)	81 / 83
PFE1000FA-12	12	9.6 - 14.4	60	720	120	8.0 / 3.9	84.5 / 89.5
PFE300SA-28	28	22.4 - 33.6	10.8	302	280	3.2 / 1.6	87.5 / 89.5
PFE500SA-28	28	22.4 - 33.6	18	504	280	5.2 / 2.5	88 / 90
PFE500F-28	28	22.4 - 33.6	18	504	280	6.4 / 3.2(1)	84 / 86
PFE1000FA-28	28	22.4 - 33.6	36	1008	280	10.8 / 5.3	87 / 89.5
PFE300SA-48	48	38.4 - 57.6	6.3	302	480	3.1 / 1.6	88 / 90.5
PFE500SA-48	48	38.4 - 57.6	10.5	504	480	5.1 / 2.5	90 / 91
PFE500F-48	48	38.4 - 57.6	10.5	504	480	6.4 / 3.2(1)	84 / 86
PFE1000FA-48	48	38.4 - 57.6	21	1008	480	10.6 / 5.2	88 / 90.5
PFE700SA-48	48	None	14	714	4000	7.0 / 3.4	90 / 92

PFE500SA-	12	/	T
	Output voltage 12, 28, 48		blank Threaded mounting hole /T non threaded mounting hole

Related Products

Type	Part Number(s)	Size (mm) / Description
Heatsink for PFE300/500SA	HAF-10L	116.8 x 25.4 x 61
Heatsink for PFE300/500SA	HAF-15L	116.8 x 38.1 x 61
Heatsink for PFE300/500SA	HAF-15T	116.8 x 38.1 x 61
Heatsink for PFE500F	HAL-F12T	122 x 35 x 69.9
Heatsink for PFE1000F	HAM-F10T	160 x 33.4 x 100
504W AC-DC Power Module	PFH500F series	Next generation Power Modules

500W AC-DC Power Modules



Industrial



COTS



Test



LED



COMM



Broadcast



[Full Datasheet](#)

<https://product.tdk.com/en/power/pfh>

The 4" x 2.4" footprint, high efficiency PFH500 series of AC-DC power modules are used in environments where convection or forced air cooling is not viable. Suitable for use in outdoor enclosures or liquid cooled applications, these pcb mounted power modules accept a wide range AC input and deliver an adjustable, regulated output. High ambient temperatures can be tolerated as the conduction cooled baseplate can withstand -40 to 100°C temperatures. These third generation modules also have a PMBus™ interface with read/write capability for remote monitoring and programming.

Features

- Compact 4" x 2.4" x 0.53" Brick Package
- Metal Case
- High Power Density, High Efficiency
- 100°C Rated Baseplate Temperature
- PMBus™ Interface
- Optional Droop Mode Load Sharing

Benefits

- Less Board Area Required
- Easier Thermal Management and Lower Radiated EMI
- Less Waste Heat to Manage and Reduced AC Power Consumption
- Cold plate / Conduction Cooling for Fanless and Rugged Environments
- Remote Monitoring and Programming via i²C
- Simplified Paralleling for Higher Power or Redundant Applications

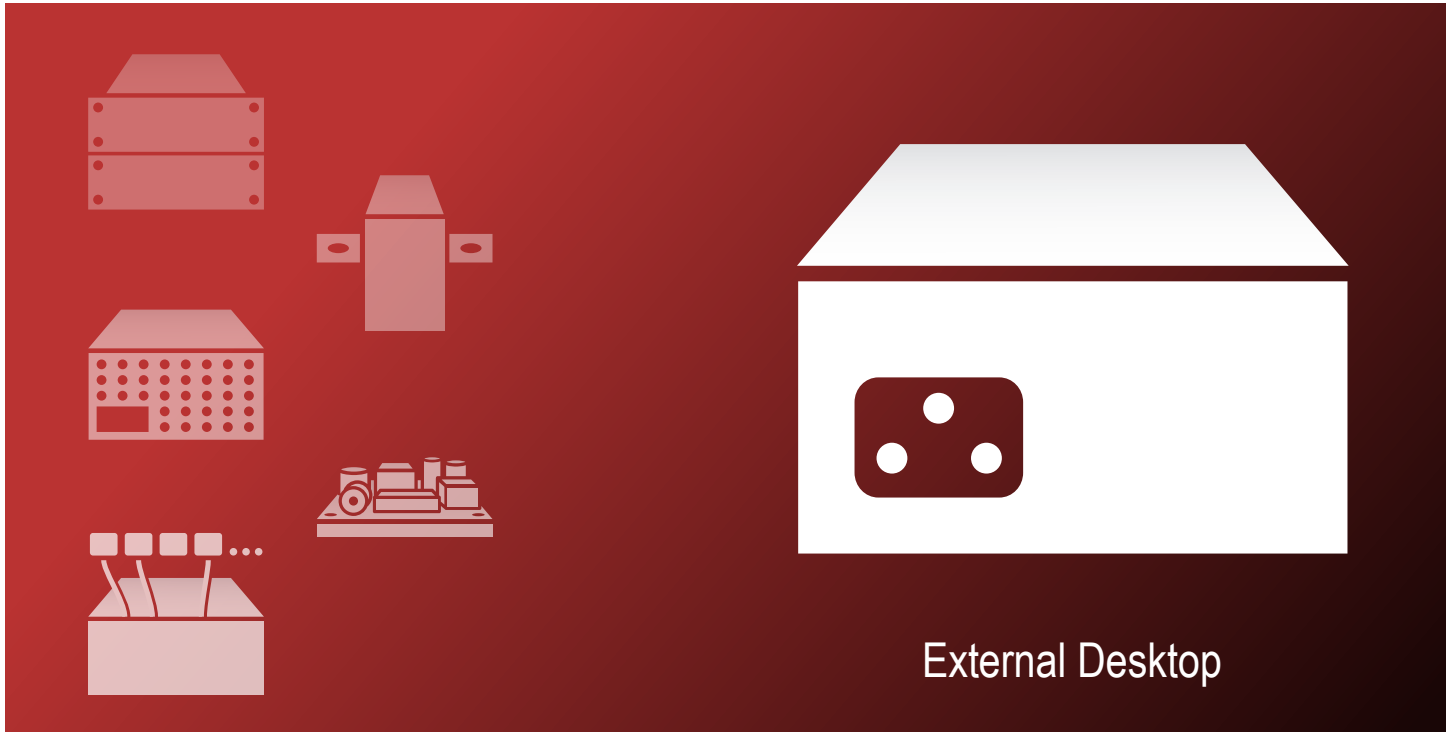
Model Selector

Model	Nominal Output Voltage (V)	Output Adjust Range (V)	Maximum Output Current (A)	Maximum Power (W) ⁽¹⁾	Mounting Inserts	Droop Mode Current Share
PFH500F-12-000-R	12	9.6 - 14.4	42	504	3.3mm Ø Non-threaded	No
PFH500F-12-0D0-R	12	9.6 - 14.4	42	504	3.3mm Ø Non-threaded	Yes
PFH500F-12-100-R	12	9.6 - 14.4	42	504	3mm (M3) Threaded	No
PFH500F-12-1D0-R	12	9.6 - 14.4	42	504	3mm (M3) Threaded	Yes
PFH500F-28-000-R	28	22.4 - 33.6	18	504	3.3mm Ø Non-threaded	No
PFH500F-28-0D0-R	28	22.4 - 33.6	18	504	3.3mm Ø Non-threaded	Yes
PFH500F-28-100-R	28	22.4 - 33.6	18	504	3mm (M3) Threaded	No
PFH500F-28-1D0-R	28	22.4 - 33.6	18	504	3mm (M3) Threaded	Yes
PFH500F-48-000-R	48	38.4 - 52.8	10.5	504	3.3mm Ø Non-threaded	No
PFH500F-48-0D0-R	48	38.4 - 52.8	10.5	504	3.3mm Ø Non-threaded	Yes
PFH500F-48-100-R	48	38.4 - 52.8	10.5	504	3mm (M3) Threaded	No
PFH500F-48-1D0-R	48	38.4 - 52.8	10.5	504	3mm (M3) Threaded	Yes

PFH500F	-	28	-	1	D	0	-	R
		Output voltage 12, 28, 48V	0 Non-threaded inserts 1 M3 threaded inserts		0 No droop mode current share D Droop mode current share		RoHS Compliant	



AC-DC External/Desktop/Wallmount



Applications

- External power supplies as accessory for end equipment
- Typically used for portable, Medical and ITE equipment

Features

- Fully enclosed plastic case
- Plug and play – no input range setting or output voltage adjustment required
- IEC AC input connection
- DC output cable and connector
- ErP, CEC, DOE and EISA compliant models
- Class I and Class II versions
- DTM series suitable for medical equipment
- WMM series wallmounts with international AC plugs

AC/DC External Index by Wattage

Wattage	Number of Outputs	Series	Page
25-30W	1	WMM30	80
25-36W	1	DTM36-C8	81
40-65W	1	DTM65-C8	82
40-65W	1	DTM65-D	83
40-80W	1	DT62-80D	84
70W	1	DTM70	85
100-150W	1	DT100-150-D	86
110W	1	DTM110-C8	87
150-160W	1	DTM160	88
250W	1	DTM250-D	89
300W	1	DTM300-D	90

Listed by Wattage

25 to 30W Medical Wall Mount Power Supplies



Medical



Home Medical

[Full Datasheet](#)

<https://product.tdk.com/en/power/wmm>

The WMM30 Class II 25 to 30W wall mount power supplies are certified to IEC/ES/EN60601-1 and EN60601-1-11, are compliant to EN60601-1-2 (Ed4) and designed to meet IEC60335-1 (Household Appliances). Requiring no earth ground, the WMM30 series is ideally suited for Medical, Clinical and Home Healthcare applications. Four interchangeable AC plugs are available (sold separately) for use in North America, Europe, UK and Australia. Alternative output connectors and cable assemblies are available on request.

Features

- Medical Safety Certifications and Immunity
- Class II Input
- Meets DoE Level VI and EU Tier 2 Efficiency, <0.075W Off-load Power Consumption
- 4kV (2xMOPP) Input to Output Isolation
- Alternative Connectors and Cable Assemblies

Benefits

- Suitable for Medical, Clinical and Home Healthcare Use
- No Earth Ground Connection Needed
- Meets US and EU Energy Saving Legislation
- Fully Isolated For Use With B and BF Rated Equipment
- Flexible System Integration

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage Protection (V) (Maximum)	Maximum Load Capacitance (uF)	Efficiency (%) (230Vac input, 75% Load)	Average Efficiency (%) ⁽¹⁾
WMM30CN050	5	5	25	7.44	5,000	84	>85
WMM30CN090	9	3.3	29.7	12.6	3,300	88	>87.7
WMM30CN120	12	2.5	30	15.5	2,500	88	>87.7
WMM30CN150	15	2	30	19.5	2,000	88	>87.7
WMM30CN180	18	1.67	30	23.5	1,670	88	>87.7
WMM30CN240	24	1.25	30	31.5	1,250	88	>87.7

WMM30CN	120	-	xxx
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Output voltage 5, 9, 12, 15, 18, 24

Connector/Cable Options* (When applicable)

* Options

When no option code is stated:

5V output model has a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and a 16 AWG 1220mm long cable

9V output model has a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and a 16 AWG 1800mm long cable

12V and 15V output models have a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and an 18 AWG 1800mm long cable

18V and 24V output models have a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and an 22 AWG 1800mm long cable

A variety of connector and output cable options are available, please contact your local sales office

Interchangeable AC Plugs (Sold separately)

Part Number	Region
ACC-WMM30-A	North America
ACC-WMM30-U	UK
ACC-WMM30-E	Europe
ACC-WMM30-S	Australia

25 to 36W Medical External Power Supplies



Medical



Home Medical

[Full Datasheet](#)

<https://product.tdk.com/en/power/dtm>

The DTM36-C8 Class II 25 to 36W external power supplies are certified to IEC/ES/EN60601-1 and EN60601-1-11, are compliant to EN60601-1-2 (Ed4) and designed to meet IEC60335-1 (Household Appliances). Requiring no earth ground, the DTM series is ideally suited for Medical, Clinical and Home Healthcare applications. Alternative connectors and cable assemblies are available on request.

Features	Benefits
• Medical Safety Certifications and Immunity	• Suitable for Medical, Clinical and Home Healthcare Use
• Class II Input	• No Earth Ground Connection Needed
• Meets DoE Level VI and EU Tier 2 Efficiency, <75mW Off-load Power Consumption	• Meets US and EU Energy Saving Legislation
• 4kV (2xMOPP) Input to Output Isolation	• Fully Isolated For Use With B and BF Rated Equipment
• Alternative Connectors and Cable Assemblies	• Flexible System Integration

Model Selector							
Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage Protection (V) (Typical)	Maximum Load Capacitance (uF)	Efficiency (%) (230Vac input, 75% Load)	Average Efficiency (%) (1)
DTM36CN050-C8	5	5	25	7.44	5,000	85	85.0
DTM36CN090-C8	9	3.3	29.7	12.6	3,300	88	87.7
DTM36CN120-C8	12	2.5	30	15.9	2,500	89	87.7
DTM36CN135-C8	13.5	2.4	32.4	18.5	2,400	89	87.9
DTM36CN150-C8	15	2.4	36	21.5	2,400	89	88.3
DTM36CN180-C8	18	2	36	24.8	2,000	89	88.3
DTM36CN240-C8	24	1.5	36	31.5	1,500	89	88.3
DTM36CN360-C8	36	1	36	45.2	1,000	89	88.3
DTM36CN480-C8	48	0.75	36	59.6	750	89	88.3

DTM36CN	120	C8	-	xxx
	Output voltage 5, 9, 12, 13.5, 15, 18, 24, 36, 48	IEC C8 input connector		Connector/Cable Options* (When applicable)

* Options

When no option code is stated:

5V output model has a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and a 16 AWG 1220mm long cable

9V, 12V and 13.5V output models have a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and an 18 AWG 1800mm long cable

≥15 models have a straight 5.5 x 2.1 x 12mm (OD x ID x L) connector, positive center pin and an 20 AWG 1800mm long cable

40-65W Medical Class II AC-DC External Power Supplies



Medical



Home Medical

[Full Datasheet](#)

<https://product.tdk.com/en/power/dtm>

The DTM65-C8 Class II 40 to 65W external power supplies are certified to IEC/ES/EN60601-1, EN60601-1-11 and are compliant to EN60601-1-2 (Ed4). All models also meet EN55011-B, FCC Class B conducted & radiated emissions. Requiring no earth ground, the DTM65-C8 series is ideally suited for a variety of Medical, Clinical and Home Healthcare applications, including diagnostic and monitoring equipment.

Features	Benefits
• Medical Safety Certifications and Immunity	• Suitable for Medical, Clinical and Home Healthcare Use
• Meets DoE Level VI (Level V for 5V model)	• Meets US Energy Saving Legislation
• >88% Average Efficiency, <0.21W No Load Power	• Consumes Less Energy
• 4kV (2xMOPP) Input to Output Isolation	• Suitable for B and BF Rated Equipment
• Wide Range AC, Class II Input IEC320-C8	• Global Operation, No Earth Required

Model Selector							
Model	Output Voltage (V)	Max Current (A)	Max Power (W)	Overvoltage Protection (V)	Output Regulation (%)	Ripple & Noise (mVpk-pk)	DoE Efficiency Level
DTM65PW050C8	5	8	40	5.5 - 7.5	±5	50	V
DTM65PW120C8	12	5	60	13.2 - 18.0	±5	120	VI
DTM65PW150C8	15	4	60	16.5 - 22.5	±5	150	VI
DTM65PW190C8	19	3.42	65	20.9 - 28.5	±3	190	VI
DTM65PW240C8	24	2.7	65	26.4 - 36.0	±3	240	VI
DTM65PW280C8	28	2.32	65	30.8 - 42.0	±3	280	VI
DTM65PW480C8	48	1.35	65	52.8 - 72.0	±3	480	VI

DTM65PW	190	C8
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050	5V Output Voltage
120	12V Output Voltage
150	15V Output Voltage
190	19V Output Voltage
240	24V Output Voltage
280	28V Output Voltage
480	48V Output Voltage

IEC C8 input connector

40-65W Medical Class I AC-DC External Power Supplies



Medical



Home Medical

[Full Datasheet](#)

<https://product.tdk.com/en/power/dtm>

The DTM65-D Class I 40 to 65W external power supplies are certified to IEC/ES/EN/UL/CSA 60601-1 and are compliant to EN60601-1-2 (Ed4). With an average efficiency of greater than 89% and an off-load power consumption of less than 0.15W, this series also complies with DoE Level VI and EU Tier 2 v5 standards for efficiency and off-load power. The DTM65-D series is ideally suited for a variety of hospital, dental and healthcare applications, including diagnostic and monitoring equipment.

Features	Benefits
• Medical Safety Certifications and Immunity	• Suitable for Medical and Clinical Use
• Meets DoE Level VI & EU Tier 2 Efficiency	• Meets US and EU Energy Saving Legislation
• >89% Average Efficiency, <0.15W No Load Power	• Consumes Less Energy
• 4kV (2xMOPP) Input to Output Isolation	• Suitable for B and BF Rated Equipment
• Wide Range Input (90-264VAC)	• Global Operation

Model Selector

Model	Output Voltage (V)	Max Current (A)	Max Power (W)	Overvoltage Protection (V)	Ripple & Noise (mVpk-pk)
DTM65PW050D	5	8.0	40	5.5 - 8.5	120
DTM65PW120D	12	5.0	60	13.2 - 16.0	120
DTM65PW150D	15	4.0	60	16.5 - 30.0	150
DTM65PW190D	19	3.42	65	20.9 - 35.0	190
DTM65PW240D	24	2.70	65	26.4 - 35.0	240
DTM65PW280D	28	2.32	65	30.0 - 35.0	280
DTM65PW360D	36	1.81	65	41.0 - 50.0	360
DTM65PW480D	48	1.35	65	52.8 - 60.0	480

DTM65PW	240D	
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050D	5V Output Voltage
120D	12V Output Voltage
150D	15V Output Voltage
190D	19V Output Voltage
240D	24V Output Voltage
280D	28V Output Voltage
360D	36V Output Voltage
480D	48V Output Voltage

40-80W AC-DC External Power Supplies



Industrial



Broadcast



Test



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/dt-d>

Ranging from 40 to 80W, these DT62/80-D external power supplies are certified to UL/CSA/EN/IEC62368-1 and comply with DoE Level VI Efficiency. In addition to satisfying Energy Efficiency Level VI with an average efficiency of greater than 89% and an off-load power draw of less than 150mW, the products also meet EU CoC Tier 1 or Tier 2 requirements. All units meet EN 55032-B, FCC Class B conducted & radiated emissions and EN55024 immunity standards.

Features

- EU CoC Tier 2 & DoE Level VI Compliant
- Wide Range AC Input (90-264VAC)
- >89% Average Efficiency
- Rugged Non-Vented Enclosure
- Alternative Connectors and Cable Assemblies

Benefits

- Meets US and EU Energy Saving Legislation
- Global Operation
- Consumes Less Energy
- Suitable for Harsh Industrial Environment
- Flexible System Integration

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage Protection (V)	DoE Level / EU CoC V.5	Ripple & Noise (mVpk-pk)
DT62PW050D	5	8.0	40	5.5 - 8.5	VI* / Tier 1*	50
DT62PW080D	8	5.0	40	8.8 - 13.0	VI* / Tier 1*	80
DT62PW120D	12	5.41	65	13.2 - 17.4	VI / Tier 2	120
DT62PW150D	15	4.33	65	16.5 - 21.0	VI / Tier 2	150
DT62PW190D	19	3.43	65	20.9 - 28.0	VI / Tier 2	190
DT62PW240D	24	2.71	65	26.4 - 31.2	VI / Tier 2	240
DT62PW360D	36	1.81	65	39.6 - 52.2	VI / Tier 2	240
DT62PW480D	48	1.36	65	52.8 - 67.5	VI / Tier 2	240
DT80PW090D	9	8.0	72	9.90 - 11.7	VI* / Tier 1*	240
DT80PW120D	12	6.67	80	13.2 - 15.6	VI / Tier 2	240
DT80PW150D	15	5.34	80	16.5 - 19.5	VI / Tier 2	240
DT80PW180D	18	4.45	80	19.8 - 23.4	VI / Tier 2	240
DT80PW240D	24	3.34	80	26.4 - 31.2	VI / Tier 2	240
DT80PW280D	28	2.86	80	30.8 - 36.4	VI / Tier 2	240
DT80PW480D	48	1.67	80	52.8 - 60.0	VI / Tier 2	240

*Product built after July 2016

DoE - Department of Energy

EU CoC V.5 - European Code of Conduct Version 5

DT	80PW	240	D
	62PW 40/65W Output Power 80PW 72/80W Output Power	050 5V Output Voltage (DT62 only) 080 8V Output Voltage (DT62 only) 090 9V Output Voltage (DT80 only) 120 12V Output Voltage 150 15V Output Voltage 180 18V Output Voltage (DT80 only) 190 19V Output Voltage (DT62 only) 240 24V Output Voltage 280 28V Output Voltage (DT80 only) 360 36V Output Voltage (DT62 only) 480 48V Output Voltage	

70W Medical and ICT Class I and II External AC-DC Power Supplies



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/dtm>

The DTM70 Class I and DTM70-C8 Class II (no ground connection) 70W external power supplies are certified to IEC/ES/CSA/EN60601-1, IEC60601-1-11 (DTM70-C8 model) and are compliant to IEC60601-1-2 (Ed4) and IEC/BS/EN62368-1. With an average efficiency of up to 91% and an off-load power consumption of less than 0.15W, this series also complies with DoE Level VI standards. The DTM70 series is suitable for a variety of medical, clinical, healthcare, industrial, test and measurement applications.

Features	Benefits
• Wide Range AC Input (Class I or Class II Input Options)	• Supports Medical and Industrial Applications Globally
• Locking Output Connector	• Avoids Accidental Disconnection
• DoE Level VI Efficiency	• Meets US Energy Saving Legislation
• 60601-1 Medical Certifications (2xMOPP)	• Suitable for B & BF Rated Equipment
• 62368-1 Compliant for ICT and Industrial Applications	• Suitable for Industrial Applications
• < 0.15W Off-load Power Draw	• Consumes Less Energy, ErP Compliant

Model Selector							
Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage Protection (V)	Ripple & Noise (mV pk-pk)	Efficiency at 230Vac (%)	Max. Load Capacitance (µF)
DTM70CN120	12	5.8	70	13.5	120	89	5,800
DTM70CN150	15	4.65	70	16.5	150	89	4,650
DTM70CN180	18	3.9	70	19.5	180	89	3,900
DTM70CN240	24	3	70	26	240	90	3,000
DTM70CN360	36	1.9	70	40	360	90	1,900
DTM70CN480	48	1.5	70	53.5	480	91	1,500
DTM70CN120C8	12	5.8	70	13.5	120	89	5,800
DTM70CN150C8	15	4.65	70	16.5	150	89	4,650
DTM70CN180C8	18	3.9	70	19.5	180	89	3,900
DTM70CN240C8	24	3	70	26	240	90	3,000
DTM70CN360C8	36	1.9	70	40	360	90	1,900
DTM70CN480C8	48	1.5	70	53.5	480	91	1,500

DTM70CN	120	C8	-xxx
Series	120 = 12V Output Voltage 150 = 15V Output Voltage 180 = 18V Output Voltage 240 = 24V Output Voltage 360 = 36V Output Voltage 480 = 48V Output Voltage	Blank = Class I (IEC320/C14) inlet C8 = Class II (IEC320/C8) inlet	Modified standard designator for alternative connectors, cables and other non-safety file impacting changes*

* Contact Sales, MOQs may apply

Related Products		
Type	Part Number	Description
Power supply	DTM and WMM	30 to 300W external power supplies

100-150W AC-DC External Power Supplies



Industrial



Broadcast



Test



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/dt-d>

Ranging from 100 to 150W, these DT100/150-D external power supplies are certified to UL/CSA/EN/IEC62368-1 and comply with DoE Level VI Efficiency. In addition to satisfying Energy Efficiency Level VI with an average efficiency of greater than 89% and an off-load power draw of less than 150mW, the products also meet EU Tier 2 requirements. All units meet EN55032-B, FCC Class B conducted & radiated emissions and EN55024 immunity standards.

Features

- EU CoC Tier 2 & DoE Level VI Compliant
- Wide Range AC Input (90-264VAC)
- >89% Average Efficiency
- Rugged Non-Vented Enclosure
- Alternative Connectors and Cable Assemblies

Benefits

- Meets US and EU Energy Saving Legislation
- Global Operation
- Consumes Less Energy
- Suitable for Harsh Industrial Environment
- Flexible System Integration

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage Protection (V)	Output Regulation (%)	Ripple & Noise (mVpk-pk)
DT100PW120D	12	8.34	100	13.2 - 15.6	±5	240
DT100PW160D	16	6.25	100	17.6 - 20.8	±5	320
DT100PW190D	19	5.27	100	20.9 - 24.7	±5	380
DT100PW240D	24	4.17	100	26.4 - 31.2	±3	480
DT100PW360D	36	2.78	100	39.6 - 46.8	±3	480
DT100PW480D	48	2.09	100	52.8 - 62.4	±3	480
DT150PW120D	12	11.67	140	13.2 - 15.6	±5	240
DT150PW160D	16	9.38	150	17.6 - 20.8	±5	320
DT150PW190D	19	7.90	150	20.9 - 24.7	±5	380
DT150PW240D	24	6.25	150	26.4 - 31.2	±3	480
DT150PW360D	36	4.17	150	39.6 - 46.8	±3	480
DT150PW480D	48	3.13	150	52.8 - 62.4	±3	480

DT	100PW	240	D
	100 100W Output Power 150 140/150W Output Power	120 12V Output Voltage 160 16V Output Voltage 190 19V Output Voltage 240 24V Output Voltage 360 36V Output Voltage 480 48V Output Voltage	

105-110W Medical/ITE Class II AC-DC External Power Supplies



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/dtm>

The DTM110-C8 Class II 105 to 110W external power supplies are certified to IEC/ES/CSA/EN60601-1, IEC60601-1-11, IEC/UL/CSA/EN62368-1 and are compliant to IEC60601-1-2 (Ed4). With an average efficiency of greater than 89% and an off-load power consumption of less than 0.15W, this series also complies with DoE Level VI and EU Tier 2 v5 standards for efficiency and off-load power. Requiring no earth ground, the DTM110-C8 series is ideally suited for a variety of hospital and home healthcare applications, plus industrial test, measurement and portable equipment.

Features	Benefits
• Medical Safety Certifications and Immunity	• Suitable for Medical, Clinical and Home Healthcare Use
• Meets DoE Level VI & EU Tier 2 Efficiency	• Meets US and EU Energy Saving Legislation
• 4kVac (2xMOPP) Input to Output Isolation	• Suitable for B & BF Rated Equipment
• IP41 rated, Vent-free Enclosure	• Suitable for Industrial Environments
• Wide Range AC, Class II Input IEC320-C8	• Global Operation, No Earth Ground Required

Model Selector

Model	Output Voltage (V)	Max Current (A)	Max Power (W)	Overvoltage Protection (V)	Output Regulation (%)
DTM110PW120C8	12	8.75	105	13.2 - 15.6	±5
DTM110PW150C8	15	7.34	110	16.5 - 19.5	±5
DTM110PW190C8	19	5.79	110	20.9 - 24.7	±5
DTM110PW240C8	24	4.59	110	26.4 - 31.2	±3
DTM110PW280C8	28	3.93	110	30.8 - 36.4	±3
DTM110PW360C8	36	3.06	110	39.6 - 46.8	±3
DTM110PW480C8	48	2.29	110	52.8 - 62.4	±3

DTM110PW	190	C8
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120	12V Output Voltage
150	15V Output Voltage
190	19V Output Voltage
240	24V Output Voltage
280	28V Output Voltage
360	36V Output Voltage
480	48V Output Voltage

IEC C8 input connector

150-160W Medical and ICT Class I and II External AC-DC Power Supplies



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/dtm>

The DTM160 Class I and DTM160-C8 Class II (no ground connection) 150-160W external power supplies are certified to IEC/UL/CSA/EN60601-1, IEC60601-1-11 (DTM160-C8 model) and are compliant to IEC60601-1-2 (Ed4) and IEC/BS/EN62368-1. With an average efficiency of up to 93% and an off-load power consumption of less than 0.15W, this series also complies with DoE Level VI standards. The DTM160 series is suitable for a variety of medical, clinical, healthcare, industrial, test and measurement applications.

Features

- Wide Range AC Input (Class I or Class II Input Options)
- Locking Output Connector
- DoE Level VI Efficiency
- 60601-1 Medical Certifications (2xMOPP)
- 62368-1 Compliant for ICT and Industrial Applications
- < 0.15W Off-load Power Draw

Benefits

- Supports Medical and Industrial Applications Globally
- Avoids Accidental Disconnection
- Meets US Energy Saving Legislation
- Suitable for B & BF Rated Equipment
- Suitable for Industrial Applications
- Consumes Less Energy, ErP Compliant

Model Selector

Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Overvoltage Protection (V)	Ripple & Noise (mV pk-pk)	Efficiency at 230Vac (%)	Max. Load Capacitance (µF)
DTM160CN120	12	12.5	150	13.2	120	91	12,250
DTM160CN240	24	6.66	160	28.6	200	92	6,600
DTM160CN360	36	4.44	160	41.8	200	92	4,330
DTM160CN480	48	3.33	160	55.6	200	93	3,240
DTM160CN120C8	12	12.5	150	13.2	120	91	12,250
DTM160CN240C8	24	6.66	160	28.6	200	92	6,600
DTM160CN360C8	36	4.44	160	41.8	200	92	4,330
DTM160CN480C8	48	3.33	160	55.6	200	93	3,240

DTM160CN	XXX	YY	-XXX
Series	120 = 12V Output Voltage 240 = 24V Output Voltage 360 = 36V Output Voltage 480 = 48V Output Voltage	Blank = Class I (IEC320/C14) inlet C8 = Class II (IEC320/C8) inlet	Modified standard designator for alternative connectors, cables and other non-safety file impacting changes*

* Contact Sales, MOQs may apply

Related Products

Type	Part Number	Description
Power supply	DTM and WMM	30 to 300W external power supplies

250W Medical/ITE AC-DC External Power Supplies



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/dtm>

The DTM250-D 250W external power supplies are certified to IEC/ES/CSA/EN60601-1, IEC/UL/CSA/EN62368-1 and are compliant to IEC60601-1-2 (Ed4). With an average efficiency of greater than 89% and an off-load power consumption of less than 0.15W, this series also complies with DoE Level VI and EU Tier 2 v5 standards for efficiency and off-load power. The DTM250-D series is suitable for higher power medical, dental, test, measurement and industrial portable equipment.

Features	Benefits
• Wide Range AC Input	• Global Operation
• Meets DoE Level VI & EU Tier 2 Efficiency	• Meets US and EU Energy Saving Legislation
• 60601-1 Medical Certifications /2xMoPP	• Suitable for B & BF Rated Equipment
• 62368-1 ITE Certifications	• Suitable for Industrial Applications
• < 0.15W Off-load Power Draw	• Consumes Less Energy

Model Selector					
Model	Output Voltage (V)	Max Current (A)	Max Power (W)	Overvoltage Protection (V)	Ripple & Noise (mVpk-pk)
DTM250PW120D	12	20.83	250	12.9 - 16.0	240
DTM250PW190D	19	13.157	250	20.20 - 25.46	300
DTM250PW240D	24	10.416	250	25.50 - 32.16	300
DTM250PW280D	28	8.928	250	29.6 - 33.2	300
DTM250PW360D	36	6.94	250	37.8 - 43.2	300
DTM250PW480D	48	5.208	250	50.0 - 57.2	300
DTM250PW540D	54	4.629	250	56.0 - 60.2	300

DTM250PW	190D
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120D	12V Output Voltage
190D	19V Output Voltage
240D	24V Output Voltage
280D	28V Output Voltage
360D	36V Output Voltage
480D	48V Output Voltage
540D	54V Output Voltage

300W Medical/ITE Class I and II AC-DC External Power Supplies



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/dtm>

The DTM300-D Class I and Class II (no ground connection) 300W external power supplies are certified to IEC/ES/CSA/EN60601-1, IEC60601-1-11 (Class II), IEC/UL/CSA/EN62368-1 and are compliant to IEC60601-1-2 (Ed4). With an average efficiency of greater than 88% and an off-load power consumption of less than 0.5W, this series also complies with DoE Level VI standards for efficiency and off-load power. With options for Class I or Class II inputs, the DTM300-D series is suitable for a variety of power hungry medical, industrial, and test and measurement applications.

Features	Benefits
• Wide Range AC Input (Class I or Class II Input Options)	• Global Operation
• Meets DoE Level VI Efficiency	• Meets US Energy Saving Legislation
• 60601-1 Medical Certifications /2xMoPP	• Suitable for B & BF Rated Equipment
• 62368-1 ITE Certifications	• Suitable for Industrial Applications
• < 0.5W Off-load Power Draw	• Consumes Less Energy

Model Selector

Model	Output Voltage (V)	Max Current (A)	Max Power (W)	Overvoltage Protection (V)	Ripple & Noise (mVpk-pk)
DTM300PW120D1	12	25	300	12.9 - 16.0	240
DTM300PW150D1	15	20	300	16.0 - 20.0	300
DTM300PW190D1	19	15.79	300	20.20 - 25.46	300
DTM300PW240D1	24	12.50	300	25.50 - 32.16	300
DTM300PW280D1	28	10.71	300	29.6 - 33.2	300
DTM300PW480D1	48	6.25	300	50.0 - 57.2	300
DTM300PW540D1	54	5.56	300	56.0 - 60.2	300
DTM300PW120D2	12	25	300	12.9 - 16.0	240
DTM300PW150D2	15	20	300	16.0 - 20.0	300
DTM300PW190D2	19	15.79	300	20.20 - 25.46	300
DTM300PW240D2	24	12.5	300	25.50 - 32.16	300
DTM300PW280D2	28	10.71	300	29.6 - 33.2	300
DTM300PW480D2	48	6.25	300	50.0 - 57.2	300
DTM300PW540D2	54	5.56	300	56.0 - 60.2	300

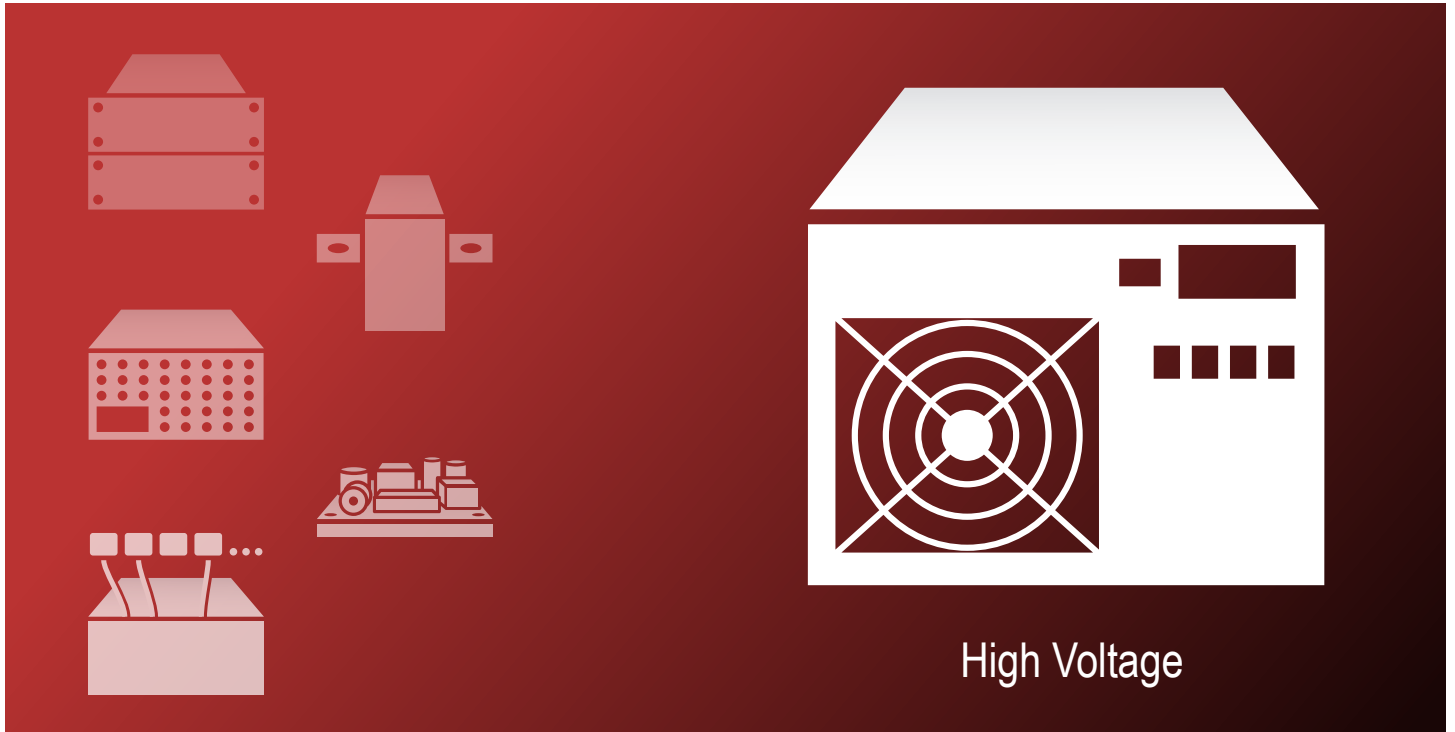
DTM300PW	240	D2
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120	12V Output Voltage
150	15V Output Voltage
190	19V Output Voltage
240	24V Output Voltage
280	28V Output Voltage
480	48V Output Voltage
540	54V Output Voltage

D1	Class I Input (IEC320-C14)
D2	Class II Input (IEC320-C18)



AC-DC High Voltage



Applications

- Test & Measurement
- Industrial
- Medical
- Semiconductor
- Applied R&D
- Renewable Energy
- Oil & Gas
- Communications
- Automotive
- COTS
- Robotics

Features ALE Rack Mount

- Available as Rack mount - 4000W to 50000W
- Simple parallel operation for higher power
- Full remote control interface
- High EMI-RFI immunity

Features TPF45000

- Non-Isolated modular power supply - 4500W to 45,000W
- 385VDC Output
- Ideal for Distributed Power Architecture (DPA) with isolated DC/DC converters
- Up to 98% Efficient
- 400/440/480 3 phase Delta or WYE Input
- PMBus™ and USB Communication Interfaces

AC/DC High Voltage Index by Wattage

Wattage	Number of Outputs	Series	Description	Page
4000	1	ALE 402	Capacitor Charging Power Supply	93
8000	1	ALE 802	Capacitor Charging Power Supply	93
12000	1	ALE LC1202	Capacitor Charging Power Supply	93
30000	1	ALE 303	Capacitor Charging Power Supply	93
4500-45000	1	TPF45000	Front End Non-Isolated 385Vdc Power Supply	51

Listed by Wattage

Compact OEM and Rack Mount capacitor charging supplies



Medical



Industrial



Test



COTS



COMM



Renewable



Semi-Fab

<https://www.us.lambda.tdk.com/products/high-voltage-power/capacitor-charging/>

TDK-Lambda's ALE Series are compact, high performance, high voltage, constant current power supplies specifically designed to rapidly and efficiency charge capacitors and pulse forming networks in repetitive pulse discharge circuits. Output powers are available from 1kJ/sec to 30kJ/sec with voltages up to 40kV or 50kV in a single package, and all models can be easily connected in parallel for higher power operation. All models feature standard remote analog control and programming, with the rack mount models available with local front panel controls.

Features

- Compact air and water cooled OEM or rack mount packages
- Simple parallel operation for higher power
- Constant current resonant inverter topology
- Excellent pulse to pulse repeatability
- Full remote control interface
- High EMI-RFI immunity
- 230VAC inputs for 1Ø, 208, 400, 480VAC for 3Ø

Benefits

- Significant Space Saving in End Equipment
- Upgradable for increased power
- No need for series current limit resistor for optimum efficiency
- Improved performance in load circuits
- Simple and precise operation
- Proven operation in noisy environments
- Worldwide operation

Model Selector

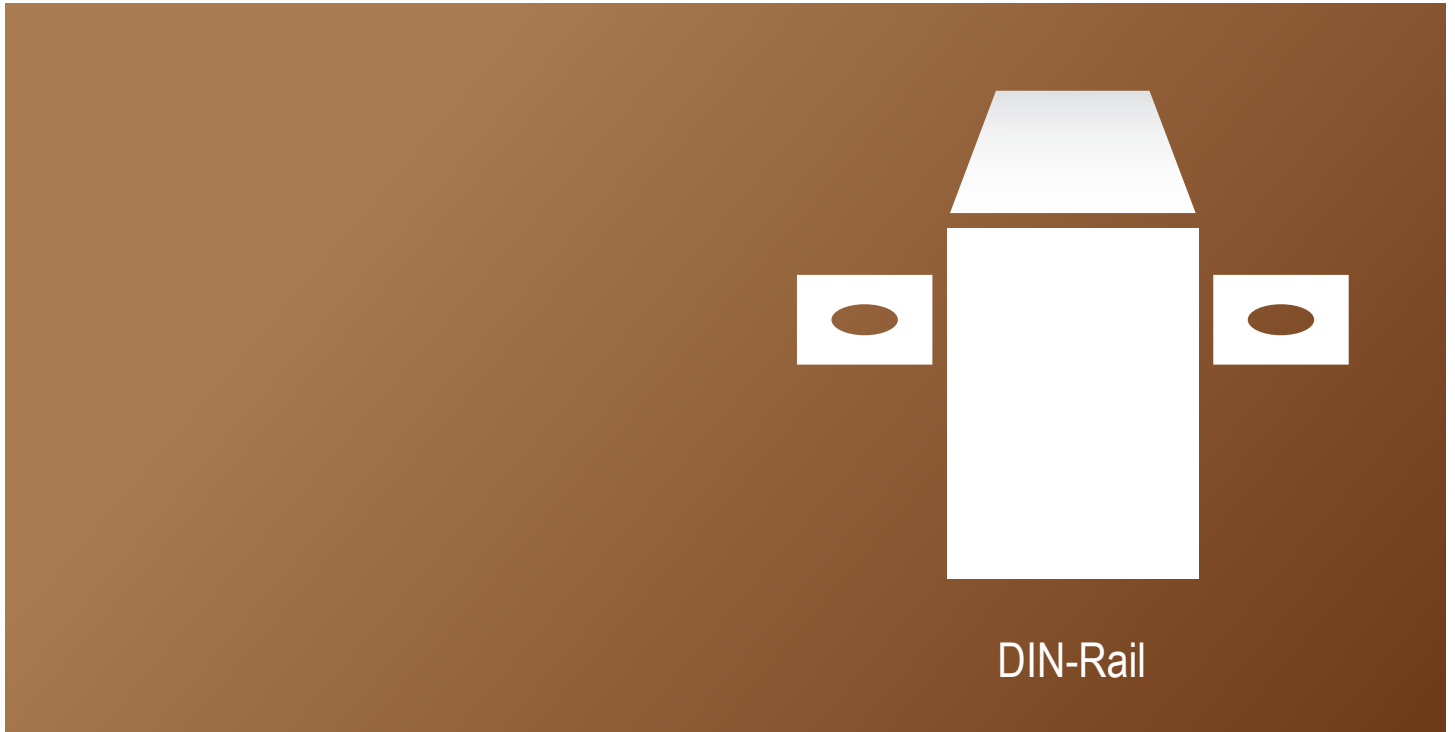
Model	102A	152A	202A	402	802	LC1202	303
Voltage Range	10kV	4kV	1.5, 3, 6, 20, 40kV	1, 2, 4, 5, 10, 15, 20, 30, 40, 50kV		30kV max	5, 10, 15, 20, 30, 40, 50kV
Charging Power (Av)	1kJ/s	1.5kJ/s	2kJ/s	4kJ/s	8kJ/s	12kJ/s	30kJ/s
Charging Power (Pk)	1.1kJ/s	1.65kJ/s	2.2kJ/s	5kJ/s	9kJ/s	13.5kJ/s	37.5kJ/s
CW DC Power	n/a			4kW	8kW	15kW	50kW
AC Input	230 1Ø		208/400 3Ø			208/400/480 3Ø	400/480 3Ø
Power factor	0.98	0.65	0.98	0.85		0.9	0.85
Polarity	Positive		Available as fixed Positive or Negative. Please specify at time of ordering				
Panel Options	OEM only			L - Controls & Meters, S - Status LEDs only, OEM - Blank			
Efficiency	85%			85%		90%	85%
Stored Energy	Less than 0.3J all models						
Repeatability	0.1% to 300Hz			2% to 1kHz		1% to 1kHz	2% to 100Hz
Mechanical	5.75 x 5.56 x 14.2"		14.8"	4U x 19" x 17"	5U x 19" x 17"		7U x 19" x 22.5"
Weight	14 lbs		16 lbs	60 lbs	85 lbs	90 lbs	185 lbs
Operating Temp	-20 to +45°C			-20 to +45°C		+5 to +45°C	
Storage Temp	-40 to +85°C						-40 to +70°C
Altitude Storage	- 40,000ft, Operating - 9,900ft						
Humidity	10-90%, non condensing						
Protection	Open/short circuits, Overloads, Arcs, Overtemp						
Remote Control	15-pin D-sub Analog/Digital Interface			25-pin D-sub Analog/Digital Interface			

Examples:

152A-4kV-POS, 202A-3kV-NEG-PFC, 402-OEM-50kV-POS-3P208, 802L-10kV-POS-3P400, LC1202S-1kV-NEG-DC-3P208, 303L-50kV-POS-3P480



DIN-Rail Mount



Applications

- Factory Automation and Controls
- Facility & Hotel or Home Automation
- Food & Beverage Industry
- Robot Controls
- Paper Handling, Sorting, Delivery Systems
- Process Automation
- Conveyors, Elevators, Escalators
- Typical for DIN-Rail mounting in cabinets

Features

- Efficiency up to 94% – NEW DRF-Series
- Mainly with 24V output, but also other output voltages from 5V to 48V are available
- Power range from 10W to 960W with convection-cooling
- Single-phase and three-phase AC input (for 120-960W models) and DC input models
- Plastic cases for low-power units up to 480W, metal cases for higher output power
- Flat shape for wall mounted cabinets
- Slim shape for industrial cabinets
- UL 508 Listed
- Isolated and Non-Isolated DC Input 40W to 500W

DIN Rail Mount Index by Wattage

Wattage	Number of Outputs	Series	Page
10-100W	1	DRL	96
15-100W	1	DRB15-100	97
120-480W	1	DRB120-480	98
120-960W	1	DRB120-960-3	99
40-60W	1	DPX40, DPX60 (DC Input)	100
40-65W	1	CSW65 (DIN mount option)	16
120-960W	1	DRF120-960	101
250-500W	1-2	DDA (DC Input)	102
250ms	1	DBM20 (Hold Up Module)	103
20-40A	1	DRM40 (Redundant Module)	104

Listed by Wattage

10-100W Low Profile DIN Rail Mount Power Supplies



Industrial



Test



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/dri>

The low profile DRL DIN rail power supply series provides a reliable solution for many industrial and building automation applications. With double insulation and a safety Class II input, connection to earth is not required. The NEC Class 2 compliant output, in accordance with UL 1310, allows operation where output currents are to be limited under fault conditions. Available in four power ranges, the DRL series provide a choice of 12, 15 and 24 output voltages

Features	Benefits
• High Efficiency, up to 90%	• Lower Operating Costs, Improved Thermal Performance
• UL1310 Class 2 Compliant	• Suitable for Building Automation requiring NEC Class 2
• Low No Load Power Consumption	• Energy Saving
• Long E-Capacitor Life (>8 years @ 40°C, 75% Load, 230VAC)	• Long Field Life
• Class II, Wide Range Input (85-264VAC)	• Global Application, No Earth Required

Model Selector							
Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)	Efficiency (115/230VAC) (%)	Overvoltage (V)	UL1310 Class 2
DRL10-12-1	12	-	0.84	10.08W	85 / 85	13.8 - 16.2	Yes
DRL30-12-1	12	12 - 15	2.1	25.2W	87 / 88	16 - 19	Yes
DRL60-12-1	12	12 - 15	4.5	54W	87 / 87	16 - 19	Yes
DRL30-15-1	15	12 - 15	1.68	25.2W	87 / 88	16 - 19	Yes
DRL60-15-1	15	12 - 15	3.6	54W	87 / 87	16 - 19	Yes
DRL10-24-1	24	-	0.42	10W	87 / 87	29 - 35	Yes
DRL30-24-1	24	24 - 28	1.25	30W	88 / 90	29 - 35	Yes
DRL60-24-1	24	24 - 28	2.5	60W	89 / 90	29 - 35	Yes
DRL100-24-1	24	24 - 28	4.2	100.8W	88 / 90	29 - 35	No
DRL100-24-1/C2	24	-	3.67	88W	88 / 90	26 - 30	Yes

15W - 100W DIN Rail Mount Single Phase Power Supplies



Industrial



Test



Semi-Fab



[Full Datasheet](#)

<https://product.tdk.com/en/power/dr>

The DRB series supports the growing trend for simple and economically priced DIN power supplies for industrial and process control applications. The series combines low cost, reliability and compact dimensions with energy saving efficiencies of up to 91%. Conservatively rated electrolytic capacitor temperatures offer improved field life-times of up to 10 years. Available in four power levels, 15W, 30W, 50W, 100W, the series provides a choice of 5, 12, 15, 24 and 48V outputs. UL1310 Class 2 models and Class 1 Div 2 (ISA 12.12.01) certifications are available.

Features	Benefits
• High Efficiency, up to 91%	• Lowers Operating Costs and Improves Thermal Performance
• Narrow Case Widths	• Increases Available Space on the DIN Rail
• Curve B Radiated and Conducted EMI	• Reduced Electrical Noise in the System
• Low No Load Power Draw	• Saves Energy
• UL1310 Class 2 Compliant Models	• Suitable for Building Automation requiring NEC Class 2
• Class 1 Div 2 Compliance	• For Use in Explosive Atmospheres

Model Selector								
Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)	Ripple & Noise (mV)	Overvoltage Protection (V)	Efficiency (%) (115/230Vac)	UL1310 Class 2
DRB50-5-1	5	5 - 5.5	6	30	30	5.75 - 6.75	79 / 80	No
DRB30-12-1	12	12 - 15	2.5	30	40	15.96 - 18.72	86 / 88	Yes
DRB50-12-1	12	12 - 15	3.4	51*	20	15.96 - 18.72	88 / 90	Yes
DRB50-15-1	15	12 - 15	3.4	51*	20	15.96 - 18.72	88 / 90	Yes
DRB15-24-1	24	24 - 28	0.63	15.1	20	30 - 33.6	87 / 90	Yes
DRB30-24-1	24	24 - 28	1.25	30	30	30 - 33.6	88 / 90	Yes
DRB50-24-1	24	24 - 28	2.1	50.4	30	30 - 33.6	88 / 90	Yes
DRB100-24-1	24	24 - 28	4.2	100.8	30	30 - 33.6	90 / 91	No
DRB50-48-1	48	48 - 52.8	1.05	50.4	40	53.76 - 68.16	90 / 91	Yes

* Maximum power is 51W at 15V output, 40.8W when set at 12V output

120W - 480W DIN Rail Mount Single Phase Power Supplies



Industrial



Test



Semi-Fab

[Full Datasheet](#)

<https://product.tdk.com/en/power/drb>

The DRB series supports the growing trend for simple and economically priced DIN power supplies for industrial and process control applications. The series combines low cost, reliability and compact dimensions with energy saving efficiencies of up to 93%. Conservatively rated electrolytic capacitor temperatures offer improved field life-times of up to 10 years. Available in three power levels, 120W, 240W and 480W, the series provides a choice of 12V, 24V and 48V outputs. An opto-isolated DC OK signal is fitted for remote monitoring.

Features	Benefits
• High Efficiency, up to 93%	• Lowers Operating Costs and Improves Thermal Performance
• Narrow Case Widths	• Increases Available Space on the DIN Rail
• Curve B Radiated and Conducted EMI	• Reduced Electrical Noise in the System
• Long E-Capacitor Life (Up to 10 Years)	• Improved Field Life
• Low Off-Load Power Consumption	• Saves Energy

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Peak Current (A) 10s maximum, <35% duty cycle	Maximum Power (W)	Maximum Peak Power (W)	Overvoltage Protection (V)	Efficiency (%) (120/230Vac) ⁽¹⁾
DRB120-12-1	12	12 - 13.2	10	12	120	144	13.8 - 17.4	>90 / 91
DRB120-24-1	24	24 - 28	5	6	120	144	30 - 35	91 / 93 (Typ)
DRB240-24-1	24	24 - 28	10	12	240	288	30 - 35	91 / 93 (Typ)
DRB480-24-1	24	24 - 26.4	20	-	480	-	29.4 - 30.6	>90 / 92
DRB120-48-1	48	48 - 52.8	2.5	3	120	144	55.2 - 60	>90 / 91
DRB240-48-1	48	48 - 52.8	5	6	240	288	55.2 - 60	>90 / 92
DRB480-48-1	48	48 - 52.8	10	-	480	-	54.7 - 59.3	>90 / 92

Related Products

Type	Part Number(s)	Description
Redundancy module	DRM40	20 to 40A DIN Rail Redundancy Module
Low power DIN rail power supplies	DRB15, 30, 50, 100	15 to 100W AC-DC DIN rail power supplies
Mid to high power premium DIN rail power supplies	DRF120, 240, 480, 960	120 to 960W AC-DC DIN rail power supplies
DIN rail mount filters	RSMN	3A to 30A 250Vac 2 stage filters with pulse attenuation
DIN rail mount filters	RSEV	6A to 30A 250Vac 2 stage filters
RSEV DIN rail mounting kit	DIN-RSEV	RSEV DIN rail mounting kit

120W - 960W DIN Rail Mount Three Phase Power Supplies



Industrial



Test



Semi-Fab



[Full Datasheet](#)

<https://product.tdk.com/en/power/dr>

The DRB120-3, DRB240-3, DRB480-3 and DRB960-3 series supports the growing trend for mid range 3-phase input DIN power supplies for industrial and process control applications. The series offers an excellent balance between functionality and price, combining reliability and compact dimensions with energy saving efficiencies of up to 96.3%. Conservatively rated electrolytic capacitor temperatures offer improved field life-times of typically 10 years. Now available in four power levels, 120, 240, 480 and 960W, the series provides a choice of 12V, 24V, 48 or 72V outputs. All models have boost (peak) power ratings to handle capacitive loading. A low energy inrush current level avoids nuisance tripping of circuit breakers. Units can be connected in parallel to provide more power or for redundant applications. A DC Good relay, remote on/off and a choice of models with either screw or push-in wire terminals for automated and robotic wiring.

Features	Benefits
• 50% Boost (peak) Power Ratings for up to 600 Seconds	• Supports Capacitive and Inductive Loading
• High Efficiency up to 96.3%	• Lowers Operating Costs and Improves Thermal Performance
• Narrow Case Widths	• Occupies Less Space on the DIN rail
• Curve B Radiated and Conducted EMI	• Reduced Electrical Noise in the System
• Long E-Capacitor Life (typically 10 Years)	• Improved Field Life
• Low Off-Load Power Consumption	• Saves Energy

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Peak Current (A) ⁽¹⁾	Maximum Power (W)	Maximum Peak Power (W) ⁽¹⁾	Terminal Type	Efficiency (%) (400/500Vac) ⁽²⁾
DRB120-12-3-A0	12	11.4 - 15	10	14.5 for 600s	120	174	Screw	89.4 / 89.1
DRB120-12-3-A1	12	11.4 - 15	10	14.5 for 600s	120	174	Push-in	89.4 / 89.1
DRB120-24-3-A0	24	22.5 - 29	5	7.5 for 600s	120	180	Screw	91.3 / 91.2
DRB120-24-3-A1	24	22.5 - 29	5	7.5 for 600s	120	180	Push-in	91.3 / 91.2
DRB240-24-3-A0	24	22.5 - 29	10	15 for 60s	240	360	Screw	93.1 / 93.2
DRB240-24-3-A1	24	22.5 - 29	10	15 for 60s	240	360	Push-in	93.1 / 93.2
DRB480-24-3-A0	24	22.5 - 29	20	30 for 7s	480	720	Screw	95.1 / 94.9
DRB480-24-3-A1	24	22.5 - 29	20	30 for 7s	480	720	Push-in	95.1 / 94.9
DRB240-48-3-A0	48	45 - 56	5	7.5 for 60s	480	360	Screw	93.8 / 94.0
DRB240-48-3-A1	48	45 - 56	5	7.5 for 60s	480	360	Push-in	93.8 / 94.0
DRB480-48-3-A0	48	45 - 56	10	15 for 7s	480	720	Screw	95.3 / 95.1
DRB480-48-3-A1	48	45 - 56	10	15 for 7s	480	720	Push-in	95.3 / 95.1
DRB480-72-3-A0	72	70 - 85	6.7	10 for 5s	480	720	Screw	95.8 / 95.6
DRB480-72-3-A1	72	70 - 85	6.7	10 for 5s	480	720	Push-in	95.8 / 95.6
DRB960-24-3-A0	24	22.5 - 29	40	60 for 5s	960	1440	Screw	95.2 / 95.1
DRB960-24-3-A1	24	22.5 - 29	40	60 for 5s	960	1440	Push-in	95.2 / 95.1
DRB960-48-3-A0	48	45 - 56	20	30 for 5s	960	1440	Screw	95.9 / 95.8
DRB960-48-3-A1	48	45 - 56	20	30 for 5s	960	1440	Push-in	95.9 / 95.8
DRB960-72-3-A0	72	70 - 85	13.3	20 for 5s	960	1440	Screw	96.3 / 96.2
DRB960-72-3-A1	72	70 - 85	13.3	20 for 5s	960	1440	Push-in	96.3 / 96.2

Related Products

Type	Part Number(s)	Description
Redundancy module	DRM40	20 to 40A DIN rail Redundancy module
Buffer DIN rail modules	DBM20	20A DIN rail Buffer (hold-up) modules
Low power DIN rail power supplies	DRB15, 30, 50, 100	15 to 100W AC-DC single phase DIN rail power supplies
Mid power DIN rail power supplies	DRB120, 240, 480	120 to 480W AC-DC single phase DIN rail power supplies
Mid to high power premium DIN rail power supplies	DRF120, 240, 480, 960	120 to 960W AC-DC single phase DIN rail power supplies
DIN rail mount filters	RTMN	6A to 60A 500Vac three phase 2 stage filters with pulse attenuation

40-60W Single, Dual and Triple Output
Isolated DIN-Rail Mount DC-DC Converters



Industrial



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/dpx>

The DPX DIN rail mount DC-DC converters are an ideal all-in-one-package for generating additional isolated and regulated voltages from a 24Vdc DIN rail bus. Fully protected and with Class B EMC performance, the DPX40/60 series is available with single, dual or triple output models and power levels from 40 to 60W. All commonly requested voltages are covered by the series, and the units will operate from 12V, 24V or 48V nominal DC inputs with 2:1 or 4:1 ranges. These power supplies are convection cooled and operate over a wide temperature range from -40 to +85°C, with appropriate derating at high temperatures. The DPX is also designed to meet MIL-STD-810F shock & vibration standards.

Features	Benefits
• All In One Package	• Easy to Use and Mount
• Wide Range Input	• Less Parts to Inventory
• 1600Vdc Input to Output Isolation	• Output Voltages Can Be Isolated for Lower Noise
• CE and UKCA Marks	• Easier System Compliance

DPX-	40	-24	S	05	/N
	40 40W Output Power 60 60W Output Power	-12 9.5 - 18V input -24 18 - 36V input -48 36 - 75V input -24W 9.5 - 36V input -48W 18 - 75V input	S Single Output D Dual Output T Triple Output	Single Output 3P3 3.3V Output Voltage 05 5V Output Voltage 12 12V Output Voltage 15 15V Output Voltage Single and Dual Output 12 ±12V Output Voltage 15 ±15V Output Voltage Triple Output 3312 3.3V, ±12V Output Voltage 3315 3.3V, ±15V Output Voltage 0512 5V, ±12V Output Voltage 0515 5V, ±15V Output Voltage	Blank Positive Logic Remote On/Off /N Negative Logic Remote On/Off

Preferred model

*Not available for 60W models

120-960W Single Output Full Featured DIN Rail Mount Power Supplies



[Full Datasheet](#)

<https://product.tdk.com/en/power/dr/>



Industrial



Test



Semi-Fab



HazLoc



Renewable

The DRF series provides full featured DIN Rail mount power supplies for industrial and process control applications. The series combines careful thermal design, reliability and compact dimensions with energy saving efficiencies of up to 95%. Conservatively rated electrolytic capacitor temperatures offer improved field life-times of up to 10 years. Available in four power levels, 120W, 240W, 480W and 960W, the series provides 24V outputs with a peak loading capability of 150% for up to four seconds. The models can be operated in parallel, have remote on/off and remote voltage adjustment. For operation in hazardous locations, the /HL option can be selected on the DRF120 to DRF480 models, which includes coating of the circuit boards for added protection.

Features

- High Efficiency, up to 95%
- 150% Peak Power for Four Seconds
- Long E-Capacitor Life (Up to 10 Years)
- Low Off-Load Power Consumption
- Remote On/Off and Remote Output Control
- Hazardous Location Option (/HL)

Benefits

- Lowers Operating Costs and Improves Thermal Performance
- Operates With Capacitive and Inductive Loads
- Improved Field Life
- Saves Energy
- Supports Intelligent System Control
- Certified For Use in Explosive Atmospheres

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Max Current (A)	Max Power (W)	Peak Output Current (1) (A)	Peak Output Power (1) (W)
DRF120-24-1	24	24 - 28	5	120	7.5	180
DRF240-24-1	24	24 - 28	10	240	15	360
DRF480-24-1	24	24 - 28	20	480	30	720
DRF960-24-1	24	24 - 28	40	960	60	1440

DRF	240	-24	-1	/HL
Series	120, 240, 480, 960W	24V Output	Single phase	Blank No ATEX, IEC EX Certification or pcb coating /HL ATEX, IEC EX Certification (Including pcb coating). Not available for DRF960.

Related Products

Type	Part Number(s)	Description
Buffer Module	DBM20	24V 20A Hold-Up DIN Rail Module
Redundancy Module	DRM40	20A to 40A DIN Rail Redundancy Module
Low power DIN rail power supplies	DRB15, 30, 50, 100	15 to 100W AC-DC DIN rail power supplies
Mid to high power DIN rail power supplies	DRB120, 240, 480	120 to 480W AC-DC DIN rail power supplies
Mid to high power 3-phase DIN rail power supplies	DRB-3	3- phase AC-DC DIN rail power supplies
DIN rail mount filters	RSMN	3A to 30A 250Vac 2 stage filters with pulse attenuation
DIN rail mount filters	RSEV	6A to 30A 250Vac 2 stage filters
RSEV DIN rail mounting kit	DIN-RSEV	RSEV DIN rail mounting kit

250-500W, Wide Range Input, Non-isolated, DIN Rail DC-DC Converters



[Full Datasheet](#)

<https://product.tdk.com/en/power/dda>



Industrial



Test



Semi-Fab

The DDA DIN rail mount, non-isolated step-down converters are ideal for creating additional high current output voltages from a single output 12V, 24V or 48V AC-DC power supply. The highly efficient DDA series accepts a very wide DC input and has a wide output adjustment range, with a choice of single or dual output models.

Features	Benefits
• 250W Single Output, 325W and 500W Dual Output Power Levels	• High Power Density
• High Efficiency up to 95%	• Less Waste Heat
• Wide Input Range - 9 up to 53V	• One Part For Multiple Applications
• Wide 3.3 to 24V Output Adjustment	• Accommodates Non-Standard Voltages
• Narrow 36.5mm Width	• More Space Available For Other DIN Rail Devices
• Convection Cooled	• Easy To Cool In End System

Model Selector						
Part Number	Output Voltage 1		Output Voltage 2		Maximum Output Current	Maximum Output Power
	Nominal (V) ⁽¹⁾	Adjust Range (V)	Nominal (V) ⁽¹⁾	Adjust Range (V)		
DDA250N-S1PX-12-001	12V	3.3 to 15V	NA	NA	20A / NA	250W / NA
DDA500N-D2PP-1205-001	12V	3.3 to 15V	5V	3.3 to 15V	20A / 20A	250W / 250W
DDA325N-D2PN-1212-001	12V	3.3 to 24V	-12V	-3.3 to -24V	14A / 8A	250W / 75W

Consult factory for other output voltage combinations.

Specification						
Model(s)		DDA250		DDA500		DDA325
Input						
Input Voltage range	Vdc	9 to 53V (Turn on at 10V or greater)			9 to 40V (Turn on at 10V or greater)	
Input Current (Max.)	A	20A		40A		35A
Efficiency	-	92 - 95%			88 - 94%	
Conducted & Radiated EMI	-	EN55032 Class A				
Immunity	-	EN55024				
Safety Certifications and Markings	-	IEC/UL/CSA/EN 62368-1, CE Mark and UKCA Mark				
Output						
Switching Frequency	kHz	400				
Line Regulation	mV	25mV			20mV	
Load Regulation	mV	150mV			100mV	
External Load Capacitance	uF	0 - 1000uF each output voltage				
Output Ripple & Noise (pk-pk)	mV	60mV			50mV each output voltage	
Overcurrent Protection Threshold	A	28A			22 / 15A	
Overvoltage Protection	V	None				
Remote On / Off	-	To enable the output(s), connect the on/off pins to the GND pin(s) on the top connector				
Remote Sense	-	(+) Sense, compensating up to 5% of output voltage				
Power Good	-	Open collector(s), low on fail				
Indicators	-	A green LED indicates the output is OK				
Parallel Operation	-	Not possible				
Series operation	-	Not possible				

24V 20A Buffer (Hold-Up) DIN Rail Module



[Full Datasheet](#)

<https://product.tdk.com/en/power/dbm>



Industrial



Test



Semi-Fab

The DBM20 20A buffer module is ideal for providing short term hold-up or peak power for loads powered by a 24Vdc output AC-DC power supply. During normal operation, energy is stored in the DBM20's electrolytic capacitors. When the AC power is interrupted for a short period of time, the DBM20 continues to power the load, allowing equipment to shutdown in a safe and controlled manner. The DBM20 can be set to fixed or variable buffer mode. In fixed mode it will provide power when the input voltage drops to 22.4V, in variable mode when the input decreases by 1V. Multiple buffer modules can be paralleled for additional hold-up time. Product status can be accessed remotely via a DC OK relay, or locally using the LED indicators. The output voltage can also be inhibited to avoid an unsafe discharge of the stored energy.

Features

- Provides 250ms Additional Hold-Up Time at 448W
- Utilizes Electrolytic Capacitors to Store Energy
- Narrow 49mm Width
- Parallel Capable
- Output Remote On/Off Function

Benefits

- Avoids Loss of Data During AC Power Interruptions
- No Batteries to Service or Maintain
- Increases Available Space on the DIN Rail
- Hold-Up Time Can Be Extended
- Avoids Unsafe Discharge of Stored Energy

Model Selector

Model	Output Voltage Fixed Mode (V) (1)	Output Voltage Dynamic Mode (V) (1)	Maximum Current (A)	Average Buffer Power (W)	Terminals
DBM20	22.4	Vin-1	20	448	Screw
DBM20/E	22.4	Vin-1	20	448	Spring Clamp

Related Products

Type	Part Number(s)	Description
Redundancy module	DRM40	20 to 40A DIN Rail Redundancy Module
Low power DIN rail power supplies	DRB15, 30, 50, 100	15 to 100W AC-DC DIN rail power supplies
Mid to high power DIN rail power supplies	DRB120, 240, 480	120 to 480W AC-DC DIN rail power supplies
Mid to high power premium DIN rail power supplies	DRF120, 240, 480, 960	120 to 960W AC-DC DIN rail power supplies
DIN rail mount filters	RSMN	3A to 30A 250Vac 2 stage filters with pulse attenuation
DIN rail mount filters	RSEV	6A to 30A 250Vac 2 stage filters
RSEV DIN rail mounting kit	DIN-RSEV	RSEV DIN rail mounting kit

Specifications

Model		DBM20
Input		
Input Voltage range	Vdc	Fixed Mode: 23 - 30, VIN-1 Mode: 24 - 30
Input Voltage Maximum Limit	Vdc	35
Input Current (Typical)	A	Charging Mode: 0.8, Ready Mode: 0.2
Charging Time (Typical)	s	40
Hold Up Time (Typical)	ms	250
Conducted & Radiated EMI	-	EN55032-B CISPR32-B
Immunity	-	See immunity table
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, UL508, CE Mark and UKCA Mark

20-40A DIN Rail Redundancy Module



Industrial



Test

[Full Datasheet](#)

<https://product.tdk.com/en/power/drm40>

The DRM40 series of DIN rail mount redundancy modules are ideal for connecting two 20A, 10V to 30Vdc output power supplies to produce a 20A N+1 redundant configuration. Alternatively, using the load balancing option, two 20A supplies can be paralleled to deliver a 40A output. For capacitive and inductive loads, the DRM40 will support an additional 50% peak load for four seconds. The use of low-loss MOSFET reverse current protection devices reduces the internal voltage drop to just 200mV.

Features	Benefits
• Compact Size	• Occupies Less Space on the DIN rail
• Low 200mV Voltage Drop	• Reduced Voltage Drop and Power Loss
• Current Balance Indicator Option	• Ensure and Monitor Power Supply Load Sharing
• Isolated Alarm Signals	• Simplified Remote Monitoring

Model Selector

Model	Input Voltage Range (V)	# of Inputs	Maximum Current (A)	Peak Current (A) (<4s, 35% Duty Cycle)	Monitoring Signals
DRM40	10-30	2	40	60	Input Good and Current Balance Indicators
DRM40B	10-30	2	40	60	None

Related Products

Type	Part Number(s)	Description
Buffer DIN rail modules	DBM20	20A DIN rail Buffer (hold-up) modules
Low power DIN rail power supplies	DRL10, 30, 60, 100	10 to 100W AC-DC DIN rail power supplies (Class II, No AC Ground required)
Low power DIN rail power supplies	DRB15, 30, 50, 100	15 to 100W AC-DC DIN rail power supplies (Class I, AC Ground required)
Mid to high power DIN rail power supplies	DRB120, 240, 480	120 to 480W AC-DC DIN rail power supplies
Mid to high power premium DIN rail power supplies	DRF120, 240, 480, 960	120 to 960W AC-DC DIN rail power supplies
DIN rail mount filters	RSMN	3A to 30A 250Vac 2 stage filters with pulse attenuation
DIN rail mount filters	RSEV	6A to 30A 250Vac 2 stage filters
RSEV DIN rail mounting kit	DIN-RSEV	RSEV DIN rail mounting kit



Programmable Power Supplies, Sources and Loads

Applications

- Test & Measurement ATE
- Battery Simulation
- Component Burn-in
- Plating and Etching
- Industrial
- Medical
- Semiconductor
- Automotive
- Renewable Energy
- Oil & Gas
- Avionics & Defense/COTS
- Communications
- Applied/Laboratory R&D



Features (Genesys™)

- Output Voltage Ratings up to 1500V
- Output Current Ratings up to 1000A
- Output Power from 600W to 15kW
- World-wide single-phase/three-phase AC Inputs (w/ PFC)
- Constant Voltage (CV) or Constant Current (CC) operation w/ Auto-Crossover
- Built-In RS-232/RS-485 and Analog Program/Monitor (5V/10V) Interfaces
- Optional LAN, USB, IEEE and Isolated Analog (5V/10V or 4-20mA) Interfaces
- Parallel Operation (up to 60kW) / Series Operation
- Bench-Top, Rack-Mount or Chassis-Mount w/ Zero-Stacking
- Safety Agency Approvals & CE/UKCA Marks / 5Yr Warranty

Features (GENESYS+™ Rack-Mount and Rack Systems)

- Output Voltages up to 1500V (Rack-Mount), 600V (Rack Systems)
- Output Current Ratings up to 1500A (Rack-Mount), 4500A (Rack Systems)
- Output Power from 1kW to 15kW (Rack-Mount), 30kW to 60kW (Rack Systems)
- Worldwide single-phase/three-phase AC Inputs w/ PFC
- Constant Voltage (CV) or Constant Current (CC) operation w/ Auto-Crossover
- Advanced Features Built-In (Waveform Generator, Slew-Rate Control, CP Limit, etc.)
- Built-In RS-232/RS-485, LAN, USB and Isolated Analog (5V/10V) Interfaces
- Optional IEEE, EtherCAT and Modbus-TCP Interfaces
- Advanced Parallel Operation (up to 60kW) / Series Operation
- Bench-Top, Rack-Mount, or Chassis-Mount (Rack Mount) w/ Zero-Stacking
- Safety Agency Approvals & CE/UKCA Marks
- Five Year Warranty



Features (Genesys™ AC and Genesys™ AC PRO)

- High Power Density 2 and 3 kVA in 1U, and stackable to 27kVA
- AC and AC+DC models
- 0-350Vac operating range
- High peak current capability
- LAN, USB, RS232/485 and Analog interface standard
- Safety certified per IEC/UL/EN 61010-1 Ed. 3 (cTUVus, T-Mark, CE/UKCA)
- Five year warranty

Features (SFL Programmable DC Loads)

- 300W/1kW models (120V and 500V)
- Stable High Speed Current Control
- High Slew Rate (Up to 30A/us)
- Low Voltage Operation with No Turn-On Delay
- Seven Operating Modes (CC, CR, CP, CV, EXT, Short, CV+Climit)
- Four Operating Modes (Normal, Dynamic, Sequence and Sweep)
- Built-In Memory Function (store/recall eight settings)
- Multi-Channel Triggering (up to ten units)
- Parallel Operation (up to ten units - up to 10kW)
- Bench-top or Rack-Mount w/ Zero-Stacking
- Built-In USB (2.0) Digital Programming Interface
- Optional IEEE (w/ DIDO) Interface and Ripple Measurement Interface
- Safety Agency Compliance & CE/UKCA Marks
- Two Year Warranty

Programmable DC Power Supply Index by Wattage

Wattage	Number of Outputs	Series	Description	Page
200-800	1	Z+	Programmable DC Bench top or 2U Rack Mount Power supplies	107
200-800	1	Z+ High Voltage	Programmable DC Bench top or 2U Rack Mount Power supplies	108
600-15000	1	Genesys™	Programmable DC Bench top or Rack Mount Power supplies	109-114
1000-15600	1	GENESYS+™	Programmable DC Bench top or Rack Mount Power supplies	115-120
30,000-60,000	1	GENESYS+™	Programmable DC Bench top or Rack Mount Power supplies	121-122
300-1000		SFL	Programmable DC Electronic Loads	125

Listed by Wattage

Programmable AC Power Supply Index by Wattage

Wattage	Number of Outputs	Series	Description	Page
2000-3000	1	GENESYS™ AC	Programmable AC Bench top or 1U Rack Mount Power supplies	123-124
2000-3000	1	GENESYS™ AC PRO	Programmable AC Bench top or 1U Rack Mount Power supplies	123-124

Listed by Wattage

200-800W, 10 to 100V Programmable Power Supplies



Industrial



Test



[Full Datasheet](#)

<https://product.tdk.com/en/power/zplus>

Suitable for bench or 2U rack mounting, the Z+ is a very compact programmable power supply offering power levels from 200 to 800W, voltages of up to 100V and currents of up to 72A. Multiple remote programming methods are available including built-in USB, RS232 & RS485 and optional LAN, GPIB & isolated analogue interfaces. The units can operate in either constant current or constant voltage mode and accept a wide 85-265Vac input. The product is backed with a five year warranty.

Features	Benefits
• 2U high	• Low Profile
• Built-in USB, RS-232 & RS-485 Interface	• No Additional Cost
• Optional LAN, GPIB & Isolated Analog Programming	• Programmable Remote Operation
• Bench or Rack Mount	• Flexible Mounting
• Constant Current or Voltage Modes	• Seamless Transition (Auto Crossover)
• Five Year Warranty	• Low Cost of Ownership

Model Selector								
Model (Note: Add appropriate suffix for the AC line cord)	Voltage Adjust Range (V)	Current Adjust Range (A)	Max Power (W)	Ripple 5Hz-1MHz (mV)	Noise 20MHz BW (mV)	Ripple 5Hz-1MHz (mA)	Efficiency (100-200Vac) (%)	Front Panel Output Jacks (Option)
Z10-20	0 - 10	0 - 20	200	5	50	25	80 / 82	Yes
Z10-40	0 - 10	0 - 40	400	5	50	70	80 / 82	Yes
Z10-60	0 - 10	0 - 60	600	5	50	150	80 / 82	Yes
Z10-72	0 - 10	0 - 72	720	5	50	180	80 / 82	Yes
Z20-10	0 - 20	0 - 10	200	6	50	15	82 / 84	Yes
Z20-20	0 - 20	0 - 20	400	6	50	40	81 / 83	Yes
Z20-30	0 - 20	0 - 30	600	5	50	75	82 / 84	Yes
Z20-40	0 - 20	0 - 40	800	5	50	100	82 / 84	Yes
Z36-6	0 - 36	0 - 6	216	6	50	8	83 / 85	Yes
Z36-12	0 - 36	0 - 12	432	6	50	15	83 / 85	Yes
Z36-18	0 - 36	0 - 18	648	5	50	25	84 / 85	Yes
Z36-24	0 - 36	0 - 24	864	5	50	31	84 / 85	Yes
Z60-3.5	0 - 60	0 - 3.5	210	7	50	4	83 / 85	Yes
Z60-7	0 - 60	0 - 7	420	7	50	8	83 / 85	Yes
Z60-10	0 - 60	0 - 10	600	12	50	8	83 / 85	Yes
Z60-14	0 - 60	0 - 14	840	12	60	28	83 / 85	Yes
Z100-2	0 - 100	0 - 2	200	8	80	3	83 / 85	No
Z100-4	0 - 100	0 - 4	400	8	80	3	84 / 86	No
Z100-6	0 - 100	0 - 6	600	15	80	5	84 / 86	No
Z100-8	0 - 100	0 - 8	800	15	80	12	84 / 86	No

Part Number Example

Z10	-	20	-	LAN	-	L	-	U
Series & output voltage		Output current		blank USB, RS-232/RS-485 (All models) IEEE GPIB Interface** IS510 Voltage Programming Isolated Analog Interface** IS420 Current Programming Isolated Analog Interface** LAN LAN Interface (Complies with "LXI" Class C)		blank No front output jacks -L Output jacks* -L2 Output jacks* (insulated)		Blank AC Line cord U No AC cord supplied E North America cord J European cord I Japan cord I Middle East cord
								Plug Type - NEMA 5-15P CEE 7/II JIS C8303 SI 32

* Requires wide body case (105mm wide), limited to 24A maximum

** Requires wide body case (105mm wide)

Notes: -U option line cord preferred in the Americas.
-E option supplied with unit in Europe

200-800W, 160 to 650V Programmable Power Supplies



Industrial



Test

[Full Datasheet](#)

<https://product.tdk.com/en/power/zplus>

Suitable for bench or 2U rack mounting, the Z+ is a very compact programmable power supply offering power levels from 200 to 800W, voltages from 160 to 650V and currents of up to 5A. Multiple remote programming methods are available including built-in USB, RS232 & RS485 and optional LAN, GPIB & isolated analogue interfaces. The units can operate in either constant current or constant voltage mode and accept a wide 85-265Vac input. The product is backed with a five year warranty.

Features

- 2U high
- Built-in USB, RS-232 & RS-485 Interface
- Optional LAN, GPIB & Isolated Analog Programming
- Bench or Rack Mount
- Constant Current or Voltage Modes
- Five Year Warranty

Benefits

- Low Profile
- No Additional Cost
- Programmable Remote Operation
- Flexible Mounting
- Seamless Transition (Auto Crossover)
- Low Cost of Ownership

Model Selector

Model (Note: Add appropriate suffix for the AC line cord)	Voltage Adjust Range (V)	Current Adjust Range (A)	Maximum Power (W)	Ripple Voltage (RMS) 5Hz-1MHz (mV)	Noise Voltage 20MHz BW (mV)	Ripple Current (RMS) 5Hz-1MHz (mA)	Efficiency (100-200Vac) (%)	Front Panel Output Jacks (Option)
Z160-1.3	0 - 160	0 - 1.3	208	10	100	1.2	79 / 81	Yes
Z160-2.6	0 - 160	0 - 2.6	416	10	100	1.5	84 / 86	Yes
Z160-4	0 - 160	0 - 4	640	10	100	2	86.5 / 88.5	Yes
Z160-5	0 - 160	0 - 5	800	10	100	2	86.5 / 88.5	Yes
Z320-0.65	0 - 320	0 - 0.65	208	25	150	0.8	79 / 81	Yes
Z320-1.3	0 - 320	0 - 1.3	416	25	150	1	84 / 86	Yes
Z320-2	0 - 320	0 - 2	640	30	150	1.5	87 / 88.5	Yes
Z320-2.5	0 - 320	0 - 2.5	800	30	150	1.5	86.5 / 89	Yes
Z375-2.2	0 - 375	0 - 2.2	825	30	150	1.5	87.5 / 89.5	Yes
Z650-0.32	0 - 650	0 - 0.32	208	60	150	0.5	79 / 81	Yes
Z650-0.64	0 - 650	0 - 0.64	416	60	150	0.6	84 / 86	Yes
Z650-1	0 - 650	0 - 1	650	60	250	1	86.5 / 88.5	Yes
Z650-1.25	0 - 650	0 - 1.25	812	60	250	1	87 / 89	Yes

Part Number Example

Z160		-	1.3	-	LAN		-	L2		-	U				
Series & output voltage	Output current	blank		USB, RS-232/RS-485 (All models)		blank	No front output jacks	-L2	Output jacks* (insulated)	AC Line cord		Plug Type			
		IEEE		GPIB Interface*						Blank		No AC cord supplied		-	
		IS510		Voltage Programming Isolated Analog Interface*						U		North America cord		NEMA 5-15P	
		IS420		Current Programming Isolated Analog Interface*						E		European cord		CEE 7/II	
		LAN		LAN Interface (Complies with "LXI" Class C)						J		Japan cord		JIS C8303	
										I		Middle East cord		SI 32	

* Requires wide body case (105mm wide)

Notes: -U option line cord preferred in the Americas.
-E option supplied with unit in Europe

General-Purpose Programmable DC Power Supplies (Single Output in 1U, 2U and 3U Profile)



<https://www.us.lambda.tdk.com/products/programmable-power/genesys.html>

The **Genesys™** DC Programmable Power Supply Series is a general-purpose, solution that provides high power density from 600W to 15kW with a complete set of reliable and user-friendly front panel, Remote Analog programming and Remote Digital communication interfaces. This series offers Output voltages from 6V to 1500V and several AC Inputs (single-phase/three-phase) with Power-Factor Correction.

Remote interfaces include the built-in Analog (5V/10V) Program/Monitor/Control and Digital (RS-232/RS-485) Communication Interfaces along with the optional LAN (**LXI** 1.5), IEEE (488.2), USB (2.0) and Isolated Analog (5V/10V or 4-20mA) Interfaces.

Features	Benefits
• Single Output: Models from 6V to 1500V (750W to 15kW)	• Flexibility in model choice and AC Input
• Worldwide AC Inputs (single/three-phase) with Active Power Factor Correction	• Lightweight, high efficiency, reliable operation
• CV/CC operation with Auto-Crossover / 0°C to +50°C operation	• Flexibility in Digital/Isolated Analog Interface selection
• Built-In Interfaces: Front Panel, RS-232/RS-485, Remote Analog (5V/10V)	• Easy physical implementation (bench-top or rack-mount)
• Digital Interfaces (optional): LAN (LXI 1.5) , USB (2.0), IEEE (488.2)	• Higher power (parallel) or higher voltage (series) capability
• Isolated Analog Interfaces (optional): IS510 (5V/10V), IS420 (4-20mA)	• Simple and similar front panel/rear panel operation (750W - 15kW)
• Worldwide Safety Agency Approvals / CE Mark / 5Yr Warranty	• Built-In Safety/EMC/RoHS compliance

750W Programmable DC Power Supplies (Single Output in 1U Half-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (100VAC/200VAC) (%)
GENH 6-100	0 - 6	0 - 100	600	60	200	76 / 78
GENH 8-90	0 - 8	0 - 90	720	60	180	78 / 81
GENH 12.5-60	0 - 12.5	0 - 60	750	60	120	81 / 84
GENH 20-38	0 - 20	0 - 38	760	60	76	82 / 85
GENH 30-25	0 - 30	0 - 25	750	60	63	82 / 85
GENH 40-19	0 - 40	0 - 19	760	60	48	83 / 87
GENH 60-12.5	0 - 60	0 - 12.5	750	60	38	83 / 87
GENH 80-9.5	0 - 80	0 - 9.5	760	80	29	83 / 87
GENH 100-7.5	0 - 100	0 - 7.5	750	80	23	83 / 87
GENH 150-5	0 - 150	0 - 5	750	100	18	83 / 87
GENH 300-2.5	0 - 300	0 - 2.5	750	150	13	83 / 87
GENH 600-1.3	0 - 600	0 - 1.3	780	300	8	83 / 87

GENH	30	-	25	-	LAN	-	U
Product Series: GENH (Half-Rack 750W)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)		U: North American Linecord

Examples: **GENH 30-25-U**, **GENH 60-12.5-LAN-U**, **GENH 100-7.5-IEEE-U**

750W Programmable DC Power Supplies (Single Output in 1U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mA _{rms})	Efficiency (100VAC/200VAC) (%)
GEN 6-100	0 - 6	0 - 100	600	60	200	77 / 80
GEN 8-90	0 - 8	0 - 90	720	60	180	78 / 81
GEN 12.5-60	0 - 12.5	0 - 60	750	60	120	83 / 86
GEN 20-38	0 - 20	0 - 38	760	60	76	83 / 86
GEN 30-25	0 - 30	0 - 25	750	60	63	82 / 85
GEN 40-19	0 - 40	0 - 19	760	60	48	84 / 88
GEN 60-12.5	0 - 60	0 - 12.5	750	60	38	84 / 88
GEN 80-9.5	0 - 80	0 - 9.5	760	80	29	84 / 88
GEN 100-7.5	0 - 100	0 - 7.5	750	80	23	84 / 88
GEN 150-5	0 - 150	0 - 5	750	100	18	84 / 88
GEN 300-2.5	0 - 300	0 - 2.5	750	120	13	83 / 87
GEN 600-1.3	0 - 600	0 - 1.3	780	300	8	83 / 87

GEN	60	-	12.5	-	USB	-	U
Product Series: GEN (Full-Rack 750W)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)		U: North American Linecord

Examples: **GEN 60-12.5-U**, **GEN 600-1.6-USB-U**, **GEN 100-7.5-IEEE-U**

1500W Programmable DC Power Supplies (Single Output in 1U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mA _{rms})	Efficiency (100VAC/200VAC) (%)
GEN 6-200	0 - 6	0 - 200	1200	60	400	77 / 80
GEN 8-180	0 - 8	0 - 180	1440	60	360	78 / 81
GEN 12.5-120	0 - 12.5	0 - 120	1500	60	240	83 / 86
GEN 20-76	0 - 20	0 - 76	1520	60	152	83 / 86
GEN 30-50	0 - 30	0 - 50	1500	60	125	82 / 85
GEN 40-38	0 - 40	0 - 38	1520	60	95	84 / 88
GEN 50-30	0 - 50	0 - 30	1500	60	85	84 / 88
GEN 60-25	0 - 60	0 - 25	1500	60	75	84 / 88
GEN 80-19	0 - 80	0 - 19	1520	80	57	84 / 88
GEN 100-15	0 - 100	0 - 15	1500	80	45	84 / 88
GEN 150-10	0 - 150	0 - 10	1500	100	35	84 / 88
GEN 300-5	0 - 300	0 - 5	1500	120	25	83 / 87
GEN 600-2.6	0 - 600	0 - 2.6	1560	300	12	83 / 87

GEN	600	-	2.6	-	IEEE
Product Series: GEN (Half-Rack 750W)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)

Examples: **GEN 30-50-LAN**, **GEN 100-15**, **GEN 300-5-IEEE**

2400W Programmable DC Power Supplies (Single Output in 1U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mAmps)	Efficiency (3P208) (%)
GEN 8-300	0 - 8	0 - 300	2400	60	1200	84
GEN 10-240	0 - 10	0 - 240	2400	60	960	84
GEN 16-150	0 - 16	0 - 150	2400	60	600	86
GEN 20-120	0 - 20	0 - 120	2400	60	480	86
GEN 30-80	0 - 30	0 - 80	2400	60	220	88
GEN 40-60	0 - 40	0 - 60	2400	60	120	88
GEN 60-40	0 - 60	0 - 40	2400	60	70	88
GEN 80-30	0 - 80	0 - 30	2400	80	50	88
GEN 100-24	0 - 100	0 - 24	2400	80	40	88
GEN 150-16	0 - 150	0 - 16	2400	100	30	88
GEN 300-8	0 - 300	0 - 8	2400	200	15	88
GEN 600-4	0 - 600	0 - 4	2400	300	7	87

GEN	10	-	240	-	USB	-	1P230
Product Series: GEN (Full-Rack 2400W)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)		1P230: Single-phase 230VAC 3P208: Three-phase 208VAC

Examples: **GEN 10-240-1P230**, **GEN 600-4-USB-3P208**, **GEN 60-40-LAN-1P230**

3300W Programmable DC Power Supplies (Single Output in 2U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mAmps)	Efficiency (1P230/3P208/3P480) (%)
GEN 8-400	0 - 8	0 - 400	3200	60	1300	82
GEN 10-330	0 - 10	0 - 330	3300	60	1200	83
GEN 15-220	0 - 15	0 - 220	3300	60	880	83
GEN 20-165	0 - 20	0 - 165	3300	60	660	83
GEN 30-110	0 - 30	0 - 110	3300	60	300	86
GEN 40-85	0 - 40	0 - 85	3400	60	200	86
GEN 60-55	0 - 60	0 - 55	3300	60	100	88
GEN 80-42	0 - 80	0 - 42	3360	80	80	88
GEN 100-33	0 - 100	0 - 33	3300	100	70	88
GEN 150-22	0 - 150	0 - 22	3300	100	60	87
GEN 200-16.5	0 - 200	0 - 16.5	3300	275	40	87
GEN 300-11	0 - 300	0 - 11	3300	300	20	87
GEN 600-5.5	0 - 600	0 - 5.5	3300	500	10	87

GEN	60	-	55	-	LAN	3P208
Product Series: GEN (Full-Rack 3.3kW)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)	1P230: Single-phase 230VAC 3P208: Three-phase 208VAC 3P480: Three-phase 480VAC

Examples: **GEN 20-165-LAN-1P230**, **GEN 300-11-3P208**, **GEN 8-400-USB-3P480**

5000W Programmable DC Power Supplies (Single Output in 2U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (3P208/3P480) (%)
GEN 8-600	0 - 8	0 - 600	4800	75	1950	83
GEN 10-500	0 - 10	0 - 500	5000	75	1800	84
GEN 16-310	0 - 16	0 - 310	4960	75	1400	84
GEN 20-250	0 - 20	0 - 250	5000	75	1000	86
GEN 30-170	0 - 30	0 - 170	5100	75	460	86
GEN 40-125	0 - 40	0 - 125	5000	75	300	88
GEN 60-85	0 - 60	0 - 85	5100	75	150	88
GEN 80-65	0 - 80	0 - 65	5200	80	120	88
GEN 100-50	0 - 100	0 - 50	5000	100	100	88
GEN 150-34	0 - 150	0 - 34	5100	120	90	88
GEN 200-25	0 - 200	0 - 25	5000	220	60	88
GEN 300-17	0 - 300	0 - 17	5100	300	30	88
GEN 400-13	0 - 400	0 - 13	5200	350	25	88
GEN 500-10	0 - 500	0 - 10	5000	400	20	88
GEN 600-8.5	0 - 600	0 - 8.5	5100	500	15	88

GEN	10	-	500	-	LAN	-	3P480
Product Series: GEN (Full-Rack 5kW)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)		3P208: Three-phase 208VAC 3P480: Three-phase 480VAC

Examples: **GEN 600-8.5-3P208**, **GEN 10-500-LAN-3P480**, **GEN 60-85-USB-3P208**

10kW Programmable DC Power Supplies (Single Output in 3U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (3P208/3P480) (%)
GEN 7.5-1000	0 - 7.5	0 - 1000	7500	60	5300	77
GEN 10-1000	0 - 10	0 - 1000	10000	60	4000	83
GEN 12.5-800	0 - 12.5	0 - 800	10000	60	2560	83
GEN 20-500	0 - 20	0 - 500	10000	60	1000	83
GEN 25-400	0 - 25	0 - 400	10000	60	640	83
GEN 30-333	0 - 30	0 - 333	9990	60	444	83
GEN 40-250	0 - 40	0 - 250	10000	60	250	83
GEN 50-200	0 - 50	0 - 200	10000	75	160	83
GEN 60-167	0 - 60	0 - 167	10020	75	67	83

Continued on next page

GEN	20	-	500	-	USB	3P480
Product Series: GEN (Full-Rack 10kW)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)	3P208: Three-phase 208VAC 3P400: Three-phase 400VAC 3P480: Three-phase 480VAC

Examples: **GEN 40-250-LAN-3P208**, **GEN 10-1000-3P480**, **GEN 25-400-IEEE-3P208**

10kW Programmable DC Power Supplies (Single Output in 3U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (3P208/3P480) (%)
GEN 80-125	0 - 80	0 - 125	10000	100	50	83
GEN 100-100	0 - 100	0 - 100	10000	100	40	83
GEN 125-80	0 - 125	0 - 80	10000	125	32	83
GEN 150-66	0 - 150	0 - 66	9900	150	26	83
GEN 200-50	0 - 200	0 - 50	10000	175	20	83
GEN 250-40	0 - 250	0 - 40	10000	200	16	83
GEN 300-33	0 - 300	0 - 33	9900	200	13	83
GEN 400-25	0 - 400	0 - 25	10000	300	10	83
GEN 500-20	0 - 500	0 - 20	10000	350	8	83
GEN 600-17	0 - 600	0 - 17	10200	350	7	83
GEN 800-12.5	0 - 800	0 - 12.5	10000	700	15	93.5
GEN 1000-10	0 - 1000	0 - 10	10000	800	10	93.5
GEN 1250-8	0 - 1250	0 - 8	10000	1000	6	93.5
GEN 1500-6.7	0 - 1500	0 - 6.7	10050	1400	4	93.5

GEN	1000	-	10	-	LAN	-	3P208
Product Series: GEN (Full-Rack 10kW)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)		3P208: Three-phase 208VAC 3P400: Three-phase 400VAC 3P480: Three-phase 480VAC

Examples: **GEN 100-100-3P480**, **GEN 800-12.5-USB-3P208**, **GEN 300-33-LAN-3P208**

15kW Programmable DC Power Supplies (Single Output in 3U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (3P208/3P480) (%)
GEN 30-500	0 - 30	0 - 500	15000	60	350	88
GEN 40-375	0 - 40	0 - 375	15000	60	200	88
GEN 50-300	0 - 50	0 - 300	15000	75	150	88
GEN 60-250	0 - 60	0 - 250	15000	75	100	88
GEN 80-187.5	0 - 80	0 - 187.5	15000	100	100	88
GEN100-150	0 - 100	0 - 150	15000	100	100	88
GEN 125-120	0 - 125	0 - 120	15000	125	50	88
GEN 150-100	0 - 150	0 - 100	15000	150	50	88
GEN 200-75	0 - 200	0 - 75	15000	175	20	88
GEN 250-60	0 - 250	0 - 60	15000	200	20	88

Continued on next page

GEN	40	-	375	-	USB	-	3P480
Product Series: GEN (Full-Rack 5kW)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)		3P208: Three-phase 208VAC 3P400: Three-phase 400VAC 3P480: Three-phase 480VAC

Examples: **GEN 40-375-USB-3P208**, **GEN 150-100-3P480**, **GEN 300-50-LAN-3P208**

15kW Programmable DC Power Supplies (Single Output in 3U Full-Rack Profile)

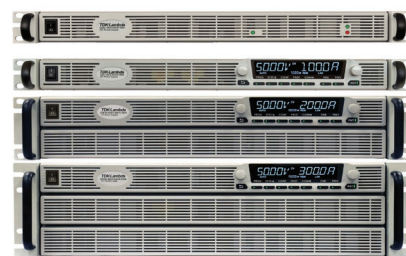


Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mA _{rms})	Efficiency (3P208/3P480) (%)
GEN 300-50	0 - 300	0 - 50	15000	200	20	88
GEN 400-37.5	0 - 400	0 - 37.5	15000	300	10	88
GEN 500-30	0 - 500	0 - 30	10000	350	10	88
GEN 600-25	0 - 600	0 - 25	15000	350	10	88
GEN 800-18.8	0 - 800	0 - 18.8	15040	700	15	93.5
GEN 1000-15	0 - 1000	0 - 15	15000	800	10	93.5
GEN 1250-12	0 - 1250	0 - 12	15000	1000	6	93.5
GEN 1500-10	0 - 1500	0 - 10	15000	1400	4	93.5

GEN	1250	-	12	-	USB	-	3P480
Product Series: GEN (Full-Rack 10kW)	Output voltage		Output current		LAN: LAN Interface IEMD: IEEE (GPIB) Interface USB: USB (2.0) Interface IS510: Isolated Analog (5V/10V) IS420: Isolated Analog (4-20mA)		3P208: Three-phase 208VAC 3P400: Three-phase 400VAC 3P480: Three-phase 480VAC

Examples: **GEN 600-100-3P480**, **GEN 1250-12.5-USB-3P208**, **GEN 300-33-LAN-3P208**

High Performance Programmable DC Power Supplies (Single Output in 1U, 2U and 3U Profile)



<https://www.us.lambda.tdk.com/products/programmable-power/genesys-plus.html>

The **GENESYS™** DC Programmable Power Supply Series offers advanced features in a lightweight high power density profile (from 1kW to 15kW) with a complete set of user - friendly Analog programming and Digital communication interfaces.

This series offers Output voltages from 10V to 1500V and worldwide AC inputs (wide-range 85-265VAC, single-phase 230VAC, three-phase 208VAC and wide-range three-phase 480VAC) for easy and flexible system integration.

Remote interfaces include the built-in Isolated Analog (5V/10V) Program/Monitor/Control, LAN (**LXI** 1.5), USB (2.0) and RS-232/RS-485 along with the optional IEEE (488.2), Modbus-TCP, EtherCAT and Isolated Analog (4-20mA) interfaces.

Features

- Single Output: Models from 6V to 1500V (1U Half-Rack 1kW to 3U Full-Rack 15kW)
- Worldwide AC Inputs (single/three-phase) with Active Power-Factor-Correction
- CV/CC/CP Limit operation with Auto-Crossover / 0°C to +50°C operation
- Advanced Features Built-In: Slew-Rate Control (V/I), Waveform Generator w/ Auto-Trigger and Internal Resistance Programming, Multi-Drop Operation
- Built-In Interfaces: Front Panel, LAN (LXI 1.5), USB (2.0), RS-232/RS-485, Isolated Analog
- Digital Interfaces (optional): IEEE (488.2), Modbus-TCP, EtherCAT
- Analog Interfaces (optional): IS420 (4-20mA)
- Worldwide Safety Agency Approvals / CE Mark / 5Yr Warranty

Benefits

- Flexibility in model choice and AC Input
- Higher efficiency, lighter weight, reliable operation
- Multiple Digital Interface offering
- Simple setup for advanced features
- Easy parallel capability for high power systems
- Bench-top or rack-mount capability built-in
- Quiet operation (reduced audible noise)
- Built-In Safety/EMC/RoHS compliance

1kW Programmable DC Power Supplies Single Output in 1U Half-Rack Profile Standard Front Panel (GH), Blank Front Panel (GHB)



Model Selector

Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (100VAC/200VAC) (%)
GH10-100	0 - 10	0 - 100	1000	50	≤ 420	86/88
GH20-50	0 - 20	0 - 50	1000	50	≤ 160	87/89
GH30-34	0 - 30	0 - 34	1020	50	≤ 100	87/89
GH40-25	0 - 40	0 - 25	1000	60	≤ 60	87/89
GH60-17	0 - 60	0 - 17	1020	60	≤ 50	87/89
GH80-12.5	0 - 80	0 - 12.5	1000	75	≤ 30	87/89
GH100-10	0 - 100	0 - 10	1000	75	≤ 20	88/90
GH150-7	0 - 150	0 - 7	1050	75	≤ 10	88/90
GH300-3.5	0 - 300	0 - 3.5	1050	200	≤ 8	88/90
GH600-1.7	0 - 600	0 - 1.7	1020	500	≤ 5	88/90

GH/GHB	30	-	34	-	IEEE	-	U
	Output voltage		Output current		IEEE: IEEE (GPIB) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface		U: North American Linecord
Product Series: GH/GHB (Half-Rack 1kW)							

Examples: **GH30-34-U**, **GH60-17-IEEE-U**, **GHB100-10-IEEE-U**

1.5kW Programmable DC Power Supplies

Single Output in 1U Half-Rack Profile

Standard Front Panel (GH), Blank Front Panel (GHB)



Model Selector						
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (100VAC/200VAC) (%)
GH10-150	0 - 10	0 - 150	1500	50	≤ 250	86/88
GH20-75	0 - 20	0 - 75	1500	50	≤ 130	87/89
GH30-50	0 - 30	0 - 50	1500	50	≤ 100	87/89
GH40-38	0 - 40	0 - 38	1520	60	≤ 60	87/89
GH60-25	0 - 60	0 - 25	1500	60	≤ 50	87/89
GH80-19	0 - 80	0 - 19	1520	75	≤ 30	87/89
GH100-15	0 - 100	0 - 15	1500	130	≤ 40	88/90
GH150-10	0 - 150	0 - 10	1500	75	≤ 10	88/90
GH300-5	0 - 300	0 - 5	1500	180	≤ 8	88/90
GH600-2.6	0 - 600	0 - 2.6	1560	500	≤ 5	88/90

GH/GHB	60	-	25	-	MDBS	
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Product Series: **GH/GHB** (Half-Rack 1.5kW)

Output voltage

Output current

IEEE: IEEE (GPIB) Interface
 ECAT: EtherCAT Interface
 MDBS: Modbus-TCP Interface

Examples: **GH20-75**, **GH100-15-ECAT**, **GHB10-150**

1kW Programmable DC Power Supplies

Single Output in 1U Full-Rack Profile

Standard Front Panel (G), Blank Front Panel (GB)



Model Selector						
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (100VAC/200VAC) (%)
G10-100	0 - 10	0 - 100	1000	50	≤ 420	86/88
G20-50	0 - 20	0 - 50	1000	50	≤ 160	87/89
G30-34	0 - 30	0 - 34	1020	50	≤ 100	87/89
G40-25	0 - 40	0 - 25	1000	60	≤ 60	87/89
G60-17	0 - 60	0 - 17	1020	60	≤ 50	87/89
G80-12.5	0 - 80	0 - 12.5	1000	75	≤ 30	87/89
G100-10	0 - 100	0 - 10	1000	75	≤ 20	88/90
G150-7	0 - 150	0 - 7	1050	75	≤ 10	88/90
G300-3.5	0 - 300	0 - 3.5	1050	120	≤ 8	88/90
G600-1.7	0 - 600	0 - 1.7	1020	500	≤ 5	88/90

G/GB	10	-	100	-	ECAT	-	U
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Product Series: **G/GB** (Full-Rack 1kW)

Output voltage

Output current

IEEE: IEEE (GPIB) Interface
 ECAT: EtherCAT Interface
 MDBS: Modbus-TCP Interface

U: North American Linecord

Examples: **G60-17-U**, **G300-3.5-MDBS**, **GB40-25-U**

1.7kW Programmable DC Power Supplies

Single Output in 1U Full-Rack Profile

Standard Front Panel (G), Blank Front Panel (GB)



Model Selector						
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (100VAC/200VAC) (%)
G10-170	0 - 10	0 - 170	1700	50	≤ 420	86/88
G20-85	0 - 20	0 - 85	1700	50	≤ 160	87/89
G30-56	0 - 30	0 - 56	1680	50	≤ 100	87/89
G40-42	0 - 40	0 - 42	1680	60	≤ 60	87/89
G60-28	0 - 60	0 - 28	1680	60	≤ 50	87/89
G80-21	0 - 80	0 - 21	1680	75	≤ 30	87/89
G100-17	0 - 100	0 - 17	1700	75	≤ 20	88/90
G150-11.2	0 - 150	0 - 11.2	1680	75	≤ 10	88/90
G300-5.6	0 - 300	0 - 5.6	1680	120	≤ 8	88/90
G600-2.8	0 - 600	0 - 2.8	1680	500	≤ 5	88/90

G/GB	600	-	2.8	-	IEEE
Product Series: G/GB (Full-Rack 1.7kW)	Output voltage		Output current		IEEE: IEEE (GPIB) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface

Examples: **G40-42**, **G80-21-IEEE**, **GB100-17**

2.7kW Programmable DC Power Supplies

Single Output in 1U Full-Rack Profile

Standard Front Panel (G), Blank Front Panel (GB)



Model Selector						
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (3-F, 1-F) (5Hz ~ 1MHz) (mArms)	Efficiency (100VAC/200VAC) (%)
G10-265	0 - 10	0 - 265	2650	75	≤ 800/1200	88
G20-135	0 - 20	0 - 135	2700	75	≤ 450/600	89
G30-90	0 - 30	0 - 90	2700	75	≤ 300/300	89.5
G40-68	0 - 40	0 - 68	2720	75	≤ 150/300	90
G60-45	0 - 60	0 - 45	2700	80	≤ 100/200	90
G80-34	0 - 80	0 - 34	2720	80	≤ 70/100	90.5
G100-27	0 - 100	0 - 27	2700	100	≤ 45/60	90.5
G150-18	0 - 150	0 - 18	2700	120	≤ 30/40	90.5
G300-9	0 - 300	0 - 9	2700	200	≤ 12/12	90.5
G600-4.5	0 - 600	0 - 4.5	2700	480	≤ 5/8	90.5

G/GB	100	-	2.7	-	ECAT	-	3P208
Product Series: G/GB (Full-Rack 2.7kW)	Output voltage		Output current		IEEE: IEEE (GPIB) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface		1P208: Single-phase 230VAC 3P208: Three-phase 208VAC 3P480: Three-phase 480VAC

Examples: **G10-265-1P208**, **G60-45-ECAT-3P480**, **GB600-4.5-3P208**

3.4kW Programmable DC Power Supplies

Single Output in 1U Full-Rack Profile

Standard Front Panel (G), Blank Front Panel (GB)



Model Selector							
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (3-F, 1-F) (5Hz ~ 1MHz) (mA _{rms})	Efficiency (100VAC/200VAC) (%)	
G10-340	0 - 10	0 - 340	3400	75	≤ 800/1200	88	
G20-170	0 - 20	0 - 170	3400	75	≤ 450/600	89	
G30-112	0 - 30	0 - 112	3360	75	≤ 300/300	89.5	
G40-85	0 - 40	0 - 85	3400	75	≤ 150/300	90	
G60-56	0 - 60	0 - 56	3360	80	≤ 100/200	90	
G80-42	0 - 80	0 - 42	3360	80	≤ 70/100	90.5	
G100-34	0 - 100	0 - 34	3400	100	≤ 45/60	90.5	
G150-22.5	0 - 150	0 - 22.5	3375	120	≤ 30/40	90.5	
G300-11.5	0 - 300	0 - 11.5	3450	200	≤ 12/12	90.5	
G600-5.6	0 - 600	0 - 5.6	3360	480	≤ 5/8	90.5	
G/GB	60	-	56	-	MDBS	-	3P480
	Output voltage	Output current		IEEE: IEEE (GPIO) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface		1P208: Single-phase 230VAC 3P208: Three-phase 208VAC 3P480: Three-phase 480VAC	
Product Series: G/GB (Full-Rack 3.4kW)							

Examples: **G100-34-1P208**, **G40-85-MDBS-3P480**, **GB300-11.5-3P208**

5kW Programmable DC Power Supplies

Single Output in 1U Full-Rack Profile

Standard Front Panel (G), Blank Front Panel (GB)



Model Selector						
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mA _{rms})	Efficiency (%)
G10-500	0 - 10	0 - 500	5000	75	≤ 1200	89
G20-250	0 - 20	0 - 250	5000	75	≤ 600	91
G30-170	0 - 30	0 - 170	5100	75	≤ 300	91
G40-125	0 - 40	0 - 125	5000	75	≤ 150	91
G50-100	0 - 50	0 - 100	5000	75	≤ 130	90
G60-85	0 - 60	0 - 85	5100	75	≤ 100	91
G80-65	0 - 80	0 - 65	5200	80	≤ 70	91
G100-50	0 - 100	0 - 50	5000	90	≤ 45	91
G150-34	0 - 150	0 - 34	5100	120	≤ 45	91
G200-25	0 - 200	0 - 25	5000	200	≤ 45	91
G300-17	0 - 300	0 - 17	5100	200	≤ 15	92
G400-13	0 - 400	0 - 13	5200	400	≤ 12	92
G500-10	0 - 500	0 - 10	5000	450	≤ 10	92
G600-8.5	0 - 600	0 - 8.5	5100	480	≤ 8	92

G/GB	100	-	50	-	ECAT	-	3P208
	Output voltage		Output current		IEEE: IEEE (GPIO) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface		3P208: Three-phase 208VAC 3P480: Three-phase 480VAC
Product Series: G/GB (Full-Rack 5kW)							

Examples: **G40-125-3P208**, **G20-250-IEEE-3P480**, **GB10-500-3P208**

7.5kW Programmable DC Power Supplies

Single Output in 1U Full-Rack Profile

Standard Front Panel (G), Blank Front Panel (GB)



Model Selector							
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (%)	
G20-375	0 - 20	0 - 375	7500	80	≤ 900	91	
G30-250*	0 - 30	0 - 250	7500	80*	≤ 900*	91*	
G40-188	0 - 40	0 - 188	7520	80	≤ 300	91	
G60-125*	0 - 60	0 - 125	7500	90*	≤ 300*	91*	
G80-94*	0 - 80	0 - 94	7500	90*	≤ 300*	91*	
G100-75	0 - 100	0 - 75	7500	90	≤ 70	91	
G150-65	0 - 80	0 - 65	5200	150	≤ 45	91	
G200-37.5*	0 - 200	0 - 37.5	7500	450*	< 45*	91*	
G300-25*	0 - 300	0 - 25	7500	450*	≤ 45*	91*	
G600-12.5	0 - 600	0 - 12.5	7500	450	≤ 14	92	
G1000-7.5*	0 - 1000	0 - 7.5	7500	1300*	≤ 14*	92*	
G1500-5	0 - 1500	0 - 5	7500	1300	≤ 5	92	

G/GB	1000	-	7.5	-	IEEE	-	3P480
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Output voltage

Output current

IEEE: IEEE (GPIB) Interface
ECAT: EtherCAT Interface
MDBS: Modbus-TCP Interface

3P208: Three-phase 208VAC
3P480: Three-phase 480VAC

Product Series: **G/GB** (Full-Rack 7.5kW)

Examples: **G1500-5-3P208**, **G300-25-IEEE-3P480**, **GB60-125-3P208** * = Contact factory

10kW Programmable DC Power Supplies

Single Output in 2U Full-Rack Profile

Standard Front Panel (GSP), Blank Front Panel (GBSP)



Model Selector							
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (kW)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mArms)	Efficiency (%)	
G10-1000	0 - 10	0 - 1000	10	75	≤ 1200	89	
G20-500	0 - 20	0 - 500	10	75	≤ 700	90	
G30-340	0 - 30	0 - 340	10.2	75	≤ 300	91	
G40-250	0 - 40	0 - 250	10	75	≤ 150	91	
G50-200	0 - 50	0 - 200	10	75	≤ 100	91	
G60-170	0 - 60	0 - 170	10.2	75	≤ 75	91	
G80-130	0 - 80	0 - 130	10.4	80	≤ 50	91	
G100-100	0 - 100	0 - 100	10	90	≤ 35	91	
G150-68	0 - 150	0 - 68	10.2	120	≤ 23	91	
G200-50	0 - 200	0 - 50	10	200	≤ 23	91	
G300-34	0 - 300	0 - 34	10.2	200	≤ 7.5	92	
G400-26	0 - 400	0 - 26	10.4	400	≤ 7.5	92	
G500-20	0 - 500	0 - 20	10	450	≤ 8	91	
G600-17	0 - 600	0 - 17	10.2	480	≤ 6	92	

GSP/GBSP	60	-	170	-	IEEE	-	3P208
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Output voltage

Output current

IEEE: IEEE (GPIB) Interface
ECAT: EtherCAT Interface
MDBS: Modbus-TCP Interface

3P208: Three-phase 208VAC
3P480: Three-phase 480VAC

Product Series: **GSP/GBSP** (Full-Rack 10kW)

Examples: **G150-68-3P208**, **G50-200-MDBS-3P480**, **GB300-34-3P480**

15kW Programmable DC Power Supplies

Single Output in 3U Full-Rack Profile

Standard Front Panel (GSP), Blank Front Panel (GBSP)



Model Selector						
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (kW)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mA _{rms})	Efficiency (%)
G10-1500	0 - 10	0 - 1500	15	75	≤ 1200	89
G20-750	0 - 20	0 - 750	15	75	≤ 700	90
G30-510	0 - 30	0 - 510	15.3	75	≤ 300	91
G40-375	0 - 40	0 - 375	15	75	≤ 150	91
G50-300	0 - 50	0 - 300	15	75	≤ 130	91
G60-255	0 - 60	0 - 255	15.3	75	≤ 90	91
G80-195	0 - 80	0 - 195	15.6	80	≤ 60	91
G100-150	0 - 100	0 - 150	15	90	≤ 35	91
G150-102	0 - 150	0 - 102	15.3	120	≤ 23	91
G200-75	0 - 200	0 - 75	15	200	≤ 23	91
G300-51	0 - 300	0 - 51	15.3	200	≤ 7.5	92
G400-39	0 - 400	0 - 39	15.6	400	≤ 7.5	92
G500-30	0 - 500	0 - 30	15	450	≤ 8	91
G600-25.5	0 - 600	0 - 25.5	15.3	480	≤ 6	92

GSP/GBSP	10	-	1500	-	IEEE	-	3P208
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Output voltage

Output current

IEEE: IEEE (GPIB) Interface
ECAT: EtherCAT Interface
MDBS: Modbus-TCP Interface

3P208: Three-phase 208VAC
3P480: Three-phase 480VAC

Product Series: **GSP/GBSP** (Full-Rack 10kW)

Examples: **G150-68-3P208**, **G50-200-MDBS-3P480**, **GB300-34-3P480**

High Performance Programmable Rack DC Power Systems (Single Output in 23U Rack System Profile)



<https://www.us.lambda.tdk.com/products/programmable-power/genplus-rack-dc-systems.html>



The **GENESYS™** DC Programmable Rack DC Power System platform offers advanced features in a portable high power density profile (from 30kW to 60kW) with a complete set of user - friendly Analog programming and Digital communication interfaces.

This series offers Output voltages from 10V to 600V and worldwide AC inputs (three-phase 208VAC and wide-range three-phase 480VAC) for easy and flexible system integration.

Remote interfaces include the built-in Isolated Analog (5V/10V) Program/Monitor/Control, LAN (**LXI** 1.5), USB (2.0) and RS-232/RS-485 along with the optional IEEE (488.2), Modbus-TCP, EtherCAT and Isolated Analog (4-20mA) interfaces.

Features	Benefits
• Single Output: Models from 6V to 600V (23U Stand-Alone Rack DC Power Systems)	• Flexibility in model choice and AC Input
• Worldwide AC Inputs (three-phase) with Active Power-Factor-Correction	• High efficiency, reliable operation (no additional fans in rack)
• CV/CC/CP Limit operation with Auto-Crossover / 0°C to +50°C operation	• Multiple Digital Interface offering
• Advanced Features Built-In: Slew-Rate Control (V/I), Waveform Generator w/ Auto-Trigger and Internal Resistance Programming, Multi-Drop Operation	• Simple setup for advanced features
• Built-In Interfaces: Front Panel, LAN (LXI 1.5), USB (2.0), RS-232/RS-485, Isolated Analog	• Easy parallel capability for high power systems
• Digital Interfaces (optional): IEEE (488.2), Modbus-TCP, EtherCAT	• Portability (built-in casters)
• Analog Interfaces (optional): IS420 (4-20mA)	• Uncomplicated AC Input / DC Output connections
• Worldwide Safety Agency Compliance / CE/UKCA Mark / 5Yr Warranty	• Quiet operation (reduced audible noise)
	• Built-In Safety/EMC/RoHS compliance

30kW Programmable DC Power Supplies Single Output in 23U Rack System Profile Standard Front Panel (GSPS), Blank Front Panel (GBSPS)



Model Selector						
Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (kW)	Line/Load Regulation (CV mode)	Line/Load Regulation (CC mode)	Efficiency (200VAC/380VAC) (%)
GSPS10-3000	0 - 10	0 - 3000	30	1mV / 6mV	1.5A / 2.4A	87
GSPS20-1500	0 - 20	0 - 1500	30	2mV / 7mV	0.75A / 1.20A	87
GSPS30-1020	0 - 30	0 - 1020	30	3mV / 8mV	0.51A / 0.82A	88
GSPS40-750	0 - 40	0 - 750	30	4mV / 9mV	0.375A / 0.600A	89
GSPS50-600	0 - 50	0 - 600	30	5mV / 10mV	0.30A / 0.48A	89
GSPS60-510	0 - 60	0 - 510	30.6	6mV / 11mV	0.26A / 0.41A	90
GSPS80-390	0 - 80	0 - 390	31.2	8mV / 13mV	0.20A / 0.31A	90
GSPS100-300	0 - 100	0 - 300	30	10mV / 15mV	0.15A / 0.24A	90
GSPS150-204	0 - 150	0 - 204	30.6	15mV / 20mV	0.102A / 0.163A	90
GSPS200-150	0 - 200	0 - 150	30	20mV / 25mV	0.075A / 0.120A	90
GSPS300-102	0 - 300	0 - 102	30.6	30mV / 35mV	0.051A / 0.082A	90
GSPS400-78	0 - 400	0 - 78	31.2	40mV / 45mV	0.039A / 0.062A	90
GSPS500-60	0 - 500	0 - 60	30	50mV / 55mV	0.030A / 0.048A	90
GSPS600-51	0 - 600	0 - 51	30.6	60mV / 65mV	0.026A / 0.041A	90

GSPS/GBSPS	300	-	102	-	ECAT	-	3P480
	Output voltage		Output current		IEEE: IEEE (GPIB) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface		3P208: Three-phase 208VAC 3P480: Three-phase 480VAC

Product Series: **GSPS/GBSPS** (23U Full-Rack 30kW)

Examples: **GSPS30-1020-3P480, GSPS400-78-IEEE-3P208, GBSPS100-300-IEEE-3P208**

45kW Programmable DC Power Supplies

Single Output in 23U Rack System Profile

Standard Front Panel (GSPS), Blank Front Panel (GBSPS)



Model Selector

Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (kW)	Line/Load Regulation (CV mode)	Line/Load Regulation (CC mode)	Efficiency (200VAC/380VAC) (%)
GSPS10-4500	0 - 10	0 - 4500	45	1mV / 6mV	2.25A / 3.60A	87
GSPS20-2250	0 - 20	0 - 2250	45	2mV / 7mV	1.13A / 1.80A	87
GSPS30-1530	0 - 30	0 - 1530	45.9	3mV / 8mV	0.77A / 1.22A	88
GSPS40-1125	0 - 40	0 - 1125	45	4mV / 9mV	0.56A / 0.90A	89
GSPS50-900	0 - 50	0 - 900	45	5mV / 10mV	0.45A / 0.72A	89
GSPS60-765	0 - 60	0 - 765	45.9	6mV / 11mV	0.38A / 0.61A	90
GSPS80-585	0 - 80	0 - 585	46.8	8mV / 13mV	0.29A / 0.47A	90
GSPS100-450	0 - 100	0 - 450	45	10mV / 15mV	0.23A / 0.36A	90
GSPS150-306	0 - 150	0 - 306	45.9	15mV / 20mV	0.153A / 0.245A	90
GSPS200-225	0 - 200	0 - 225	45	20mV / 25mV	0.113A / 0.180A	90
GSPS300-153	0 - 300	0 - 153	45.9	30mV / 35mV	0.077A / 0.122A	90
GSPS400-117	0 - 400	0 - 117	46.8	40mV / 45mV	0.059A / 0.094A	90
GSPS500-90	0 - 500	0 - 90	45	50mV / 55mV	0.045A / 0.072A	90
GSPS600-76.5	0 - 600	0 - 76.5	45.9	60mV / 65mV	0.038A / 0.061A	90

GSPS/GBSPS	600	-	76.5	-	MDBS	-	3P480
	Output voltage		Output current		IEEE: IEEE (GPIO) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface		3P208: Three-phase 208VAC 3P480: Three-phase 480VAC
Product Series: GSPS/GBSPS (23U Full-Rack 45kW)							

Examples: **GSPS300-153-3P208**, **GSPS60-765-ECAT-3P480**, **GBSPS10-4500-3P208**

60kW Programmable DC Power Supplies

Single Output in 23U Rack System Profile

Standard Front Panel (GSPS), Blank Front Panel (GBSPS)



Model Selector

Model	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (kW)	Line/Load Regulation (CV mode)	Line/Load Regulation (CC mode)	Efficiency (200VAC/380VAC) (%)
GSPS20-3000	0 - 20	0 - 3000	60	2mV / 7mV	1.50A / 2.40A	87
GSPS30-2040	0 - 30	0 - 2040	61.2	3mV / 8mV	1.20A / 1.64A	88
GSPS40-1500	0 - 40	0 - 1500	60	4mV / 9mV	0.76A / 1.20A	89
GSPS50-1200	0 - 50	0 - 1200	60	5mV / 10mV	0.60A / 0.96A	89
GSPS60-1020	0 - 60	0 - 1020	61.2	6mV / 11mV	0.51A / 0.82A	90
GSPS80-780	0 - 80	0 - 780	62.4	8mV / 13mV	0.390A / 0.624A	90
GSPS100-600	0 - 100	0 - 600	60	10mV / 15mV	0.300A / 0.480A	90
GSPS150-408	0 - 150	0 - 408	61.2	15mV / 20mV	0.204A / 0.326A	90
GSPS200-300	0 - 200	0 - 300	60	20mV / 25mV	0.150A / 0.240A	90
GSPS300-204	0 - 300	0 - 204	61.2	30mV / 35mV	0.102A / 0.163A	90
GSPS400-156	0 - 400	0 - 156	62.4	40mV / 45mV	0.077A / 0.125A	90
GSPS500-120	0 - 500	0 - 120	60	50mV / 55mV	0.060A / 0.096A	90
GSPS600-102	0 - 600	0 - 102	61.2	60mV / 65mV	0.051A / 0.082A	90

GSPS/GBSPS	60	-	1020	-	IEEE	-	3P208
	Output voltage		Output current		IEEE: IEEE (GPIO) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface		3P208: Three-phase 208VAC 3P480: Three-phase 480VAC
Product Series: GSPS/GBSPS (23U Full-Rack 60kW)							

Examples: **GSPS100-600-3P208**, **GSPS500-120-MDBS-3P480**, **GBSPS20-3000-ECAT-3P480**

2kVA and 3kVA AC Programmable Power Sources



Medical



Industrial



Test



COTS



COMM



Marine

[Full Datasheet](#)

<https://product.tdk.com/en/power/gac>

Suitable for 1U high rack or bench mounting, the GENESYS™ AC (GAC) programmable power sources have a very high power density. The series currently offers power levels of 2kVA and 3kVA, with voltages adjustable from 0V to 350Vac and ± 500 Vdc (GAC-PRO models), currents from 0 to 30Arms and frequencies from 16Hz to 1200Hz, (5000Hz option on GAC-PRO). Multiple remote programming methods are available, including built-in LAN, USB, RS232 & RS485 and optional IEEE/GPIB interface. The GENESYS™ AC PRO models include real time analog control functionality necessary for more complex test scenarios. The GENESYS™ AC series has a full colour LCD, multi-language, touch panel display for ease of use and a GUI interface.

Features	Benefits
• 1U high	• Less Rack Space Used
• Full Colour Touch Panel Display	• Easy to Read and Program
• Built-in USB, LAN, RS-232 & RS-485 (plus others) Interfaces	• No Additional Cost
• Parallelable to 9kW single and multi-phase	• Scalable for Larger Systems and Multiple Phase Operation
• Five Year Warranty	• Low Cost of Ownership

Part Numbering Scheme

An easy to use on-line part number configurator is available. Click [here](#) for EMEA region, click [here](#) for the Americas region.



GAC-PRO	-	03	B	A	1	A	-	00	A	00	A
Series Name			Front Panel Type/Color		Communication Interface		Frequency Limit			Accessories	
GAC			A - Full Panel (Grey)		1 - Built-in RS232, RS485, USB, LAN		A - AC Mode, 1200Hz			A - None	
GAC-PRO			B - Full Panel (Black)		2 - IEEE/GPIB + built-in RS232, RS485, USB, LAN		B - AC + DC Mode, 1200Hz*				
			C - Blank Panel (Grey)				C - AC + DC Mode, 5000Hz*			Additional Options	
			D - Blank Panel (Black)							00 - None	
Apparent Output Power			Input Voltage		Avionic Standards *(GAC-PRO Only)						
02 = 2kVA			A - 85-265Vac single phase **		00 - None						
03 = 3kVA			B - 170-265Vac 3-phase		01 - RTCA/DO 160						
06 = 6kVA***			C - 342-528Vac 3-phase		02 - MIL-STD 704						
09 = 9kVA***			** 2kVA, 3kVA only		03 - A350 (Airbus ABD100.1.8.1)						
					04 - RTCA/DO 160 & MIL-STD 704						
					05 - RTCA/DO 160 & A350 (Airbus ABD100.1.8.1)						
					06 - MIL-STD 704 & A350 (Airbus ABD100.1.8.1)						
					07 - RTCA/DO 160 & MIL-STD 704 & A350 (Airbus ABD100.1.8.1)						
											*(GAC-PRO Only)
					IEC & Other Standards						
					A - None						
					B - IEC61000-4-11						GAC-PRO Only*
					C - IEC61000-4-13						GAC-PRO Only*
					D - MIL-STD-1399-300 PART 1						GAC-PRO Only*
					E - IEC61000-4-11 & IEC61000-4-13						GAC-PRO Only*
					F - IEC61000-4-11 & MIL-STD-1399-300 PART 1						GAC-PRO Only*
					G - IEC61000-4-13 & MIL-STD-1399-300 PART 1						GAC-PRO Only*
					H - IEC61000-4-11 & IEC61000-4-13 & MIL-STD-1399-300 PART 1						GAC-PRO Only*
					I - Wave Generator & Harmonic Analysis						GAC ONLY
					J - IEC61000-4-11 & Wave Generator & Harmonic Analysis						GAC ONLY
					K - IEC61000-4-13 & Wave Generator & Harmonic Analysis						GAC ONLY
					L - IEC61000-4-11 & IEC61000-4-13 & Wave Generator & Harmonic Analysis						GAC ONLY

***Contact factory for availability

High *Performance*
Programmable AC Power

GENESYS™ AC



Output Ratings	Genesys™ AC Models		Genesys™ AC-PRO Models	
	GAC-02	GAC-03	GAC-PRO 02	GAC-PRO 03
AC Power	2000VA	3000VA	2000VA	3000VA
Operating Modes	AC		AC, DC, AC+DC	
Phases*	Single Phase per unit*			
AC Voltage Range	0-350 VAC (Single Range)			
AC Current	0 - 20 A RMS	0 - 30 A RMS	0 - 20 A RMS	0 - 30 A RMS
Output Frequency	0~1200 Hz		0-1200 Hz (0-5000Hz option)	
Peak AC Current (Crest Factor)	120 A (6:1 CF)	120 A (4:1 CF)	120 A (6:1 CF)	120 A (4:1 CF)
Load PF	0 - 1 Leading or Lagging			
DC Power	N/A		2000W	3000W
DC Voltage Range	N/A		-500 ~ +500 VDC	
DC Current	N/A	N/A	0 - 20 A	0 - 30 A
DC Current Range	N/A		0-20A DC	0-30A DC

* Multiple identical units are user configurable to parallel to higher power or split and three phase configurations.

Measurement and Analysis

AC / DC Voltage	≤ 0.2 % FS (DC & 16-1200Hz)
RMS / DC Current	≤ 1.0 % FS
Power (Real & Apparent)	≤ 2.25% FS
Frequency	≤ 0.1 % (Above 5% of rated output)
Harmonics (Freq / Harmonic #)	32-50,000 Hz / 2-50 th
Harmonic Items	RMS Voltage, RMS Current, Phase Angle, THD



Rear Panel View

Input Characteristics

Available Configurations	Single phase: 85-265VAC (Derate to 1.5kVA below 170VAC), Three Phase: 170-265 VAC or 342-528 VAC
Efficiency	> 85%
Power Factor	Single-phase input 0.98 / Three-phase input 0.94

Programming and Readback

Standard Interfaces	LAN / USB / RS232 / RS485	
	Analog Monitoring	Analog Monitoring and Control
Optional Interface	IEEE / GPIB	
SW and Language	Web Page Monitor, Remote GUI SW & SCPI programmable all standard	

Mechanical

Form Factor	EIC 1U, Aluminum Chassis
Dimensions	H: 43.6mm x W: 423mm x D: 544.5mm / H 1.72" x W: 16.65" x D: 24.5"

Available Pre-Programmed Test Standards

IEC	IEC 61000- 4-11 & 13	IEC 61000- 4-11 & 13
MIL-SPC	N/A	MIL-STD-1399-300 P1, MIL-STD-704
Aero	N/A	RCTA/DO-160, A350

Programmable DC Electronic Loads (300W: Single Input in 3U Half-Rack Profile) (1kW: Single Input in 3U Full-Rack Profile)



<https://www.us.lambda.tdk.com/products/programmable-loads/sfl.html>

The SFL DC Programmable Electronic Load Series is a high performance multi-functional solution available in two voltage levels (120V/500V) over two power levels (300W/1kW) and offers the user flexible load current control to simulate different load conditions. A user-friendly front panel along with built-in and optional interfaces make it suitable for use in product Research, Design and Development.

Standard control Interfaces include a 3.5" color front panel LCD display along with the built-in **USB** and the **EXT-IN** Analog programming (0-10V) interfaces, an optional IEEE Interface (with built-in DIDO for remote PLC controller interfacing) and a Ripple Measurement Interface (for measuring Output ripple and noise).

Features	Benefits
• Stable high speed current control; High Slew Rate (up to 30A/us)	• Easy model choice (low/high voltage at 300W or 1kW)
• Seven load modes (CR, CC, CP, CV, EXT, Short, CV+Climit)	• Similar front panel/rear panel operation (300W/1kW)
• Four operating modes (Normal, Dynamic-Time, Dynamic-Freq, Sequence, Sweep)	• Flexibility in load mode and operating mode conditions
• Parallel Operation (up to ten units)	• Front or rear panel power connections available
• Built-In Interfaces: 3.5" Front Panel LCD display, USB (2.0), EXT-IN	• Simple parallel capability (up to 10kW)
• Digital Interfaces (optional): IEEE (488.1) w/ DIDO (for PLC interfacing)	• Easy physical impementation (bench-top or rack-mount)
• Ripple Measurement Interface (optional)	• Built-In Safety/EMC/RoHS compliance
• Compliant to EN61010-1 / CE Mark / 2Yr Warranty	

300W/1kW Programmable DC Electronic Load (Single Input in 3U Half-Rack/Full-Rack Profile)

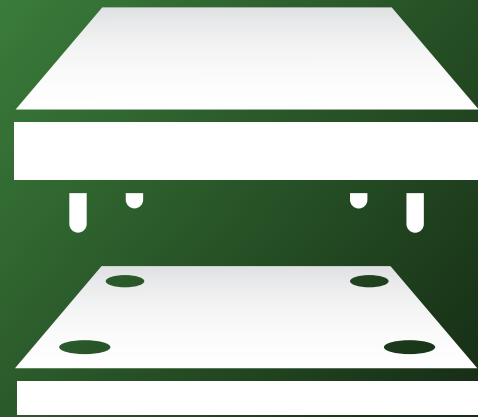
Model Number	Load Voltage Rating (V)	Load Current Rating (A)	Load Power Rating (W)	Slew Rate (mA/us or A/us)	Voltage Measurement Range (V)	Current Measurement Range (A)
SFL 120-60-300	120	60	300	5mA/us to 20A/us	0-20 / 0-120	0-0.6 / 0-6 / 0-60
SFL 500-12-300	500	12	300	0.25mA/us to 1A/us	0-85 / 0 - 500	0-0.12 / 0-1.2 / 0-12
SFL 120-180-1K	120	180	1000	7.5mA/us to 30A/us	0-20 / 0-120	0-1.8 / 0-18 / 0-180
SFL 500-36-1K	500	36	1000	0.75mA/us to 3A/us	0-85 / 0 - 500	0-0.36 / 0-3.6 / 0-36

SFL	120	-	60	-	300	-	IEEE	-	R
	Rated voltage: 120, 500				Rated power: 300, 1K		IEMD: IEEE Interface		R: Ripple Measurement Interface
Product Series: SFL (3U Half-Rack/Full-Rack 300W/1kW)									
			Rated current: 60, 180; 12, 36						

Examples: **SFL 120-60-300**, **SFL 500-36-1K-R**, **SFL 120-180-IEEE-R**, **SFL 500-12-300**



DC-DC Isolated Converters



Isolated

Applications

- Distributed Power Architecture
- Battery powered devices
- Industrial
- Medical
- Communications
- Computing
- Data Storage
- Test & Measurement
- Transportation
- Defense / COTS

Bidirectional DC/DC Converters

- Electrical Motor Energy Re-generation/storage (lifts, cranes, etc)
- Battery Tests Systems Energy Re-generation to avoid energy waste
- Smart-Grid, particularly "Micro-Grid" applications

Features

- Industry leading power density and efficiency
- Galvanic isolation between input and output
- Power range from 1.3W to 11,000W
- High useable power at elevated temperatures
- Open frame low profile construction
- Baseplate and conduction cooling options

DC/DC Isolated Converters Index by Wattage

Series	Total Power (W)	Outputs	Input Volts (VDC)	Output Volts (VDC)	Amps (A)	Size (Inches)	Type	Page
CCG1R5	1.32-1.56	1,2	4.5-76	3.3-30	up to .167	0.62 x 0.41 x 0.45	PCB Mount	128
CC-E	1.5-25	1,2	4.5-76	3.3-30	up to 7.5	DIP/SIP	PCB Mount	129
CCG3	2.64-3.12	1,2	4.5-76	3.3-30	up to .317	0.62 x 0.41 x 0.45	PCB Mount	128
CCG6-10	5.28-10.5	1,2	4.5-76	3.3-30	up to 2.6	0.75 x 0.49 x 0.45	PCB Mount	128
PXC-M	3-10	1,2	9-75	3.3-24	up to 2.5	1.25 x 0.8 x 0.4	PCB Mount	130
PXG-M	15-20	1,2	9-75	5-24	up to 1.67	1.6 x 1 x 0.4	PCB Mount	131
CCG15-30	15-30	1,2	9-76	3.3 - ±15	up to 7.5	1 x 1 x 0.39	PCB Mount	132
PYD20	20	1,2	8.5-160	4 - ±24	up to 4	2 x 1 x 0.4	PCB Mount	133
PXD-M	30	1,2	9-75	5-24	up to 6	2 x 1.6 x 0.4	PCB Mount	134
PYQ50	30-50	1	14-160	4-55.2	up to 6	2.28 x 1.45 x 0.5	Quarter Brick	135
CN-A110	30-200	1	60-160	5-24	up to 40	2.28 x 1.45 x 0.5	Quarter/Half Brick	136
PXD60	39.6-60	1,2	9-75	3.3-24	up to 12	2 x 1 x 0.4	PCB Mount	137
PXD40	40	1,2	9-75	3.3-48	up to 12.2	2 x 1 x 0.4	PCB Mount	138
iEA	48-78	1	18-75	5-28	up to 15	2.3 x 0.9 x 0.35	Eighth Brick	139
IQE	49-204	1	18-75	5,12,16	up to 30	2.28 x 1.45 x 0.41	Quarter Brick	140
CN-A24	50-100	1	14-36	5-24	up to 20	2.28 x 1.45 x 0.5	Quarter Brick	141
CN-B110	50-300	1	43-160	5-24	up to 20	2.4 x 2.28 x 0.5	Quarter/Half Brick	142
PH-A280	50-600	1	200-425	3.3-48	up to 60	1.46 x 0.5 x 2.3	Quarter/Half Brick	143
PH1200A280	1200	1	200-425	12-48	up to 100	4.6 x 2.4 x 0.5	Full Brick	144
IQL	72-308	1	18-75	1.2-28	up to 60	2.28 x 1.45 x 0.52	Quarter Brick	145
PYQ75	75	1	9-75	9.6-55.2	up to 6.25	2.28 x 1.45 x 0.5	Quarter Brick	146
HQA-85	85	1	9-40	3.3-28	up to 25	2.39 x 2.2 x 0.5	Quarter Brick	147
GQA120	120	1	9-36	5-48	up to 24	2.39 x 1.95 x 0.5	Quarter Brick	148
HQA120	120	1	9-40	5-48	up to 24	2.39 x 2.2 x 0.5	Quarter Brick	149
PYH200	200	1	14-160	9.6-55.2	up to 16.7	2.4 x 2.28 x 0.5	Half Brick	150
IEH	300	1	36-75	10.8, 12	up to 25	2.3 x 0.9 x 0.52	Eighth Brick	151
PAH300-450	300-450	1	18-76	12-48	up to 29	2.4 x 2.28 x 0.5	Half Brick	152
IQG	300-504	1	36-75	9.6-12	up to 47	2.28 x 1.45 x 0.52	Quarter Brick	153
PAF600F	600	1	19-76	12, 28	up to 45.8	4.6 x 2.4 x 0.5	Half Brick	154
IQK	1008	1	48-56	11.2	up to 90A	2.28 x 1.45 x 0.57	Quarter Brick	155
EZA2500	2,500	1	260-400	36-60	up to 52	16.65 x 15.75 x 1.72	1U rack Mount	156
EZA11K-320240	11,000	1	240-400	150-300	up to 51	16.65 x 20.87 x 1.72	1U rack Mount	157

Listed by Wattage

1.3 to 10.8W DC-DC Converters



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/ccg>

The space saving CCG1R5 to CCG10 series of isolated DC-DC converters operate from wide range 4.5 to 18V, 9 to 36Vdc or 18 to 76V inputs with 1.3W to 10.8W power levels and output voltages from 3.3V to 30V⁽¹⁾. Single output models can be adjusted -5% to +10% by using the trim terminal. The CCG can operate in ambient temperatures of up to -40 to +100°C (model dependent) and have an input to output isolation of 1,500Vdc. The CCG series is available in through-hole or surface mount packages, with an option for a double sided board coating for rail applications and other harsh environments.

Features	Benefits
• Wide 4:1 Input Ranges	• Supports Dual 5/12V 12/24V or 24/48V System Voltages
• Space Saving Package Sizes	• Less Board Area Needed
• Certified to IEC62368-1	• Easier System Compliance
• Reduced Derating at High Ambient Temperatures	• More Useable Power
• No Silicone Potting	• Reduced Quality Risk During Surface Mount Reflow Process

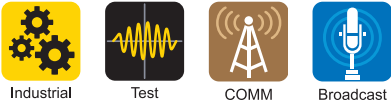
Part Numbering Scheme

CCG	1R5	-12	-03	S	F	C
Series Name CCG	Output Power 1R5 = 1.5W 3 = 3W 6 = 6W 10 = 10W	Input Voltage 12 = 4.5 - 18V 24 = 9 - 36V 48 = 18 - 76V	Output Voltage 03 = 3.3V 05 = 5V 12 = 12V 15 = 15V	S = Single Output D = Dual Output	Mounting Type F = Through hole R = Surface Mount	Board Coating Blank = No coating C = Coating

Related Products

Type	Part Number	Description
Isolated DC-DC Converter	CCG15-30	15-30W, 9 up to 76Vin, Single or Dual Output, 1x1 inch
Evaluation Kit	CCG-EVK-D0	Evaluation board (no module) for CCG15 or CCG30
Isolated DC-DC Converter	PXD40	40W, 9-36 or 18-75Vin, Single or Dual Outputs, 2x1 inch
DC-DC Non-isolated Buck Converter	i3A	100W, 9-53Vin, Output 5-30V 4.5A; 3.3-16.5V 8A, 1/32nd brick
DC-DC Non-isolated Buck Converter	i6A4W	250W, 9-53Vin, Output 3.3-40V 10A; 3.3-15V 20A, 16th brick
DC-DC Non-isolated Buck Converter	i7A	400-750W, 9 up to 60Vin, 0.8 up to 24Vout, 33A, 45A, 60A, 16th brick pinout
Ruggedized DC-DC Buck-Boost Converter	RGC	300W, 9-53Vin, Output 9.6-48V 8A; 5-28V 12.5A, 16th brick pinout
Isolated DC-DC Converter	PYD20	20W, 8.5-160Vin, Single or Dual Outputs, 2x1 inch
Isolated DC-DC Converter	PYQ50	30-50W, 14-160Vin, Single Output, Quarter brick

1.3 to 10W DC-DC Converters



[Full Datasheet](#)
<https://product.tdk.com/en/power/cc-e>

The low profile, lightweight CC-E series of isolated DC-DC converters operate from 4.5 to 9V, 9 to 18V, 18 to 36V or 36 to 76V inputs with 1.5W, 3W, 6W and 10W power levels and output voltages from 3.3V to 30V⁽¹⁾⁽²⁾. Both single and dual output models can be adjusted using the trim terminal. The CC-E can operate in ambient temperatures of -40 to 85°C and have an input to output isolation of 500Vac. Both through hole and surface mount packages are offered. The five-sided metal case reduces radiated noise.

Features	Benefits
• Low Profile	• Supports Vertical Mount Cards
• Remote on/off	• Individual Control
• Five Sided Metal Case Design	• Reduced Radiated Noise
• Reduced Derating at High Ambient Temperatures	• More Useable Power
• No Potting	• Low Weight

Part Numbering Scheme

CC	1R5	-05	03	S	F	-E
Series Name CC	Output Power 1R5 = 1.5W, 3 = 3W 6 = 6W, 10 = 10W	Input Voltage 05 = 4.5 - 9V 12 = 9 - 18V 24 = 18 - 36V 48 = 36 - 76V	Output Voltage 03 = 3.3V 05 = 5V 12 = 12V 15 = 15V	S = Single Output D = Dual Output	Mounting Type F = Through hole R = Surface Mount S = Vertical SIP (CC3 only)	

3-10W Medical DC-DC Converters



Medical



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/pxc-m>

The PXC-M series of medical DC-DC converters feature a wide 4:1 input range in a compact 1.25 x 0.8" (31.8 x 20.3mm) industry standard package. With 5kV input to output isolation, 2uA touch current and a low off-load power draw, these encapsulated modules are ideal for fixed and portable applications.

Features	Benefits
• Wide 4:1 Input Range	• Supports Dual 12/24V or 24/48 System Voltages
• Compact 1.25" x 0.8" Industry Package	• Less Board Area Needed
• Certified to IEC60601-1 and ES60601-1	• Suitable For Medical Applications
• 2 x MOPP Isolation	• High Input to Output Isolation
• Low No Load Power Consumption	• Longer Battery Life

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Current (mA)	Efficiency (%)	Maximum Load Capacitance (uF)
Single Outputs							
PXC-M03-24WS3P3	9 - 36	3.3	1	3.3	6	82	1050
PXC-M06-24WS3P3	9 - 36	3.3	1.8	5.9	6	83	2100
PXC-M10-24WS3P3	9 - 36	3.3	2.5	8.3	6	83	3000
PXC-M03-24WS05	9 - 36	5	0.6	3	6	84.5	750
PXC-M06-24WS05	9 - 36	5	1.2	6	6	86	1500
PXC-M10-24WS05	9 - 36	5	2	10	6	86.5	2500
PXC-M03-24WS12	9 - 36	12	0.25	3	6	87	130
PXC-M06-24WS12	9 - 36	12	0.5	6	6	89	260
PXC-M10-24WS12	9 - 36	12	0.83	10	6	89	430
PXC-M03-24WS15	9 - 36	15	0.2	3	6	87	100
PXC-M06-24WS15	9 - 36	15	0.4	6	6	89	210
PXC-M10-24WS15	9 - 36	15	0.67	10.1	6	89	350
PXC-M03-24WS24	9 - 36	24	0.125	3	6	87	39
PXC-M06-24WS24	9 - 36	24	0.25	6	6	88.5	75
PXC-M10-24WS24	9 - 36	24	0.416	10	6	89	125
PXC-M03-48WS3P3	18 - 75	3.3	1	3.3	4	81	1050
PXC-M06-48WS3P3	18 - 75	3.3	1.8	5.9	4	82.5	2100
PXC-M10-48WS3P3	18 - 75	3.3	2.5	8.3	4	82.5	3000
PXC-M03-48WS05	18 - 75	5	0.6	3	4	84	750
PXC-M06-48WS05	18 - 75	5	1.2	6	4	86.5	1500
PXC-M10-48WS05	18 - 75	5	2	10	4	86.5	2500
PXC-M03-48WS12	18 - 75	12	0.25	3	4	87	130
PXC-M06-48WS12	18 - 75	12	0.5	6	4	88	260
PXC-M10-48WS12	18 - 75	12	0.83	10	4	89	430
PXC-M03-48WS15	18 - 75	15	0.2	3	4	86.5	100
PXC-M06-48WS15	18 - 75	15	0.4	6	4	88.5	210
PXC-M10-48WS15	18 - 75	15	0.67	10.1	4	89	350
PXC-M03-48WS24	18 - 75	24	0.125	3	4	86.5	39
PXC-M06-48WS24	18 - 75	24	0.25	6	4	88	75
PXC-M10-48WS24	18 - 75	24	0.416	10	4	88.5	125

15-20W Medical and Industrial DC-DC Converters



Medical



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/pwg-m>

The PXG-M series of medical and industrial DC-DC converters feature a wide 4:1 input range in a compact 1.6 x 1" (41 x 25mm) industry standard package. With 5kV input to output isolation, 2.5uA touch current and a low off-load power draw, these encapsulated modules are ideal for fixed and portable applications.

Features

- Wide 4:1 Input Range
- Compact 1.6" x 1" Industry Package
- Certified to IEC 60601-1 and IEC 62368-1
- 2 x MOPP Isolation
- Low No Load Power Consumption

Benefits

- Supports Dual 12/24V or 24/48 System Voltages
- Less Board Area Needed
- Suitable For Medical and Industrial Applications
- High Input to Output Isolation
- Longer Battery Life

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%)	Maximum Load Capacitance (uF)
Single Outputs							
PXG-M15-24WS05	9 - 36	5	3	15	9	88	3800
PXG-M20-24WS05	9 - 36	5	4	20	8	88.5	5000
PXG-M15-24WS12	9 - 36	12	1.25	15	10	88.5	650
PXG-M20-24WS12	9 - 36	12	1.67	20	11	88.5	850
PXG-M15-24WS15	9 - 36	15	1	15	11	89	530
PXG-M20-24WS15	9 - 36	15	1.33	20	10	89	700
PXG-M15-24WS24	9 - 36	24	0.625	15	10	88	190
PXG-M20-24WS24	9 - 36	24	0.833	20	10	88.5	220
PXG-M15-48WS05	18 - 75	5	3	15	9	89.5	3800
PXG-M20-48WS05	18 - 75	5	4	20	9	89.5	5000
PXG-M15-48WS12	18 - 75	12	1.25	15	9	88	650
PXG-M20-48WS12	18 - 75	12	1.67	20	9	88.5	850
PXG-M15-48WS15	18 - 75	15	1	15	9	89	530
PXG-M20-48WS15	18 - 75	15	1.33	20	9	89	700
PXG-M15-48WS24	18 - 75	24	0.625	15	9	88.5	190
PXG-M20-48WS24	18 - 75	24	0.833	20	9	88.5	220
Dual Outputs							
PXG-M15-24WD05	9 - 36	±5	±1.5	15	10	86	±1900
PXG-M20-24WD05	9 - 36	±5	±2.0	20	9	86	±2500
PXG-M15-24WD12	9 - 36	±12	±0.625	15	10	88	±380
PXG-M20-24WD12	9 - 36	±12	±0.833	20	10	88.5	±500
PXG-M15-24WD15	9 - 36	±15	±0.5	15	12	89	±270
PXG-M20-24WD15	9 - 36	±15	±0.677	20	11	89	±350
PXG-M15-48WD05	18 - 75	±5	±1.5	15	9	86	±1900
PXG-M20-48WD05	18 - 75	±5	±2.0	20	9	86	±2500
PXG-M15-48WD12	18 - 75	±12	±0.625	15	9	88.5	±380
PXG-M20-48WD12	18 - 75	±12	±0.833	20	9	88.5	±500
PXG-M15-48WD15	18 - 75	±15	±0.5	15	9	89	±270
PXG-M20-48WD15	18 - 75	±15	±0.677	20	9	89	±350

13.2 to 30W DC-DC Converters



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/ccg>

The 1" x 1" footprint CCG15 and CCG30 series of isolated DC-DC converters operate from wide range 9 to 36Vdc or 18 to 76V inputs with 15W and 30W power levels and output voltages from 3.3V to 30V ⁽¹⁾. Single output models can be adjusted -10% to +10% by using the trim terminal. The CCG can operate in ambient temperatures of -40 to 85°C and has an input to output isolation of 1,500Vdc. Six sided shielding reduces radiated and conducted EMI.

Features

- Wide 4:1 Input Ranges
- Space Saving Package Sizes
- Certified to IEC 62368-1
- Reduced Derating at High Ambient Temperatures

Benefits

- Supports Dual 12/24V or 24/48V System Voltages
- Less Board Area Needed
- Easier System Compliance
- More Useable Power

Model Selector

Model	Input Voltage (V)	Voltage (V)	Output Current (A)	Maximum Power (W)	Input Current at nominal input (A)	Efficiency (%) (100% load, nominal input)
CCG15-24-03S	9 - 36	3.3	4	13.2	0.65	85
CCG30-24-03S		3.3	7	23.1	1.12	86
CCG15-24-05S		5	3	15.0	0.72	87
CCG30-24-05S		5	6	30.0	1.4	89
CCG15-24-12S		12	1.3	15.6	0.74	88
CCG30-24-12S		12	2.5	30.0	1.4	89
CCG15-24-15S		15	1	15.0	0.71	88
CCG30-24-15S		15	2	30.0	1.4	89
CCG15-24-12D (1)		24	0.65	15.6	0.73	89
CCG30-24-12D (1)		24	1.25	30.0	1.4	89
CCG15-24-15D (1)		30	0.5	15.0	0.7	90
CCG30-24-15D (1)		30	1	30.0	0.38	91
CCG15-24-12D		±12	±0.65	15.6	0.73	89
CCG30-24-12D		±12	±1.25	30.0	1.4	89
CCG15-24-15D		±15	±0.5	15.0	0.7	90
CCG30-24-15D		±15	±1.0	30.0	0.38	91
CCG15-48-03S	18 - 76	3.3	4	13.2	0.32	85
CCG30-48-03S		3.3	7	23.1	0.55	87
CCG15-48-05S		5	3	15.0	0.36	87
CCG30-48-05S		5	6	30.0	0.69	90
CCG15-48-12S		12	1.3	15.6	0.37	88
CCG30-48-12S		12	2.5	30.0	0.69	90
CCG15-48-15S		15	1	15.0	0.36	88
CCG30-48-15S		15	2	30.0	0.69	91
CCG15-48-12D (1)		24	0.65	15.6	0.37	89
CCG30-48-12D (1)		24	1.25	30.0	0.69	91
CCG15-48-15D (1)		30	0.5	15.0	0.35	90
CCG30-48-15D (1)		30	1	30.0	0.68	92
CCG15-48-12D		±12	±0.65	15.6	0.37	89
CCG30-48-12D		±12	±1.25	30.0	0.69	91
CCG15-48-15D		±15	±0.5	15.0	0.35	90
CCG30-48-15D		±15	±1.0	30.0	0.68	92

(1) ±12V dual output models can provide a 24V single output by utilizing just the +Vout and -Vout pins, leaving the COM unconnected. Similarly ±15V dual output models can be used as a 30V single output.

20W Single and Dual Output DC-DC converters



Industrial



Test



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Railway

[Full Datasheet](#)

<https://product.tdk.com/en/power/py>

The 20W 2 x 1" footprint PYD series of isolated DC-DC converters operate from an ultra wide range input of 8.5 to 160Vdc (18:1) with single and dual output voltages from 5V to 48V⁽¹⁾. Single output models can be adjusted -20% to +15% by using the trim terminal. The PYD20 models have efficiencies of up to 90% and can operate in ambient temperature of -40 to 105°C. The input to output isolation is 3,000Vac and the units are potted to provide a high resistance to shock and vibration. The converters are certified according to the 62368-1 safety standards and with additional circuits, the PYD20 series is also tested according to the EN 50155 railroad standard for electronic equipment in railroad vehicles.

Features

- 2" x 1" Footprint
- 8.5 - 160Vdc Wide Input Range (18:1)
- Certified to IEC 62368-1, Tested According to EN 50155
- Potted Plastic Case
- 3000Vac Input to Output Isolation

Benefits

- Industry Standard Package Size
- Supports the Majority of Rail DC Input Voltages
- Easier System Compliance
- High Resistance to Shock and Vibration
- Suitable For Railway and Industrial Applications

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%) at 72 / 110Vdc	Maximum Load Capacitance (uF)
Single Outputs							
PYD20-72WS05	8.5 - 160	5	4	20	5	86 / 85	6800
PYD20-72WS12	8.5 - 160	12	1.67	20	8	89 / 88	3300
PYD20-72WS15	8.5 - 160	15	1.33	20	8	89 / 88	2200
Dual Outputs							
PYD20-72WD12 ⁽¹⁾	8.5 - 160	±12	±0.833	20	8	89 / 88	820
PYD20-72WD15 ⁽¹⁾	8.5 - 160	±15	±0.667	20	8	89 / 88	680
PYD20-72WD24 ⁽¹⁾	8.5 - 160	±24	±0.417	20	8	90 / 89	330

Notes

(1) ±12V dual output models can provide a 24V single output by utilizing just the +Vout and -Vout pins, leaving the COM unconnected. Similarly ±15V models can be used as a 30V single output and ±24V models a single 48V output.

PYD	20	-72W	S	05	-
Series	Output Power 20W	-72W 8.5 - 160V Input Voltage	S Single Output D Dual Output	Output Voltage 05 = 5V 12 = 12V 15 = 15V 24 = 24V	Blank Positive Logic Remote On/Off -N Negative Logic Remote On/Off

Preferred option

Related Products

Type	Part Number	Description
DC-DC Converter	PYQ50	30-50W, Input 14-160V, quarter brick
DC-DC Converter	PYH200	200W, Input 14-160V, half brick
DC-DC Converter	CN-B	200-300W, Input 60-160V, half brick

30W Medical and Industrial DC-DC Converters



Medical



Industrial



Test



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Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/pxd-m>

The PXD-M series of medical and industrial DC-DC converters feature a wide 4:1 input range in a compact 2 x 1" (50.8 x 25mm) industry standard package. With 5kV input to output isolation, 2.5uA touch current and a low off-load power draw, these encapsulated modules are ideal for fixed and portable applications.

Features

- Wide 4:1 Input Range
- Compact 2" x 1" Industry Package
- Certified to IEC 60601-1 and IEC 62368-1
- 2 x MOPP Isolation
- Low No Load Power Consumption

Benefits

- Supports Dual 12/24V or 24/48V System Voltages
- Less Board Area Needed
- Suitable For Medical and Industrial Applications
- High Input to Output Isolation
- Longer Battery Life

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%)	Maximum Load Capacitance (uF)
Single Outputs							
PXD-M30-24WS05	9 - 36	5	6	30	9	88.5	7200
PXD-M30-24WS12	9 - 36	12	2.5	30	10	89	1200
PXD-M30-24WS15	9 - 36	15	2	30	10	90.5	1000
PXD-M30-24WS24	9 - 36	24	1.25	30	10	89.5	375
PXD-M30-48WS05	18 - 75	5	6	30	8	89	7200
PXD-M30-48WS12	18 - 75	12	2.5	30	9	89	1200
PXD-M30-48WS15	18 - 75	15	2	30	8	90	1000
PXD-M30-48WS24	18 - 75	24	1.25	30	9	89	375
Dual Outputs							
PXD-M30-24WD05	9 - 36	±5	±3.0	30	10	86	±3600
PXD-M30-24WD12	9 - 36	±12	±1.25	30	10	89.5	±750
PXD-M30-24WD15	9 - 36	±15	±1.0	30	9	90	±500
PXD-M30-48WD05	18 - 75	±5	±3.0	30	9	86.5	±3600
PXD-M30-48WD12	18 - 75	±12	±1.25	30	9	90	±750
PXD-M30-48WD15	18 - 75	±15	±1.0	30	8	89.5	±500

PXD-M	30	-24W	S	05	-N
	30 30W Output Power	-24W 9 - 36V input -48W 18 - 75V input	S Single Output D Dual Output	05 5V Output Voltage 12 12V Output Voltage 15 15V Output Voltage 24 24V Output Voltage	Blank No Remote On/Off -N Negative Logic Remote On/Off -P Positive Logic Remote On/Off

Preferred model

30-50W Single Output DC-DC converters, 1/4 Brick



Industrial



Test



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Broadcast



Railway

[Full Datasheet](#)

<https://product.tdk.com/en/power/py>

The 30-50W Quarter-brick footprint PYQ series of isolated DC-DC converters operate from an ultra wide range input of 14 to 160Vdc (12:1) with single output voltages from 5V to 48V. The output voltage can be adjusted between -20% to +10% by using the trim terminal. Sense lines for the output voltage ensure a stable output voltage even with changing loads. The PYQ50 models have efficiencies of up to 89% and can operate in ambient temperature of -40 to 100°C. The input to output isolation is 3,000Vdc and the units are potted to provide a high resistance to shock and vibration. The converters are certified according to the 62368-1 safety standards and with additional circuits, the PYQ50 series is also tested according to the EN 50155 railroad standard for electronic equipment in railroad vehicles.

Features

- Quarter-Brick Footprint
- 14 - 160Vdc Wide Input Range (12:1)
- Certified to IEC 62368-1, Tested According to EN 50155
- Potted Plastic Case
- 3000Vdc Input to Output Isolation

Benefits

- Industry Standard Package Size
- Supports the Majority of Railway DC Input Voltages
- Easier System Compliance
- High Resistance to Shock and Vibration
- Suitable For Railway and Industrial Applications

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%) at 72 / 110Vdc	Maximum Load Capacitance (uF)
PYQ50-72WS05	14 - 160	5	6	30	5	83 / 81	10000
PYQ50-72WS12	14 - 160	12	4.2	50	5	87 / 86	6800
PYQ50-72WS24	14 - 160	24	2.1	50	5	89 / 87	3300
PYQ50-72WS48	14 - 160	48	1.05	50	8	88 / 85	680

PYQ	50	-72W	S	05	-
Series	Output Power 50W (30W for 5V Version)	-72W 14 - 160V Input Voltage	S Single Output	Output Voltage 05 = 5V 12 = 12V 24 = 24V 48 = 48V	Blank Positive Logic Remote On/Off and M3 Thread -N Negative Logic Remote On/Off and M3 Thread -PD Positive Logic Remote On/Off and 3.2mm Hole -ND Negative Logic Remote On/Off and 3.2mm Hole

Preferred option

30-200W, 60 to 160V Input DC-DC Converters



[Full Datasheet](#)

<https://product.tdk.com/en/power/cn-a>

The rugged quarter and half brick 30 to 200W CN-A110 series of isolated DC-DC converters operate from a wide 60 to 160V input. With an input to baseplate isolation of 2,000Vac and 3,000Vac input to output, the series is designed for use on 110V nominal input rail and substation power systems. In addition, the baseplate cooled modules meet the rolling stock IEC 61373 Category 1, Class B shock / vibration standards and are designed to meet EN 45545-2 (Fire protection on railway vehicles). As standard, the CN-A110 series features remote sense, remote on/off and output voltage adjustment. The 200W model also offers active current share for parallel or redundant operation (12 - 24V models).

Features	Benefits
• Wide Input Range	• Supports 110V Input Rail and Substation Systems
• Quarter and Half Brick Packages	• Less Board Area Needed
• Certified to IEC 62368-1, Designed to Meet IEC 61373	• Easier System Compliance
• Current Share Function (200W Model)	• Can be Paralleled for Higher Power Applications
• No Derating at High Ambient Temperatures	• Greater Useable Power

Model Selector						
Model	Output Voltage (V)	Output Voltage Adjustment (V)	Output Current (A)	Maximum Power (W)	Input Current (A) (110V input, 100% load)	Efficiency (%) ⁽¹⁾
CN30A110-5	5	4.5 - 6.0	6	30.0	0.34	83
CN50A110-5	5	4.5 - 6.0	10	50.0	0.55	84
CN100A110-5	5	4.5 - 6.0	20	100.0	1.05	85
CN200A110-5	5	4.5 - 6.0	40	200.0	2.16	85
CN30A110-12	12	10.8 - 13.2	2.5	30.0	0.34	84
CN50A110-12	12	10.8 - 13.2	4.2	50.4	0.55	86
CN100A110-12	12	10.8 - 13.2	8.4	100.8	1.05	88
CN200A110-12	12	10.8 - 13.2	16.7	200.4	2.09	88
CN30A110-15	15	13.5 - 16.5	2	30.0	0.34	84
CN50A110-15	15	13.5 - 16.5	3.4	51.0	0.55	86
CN100A110-15	15	13.5 - 16.5	6.7	100.5	1.05	88
CN200A110-15	15	13.5 - 16.5	13.4	201.0	2.10	88
CN30A110-24	24	21.6 - 26.4	1.3	31.2	0.34	84
CN50A110-24	24	21.6 - 26.4	2.1	50.4	0.55	86
CN100A110-24	24	21.6 - 26.4	4.2	100.8	1.05	88
CN200A110-24	24	21.6 - 26.4	8.4	201.6	2.11	88

Part Numbering Scheme

CN	30A	110	-12	-
Series name	Output Power 30A = 30W 50A = 50W 100A = 100W 200A = 200W	Input Voltage 110 = 60 - 160V	Output Voltage 5 = 5V 12 = 12V 15 = 15V 24 = 24V	Options: Blank = Standard /CO = Pcb coating for EN50155 & IEC60571 compliance

60W Single and Dual Output DC-DC converters



Industrial



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[Full Datasheet](#)

<https://product.tdk.com/en/power/pxd>

The PXD60 industrial DC-DC converters feature wide 4:1 input ranges in a compact 2 x 1" (50.8 x 25mm) industry standard package. With efficiencies up to 92%, the PXD60 series typically draws a low 3mA input current when the remote on/off function is used, prolonging battery life for portable equipment. The modules have six-sided shielding to reduce radiated noise.

Features	Benefits
• Wide 4:1 Input Range	• Supports Dual 12/24V or 24/48V System Voltages
• Compact 2" x 1" Industry Package	• Less Board Area Needed
• Certified to IEC/UL/CSA/EN 62368-1	• Suitable For Industrial Applications
• Low No Load Power Consumption	• Longer Battery Life
• Six Sided Shielding	• Reduces Radiated Noise

Model Selector							
Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%)	Maximum Load Capacitance (uF)
Single Outputs							
PXD60-24WS3P3	9 - 36	3.3	12	39.6	10	90	32,000
PXD60-48WS3P3	18 - 75	3.3	12	39.6	10	90	32,000
PXD60-24WS05	9 - 36	5	12	60	10	92	30,000
PXD60-48WS05	18 - 75	5	12	60	10	92	30,000
PXD60-24WS12	9 - 36	12	5	60	10	92	5,850
PXD60-48WS12	18 - 75	12	5	60	10	92	5,850
PXD60-24WS15	9 - 36	15	4	60	10	92	3,900
PXD60-48WS15	18 - 75	15	4	60	10	92	3,900
PXD60-24WS24	9 - 36	24	2.5	60	10	92	2,000
PXD60-48WS24	18 - 75	24	2.5	60	10	91	2,000
Dual Outputs							
PXD60-24WD12	9 - 36	±12	±2.5	60	10	91	±3,900
PXD60-48WD12	18 - 75	±12	±2.5	60	10	91	±3,900
PXD60-24WD15	9 - 36	±15	±2	60	10	91	±2,400
PXD60-48WD15	18 - 75	±15	±2	60	10	91	±2,400
PXD60-24WD24	9 - 36	±24	±1.25	60	10	91	±1,000
PXD60-48WD24	18 - 75	±24	±1.25	60	10	91	±1,000

PXD	60	-24W	S	05	-N	-HC2
	60 60W Output Power	-24W 9 - 36V input -48W 18 - 75V input	S Single Output D Dual Output	3P3 3.3V Output Voltage 05 5V Output Voltage 12 12V Output Voltage 15 15V Output Voltage 24 24V Output Voltage	Blank Positive Logic Remote On/Off -N Negative Logic Remote On/Off	Blank No heatsink fitted -HC1 Factory installed heatsink with 7.62mm fins -HC2 Factory installed heatsink with 12.7mm fins -HC3 Factory installed heatsink with 20.32mm fins

Preferred model

Example: PXD60-24WS3P3-N-HC2

40W Single and Dual Output DC-DC converters



[Full Datasheet](#)

<https://product.tdk.com/en/power/pxd>



Industrial



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The PXD40 industrial DC-DC converters feature wide 4:1 input ranges in a compact 2 x 1" (50.8 x 25.4mm) industry standard package.

With efficiencies up to 93%, the PXD40 series typically draws a low 3mA input current when the remote on/off function is used, prolonging battery life for portable equipment. The modules have six-sided shielding to reduce radiated noise.

Features

- Wide 4:1 Input Range
- Compact 2" x 1" Industry Package
- Certified to IEC/UL/CSA/EN 62368-1
- Low No Load Power Consumption
- Six Sided Shielding

Benefits

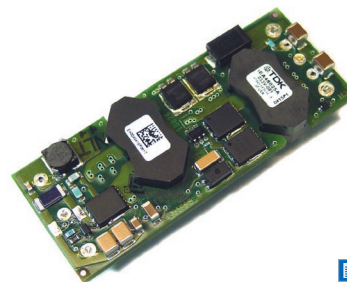
- Supports Dual 12/24V or 24/48V System Voltages
- Less Board Area Needed
- Suitable For Industrial Applications
- Longer Battery Life
- Reduces Radiated Noise

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%)	Maximum Load Capacitance (uF)
Single Outputs							
PXD40-24WS3P3	9 - 36	3.3	12.2	40.3	15	89.5	22,000
PXD40-48WS3P3	18 - 75	3.3	12.2	40.3	10	90	22,000
PXD40-24WS05	9 - 36	5	8	40	15	92	12,000
PXD40-48WS05	18 - 75	5	8	40	10	91	12,000
PXD40-24WS12	9 - 36	12	3.333	40	15	92	2,000
PXD40-48WS12	18 - 75	12	3.333	40	10	92	2,000
PXD40-24WS15	9 - 36	15	2.666	40	15	93	1,300
PXD40-48WS15	18 - 75	15	2.666	40	10	92	1,300
PXD40-24WS24	9 - 36	24	1.666	40	15	91	490
PXD40-48WS24	18 - 75	24	1.666	40	10	92	490
PXD40-24WS48	9 - 36	48	0.833	40	15	91	120
PXD40-48WS48	18 - 75	48	0.833	40	10	92	120
Dual Outputs							
PXD40-24WD12	9 - 36	±12	±1.666	40	15	91	±980
PXD40-48WD12	18 - 75	±12	±1.666	40	10	91	±980
PXD40-24WD15	9 - 36	±15	±1.333	40	15	91	±630
PXD40-48WD15	18 - 75	±15	±1.333	40	10	91	±630
PXD40-24WD24	9 - 36	±24	±0.833	40	15	91	±250
PXD40-48WD24	18 - 75	±24	±0.833	40	10	92	±250

PXD	40	-24W	S	05	-	-
Series	Output Power 40W	-24W 9 - 36V input -48W 18 - 75V input	S Single Output D Dual Output	Output Voltage 05 = 5V 12 = 12V 15 = 15V 24 = 24V 48 = 48V	Blank Positive Logic Remote On/Off -N Negative Logic Remote On/Off	Blank No heatsink fitted -HC1 Heatsink with 7.62mm fins -HC2 Heatsink with 12.7mm fins -HC3 Heatsink with 20.32mm fins
Preferred model						

48-78W, 18 to 60V or 36 to 75V Input Isolated DC-DC Eighth Brick



Industrial



Test



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[Full Datasheet](#)

<https://product.tdk.com/en/power/iEA>

The iEA series of isolated DC-DC converters deliver up to 78W in a compact industry eighth brick footprint. Available in 36-75V or 18-60V inputs with single outputs from 5V, 12V, 15V, 18V and 28V, these converters are designed primarily for use in 48V and 24V input bus architectures in communications, test and measurement, and industrial applications. Its single board open frame design allows the iEA series to achieve a low profile design of 8.81mm max to support tight board-to-board spacing and still provide high useable power at elevated ambient temperatures.

Features

- High Operating Efficiency up to 90.5%
- Open Frame, Single Board Construction
- Constant Switching Frequency
- -40 to 125 °C Operating Temperature With Minimal Derating

Benefits

- Reduces Heat Losses/Dissipation in System
- Low Profile for Tight Board to Board Spacing
- Predictable EMI
- High Useable Power At Elevated Ambient Temperature

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	On/Off Polarity	Efficiency, Full Load (typ)	Pin Length (inch)
IEA48003A280V-001-R	36 - 75	28	2.67	75	Neg	90%	0.145
IEA48003A280V-005-R	36 - 75	28	2.67	75	Neg	90%	0.200
IEA48004A180V-001-R	36 - 75	18	3.75	68	Neg	90.5%	0.145
IEA48005A150V-001-R	36 - 75	15	4.5	68	Neg	90%	0.145
IEA48007A120V-000-R	36 - 75	12	6.5	78	Pos	90.5%	0.145
IEA48007A120V-001-R	36 - 75	12	6.5	78	Neg	90.5%	0.145
IEA48007A120V-005-R	36 - 75	12	6.5	78	Neg	90.5%	0.200
IEA48015A050V-000-R	36 - 75	5	15	75	Pos	90%	0.145
IEA48015A050V-001-R	36 - 75	5	15	75	Neg	90%	0.145
IEA4W004A120V-003-R	18 - 60	12	4	48	Neg	91%	0.110

Related Products

Type	Part Number	Description
Isolated DC-DC Converter	iQL	300W, Input 36-75V or 18-36V, Isolated Quarter Brick
Isolated DC-DC Converter	iQG	300W~504W, Input 36-75V, Isolated Quarter Brick
Isolated DC-DC Converter	iEH	300W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Non-Isolated DC-DC Converter	iBH	80W/20A, 3.5-14Vin, 0.7 - 5.5Vout, DOSA Compatible
Non-Isolated DC-DC Converter	iCH	85W/12A, 4.5-14Vin, 0.7 - 8.5Vout, DOSA Compatible
Input Filter	iDQ	75V / 10A Filter
Evaluation Board	FQX-HQA-EVK-D0	Evaluation board (no modules) accepting standard Eighth or Quarter brick and FQx or iDQ input filters

132-204W, 18 to 36V or 36 to 75V Input Isolated DC-DC Quarter Brick



Industrial



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[Full Datasheet](#)

<https://product.tdk.com/en/power/iQE>

The iQE series of isolated DC-DC converters deliver up to 204W in a compact and high-performance industry standard open-frame quarter footprint. Capable of operating from nominal input voltages of 24V (18-36V) or 48V (36 to 75V), the converter provides fully regulated outputs from 5V up to 15V for demanding environments in telecom, datacom, computing and industrial applications. The output voltage can be adjusted from -10 to +10% of nominal using the trim connection to accommodate non-standard voltages.

Features

- High Operating Efficiency up to 93%
- Openframe Construction
- Available from 5V up to 15V outputs
- Constant Switching Frequency
- Monotonic Start-Up Into a Pre-Bias Output

Benefits

- Reduces Heat Losses/Dissipation in System
- Low profile for height constraint installations
- Flexible and wide output voltage coverage for various loads
- Predictable EMI
- Reliable and Stable Output in Multi-Load conditions

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Output Adjust Range (A)	Max Current (A)	Max Power (W)	Efficiency (%)	On/Off Share	Pin Length (inch)	Baseplate
iQE48030A050V-000-R	36 - 75	5	4.5 - 5.5	30	150	91.0	Pos	0.145	No
iQE48030A050V-001-R	36 - 75	5	4.5 - 5.5	30	150	91.0	Neg	0.145	No
iQE48017A120V-000-R	36 - 75	12	10.8 - 13.2	17	204	93.0	Pos	0.145	No
iQE48017A120V-001-R	36 - 75	12	10.8 - 13.2	17	204	93.0	Neg	0.145	No
iQE48017A120V-007-R	36 - 75	12	10.8 - 13.2	17	204	93.0	Neg	0.180	No
iQE4W011A120V-001-R	18 - 60	12	10.8 - 13.2	11	132	90.0	Neg	0.145	No
iQE48010A150V-001-R	36 - 75	15	13.5 - 16.5	10	150	91.0	Neg	0.145	No
iQE48010A150V-007-R	36 - 75	15	13.5 - 16.5	10	150	91.0	Neg	0.180	No

Related Products

Type	Part Number	Description
Isolated DC-DC Converter	iQG	300W-504W, Input 36-75V, Isolated Quarter Brick
Isolated DC-DC Converter	iEH	300W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	iEA	78W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Non-Isolated DC-DC Converter	iBH	80W/20A, 3.5-14Vin, 0.7 - 5.5Vout, DOSA Compatible
Non-Isolated DC-DC Converter	iCH	85W/12A, 4.5-14Vin, 0.7 - 8.5Vout, DOSA Compatible
Non-Isolated DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V 8A, 5-28V 12.5A or 8-24V 20A
Input Filter	iDQ	75V / 10A Filter
Evaluation Board	FQX-HQA-EVK-D0	Evaluation board (no modules) that fits standard Eighth or Quarter brick and FQx or iDQ input filters

50 & 100W, 14.4 to 36V Input DC-DC Converters



Industrial



COTS



Railway

[Full Datasheet](#)

<https://product.tdk.com/en/power/cn-a>

The rugged 50 and 100W quarter brick CN-A24 series of isolated DC-DC converters operate from a 14.4 to 36V (40Vdc peak) input. With an input to baseplate isolation of 2,000Vac and 3,000Vac input to output, the series is designed for use on 24V nominal input rail, vehicle and battery powered systems. In addition, the baseplate cooled modules meet the rolling stock IEC 61373 Category 1, Class B shock / vibration standards. As standard, the CN-A24 series features remote sense, remote on/off and output voltage adjustment. The board coating option provides assistance in complying with EN 50155 and IEC 60571.

Features

- Wide Input Range
- Quarter Brick Packages
- Certified to IEC 62368-1, Designed to Meet IEC 61373
- Full Power at 100°C Baseplate Temperatures

Benefits

- Supports 24V Input Rail, Vehicle and Battery Powered Systems
- Less Board Area Needed
- Easier System Compliance
- Greater Useable Power

Model Selector

Model	Output Voltage (V)	Output Voltage Adjustment (V)	Output Current (A)	Maximum Power (W)	Input Current (A) (24V input, 100% load)	Efficiency (%) ⁽¹⁾
CN50A24-5	5	4.5 - 6.0	10	50.0	2.48	85
CN100A24-5	5	4.5 - 6.0	20	100.0	4.91	86
CN50A24-12	12	10.8 - 13.2	4.2	50.4	2.47	86
CN100A24-12	12	10.8 - 13.2	8.4	100.8	4.83	88
CN50A24-24	24	21.6 - 26.4	2.1	50.4	2.47	86
CN100A24-24	24	21.6 - 26.4	4.2	100.8	4.83	88

Part Numbering Scheme

CN	50A	24	-12	-
Series name	Output Power 50A = 50W 100A = 100W	Input Voltage 24 = 14.4 - 36V	Output Voltage 5 = 5V 12 = 12V 24 = 24V	Options: Blank = Standard /CO = Pcb coating for EN50155 & IEC60571 compliance

Related Products

Type	Part Number	Description
Heat Sink	HAQ-10T	25mm transverse fins

Specifications

Model			CN-A24
Input			
Input Voltage Range	Vdc	14.4 - 36 (40 for 3s)	
Efficiency	-	See model selector table	
Conducted & Radiated EMI	-	EN55011/EN55032-A, FCC Class A, VCCI-A (External components are required, consult Evaluation Data)	
Immunity	-	See model immunity table below	
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, 60950-1, CE Mark and UKCA Mark	

50-300W, 43 to 160V Input DC-DC Converters



[Full Datasheet](#)

<https://product.tdk.com/en/power/cn-b>

The rugged quarter and half brick 50 to 300W CN-B110 series of isolated DC-DC converters operate from a very wide 43 to 160V input. With an input to baseplate isolation of 2,500Vac and 3,000Vac input to output, the series is designed for use on 72V or 110V nominal input rail power systems. In addition, the baseplate cooled modules meet the rolling stock IEC 61373 Category 1, Class B shock / vibration standards. The series is also designed to meet EN 45545-2 (Fire protection on railway vehicles) and EN 50155⁽¹⁾ (Electronic equipment in railroad vehicles) in certified systems. As standard, the 200 and 300W models features active current share for parallel or redundant operation, remote sense, remote on/off, output voltage adjustment and a power good signal. Also available are optional auxiliary voltages, replacing the power good signal on the 200-300W models and the -sense on the 50-150W models.

Features	Benefits
• Wide Input Range	• Supports 72V and 110V Input Rail Systems
• Quarter and Half Brick Packages	• Less Board Area Needed
• Certified to IEC 62368-1 and IEC 61373 Cat. 1, Class B	• Easier System Compliance
• Designed to Meet EN 45545-2 and EN 50155-2017	• Simplified System Testing
• Current Share Function (CN200B110 and CN300B110 only)	• Can be Paralleled for Higher Power Applications
• Very Minimal Derating at High Ambient Temperatures	• Greater Useable Power

Model Selector								
Model	Output Voltage (V)	Output Voltage Adjustment (V)	Output Current (A)	Maximum Power (W)	Load Reg (mV)	Line Reg (mV)	Input Current at 110Vdc input (A)	Efficiency (%) (100% load, nominal input)
CN50B110-5	5	4 - 6	10	50	10	10	0.51	89.5
CN100B110-5	5	4 - 6	20	100	10	10	1.01	91.0
CN150B110-5	5	4 - 6	30	150	10	10	1.52	90.5
CN50B110-12	12	9.6 - 14.4	4.2	50.4	24	24	0.53	88.0
CN100B110-12	12	9.6 - 14.4	8.4	100.8	24	24	1.01	92.0
CN150B110-12	12	9.6 - 14.4	12.5	150	24	24	1.51	91.5
CN200B110-12	12	9.6 - 14.4	16.7	200.4	96	48	2.00	90.0
CN300B110-12	12	9.6 - 14.4	25	300.0	96	48	3.10	89.5
CN200B110-13.8	13.8	9.66 - 14.35	14.5	200.1	96	48	2.00	91.0
CN300B110-13.8	13.8	9.66 - 14.35	21.7	299.5	96	48	3.00	90.5
CN50B110-15	15	12 - 18	3.4	51.0	30	30	0.54	87.5
CN100B110-15	15	12 - 18	6.7	100.5	30	30	1.01	91.5
CN150B110-15	15	12 - 18	10	150.0	30	30	1.51	91.5
CN200B110-15	15	12 - 18	13.4	201.0	120	60	2.10	90.0
CN300B110-15	15	12 - 18	20	300.0	120	60	3.10	90.0
CN50B110-24	24	19.2 - 28.8	2.1	50.4	48	48	0.52	89.0
CN100B110-24	24	19.2 - 28.8	4.2	100.8	48	48	1.02	90.5
CN150B110-24	24	19.2 - 28.8	6.3	151.2	48	48	1.54	90.5
CN200B110-24	24	19.2 - 26.4	8.4	201.6	192	96	2.10	90.0
CN300B110-24	24	19.2 - 26.4	12.5	300.0	192	96	3.10	90.0
CN50B110-48	48	38.4 - 57.6	1.1	52.8	96	96	0.56	87
CN100B110-48	48	38.4 - 57.6	2.1	100.8	96	96	1.02	90.5
CN150B110-48	48	38.4 - 57.6	3.2	153.6	96	96	1.55	91

50W to 600W, 200 to 425VDC Input DC-DC Converters



Industrial



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[Full Datasheet](#)

<https://product.tdk.com/en/power/ph-a>

The PH-A280 series of isolated DC-DC converters operate from a wide range 200 to 425Vdc input and are available in multiple power levels from 50 to 600W. Output voltages cover 3.3V to 48V and can be adjusted using the trim terminal by up to -60% to +20%. All models feature remote sense and remote on/off and can be conduction cooled to a cold plate or mounted with an optional heatsink. The 300 and 600W models are certified to EN 62477-1 (OVC III) for use in industrial robots connected to an incoming distribution panel, avoiding the requirement for an isolation transformer. These efficient converters are also well suited for HVDC (High Voltage Direct Current) power transmission systems and renewable energy applications.

Features	Benefits
• Wide Range 200 to 425Vdc Input	• Suitable for HVDC Applications
• Baseplate Cooled	• Can be Conduction or Convection Cooled (With an Optional Heatsink)
• -40 to 100°C Baseplate Temperature	• Operates in Harsh Environments
• Certified to IEC/EN62477-1 (OVC III)	• No External Transformer Needed
• Up to 93% Efficient	• Easier To Cool In the End System

Model Selector							
Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)	Input Current (A) 280V input, 100% load	Efficiency (%) 280V input, 100% load	Overvoltage Protection (%) ⁽²⁾
PH75A280-3.3	3.3	2.97 - 3.96	15	49.5	0.22	83	130 - 200
PH100A280-3.3	3.3	2.97 - 3.96	20	66	0.29	83	130 - 200
PH50A280-5	5	4 - 6	10	50.0	0.21	86	125 - 150
PH75A280-5	5	4 - 6	15	75.0	0.32	86	125 - 150
PH100A280-5	5	4 - 6	20	100.0	0.42	86	125 - 150
PH300A280-5	5	2.5 - 6	60	300.0	1.22	89	125 - 145
PH50A280-12	12	9.6 - 13.2	4.2	50.4	0.2	89	115 - 145
PH75A280-12	12	9.6 - 13.2	6.3	75.6	0.31	89	115 - 145
PH100A280-12	12	9.6 - 13.2	8.4	100.8	0.41	89	115 - 145
PH150A280-12	12	9.6 - 13.2	12.5	150.0	0.62	88	115 - 145
PH300A280-12	12	4.8 - 14.4	25	300.0	1.22	89	125 - 145
PH75A280-15	15	12 - 16.5	5	75.0	0.3	90	115 - 145
PH150A280-15	15	12 - 16.5	10	150.0	0.6	90	115 - 145
PH50A280-24	24	19.2 - 26.4	2.1	50.4	0.2	89	115 - 145
PH75A280-24	24	19.2 - 26.4	3.2	76.8	0.31	90	115 - 145
PH100A280-24	24	19.2 - 26.4	4.2	100.8	0.4	90	115 - 145
PH150A280-24	24	19.2 - 26.4	6.3	151.2	0.61	89	115 - 145
PH300A280-24	24	9.6 - 28.8	12.5	300.0	1.2	90.5	125 - 145
PH600A280-24	24	14.4 - 28.8	25	600.0	2.33	93	125 - 145
PH75A280-28	28	22.4 - 30.8	2.7	75.6	0.3	90	115 - 145
PH150A280-28	28	22.4 - 30.8	5.4	151.2	0.61	90	115 - 145
PH300A280-28	28	11.2 - 33.6	10.8	302.4	1.2	91	125 - 145
PH50A280-48	48	38.4 - 52.8	1.1	52.8	0.21	89	115 - 145
PH75A280-48	48	38.4 - 52.8	1.6	76.8	0.31	90	115 - 145
PH100A280-48	48	38.4 - 52.8	2.1	100.8	0.4	90	115 - 145
PH150A280-48	48	38.4 - 52.8	3.2	153.6	0.6	90	115 - 145
PH300A280-48	48	19.2 - 57.6	6.3	302.4	1.19	92	125 - 145

1200W, 200 to 425VDC Input DC-DC Converters



Industrial



COTS



Test



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[Full Datasheet](#)

<https://product.tdk.com/en/power/ph-a>

The PH1200A280 series of isolated DC-DC converters operate from a wide range 200 to 425Vdc input and are rated at 1200W. Output voltages cover 12V to 48V and can be adjusted using the trim terminal by up to -40% to +20%. All models feature a parallel function and ORing FET for higher power or N+1 redundant systems. Remote sense, remote on/off, inverter good signal and a 12V auxiliary voltage are also included as standard. The power modules can be conduction cooled to a cold plate or fitted with an optional heatsink. These 94% efficient converters are well suited for distributed power architectures, HVDC (High Voltage Direct Current) power transmission systems and renewable energy applications.

Features	Benefits
• Wide Range 200 to 425Vdc Input	• Suitable for HVDC Applications
• Baseplate Cooled	• Can be Conduction or Convection Cooled with a Heatsink
• -40 to 100°C Baseplate Temperature	• Operates in Harsh Environments
• Parallel Function with Internal ORing FET	• Suitable for Higher Power or N+1 Redundant Systems
• Up to 94% Efficient	• Easier To Cool In the End System

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)	Input Current (A) 280V input, 100% load	Efficiency (%) 280V input, 100% load	Overvoltage Protection (V)
PH1200A280-12	12	7.2 - 14.4	100	1200	4.61	94	15 - 17.4
PH1200A280-24	24	14.4 - 28.8	50	1200	4.61	94	30 - 34.8
PH1200A280-28	28	16.8 - 33.6	42.9	1201.2	4.61	94	35 - 40.6
PH1200A280-36	36	21.6 - 43.2	33.4	1202.4	4.62	94	45 - 52.2
PH1200A280-48	48	28.8 - 57.6	25	1200	4.61	94	60 - 69.6

PH	1200A	280	-12	/T
Series	Output Power	Nominal Input Voltage	Output Voltage 12, 24, 28, 36, 48V	Options Suffix Description Blank M3 tapped mounting inserts /T 3.3mm non-threaded inserts

Related Products

Type	Part Number(s)	Description
DC-DC Converters	PH-A series	50W to 600W, 200 to 425V Input DC-DC Converters
DC-DC Converters	CN200B110 to CN300B110	200 to 300W, 43 to 160V Input DC-DC Converters
Heatsink	HAF-10L	Full brick 25mm longitudinal fins
Heatsink	HAF-15L	Full brick 38.1mm longitudinal fins
Heatsink	HAF-15T	Full brick 38.1mm transverse fins

72-308W, 18 to 36V or 36 to 75V Input Isolated DC-DC Quarter Brick



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/iQL>

The iQL series of isolated DC-DC converters deliver up to 308W in a compact and high-performance industry standard quarter footprint. Capable of operating from nominal input voltages of 24V (18-36V) or 48V (36 to 75V), the converter provides fully regulated outputs from 1.2V up to 28V for demanding environments in telecom, datacom, computing and industrial applications. The output voltage can be adjusted from -20 to +10% of nominal using the trim connection to accommodate non-standard voltages.

Features

- High Operating Efficiency up to 94%
- Open frame or Baseplate Construction
- Available from 1.2V up to 28V outputs
- Constant Switching Frequency
- Monotonic Start-Up Into a Pre-Bias Output

Benefits

- Reduces Heat Losses/Dissipation in System
- Mounting Flexibility for Low profile or Conduction Cooling
- Flexible and wide output voltage coverage for various loads
- Predictable EMI
- Reliable and Stable Output in Multi-Load conditions

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Output Adjust Range (V)	Max Current (A)	Max Power (W)	Efficiency	On/Off Polarity	Pic Length (inch)	Baseplate
iQL24021A120V-001-R	20 - 36	12	9.6 - 13.2	21	252	92.0%	Neg	0.145"	Yes
iQL24021A120V-009-R	20 - 36	12	9.6 - 13.2	21	252	92.0%	Neg	0.180"	Yes
iQL24040A050V-001-R	18 - 36	5	4.0 - 5.5	40	200	91.0%	Neg	0.145"	Yes
iQL24040A050V-009-R	18 - 36	5	4.0 - 5.5	40	200	91.0%	Neg	0.180"	Yes
iQL24050A033V-009-R	18 - 36	3.3	2.64 - 3.63	50	165	90.5%	Neg	0.180"	Yes
iQL48011A280V-008-R	36 - 75	28	22.4 - 30.8	11	308	92.5%	Pos	0.180"	Yes
iQL48011A280V-009-R	36 - 75	28	22.4 - 30.8	11	308	92.5%	Neg	0.180"	Yes
iQL48011A280V-0A9-R *	36 - 75	28	16.8 - 30.8	11	308	92.5%	Neg	0.180"	Yes
iQL48025A120V-001-R	36 - 75	12	9.6 - 13.2	25	300	94.0%	Neg	0.145"	Yes
iQL48025A120V-009-R	36 - 75	12	9.6 - 13.2	25	300	94.0%	Neg	0.180"	Yes
iQL48025A120V-0B9-R	36 - 75	12	9.6 - 13.2	25	300	94.0%	Neg	0.180"	No
iQL48045A050V-001-R	36 - 75	5	4.0 - 5.5	45	225	91.0%	Neg	0.145"	Yes
iQL48045A050V-009-R	36 - 75	5	4.0 - 5.5	45	225	91.0%	Neg	0.180"	Yes
iQL48045A050V-0B3-R **	36 - 75	5	4.0 - 5.5	45	225	91.0%	Neg	0.145"	No
iQL48045A050V-0B9-R	36 - 75	5	4.0 - 5.5	45	225	91.0%	Neg	0.180"	No
iQL48060A033V-003-R **	36 - 75	3.3	2.64 - 3.63	60	198	91.0%	Neg	0.145"	Yes
iQL48060A033V-009-R	39 - 75	3.3	2.64 - 3.63	60	198	91.0%	Neg	0.180"	Yes
iQL48060A033V-0B9-R	39 - 75	3.3	2.64 - 3.63	60	198	91.0%	Neg	0.180"	No
iQL48060A025V-008-R	36 - 75	2.5	2.0 - 2.75	60	150	89.0%	Pos	0.180"	Yes
iQL48060A025V-0B3-R **	36 - 75	2.5	2.0 - 2.75	60	150	89.0%	Neg	0.145"	No
iQL48060A025V-0B9-R	36 - 75	2.5	2.0 - 2.75	60	150	89.0%	Neg	0.180"	No
iQL48060A012V-0B3-R **	36 - 75	1.2	0.96 - 1.32	60	72	83.5%	Neg	0.145"	No

Notes

* With higher OCP limit up to 15A

** Non Latching OVP

75W Single Output DC-DC converters, 1/4 Brick



Industrial



Test



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Broadcast



Railway

[Full Datasheet](#)

<https://product.tdk.com/en/power/py>

The 75W Quarter-brick footprint PYQ series of isolated DC-DC converters operate from an ultra wide range input of 9 to 75Vdc (8:1) with single output voltages from 12V to 48V. The output voltage can be adjusted between -20% to +15% by using the trim terminal. Sense lines for the output voltage ensure a stable output voltage even with changing loads. The PYQ75 models have efficiencies of up to 90% and can operate in ambient temperature of -40 to 105°C. The input to output isolation is 3,000Vac and the units are potted to provide a high resistance to shock and vibration. The converters are certified according to the 62368-1 safety standards and with additional circuits, the PYQ75 series is also tested according to the EN 50155 railroad standard for electronic equipment in railroad vehicles.

Features

- Quarter-Brick Footprint
- 9 - 75Vdc Wide Input Range (8:1)
- Certified to IEC 62368-1, Tested According to EN 50155
- Potted Plastic Case
- 3000Vac Input to Output Isolation

Benefits

- Industry Standard Package Size
- Supports the Majority of Railway DC Input Voltages
- Easier System Compliance
- High Resistance to Shock and Vibration
- Suitable For Railway and Industrial Applications

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Output Adjust (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%) at 36 / 48Vdc	Maximum Load Capacitance (uF)
PYQ75-36WS12	9 - 75	12	9.6 - 13.8	6.25	75	8	90 / 90	14000
PYQ75-36WS15	9 - 75	15	12 - 17.25	5	75	8	90 / 90	10000
PYQ75-36WS24	9 - 75	24	19.2 - 27.6	3.12	75	10	90 / 90	3900
PYQ75-36WS28	9 - 75	28	22.4 - 32.2	2.67	75	10	90 / 90	3200
PYQ75-36WS48	9 - 75	48	38.4 - 55.2	1.56	75	10	90 / 90	1100

PYQ	75	-36W	S	12	-
Series	75 Output Power 75W	-36W 9 - 75V Input Voltage	S Single Output	Output Voltage 12 = 12V 15 = 15V 24 = 24V 28 = 28V 48 = 48V	Blank Positive Logic Remote On/Off and M3 Thread -N Negative Logic Remote On/Off and M3 Thread -PD Positive Logic Remote On/Off and 3.2mm Hole -ND Negative Logic Remote On/Off and 3.2mm Hole

Preferred option

85W MIL-COTS, 9 to 40V Input Isolated Quarter Brick



Industrial



COTS



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[Full Datasheet](#)

<https://product.tdk.com/en/power/hqa>

The HQA series of isolated DC-DC converters bring a high performance quarter brick in a rugged-encapsulated package for MIL-COTS applications. With its high efficiency performance, magnetic feedback loop and wide operating baseplate temperatures of -40 to 115°C, it provides high useable power at elevated temperatures and altitude for demanding and harsh environments. Various MIL-STD compliance can be supported when paired with the FQA or FQB MIL-COTS input filters.

Features	Benefits
• Up to 85 W in an Industry Quarter Brick package	• High Power Density, Less Board Area Needed
• Encapsulated and Rugged design	• Operation in Harsh and Demanding Environments
• Maximum Baseplate Temperature of 115°C	• High Useable Power at Elevated Temperatures
• No Optocouplers used	• Increased Reliability in High Altitude
• Designed to meet MIL-STD-461; MIL-STD-1275; MIL-STD-704; RTCA/DO-160 Sec 16-18 with FQA / FQB Input Filters	• Facilitates Compliance to Various MIL-STD

Model Selector							
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Remote Sense	Baseplate	Screening
HQA2W085W033V-007-S	9 - 40	3.3	25	85	Yes	Flanged	-S : Standard
HQA2W085W033V-N07-S	9 - 40	3.3	25	85	Yes	Non-Flanged	-S : Standard
HQA2W085W050V-007-S	9 - 40	5	17	85	Yes	Flanged	-S : Standard
HQA2W085W050V-N07-S	9 - 40	5	17	85	Yes	Non-Flanged	-S : Standard
HQA2W085W120V-007-S	9 - 40	12	7.1	85	Yes	Flanged	-S : Standard
HQA2W085W120V-N07-S	9 - 40	12	7.1	85	Yes	Non-Flanged	-S : Standard
HQA2W085W150V-007-S	9 - 40	15	5.7	85	Yes	Flanged	-S : Standard
HQA2W085W150V-N07-S	9 - 40	15	5.7	85	Yes	Non-Flanged	-S : Standard
HQA2W085W240V-007-S	9 - 40	24	3.5	85	NA	Flanged	-S : Standard
HQA2W085W240V-N07-S	9 - 40	24	3.5	85	NA	Non-Flanged	-S : Standard
HQA2W085W280V-007-S	9 - 40	28	3	85	NA	Flanged	-S : Standard
HQA2W085W280V-N07-S	9 - 40	28	3	85	NA	Non-Flanged	-S : Standard

Consult factory for other valid part number suffixes not shown on the table.

HQA	2W	085W	240V	-	007	-	S
	Input Voltage 2W: 9 - 40 V	Output Power 085W: 85 Watts	Output Voltage 280V: 28 V 050V: 5 V		Baseplate Construction: 007: Flanged Baseplate N07: Non-Flanged Baseplate		Screening Options: S: Standard Screening See Screening Option Table below

Screening Options		
Operation	S-Grade (Standard Screening)	M-Grade (Enhanced Screening)
Functional Test	Room and Hot Test	Please see HQA120 series
Burn-In	Yes	
Temperature Cycling	No	
Hi-Pot	2250 Vdc	
Visual Inspection	Yes	

120W, 9 to 36V Input Industrial Isolated Quarter Brick DC-DC Converter



Industrial



COTS



Test



Robotics

[Full Datasheet](#)

<https://product.tdk.com/en/power/gqa>

The GQA series of isolated DC-DC converters deliver 120W in a compact and high performance quarter brick footprint. It operates from an input range of 9 to 36V and comes with a broad selection of output voltages. The mechanical packaging is available in multiple baseplate, enclosed and potted configurations, supporting convection and conduction cooling via external cold plate or heatsink. It's designed to deliver high useable power at elevated temperatures and withstand high shock and vibration exposure in rugged industrial and battery powered autonomous mobility applications.

Features	Benefits
• 120W in an Industry Quarter Brick Footprint	• High Power Density, Less Board Area Needed
• 9 to 36V Input Range	• Can Operate From Different Input DC Sources Including Battery
• Flanged and Non-Flanged Baseplate Design	• Conduction Cooling Mounting Flexibility for Cold Plate or Heatsink
• Maximum Baseplate Temperature of 105°C	• High Useable Power at Elevated Temperatures
• Enclosed and Potted Options	• Operation in Harsh Environment With High Shock and Vibration Exposure

Model Selector (Full Systems)								
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Remote Sense	Baseplate	Enclosed with Potting	Input to Output Isolation
GQA2W024A050V-007-R	9 - 36	5	24	120	Yes	Flanged	No	1500 Vdc
GQA2W024A050V-0P7-R	9 - 36	5	24	120	Yes	Flanged	Yes	3000 Vdc
GQA2W024A050V-N07-R	9 - 36	5	24	120	Yes	Non-Flanged	No	1500 Vdc
GQA2W024A050V-NP7-R	9 - 36	5	24	120	Yes	Non-Flanged	Yes	2250 Vdc
GQA2W010A120V-007-R	9 - 36	12	10	120	Yes	Flanged	No	1500 Vdc
GQA2W010A120V-0P7-R	9 - 36	12	10	120	Yes	Flanged	Yes	3000 Vdc
GQA2W010A120V-N07-R	9 - 36	12	10	120	Yes	Non-Flanged	No	1500 Vdc
GQA2W008A150V-007-R	9 - 36	15	8	120	Yes	Flanged	No	1500 Vdc
GQA2W008A150V-0P7-R	9 - 36	15	8	120	Yes	Flanged	Yes	3000 Vdc
GQA2W008A150V-N07-R	9 - 36	15	8	120	Yes	Non-Flanged	No	1500 Vdc
GQA2W005A240V-007-R	9 - 36	24	5	120	NA	Flanged	No	1500 Vdc
GQA2W005A240V-0P7-R	9 - 36	24	5	120	NA	Flanged	Yes	3000 Vdc
GQA2W005A240V-N07-R	9 - 36	24	5	120	NA	Non-Flanged	No	1500 Vdc
GQA2W005A240V-NP7-R	9 - 36	24	5	120	NA	Non-Flanged	Yes	2250 Vdc
GQA2W004A280V-007-R	9 - 36	28	4.28	120	NA	Flanged	No	1500 Vdc
GQA2W004A280V-0P7-R	9 - 36	28	4.28	120	NA	Flanged	Yes	3000 Vdc
GQA2W004A280V-N07-R	9 - 36	28	4.28	120	NA	Non-Flanged	No	1500 Vdc
GQA2W004A280V-NP7-R	9 - 36	28	4.28	120	NA	Non-Flanged	Yes	2250 Vdc
GQA24003A480V-007-R	18 - 36	48	2.5	120	NA	Flanged	No	1500 Vdc
GQA24003A480V-0P7-R	18 - 36	48	2.5	120	NA	Flanged	Yes	3000 Vdc
GQA24003A480V-N07-R	18 - 36	48	2.5	120	NA	Non-Flanged	No	1500 Vdc

GQA	2W	005A	240V	-	007	-	R
	Input Voltage 2W: 9 - 36V 24: 18 - 36V	Output Current 005A: 5A 010A: 10A	Output Voltage: 240V : 24V 050V : 5V		Baseplate Construction: 007 : Flanged Baseplate 0P7 : Flanged Baseplate, Enclosed / Potted, 3kV Isolation N07: Non-Flanged Baseplate NP7: Non-Flanged Baseplate, Enclosed / Potted		R : RoHS Compliant

120W MIL-COTS , 9 to 40V
Input Isolated Quarter Brick



Industrial



COTS



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/hqa>

The HQA series of isolated DC-DC converters bring a high performance quarter brick in a rugged-encapsulated package for MIL-COTS applications. With its high efficiency performance, magnetic feedback loop and wide operating baseplate temperatures of -55 to 115°C (-40°C for -S suffix), it provides high useable power at elevated temperatures and altitude for demanding and harsh environments. Various MIL-STD compliance can be supported when paired with the FQA or FQB MIL-COTS input filters.

Features

- Up to 120 W in an Industry Quarter Brick package
- Encapsulated and Rugged design
- Maximum Baseplate Temperature of 115°C
- No Optocouplers used
- Enhanced Screening Option (-M Suffix)
- Designed to meet MIL-STD-461; MIL-STD-1275; MIL-STD-704; RTCA/DO-160 Sec 16-18 with FQA / FQB Input Filters

Benefits

- High Power Density, Less Board Area Needed
- Operation in Harsh and Demanding Environments
- High Useable Power at Elevated Temperatures
- Increased Reliability in High Altitude
- Reduces End System Test Screening Requirement
- Facilitates Compliance to Various MIL-STD

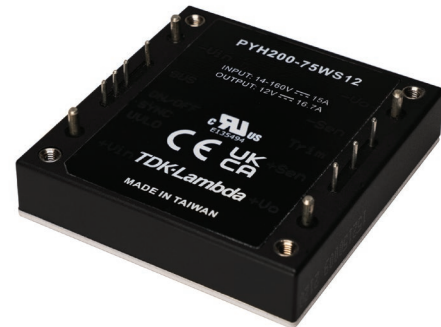
Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Remote Sense	Baseplate	Screening
HQA2W120W050V-007-S	9 - 40	5	24	120	Yes	Flanged	-S : Standard
HQA2W120W050V-N07-M	9 - 40	5	24	120	Yes	Non-Flanged	-M : Enhanced
HQA2W120W050V-N07-S	9 - 40	5	24	120	Yes	Non-Flanged	-S : Standard
HQA2W120W120V-007-M	9 - 40	12	10	120	Yes	Flanged	-M : Enhanced
HQA2W120W120V-007-S	9 - 40	12	10	120	Yes	Flanged	-S : Standard
HQA2W120W120V-N07-M	9 - 40	12	10	120	Yes	Non-Flanged	-M : Enhanced
HQA2W120W120V-N07-S	9 - 40	12	10	120	Yes	Non-Flanged	-S : Standard
HQA2W120W150V-007-M	9 - 40	15	8	120	Yes	Flanged	-M : Enhanced
HQA2W120W150V-007-S	9 - 40	15	8	120	Yes	Flanged	-S : Standard
HQA2W120W150V-N07-S	9 - 40	15	8	120	Yes	Non-Flanged	-S : Standard
HQA2W120W240V-007-M	9 - 40	24	5	120	NA	Flanged	-M : Enhanced
HQA2W120W240V-007-S	9 - 40	24	5	120	NA	Flanged	-S : Standard
HQA2W120W240V-N07-M	9 - 40	24	5	120	NA	Non-Flanged	-M : Enhanced
HQA2W120W240V-N07-S	9 - 40	24	5	120	NA	Non-Flanged	-S : Standard
HQA2W120W280V-007-M	9 - 40	28	4.2	120	NA	Flanged	-M : Enhanced
HQA2W120W280V-007-S	9 - 40	28	4.2	120	NA	Flanged	-S : Standard
HQA2W120W280V-N07-M	9 - 40	28	4.2	120	NA	Non-Flanged	-M : Enhanced
HQA2W120W280V-N07-S	9 - 40	28	4.2	120	NA	Non-Flanged	-S : Standard
HQA24120W480V-007-M	18 - 40	48	2.5	120	NA	Flanged	-M : Enhanced
HQA24120W480V-007-S	18 - 40	48	2.5	120	NA	Flanged	-S : Standard
HQA24120W480V-N07-S	18 - 40	48	2.5	120	NA	Non-Flanged	-S : Standard

Consult factory for other valid part number suffixes not shown on the table.

HQA	2W	120W	240V	-	007	-	M
	Input Voltage 2W: 9 - 40 V 24: 18 - 40 V	Output Power 120W: 120Watts	Output Voltage 280V: 28 V 050V: 5 V		Baseplate Construction: 007: Flanged Baseplate N07: Non-Flanged Baseplate		Screening Options: M: Enhanced Screening S: Standard Screening See Screening Option Table below

200W Single Output DC-DC converters, 1/2 Brick



Industrial



Test



COMM



Broadcast



Railway

[Full Datasheet](#)

<https://product.tdk.com/en/power/py>

The 200W Half-brick footprint PYH series of isolated DC-DC converters operate from an ultra wide range input of 14 to 160Vdc (12:1) with single output voltages from 12V to 48V. The output voltage can be adjusted between -20% to +15% by using the trim terminal. Sense lines for the output voltage ensure a stable output voltage even with changing loads. The PYH200 models have efficiencies of up to 90% and can operate in ambient temperature of -40 to 100°C. The input to output isolation is 3,000Vac and the units are potted to provide a high resistance to shock and vibration. The converters are certified according to the 62368-1 safety standards and with additional circuits, the PYH200 series is also tested according to the EN 50155 railroad standard for electronic equipment in railroad vehicles.

Features

- Half-Brick Footprint
- 14 - 160Vdc Wide Input Range (12:1)
- Certified to IEC 62368-1, Tested According to EN 50155
- Potted Plastic Case
- 3000Vac Input to Output Isolation

Benefits

- Industry Standard Package Size
- Supports the Majority of Railway DC Input Voltages
- Easier System Compliance
- High Resistance to Shock and Vibration
- Suitable For Railway and Industrial Applications

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%) at 72 / 110Vdc	Maximum Load Capacitance (uF)
PYH200-72WS12	14 - 160	12	16.7	200	50	90 / 90	16,700
PYH200-72WS15	14 - 160	15	13.5	200	50	90 / 89	13,500
PYH200-72WS24	14 - 160	24	8.4	200	50	88 / 88	8,000
PYH200-72WS48	14 - 160	48	4.2	200	50	88 / 89	2,200

PYH	200	-72W	S	12	-N
Series	Output Power 200W	-72W 14 - 160V Input Voltage	S Single Output	Output Voltage 12 = 12V 15 = 15V 24 = 24V 48 = 48V	Blank Positive Logic Remote On/Off and M3 Thread -N Negative Logic Remote On/Off and M3 Thread -PD Positive Logic Remote On/Off and 3.2mm Hole -ND Negative Logic Remote On/Off and 3.2mm Hole

Preferred option

300W, 36 to 75V Input Isolated DC-DC Eighth Brick



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/iEH>

The iEH series of isolated DC-DC converters deliver up to 300W in a compact and high performance eighth brick footprint. Available in 10.8V or 12V outputs with efficiencies up to 94.6%, these fully regulated Intermediate Bus Converters (IBC) feature very high, true useable power in high ambient temperatures. This makes them ideal for driving Non-Isolated Point-Of-Load (POL) converters in Distributed Power Architectures (DPA), commonly deployed in data communications, computing and storage applications. The iEH is available in an open frame format or with an integral base-plate for conduction cooling.

Features	Benefits
• High Operating Efficiency up to 94.6%	• Reduces Heat Losses/Dissipation in System
• Open Frame or Baseplate Construction	• Mounting Flexibility for Low Profile or Conduction Cooling
• 10.8V or 12V Intermediate Bus Voltage	• Optimized Distributed Power Architecture (DPA) for Driving Point-Of-Loads (POL)
• Constant Switching Frequency	• Predictable EMI
• Monotonic Start-Up Into a Pre-Bias Output	• Reliable and Stable Output in Multi-Load Conditions

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	On/Off Polarity	Pin Length (inch)	Baseplate (-1xx-R Suffix)	Droop Load Share
iEH48028A108V-103-R *	36 - 75	10.8	28	300	Neg	0.145	Yes	No
iEH48028A108V-109-R	36 - 75	10.8	28	300	Neg	0.190	Yes	No
iEH48025A120V-003-R *	36 - 75	12	25	300	Neg	0.145	No	No
iEH48025A120V-103-R *	36 - 75	12	25	300	Neg	0.145	Yes	No
iEH48025A120V-107-R *	36 - 75	12	25	300	Neg	0.190	Yes	No
iEH48025A120V-109-R	36 - 75	12	25	300	Neg	0.190	Yes	No

* Non Latching OVP (Over Voltage Protection)

Preferred option

Related Products

Type	Part Number	Description
Isolated DC-DC Converter	iQL	300W, Input 36-75V or 18-36V, Isolated Quarter Brick
Isolated DC-DC Converter	iQG	300W~504W, Input 36-75V, Isolated Quarter Brick
Isolated DC-DC Converter	iEA	78W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Non-Isolated DC-DC Converter	iBH	80W/20A, 3.5-14Vin, 0.7 - 5.5Vout, DOSA Compatible
Non-Isolated DC-DC Converter	iCH	85W/12A, 4.5-14Vin, 0.7 - 8.5Vout, DOSA Compatible
Input Filter	iDQ	75V / 10A Filter
Evaluation Board	FQX-HQA-EVK-D0	Evaluation board (no modules) accepting standard Eighth or Quarter brick and FQx or iDQ input filters

300-450W Half Brick DC-DC Converters



Industrial



COTS



Test



COMM



[Full Datasheet](#)

<https://product.tdk.com/en/power/pah>

The PAH300, PAH350 and PAH450 series of isolated half brick DC-DC converters operate from a 24V or 48V nominal dc input and are rated at 300W to 450W. Output voltages are 12V, 28V or 48V and can be adjusted over a wide range using the trim terminal by up to -40% to +18%. Remote sense and remote on/off are included as standard. The power modules can be conduction cooled to a cold plate or fitted with an optional heatsink. These efficient converters are well suited for distributed power architectures and power systems.

Features	Benefits
• Wide Range Inputs	• Operates From Batteries or DC Power Systems
• Baseplate Cooled	• Can be Conduction or Convection Cooled with a Heatsink
• -40 to +100°C Baseplate Temperature	• Operates in Harsh Environments
• Up to 92% Efficient	• Easier To Cool In the End System
• Fixed Switching Frequency	• Predictable Switching Noise

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)	Input Current (A) nominal input, 100% load	Efficiency (%) nominal input, 100% load	Overvoltage Protection (%)
PAH300S24-12	18 - 36	12	7.2 - 13.2	25	300	14.71	87	115 - 135
PAH300S48-12	36 - 76	12	7.2 - 13.2	25	300	7.02	90	115 - 135
PAH350S48-12	36 - 76	12	7.2 - 13.2	29.2	350	8.25	89	115 - 135
PAH300S24-28	18 - 36	28	16.8 - 33.0	11	308	15.1	88	125 - 140
PAH350S24-28	18 - 36	28	16.8 - 33.0	12.5	350	17.36	88	125 - 140
PAH300S48-28	36 - 76	28	16.8 - 33.0	11	308	7.21	90	125 - 140
PAH350S48-28	36 - 76	28	16.8 - 33.0	12.5	350	8.24	89	125 - 140
PAH450S48-28	36 - 76	28	16.8 - 33.0	16	448	10.3	92	125 - 145
PAH350S24-48	18 - 36	48	28.8 - 52.8	7.3	350	17.36	87	115 - 140
PAH450S48-48	36 - 76	48	28.8 - 57.6	9.4	451	10.4	92	125 - 145

PAH	450	S	24	-	28	/T	
Series	Output Power (W) 300, 350, 450	Simple Function	Nominal Input 24 = 24V 48 = 48V		Output Voltage 12, 28, 48	Options	
						Suffix	Description
						Blank	M3 tapped mounting inserts
						/T	3.3mm non-threaded inserts
						/P	Positive logic remote On/Off (Not on PAH450S)*

* Contact factory for availability on other models

* Contact factory for availability on other models

Related Products

	Part Number	Description
DC-DC Converters	PAF600F24-48	600W, 24 & 48V Input Full Brick DC-DC Converters
DC-DC Converters	PH50A280 to PH600A280	50W to 600W, 200 to 425V Input DC-DC Converters
DC-DC Converters	i7A	500 to 700W, Non-isolated Step Down DC-DC Converters
Heatsink	HAH-10L	Half brick 25mm longitudinal fins
Heatsink	HAH-10T	Half brick 25mm transverse fins
Heatsink	HAH-15L	Half brick 38.1mm longitudinal fins

300-504W, 36 to 75V Input Isolated DC-DC Quarter Brick



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/iQG>

The iQG series of isolated DC-DC converters deliver up to 504W in a compact and high performance quarter brick footprint. Available in 9.6V or 12V outputs with efficiencies up to 96%, these fully regulated Intermediate Bus Converters (IBC) feature very high, true useable power in high ambient temperatures. This makes them ideal for driving Non-Isolated Point of Load (PoL) converters in Distributed Power Architectures (DPA), commonly deployed in data communications, computing and storage applications. The iQG is available in an open frame format or with an integral base-plate for conduction cooling.

Features	Benefits
• High Operating Efficiency up to 96%	• Reduces Heat Losses/Dissipation in System
• Open frame or Baseplate Construction	• Mounting Flexibility for Low profile or Conduction Cooling
• 9.6V or 12V Intermediate Bus Voltage	• Optimized Distributed Power Architecture (DPA) for Driving Point-Of-Loads (POL)
• Droop Mode Option for Parallel Operation	• Power Scalability or Redundancy
• Constant Switching Frequency	• Predictable EMI
• Monotonic Start-Up Into a Pre-Bias Output	• Reliable and Stable Output in Multi-Load conditions

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	On/Off Polarity	Pin Length	Baseplate (-1xx-R Suffix)	Droop Load Share
iQG48047A096V-1D1-R	36 - 75	9.6	47	450	Neg	0.145	Yes	Yes
iQG48025A120V-001-R	36 - 75	12	25	300	Neg	0.145	No	No
iQG48025A120V-009-R	36 - 75	12	25	300	Neg	0.145	No	No
iQG48025A120V-101-R	36 - 75	12	25	300	Neg	0.145	Yes	No
iQG48025A120V-109-R	36 - 75	12	25	300	Neg	0.180	Yes	No
iQG48033A120V-009-R	36 - 75	12	33	400	Neg	0.180	No	No
iQG48033A120V-101-R	36 - 75	12	33	400	Neg	0.145	Yes	No
iQG48033A120V-109-R	36 - 75	12	33	400	Neg	0.180	Yes	No
iQG48033A120V-1D1-R	36 - 75	12	33	400	Neg	0.145	Yes	Yes
iQG48033A120V-1D9-R	36 - 75	12	33	396	Neg	0.180	Yes	Yes
iQG48042A120V-109-R	39 - 75	12	42	504	Neg	0.180	Yes	No
iQG48042A120V-1U9-R	39 - 75	12	42	504	Neg	0.166	Yes	Yes

Related Products

Type	Part Number	Description
Isolated DC-DC Converter	iQL	300W, Input 36-75V or 18-36V, Isolated Quarter Brick
Isolated DC-DC Converter	iEH	300W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	iEA	78W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Non-Isolated DC-DC Converter	iBH	80W/20A, 3.5-14Vin, 0.7 - 5.5Vout, DOSA Compatible
Non-Isolated DC-DC Converter	iCH	85W/12A, 4.5-14Vin, 0.7 - 8.5Vout, DOSA Compatible
Input Filter	iDQ	75V / 10A Filter
Evaluation Board	FQX-HQA-EVK-D0	Evaluation board (no modules) accepting standard Eighth or Quarter brick and FQx or iDQ input filters

600W, 24V and 48V Input DC-DC Converters



Industrial



COTS



Test



COMM

[Full Datasheet](#)

<https://product.tdk.com/en/power/paf>

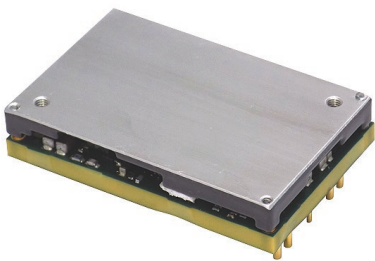
The PAF600F24 and PAF600F48 series of isolated full brick DC-DC converters operate from a 24V or 48V nominal dc input and are rated at 600W output. Output voltages are 12V or 28V and can be adjusted using the trim terminal by -40% to +10%. All models feature a parallel function for higher power or N+1 redundant systems. Remote sense, remote on/off, inverter good signal and an auxiliary voltage are also included as standard. The power modules can be conduction cooled to a cold plate or fitted with an optional heatsink. These efficient converters are well suited for distributed power architectures and power systems.

Features	Benefits
• Wide Range Inputs	• Operates From Batteries or DC Power Systems
• Baseplate Cooled	• Can be Conduction or Convection Cooled with a Heatsink
• -40 to +100°C Baseplate Temperature	• Operates in Harsh Environments
• Parallel Function	• Suitable for Higher Power or N+1 Redundant Systems
• Up to 90% Efficient	• Easier To Cool In the End System

Model Selector							
Model	Input Voltage (V)	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)	Input Current (A) nominal input, 100% load	Efficiency (%) nominal input, 100% load
PAF600F24-12	20 - 36	12	7.2 - 13.2	50	600	28.9	89
PAF600F24-28	19 - 36	28	16.8 - 30.8	21.5	602.0	28.9	89
PAF600F48-12	36 - 76	12	7.2 - 13.2	50	600	14.2	89
PAF600F48-28	36 - 76	28	16.8 - 30.8	21.5	602.0	14.1	90

PAF	600	F	24	-	28	/T
Series	Output Power	Full Function	Nominal Input 24 = 24V 48 = 48V		Output Voltage 12, 28	Options
						Suffix
						Blank
						/T
						Description
						M3 tapped mounting inserts
						3.3mm non-threaded inserts

1008W Isolated Quarter Brick DC-DC Converter



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/iQK>

The iQK series of isolated DC-DC converters provide a fully regulated 11.2V output. Rated at 1008W, the quarter brick sized module can deliver up to 90A output current. Its 48 to 56Vdc input range is suitable for use with regulated 48V front end supplies, primarily employed in computing, server and data communications applications. Featuring a high efficiency of up to 97%, it is ideal for use in distributed power architectures.

Features	Benefits
• 1008W in a Quarter Brick Footprint	• High Power Density, Less Board Area Needed
• High Efficiency - Up to 97%	• Lower Dissipated Power
• Baseplate Cooled	• Suitable for Cold plate or Heatsink Mounting
• Constant Switching Frequency	• Simplified EMI Filtering
• Optional Droop Current Share	• Easier to Connect in Parallel

Model Selector							
Model	Input Voltage(1) (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Efficiency (%)	Droop Load Share	Integrated Baseplate
iQK4N090A112V-1U9-R	48 - 56	11.2	90	1008	96%	Yes	Yes
iQK4N090A112V-1V9-R	48 - 56	11.2	90	1008	96%	No	Yes

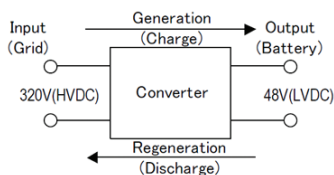
Preferred Model

Notes
(1) Operation down to 45V input is possible. Output voltage will decrease as the load current increases.

2500W Bi-Directional Isolated DC-DC Converters



Renewable



[Full Datasheet](#)

<https://product.tdk.com/en/power/eza>

Designed for energy storage systems with rechargeable batteries, this 2500W digitally controlled, compact 1U power supply can automatically change conversion direction from high voltage dc sources, powered by solar or wind, to 48Vdc batteries and vice versa. Other applications include lithium-ion battery testing as well as the utilization of regenerated energy from robots, cranes, autonomous ground vehicles and elevators.

Features

- 1U rackmount
- Seamless Transition Between Charge and Discharge
- > 92% Efficient
- RS-485 Communications & Control
- Input to Output Isolation

Benefits

- Utilizes Less Rack Space
- No Interruption in Power
- Minimizes Losses and Heat in the System
- Remote Programming and Monitoring Capabilities
- Lower Electrical Noise

Model Selector

Model	Low Voltage DC (Battery Side) Voltage (V)	High Voltage DC (Grid Side) Voltage (V)	Low Voltage DC (Battery Side) Current (A)	High Voltage DC (Grid Side) Current (A)	Maximum Power (W)
EZA2500-32048	36 - 60VDC (48V Nominal)	300 - 380VDC (320V Nominal)	±52A	±7.8A	±2,496W
EZA2500W-32048	36 - 65VDC (48V Nominal)	260 - 400VDC (320V Nominal)	±52A	±7.8A	±2,496W

EZA2500-32048 Options

Suffix	Description
EZA2500-32048CO	Two sided pcb coating
EZA2500-32048FC	Two sided pcb coating -10 to +50°C temperature range Long life, dust proof fan

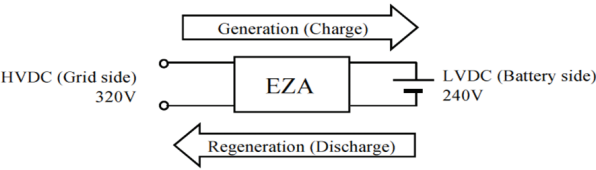
Specifications

Model		EZA2500	
Input		Low Voltage DC (Battery Side)	High Voltage DC (Grid Side)
Input / Output Voltage range	Vdc	See model selector	
Input / Output Current	A	See model selector	
Inrush Current (Typical)	5.5A	3.6A	
Pre-charge Voltage (Required)	Vdc	> 36V	EZA2500: >300V EZA2500W: >260V if LVDC is <58V >280V if LVDC is >58V)
Efficiency	%	92	
Conducted & Radiated EMI	-	EN55011-A, EN55032-A Conducted and radiated	
Safety Agency Certifications	-	IEC/EN/UL/CSA/EN60950-1, EC/EN/UL/CSA/EN62368-1, CE Mark (LVD, EMC and RoHS)	

11kW Bi-Directional Isolated DC-DC Converters



Renewable



[Full Datasheet](#)

<https://product.tdk.com/en/power/eza>

Designed for energy storage systems with rechargeable batteries, this 11kW digitally controlled, compact 1U power supply can automatically change conversion direction from high voltage dc sources, powered by solar or wind, to 240Vdc batteries and vice versa. Other applications include lithium-ion battery testing as well as the utilization of regenerated energy from robots, cranes, autonomous ground vehicles and elevators.

Features	Benefits
• 1U rackmount	• Utilizes Less Rack Space
• Seamless Transition Between Charge and Discharge	• No Interruption in Power
• > 95% Efficient	• Minimizes Losses and Heat in the System
• RS-485 Communications & Control	• Remote Programming and Monitoring Capabilities
• Input to Output Isolation	• Lower Electrical Noise

Model Selector					
Model	Low Voltage DC (Battery Side) Voltage (V)	High Voltage DC (Grid Side) Voltage (V)	Low Voltage DC (Battery Side) Current (A)	High Voltage DC (Grid Side) Current (A)	Maximum Power (W)
EZA11K-320240	150 - 300Vdc (240V Nominal)	240 - 400Vdc (320V Nominal)	±45.8	±34.4	±11,000

EZA11K-320240 Options	
Model	Options
EZA11K-320240FC	Two sided pcb coating; long life, dust proof fan



DC-DC Non-Isolated Converters



Non-Isolated

Applications DC-DC Converters

- Distributed Power Architecture
- Battery Powered Devices
- Industrial
- Medical
- Communications
- Computing
- Data Storage
- Test & Measurement
- Transportation
- Defense / COTS
- Autonomous Mobile Robotics

Features DC-DC Converters

- No galvanic isolation
- Industry leading power density and efficiency
- Buck and buck-boost converters
- SMT or through hole mounting
- Wide input and wide output ranges
- Power good, synchronization, sequencing, OCP adjustment and current monitor
- Baseplate and heatsink options

DC/DC Non-Isolated Converters Index by Wattage

Series	Total Power (W)	Outputs	Input Volts (VDC)	Output Volts (VDC)	Amps (A)	Size (Inches)	Type	Page
CHVM	1.4-3	1	11-13	±2000	up to 5.6	Various	PCB Mount	160
i6AN	75	1	9-40	-3.3 to -30	up to 8	1.3 x 0.9 x 0.47	1/16 Brick	161
iBH	80	1	3.5-14	0.7-5.5	up to 20	0.8 x 0.53 x 0.39	PCB Mount	162
iCH	85	1	4.5-14	0.7-8.5	up to 12	0.48 x 0.48 x 0.335	PCB Mount	163
i3A	100	1	9-53	3.3-30	up to 8	0.75 x 0.92 x 0.38	1/32 Brick	164
iAH	150	1	3.5-17	0.7-5.5	up to 40	1.3 x 0.53 x 0.40	PCB Mount	165
i1C	200	1	9-75	9.6-28	up to 10	1.01 x 1.01 x 0.40	1 x 1	166
i6A	250	1	9-40	3.3-24	up to 14	1.3 x 0.9 x 0.47	1/16 Brick	167
i6A4W	250	1	9-53	3.3-40	up to 20	1.3 x 0.9 x 0.74/1.3 x 0.45 x 0.98	1/16 Brick or SIP	168
RGA	250	1	9-53	3.3-40	up to 20	1.40 x 1.01 x 0.51	PCB Mount	169
i7C	300	1	9-53	5-48	up to 20	1.34 x 1.45 x 0.5/1.34 x 1.45 x 0.98	1/16 Brick	170
RGC	300	1	9-53	5-48	up to 12.5	1.50 x 1.55 x 0.51	1/16 Brick	171
i7A	750	1	9-60	0.8-32	up to 60	1.34 x 1.45 x 0.45/1.34 x 1.45 x 0.98	1/16 Brick	172
RGB	750	1	9-60	0.8-24	up to 60	1.50 x 1.55 x 0.51	1/16 Brick	173

Listed by Wattage

1.4-3W, 12V Input, 180-2000V Output DC-DC Converters



Medical



Industrial



Test



[Full Datasheet](#)

<https://product.tdk.com/en/power/chvm>

The CHVM series of non-isolated DC-DC converters feature very compact sizes and have a metal case to provide five-sided shielding for lower ripple and noise. Three package sizes cover power levels from 1.4W to 3W and output voltages of 180V to 2kV. The output can be adjusted from 0.5% to 100% of the rated voltage using either an external voltage or resistance.

Features

- Programmable Output Voltage (Voltage or Resistance)
- Compact Size
- Five-Sided Shielding
- Low Output Ripple
- Safety Certified

Benefits

- Remote Adjustment
- Less Board Area Needed
- Reduced Radiated and Conducted Noise
- Less External Filtering Required
- Simplified System Compliance

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (mA)	Maximum Power (W)	Input Current (mA) (Typical)	Typical Ripple & Noise (mV)	Maximum Ripple & Noise (mV)
CHVM1R5-12-1000P	11.0 - 13.0	0 to +1000	1.5	1.5	220	5	15
CHVM1R5-12-1000N	11.0 - 13.0	0 to -1000	1.5	1.5	220	5	15
CHVM1R5-12-1500P	11.0 - 13.0	0 to +1500	1	1.5	230	7	25
CHVM1R5-12-1500N	11.0 - 13.0	0 to -1500	1	1.5	230	7	25
CHVM1R5-12-2000P	11.0 - 13.0	0 to +2000	0.7	1.4	280	10	30
CHVM1R5-12-2000N	11.0 - 13.0	0 to -2000	0.7	1.4	280	10	30
CHVM2R7-12-0180PW	10.8 - 13.2	0 to +180	15	2.7	350	30	100
CHVM2R7-12-0180NW	10.8 - 13.2	0 to -180	15	2.7	350	30	100
CHVM3-12-0300PW	10.8 - 13.2	0 to +300	10	3	395	30	100
CHVM3-12-0300NW	10.8 - 13.2	0 to -300	10	3	395	30	100
CHVM2R5-12-0350PW	10.8 - 13.2	0 to +350	7	2.45	330	30	100
CHVM2R5-12-0350NW	10.8 - 13.2	0 to -350	7	2.45	330	30	100
CHVM2R6-12-0470PW	10.8 - 13.2	0 to +470	5.6	2.63	390	40	150
CHVM2R6-12-0470NW	10.8 - 13.2	0 to -470	5.6	2.63	390	40	150
CHVM2-12-1000PW	10.8 - 16.5	0 to +1000	2	2	280	30	100
CHVM2-12-1000NW	10.8 - 16.5	0 to -1000	2	2	280	30	100
CHVM2-12-1500PW	10.8 - 16.5	0 to +1500	1.3	1.95	290	30	100
CHVM2-12-1500NW	10.8 - 16.5	0 to -1500	1.3	1.95	290	30	100
CHVM2-12-2000PW	10.8 - 16.5	0 to +2000	1	2	340	50	150
CHVM2-12-2000NW	10.8 - 16.5	0 to -2000	1	2	340	50	150

CHVM	1R5	-12	1000	P	W
	Output power 1R5: 1.4 to 1.5W 2: 2W 2R5: 2.45W 2R6: 2.63W 2R7: 2.7W	Nominal input voltage	Max. output voltage	P Positive polarity N Negative polarity	Blank: standard input W: wide range input

75W, 9 to 40V Input Non-Isolated DC-DC Buck Converter with Negative Output



[Full Datasheet](#)

<https://product.tdk.com/en/power/i6a>



Industrial



COTS



Test



COMM



Broadcast



Robotics

The i6A -Nxx series is part of the [i6A](#) family of non-isolated DC-DC converters designed to provide a negative output. It is ideal for creating additional negative output voltage rails from a single output 12V or 24V AC-DC or DC-DC power supply. The highly efficient i6A-Nxx series accepts a wide positive DC input and has a wide negative output adjustment range from -3.3V to -30V. It comes with negative or positive logic remote On-Off, remote sense and output trim in a compact 1/16th brick package.

Features	Benefits
• Up to 75W in a 1/16th Brick Pin-Out	• High Power Density, Less Board Area Needed
• Efficiency - Up to 94%	• Longer Battery Life / Less Power Consumed
• Wide -3.3 to -30 V Output Adjustment	• One Part Supports Multiple System Voltages
• Wide 9 to 40V Input Range	• Can Operate From Different DC Source Voltages
• Low Component Count With Minimal External Components	• Low Cost

Model Selector

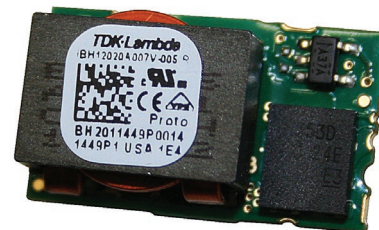
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Negative Logic On/Off	Positive Logic On/Off
i6A24008A033V-N00-R	9 - 40	-3.3 to -30	8	75	-	Yes
i6A24008A033V-N01-R	9 - 40	-3.3 to -30	8	75	Yes	-

Preferred model

Related Products

Type	Part Number	Description
DC-DC Buck Converter	i3A	100W, Input 9-53V, Output 5-30V 4.5A or 3.3-16.5V 8A
DC-DC Buck Converter	i6A4W	250W, Input 9-53V, Output 3.3-40V 10A or 3.3-15V 20A
DC-DC Buck Converter	i6A24	250W, Input 9-40V, Output 3.3-24V 14A
DC-DC Buck Converter	i7A	500-750W, Input 18-60V or 18-32V, Output 3.3-24V 33A or 3.3-18V 45A
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V 8A, 5-28V 12.5A or 8-24V 20A
Evaluation Kit	i6A14A-001-EVK-D2PN	Evaluation kit with i6A24014A033V-001-R and i6A24008A033V-N01-R modules

80W, 20A Non-Isolated SMT Point-Of-Load



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/iBH>

The iBH series of non-isolated Point-Of-Load (POL) converters provide localized voltage conversion from either a 5V or 12V bus. With its wide input and wide output voltage adjustment range, this compact-size and surface-mountable DC-DC module can deliver up to 80W making it a versatile solution for various board mount power requirements.

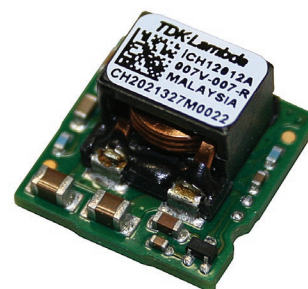
Features	Benefits
• DOSA Compatible Footprint	• Established Industry Footprint / Multisource
• Surface Mountable and Reflow Solder Compatible	• Ease of Manufacturing and Assembly
• Constant Switching Frequency	• Predictable EMI
• No External Loop Tuning Components Needed	• Simplifies Deployment and Saves Board Space
• Excellent Transient Response	• Stable / Reliable Output During Dynamic Load

Model Selector						
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	On/Off Polarity	Efficiency Full Load (typ)
iBH12020A007V-006-R	3.5 - 14	0.7 - 5.5	20	80	Pos	96%
iBH12020A007V-007-R	3.5 - 14	0.7 - 5.5	20	80	Neg	96%

Preferred Model

Related Products		
Type	Part Number	Description
Isolated DC-DC Converter	iQL	300W, Input 36-75V or 18-36V, Isolated Quarter Brick
Isolated DC-DC Converter	iQG	300W~504W, Input 36-75V, Isolated Quarter Brick
Isolated DC-DC Converter	iEH	300W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Non-Isolated DC-DC Converter	iAH	150W/40A, 3.5-17Vin, 0.7 - 5.0Vout, DOSA Compatible
Non-Isolated DC-DC Converter	iCH	85W/12A, 4.5-14Vin, 0.7 - 8.5Vout, DOSA Compatible
Input Filter	iDQ	75V / 10A Filter
DC-DC Buck Converter	i6A24	250W, Input 9-40V, Output 3.3-24V 14A
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-49V 8A, 5-28V @ 12.5A or 8-24V 20A

85W, 12A Non-Isolated SMT Point-Of-Load



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/iCH>

The iCH series of non-isolated Point-Of-Load (POL) converters provide localized voltage conversion from either a 5V or 12V bus. With its wide input and wide output voltage adjustment range, this compact-size and surface-mountable DC-DC module can deliver up to 85W making it a versatile solution for various board mount power requirements.

Features

- DOSA Compatible Footprint
- Surface Mountable and Reflow Solder Compatible
- Constant Switching Frequency
- No External Loop Tuning Components Needed
- Excellent Transient Response

Benefits

- Established Industry Footprint / Multisource
- Ease of Manufacturing and Assembly
- Predictable EMI
- Simplifies Deployment and Saves Board Space
- Stable / Reliable Output During Dynamic Load

Model Selector

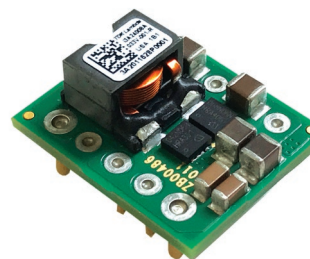
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	On/Off Polarity	Efficiency Full Load (typ)
iCH12012A007V-006-R	4.5 - 14	0.7 - 8.5	12	85	Pos	97%
iCH12012A007V-007-R	4.5 - 14	0.7 - 8.5	12	85	Neg	97%

Preferred Model

Related Products

Type	Part Number	Description
Isolated DC-DC Converter	iQL	300W, Input 36-75V or 18-36V, Isolated Quarter Brick
Isolated DC-DC Converter	iQG	300W~504W, Input 36-75V, Isolated Quarter Brick
Isolated DC-DC Converter	iEH	300W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Non-Isolated DC-DC Converter	iAH	150W/40A, 3.5-17Vin, 0.7 - 5.0Vout, DOSA Compatible
Non-Isolated DC-DC Converter	iBH	80W/20A, 3.5-14Vin, 0.7 - 5.5Vout, DOSA Compatible
Non-Isolated DC-DC Converter	i3A	100W, Input 9-53V, Output 5-30V 4.5A or 3.3-16.5V 8A
Input Filter	iDQ	75V / 10A Filter

100W, 9 to 53V Input Non-Isolated Step-Down DC-DC Buck Converter



Industrial



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Robotics

[Full Datasheet](#)

<https://product.tdk.com/en/power/i3a>

The i3A series of non-isolated DC-DC step-down converters are ideal for creating additional output voltage rails from a single output 12V, 24V or 48V AC-DC or DC-DC power supply including battery sources. The highly efficient i3A series accepts a wide DC input and has a wide output adjustment range in a compact 1/32nd brick footprint. Output trim, remote sense and negative logic remote On-Off comes as standard features.

Features	Benefits
• Up to 100 W in a 1/32nd brick package	• High Power Density, Less Board Area Needed
• High Efficiency Up to 98%	• Longer Battery Life / Less Power Consumed
• Wide 3.3 to 16.5V or 5 to 30V Output Adjustment	• One Part Supports Multiple System Voltages
• 9 to 53V Input Range	• Can Operate From Different DC Source Voltages Including Batteries
• Low Component Count With Minimal External Components	• Low Cost
• Minimal Derating Requirements in Low Airflow Environments	• Easy to Cool in End System

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Negative Logic On/Off	Positive Logic On/Off
i3A4W008A033V-001-R	9 - 53	3.3 - 16.5	8	100	Yes	-
i3A4W005A150V-001-R	9 - 53	5 - 30	4.5	100	Yes	-

Related Products

Type	Part Number	Description
DC-DC Buck Converter	i6A4W	250W, Input 9-53V, Output 3.3-40V 10A or 3.3-15V 20A
DC-DC Buck Converter	i6A24	250W, Input 9-40V, Output 3.3-24V 14A
DC-DC Buck Converter	i6AN	75W, Input 9-40V, Negative Output -3.3 to -30V, 8A
Ruggedized DC-DC Buck Converter	RGA	250W, Input 9-40V or 9-53V, Output 3.3-24V or 3.3 up to 40V
DC-DC Buck Converter	i7A	500-750W, Input 18-60V or 18-32V, Output 3.3-24V 33A or 3.3-18V 45A
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V 8A, 5-28V 12.5A or 8-24V 20A
Evaluation Kit	i3A05A-C01-EVK-S1	Compact Evaluation kit with i3A4W005A150V-001-R module
Evaluation Kit	i3A08A-C01-EVK-S1	Compact Evaluation kit with i3A4W008A033V-001-R module
Evaluation Kit	i3A5A8A-001-VK-D2PP	Evaluation kit with i3A4W005A150V-001-R and i3A4W008A033V-001-R modules

150W, 40A Non-Isolated SMT Point-Of-Load



Industrial



Test



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/iAH>

The iAH series of non-isolated Point-Of-Load (POL) converters provide localized voltage conversion from either a 5V or 12V bus. With its wide input and wide output voltage adjustment range, this compact-sized DC-DC module can deliver up to 150W making it a versatile solution for various board mount power requirements.

Features

- DOSA Compatible Footprint
- Surface Mountable and Reflow Solder Compatible
- Constant Switching Frequency
- No External Loop Tuning Components Needed
- Excellent Transient Response

Benefits

- Established Industry Footprint / Multisource
- Ease of Manufacturing and Assembly
- Predictable EMI
- Simplifies Deployment and Saves Board Space
- Stable / Reliable Output During Dynamic Load

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	On/Off Polarity	Efficiency, Full Load (typ)
iAH12040A007V-006-R	3.5 - 17	0.7 - 5.0	40	150	Pos	96%
iAH12040A007V-007-R	3.5 - 17	0.7 - 5.0	40	150	Neg	96%

Related Products

Type	Part Number	Description
Isolated DC-DC Converter	iQL	300W, Input 36-75V or 18-36V, Isolated Quarter Brick
Isolated DC-DC Converter	iQG	300W~504W, Input 36-75V, Isolated Quarter Brick
Isolated DC-DC Converter	iEH	300W, Input 36-75V, Isolated Eighth Brick
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Non-Isolated DC-DC Converter	iBH	80W/20A, 3.5-14Vin, 0.7 - 5.5Vout, DOSA Compatible
Non-Isolated DC-DC Converter	iCH	85W/12A, 4.5-14Vin, 0.7 - 8.5Vout, DOSA Compatible
Input Filter	iDQ	75V / 10A Filter
Evaluation Board	FQX-HQA-EVK-D0	Evaluation board (no modules) accepting standard Eighth or Quarter brick and FQx or iDQ input filters

200W, 9 to 36V or 18 to 75 V Input Non-Isolated 1 x 1" DC-DC Buck-Boost Converters



Industrial



COTS



Test



COMM



Broadcast



Robotics



[Full Datasheet](#)

<https://product.tdk.com/en/power/i1c>

The i1C series are non-isolated buck-boost DC-DC converters that delivers up to 200W in a compact and familiar industry standard 1 x 1 inch footprint. Operating from either a 9-36V or 18-75V input, it comes with a wide adjustable output of 9.6 to 28V that can support multiple system load voltages, minimizing part number variations. Encased in a 5-sided metal case that supports -40 to 120°C case temperature operation along with its remarkable 98% efficiency, the i1C series provides a higher power migration path in applications where space is at a premium.

Features	Benefits
• Up to 200W in a 1 x 1 inch Industry Footprint	• High Power Density, Less Board Area Needed
• Encapsulated in a 5-sided metal case	• Improves EMI
• 120°C maximum case temperature	• Rugged deployment in harsh environment with high shock & vibration exposure
• Efficiency - Up to 98%	• Longer Battery Life / Low Power Consumed
• Wide Output Adjustment from 9.6 up to 28V	• One Part Supports Multiple System Voltages
• Wide Input Range	• Can Operate from Different DC Input Source Voltages

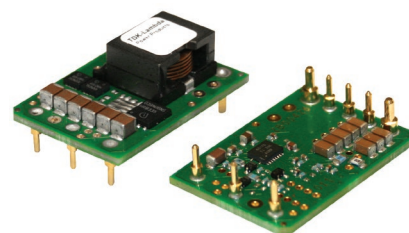
Model Selector

Model	Input Voltage (V)	Nominal Output Voltage (V)	Output Voltage Adjustment Range (V)	Max Current (A)	Max Power (W)	Remote On/Off Logic	Pin Length
i1C2W010A120V-000-R	9 - 36	12	9.6 - 28	10	200	Positive	0.145"
i1C2W010A120V-001-R	9 - 36	12	9.6 - 28	10	200	Negative	0.145"
i1C2W010A120V-004-R	9 - 36	12	9.6 - 28	10	200	Positive	0.220"
i1C2W010A120V-005-R	9 - 36	12	9.6 - 28	10	200	Negative	0.220"
i1C4W010A120V-000-R	18 - 75	12	9.6 - 28	10	200	Positive	0.145"
i1C4W010A120V-001-R	18 - 75	12	9.6 - 28	10	200	Negative	0.145"
i1C4W010A120V-004-R	18 - 75	12	9.6 - 28	10	200	Positive	0.220"
i1C4W010A120V-005-R	18 - 75	12	9.6 - 28	10	200	Negative	0.220"

Related Products

Type	Part Number	Description
Isolated DC-DC Converter	CCG	15-30W 1 x 1 inch Footprint, Input 9-36V or 18-76V, 3.3 to 30V single or dual outputs
Ruggedized DC-DC Buck Converter	RGA	250W, Input 9-40V and Output 3.3-24V or, 9-53V Input and 3.3V up to 40V Output
Ruggedized DC-DC Buck Converter	RGB	400-750W, Input 9-18V, 18-32V, 18-60V; Output 0.8-8V 60A, 3.3-18V 45A, 3.3-24V 33A
Ruggedized DC-DC Buck-Boost Converter	RGC	300W, Input 9-53V, Output 9.6-48V 8A or 5-28V 12.5A
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V 8A, 5-28V 12.5A or 8-24V 20A
DC-DC Buck Converter	i7A	400-750W, Input 9-18V, 18-32V, 18-60V, 28-60V; Output 0.8-8V 60A, 3.3-18V 45A, 3.3-24V 33A, 3.3-32V 20A
DC-DC Buck Converter	i6A4W	250W, Input 9 -53V, Output 3.3-40V 10A or 3.3-15V 20A
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Evaluation Board	i1C2W10A-C01-EVK-S1	Evaluation board with i1C2W010A120V-001-R
Evaluation Board	i1C4W10A-C01-EVK-S1	Evaluation board with i1C4W010A120V-001-R

250W, 9 to 40V Input Non-Isolated Step-Down DC-DC Buck Converter



Industrial



COTS



Test



COMM



Broadcast



Robotics

[Full Datasheet](#)

<https://product.tdk.com/en/power/i6a>

The i6A series of non-isolated DC-DC step-down converters are ideal for creating additional high current output voltage rails from a single output 12V or 24V AC-DC or DC-DC power supply. The highly efficient i6A series accepts a wide DC input and has a wide output adjustment range in compact 1/16th brick package. Output trim, remote sense, negative or positive logic remote On-Off comes as standard features. Power good, frequency synchronization and output sequencing are optional features.

Features

- Up to 250 W in a 1/16th brick package
- High Efficiency Up to 98%
- Wide Output Adjustment 3.3 to 24 V
- 9 to 40V Input Range
- Low Component Count With Minimal External Components
- Minimal Derating Requirements in Low Airflow Environments

Benefits

- High Power Density, Less Board Area Needed
- Longer Battery Life / Less Power Consumed
- One Part Supports Multiple System Voltages
- Can Operate From Different DC Source Voltages Including Batteries
- Low Cost
- Easy to Cool in End System

Model Selector

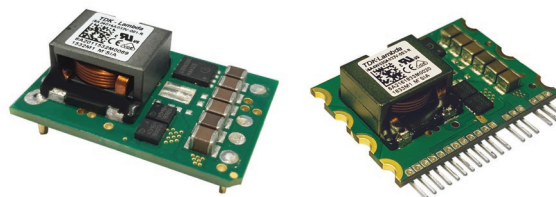
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Negative Logic On/Off	Positive Logic On/Off	Full Feature
i6A24014A033V-000-R	9 - 40	3.3 - 24	14	250	-	Yes	-
i6A24014A033V-001-R	9 - 40	3.3 - 24	14	250	Yes	-	-
i6A24014A033V-002-R	9 - 40	3.3 - 24	14	250	-	Yes	Yes
i6A24014A033V-003-R	9 - 40	3.3 - 24	14	250	Yes	-	Yes

Preferred model

Related Products

Type	Part Number	Description
DC-DC Buck Converter	i3A	100W, Input 9-53V, Output 5-30V 4.5A or 3.3-16.5V 8A
DC-DC Buck Converter	i6A4W	250W, Input 9-53V, Output 3.3-40V 10A or 3.3-15V 20A
DC-DC Buck Converter	i6AN	75W, Input 9-40V, Negative Output -3.3 to -30V, 8A
Ruggedized DC-DC Buck Converter	RGA	250W, Input 9-40V or 9-53V, Output 3.3-24V or 3.3 up to 40V
DC-DC Buck Converter	i7A	500-750W, Input 18-60V or 18-32V, Output 3.3-24V 33A or 3.3-18V 45A
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V 8A, 5-28V 12.5A or 8-24V 20A
Evaluation Kit	i6A14A-C01-EVK-S1	Compact Evaluation kit with i6A24014A033V-001-R module
Evaluation Kit	i6A14A-001-EVK-S1PX	Evaluation kit with i6A24014A033V-001-R module
Evaluation Kit	i6A14A-001-EVK-D2PN	Evaluation kit with i6A24014A033V-001-R module and i6A24008A033V-N01-R modules

250W, 9 to 53V Input Non-Isolated Step Down DC-DC Converter



Industrial



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[Full Datasheet](#)

<https://product.tdk.com/en/power/i6a>

The i6A4W series of non-isolated DC-DC step-down converters are ideal for creating additional high current output voltage rails from a single output 12V, 24V or 48V AC-DC or DC-DC power supply. The highly efficient i6A4W series accepts a very wide DC input and has a wide output adjustment range, with a choice of 1/16th brick footprint or SIP package. Output trim, remote sense, negative or positive logic remote On-Off comes as standard features. Power good, frequency synchronization and output sequencing are optional features.

Features	Benefits
• Up to 250W in a 1/16th brick or SIP package	• Very High Power Density
• Very high Efficiency up to 97%	• Easier Thermal Management
• Wide Output Adjustment 3.3 to 15V & 3.3 to 40V	• One Part For Multiple Applications
• Minimal External Components Needed	• Less Board Area Required
• Low Airflow With Minimal Derating Requirements	• Easier To Cool In End System

Model Selector

Model	Output Voltage (V) ⁽¹⁾	Max Current (A)	Max Power (W)	Positive Logic On/Off	Negative Logic On/Off	Full Feature	Package
i6A4W010A033V-001-R	3.3 to 40	10	250	-	Yes	-	DIP
i6A4W010A033V-0S1-R	3.3 to 40	10	250	-	Yes	-	SIP
i6A4W020A033V-000-R	3.3 to 15	20	250	Yes	-	-	DIP
i6A4W020A033V-001-R	3.3 to 15	20	250	-	Yes	-	DIP
i6A4W020A033V-0S1-R	3.3 to 15	20	250	-	Yes	-	SIP
i6A4W020A033V-002-R	3.3 to 15	20	250	Yes	-	Yes	DIP
i6A4W020A033V-003-R	3.3 to 15	20	250	-	Yes	Yes	DIP
i6A4W020A033V-0S3-R	3.3 to 15	20	250	-	Yes	Yes	SIP
i6A4W020A033V-005-R	3.3 to 15	20	250	-	Yes	Yes ⁽²⁾	DIP

Preferred model

Related Products

Type	Part Number	Description
DC-DC Buck Converter	i3A	100W, Input 9-53V, Output 5-30V 4.5A or 3.3-16.5V 8A
DC-DC Buck Converter	i6AN	75W, Input 9-40V, Negative Output -3.3 to -30V, 8A
DC-DC Buck Converter	i6A24	250W, Input 9-40V, Output 3.3-24V 14A
Ruggedized DC-DC Buck Converter	RGA	250W, Input 9-40V or 9-53V, Output 3.3-24V or 3.3 up to 40V
DC-DC Buck Converter	i7A	500-750W, Input 18-60V or 18-32V, Output 3.3-24V 33A or 3.3-18V 45A
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V 8A, 5-28V 12.5A or 8-24V 20A
Evaluation Kit	i6A10A-C01-EVK-S1 i6A20A-001-EVK-S1CC i6A20A-C01-EVK-S1 i6A10A-001-EVK-S1CC	Compact Evaluation kit with i6A4W010A033V-001-R module Evaluation kit with i6A4W020A033V-001-R modules set for constant current operation Compact Evaluation kit with i6A4W020A033V-001-R module Evaluation kit with i6A4W010A033V-001-R modules set for constant current operation

250W, 9 to 40V, or 9 to 53V Input Non-Isolated Ruggedized DC-DC Buck Converters



Industrial



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Test



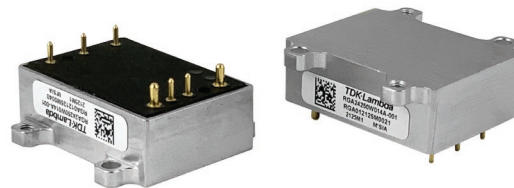
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Robotics



[Full Datasheet](#)

<https://product.tdk.com/en/power/rga>

The rugged RGA non-isolated DC-DC step-down converters are encapsulated in a five-sided aluminum case and rated for up to 110°C operation. The modules have the industry standard 1/16th brick pin-out, are qualified to MIL-STD-810G (shock and vibration) and designed for fan-less, conduction cooled applications. The series accepts a wide input range to support multiple DC bus and battery voltages. Standard and optional features include remote on/off, remote sense, power good, frequency synchronization and output sequencing, making the modules a truly versatile power solution. The wide output adjustment range allows one model to be used in multiple positions, assisting inventory and part number reduction.

Features

- Up to 250W in a 1/16th Brick Pin-Out
- Encapsulated in a 5-sided Aluminum case
- 110 °C maximum case temperature
- Efficiency - Up to 98%
- Wide 3.3 to 15V, 3.3 to 24V or 3.3 to 40V Output Adjustment
- Wide 9 to 40V or 9 to 53V Input Range
- Low Component Count With Minimal External Components

Benefits

- High Power Density, Less Board Area Needed
- Improves EMI
- Ruggedized deployment in harsh environment with high shock & vibration exposure
- Longer Battery Life / Low Power Consumed
- One Part Supports Multiple System Voltages
- Can Operate From Different DC Source Voltages
- Low Cost

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Negative Logic On/Off	Full Feature*
RGA24250W014A-001	9 - 40	3.3 - 24	14	250	Yes	No
RGA24250W014A-003	9 - 40	3.3 - 24	14	250	Yes	Yes
RGA4W250W010A-001	9 - 53	3.3 - 40	10	250	Yes	No
RGA4W250W010A-003	9 - 53	3.3 - 40	10	250	Yes	Yes
RGA4W250W020A-001	9 - 53	3.3 - 15	20	250	Yes	No
RGA4W250W020A-003	9 - 53	3.3 - 15	20	250	Yes	Yes

Preferred model

* Full feature includes Power Good signal, Frequency Synchronization, Output Sequencing

Related Products

Type	Part Number	Description
Ruggedized DC-DC Buck Converter	RGB	400-750W, Input 9 to 18V or 18 up to 60V, Output 0.8-8V or 3.3V up to 24V
Ruggedized DC-DC Buck-Boost Converter	RGC	300W, Input 9-53V or 9-36V, Output 9.6-48V, 8A; 5-28V, 12.5A; or 8-24V, 20A
DC-DC Buck Converter	i7A	400-750W, Input 9-18V, 18 up to 60V, Output 0.8-8V, 3.3 up to 32V, 20A up to 60A
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V, 8A; 5-28V, 12.5A; or 8-24V, 20A
DC-DC Buck Converter	i6A4W	250W, Input 9-53V, Output 3.3-40V, 10A; 3.3-15V, 20A
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Isolated DC-DC Converter	HQA	120W MIL-COTS, Input 9-40V, Isolated Quarter Brick
Evaluation Board	i367X-C01-EVK-S0	Evaluation Board with no module. Order required RGA part number separately.

300W, 9 to 53V or 9 to 36V Input Non-Isolated Buck-Boost DC-DC Converter



Industrial



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[Full Datasheet](#)

<https://product.tdk.com/en/power/i7c>

The i7C series of non-isolated step-up / step-down converters are ideal for generating additional DC output voltage rails up to 300 W from a single output 12V, 24V or 48V AC-DC power supply. The highly efficient i7C series accepts a very wide DC input and has a wide output adjustment range. Three mechanical configurations are available; low profile open frame, baseplate construction for conduction cooling, or integral heat sink for convection or forced air cooling. Full feature(*) options are available including output current monitoring (Imon), switching frequency synchronization (Sync) and power good (PG) or output current limit adjust (ltrim).

Features

- Up to 300W in a 1/16th Brick Pin-Out
- High Efficiency - Up to 97%
- Wide 5 to 28V, 8 to 24V or 9.6 to 48V Output Adjustment
- Wide 9 to 36V or 9 to 53V Input Range
- Low Component Count With Minimal External Components
- Low Airflow With Minimal Derating Requirements

Benefits

- High Power Density, Less Board Area Needed
- Longer Battery Life / Low Power Consumed
- One Part Supports Multiple System Voltages
- Compatible With a Wide Range of DC Source Voltages
- Low Cost
- Easy To Cool In End System

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Remote ON/OFF Logic	Full Feature(*)		Integrated Heatsink	Integrated Baseplate
						Imon, Sync	PG or ltrim		
i7C4W008A120V-001-R	9 - 53	9.6 - 48	8	300	Negative	-	-	-	-
i7C4W008A120V-002-R	9 - 53	9.6 - 48	8	300	Positive	Yes	PG	-	-
i7C4W008A120V-003-R	9 - 53	9.6 - 48	8	300	Negative	Yes	PG	-	-
i7C4W008A120V-0C1-R	9 - 53	9.6 - 48	8	300	Negative	-	-	-	Yes
i7C4W008A120V-0C3-R	9 - 53	9.6 - 48	8	300	Negative	Yes	PG	-	Yes
i7C4W008A120V-0F1-R	9 - 53	9.6 - 48	8	300	Negative	-	-	Yes	-
i7C4W008A120V-0F3-R	9 - 53	9.6 - 48	8	300	Negative	Yes	PG	Yes	-
i7C4W008A120V-P03-R	9 - 53	9.6 - 48	8	300	Negative	Yes	ltrim	-	-
i7C4W008A120V-PC3-R	9 - 53	9.6 - 48	8	300	Negative	Yes	ltrim	-	Yes
i7C4W008A120V-PF3-R	9 - 53	9.6 - 48	8	300	Negative	Yes	ltrim	Yes	-
i7C4W012A050V-001-R	9 - 53	5 - 28	12.5	300	Negative	-	-	-	-
i7C4W012A050V-002-R	9 - 53	5 - 28	12.5	300	Positive	Yes	PG	-	-
i7C4W012A050V-003-R	9 - 53	5 - 28	12.5	300	Negative	Yes	PG	-	-
i7C4W012A050V-0C1-R	9 - 53	5 - 28	12.5	300	Negative	-	-	-	Yes
i7C4W012A050V-0C3-R	9 - 53	5 - 28	12.5	300	Negative	Yes	PG	-	Yes
i7C4W012A050V-0F1-R	9 - 53	5 - 28	12.5	300	Negative	-	-	Yes	-
i7C4W012A050V-0F3-R	9 - 53	5 - 28	12.5	300	Negative	Yes	PG	Yes	-
i7C4W012A050V-P03-R	9 - 53	5 - 28	12.5	300	Negative	Yes	ltrim	-	-
i7C4W012A050V-PC3-R	9 - 53	5 - 28	12.5	300	Negative	Yes	ltrim	-	Yes
i7C4W012A050V-PF3-R	9 - 53	5 - 28	12.5	300	Negative	Yes	ltrim	Yes	-
i7C2W020A120V-001-R	9 - 36	8 - 24	20	300	Negative	-	-	-	-
i7C2W020A120V-002-R	9 - 36	8 - 24	20	300	Positive	Yes	PG	-	-
i7C2W020A120V-003-R	9 - 36	8 - 24	20	300	Negative	Yes	PG	-	-
i7C2W020A120V-0C1-R	9 - 36	8 - 24	20	300	Negative	-	-	-	Yes
i7C2W020A120V-0C3-R	9 - 36	8 - 24	20	300	Negative	Yes	PG	-	Yes
i7C2W020A120V-0F1-R	9 - 36	8 - 24	20	300	Negative	-	-	Yes	-
i7C2W020A120V-0F3-R	9 - 36	8 - 24	20	300	Negative	Yes	PG	Yes	-
i7C2W020A120V-P03-R	9 - 36	8 - 24	20	300	Negative	Yes	ltrim	-	-
i7C2W020A120V-PC3-R	9 - 36	8 - 24	20	300	Negative	Yes	ltrim	-	Yes
i7C2W020A120V-PF3-R	9 - 36	8 - 24	20	300	Negative	Yes	ltrim	Yes	-

Preferred model

* Contact Technical Support for other part number suffix and feature combinations.

300W, 9 to 53V Input Non-Isolated Ruggedized DC-DC Buck-Boost Converters



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[Full Datasheet](#)

<http://product.tdk.com/en/power/rgc>

The rugged RGC non-isolated DC-DC step-up and step-down converters are encapsulated in a five-sided aluminum case and rated for up to 115°C operation. The modules have the industry standard 1/16th brick pin-out, are qualified to MIL-STD-810G (shock and vibration) and designed for fan-less, conduction cooled applications. The series accepts a wide input range to support multiple DC bus and battery voltages. Standard features include remote on/off, remote sense and output trim while a full feature adds power good, frequency synchronization and output current monitoring, making the modules a truly versatile board mount power solution. The wide output adjustment range allows one model to be used in multiple positions, assisting inventory and part number reduction.

Features	Benefits
• Up to 300W in a 1/16th Brick-Pin-Out	• High Power Density, Less Board Area Needed
• Encapsulated in a 5-sided Aluminum case	• Improves EMI
• 115°C maximum case temperature	• Rugged deployment in harsh environment with high shock & vibration exposure
• Efficiency - Up to 97%	• Longer Battery Life / Low Power Consumed
• Wide Output Adjustment from 5 up to 48V	• One Part Supports Multiple System Voltages
• Wide Input Range from 9 to 53V	• Can Operate from Different DC Input Source Voltages
• Buck-Boost - maintains output regulation even when input varies	• Extends run times on battery-powered equipment

Model Selector						
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Negative Logic On/Off	Feature Set
RGC4W300W008A-001	9 - 53	9.6 - 48	8	300	Yes	Standard
RGC4W300W008A-003	9 - 53	9.6 - 48	8	300	Yes	Full
RGC4W300W012A-001	9 - 53	5.0 - 28	12.5	300	Yes	Standard
RGC4W300W012A-003	9 - 53	5.0 - 28	12.5	300	Yes	Full

Contact factory for other upcoming part number suffix options.

Related Products		
Type	Part Number(s)	Size (mm) / Description
Ruggedized DC-DC Buck Converter	RGA	250W, Input 9-40V and Output 3.3-24V or, 9-53V Input and 3.3V up to 40V Output
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V 8A, 5-28V 12.5A or 8-24V 20A
DC-DC Buck Converter	i7A	500-750W, Input 18-60V or 18-32V, Output 3.3-24V 33A or 3.3-18V 45A
DC-DC Buck Converter	i6A4W	250W, Input 9 -53V, Output 3.3-40V 10A or 3.3-15V 20A
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Non-Isolated DC-DC Converter	iBH	80W/20A, 3.5-14Vin, 0.7 - 5.5Vout, DOSA Compatible
Non-Isolated DC-DC Converter	iCH	85W/12A, 4.5-14Vin, 0.7 - 8.5Vout, DOSA Compatible
Input Filter	iDQ	75V / 10A Filter
Evaluation Board	i7X-C01-EVK-S0	Evaluation board with no module. Order required RGC part number separately.

400-750W, 9 to 18V, 18 to 32V, 18 to 60V or 28 to 60V Input Non-Isolated Step Down DC-DC Converter



Industrial



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[Full Datasheet](#)

<https://product.tdk.com/en/power/i7a>

The i7A series of up to 750W non-isolated DC-DC step-down converters are ideal for creating additional high current/high power 20A, 33A, 45A and 60A output voltage rails from a single output 12V, 24V, 36V or 48V AC-DC or DC-DC power supply. The highly efficient i7A series has low ripple, excellent dynamic response under sudden load changes, accepts a wide DC input with a wide output adjustment range and optional current limit (OCP) adjust. Three mechanical configurations are available; low profile open frame, baseplate construction for conduction cooling, or models with an integral heat sink for convection or forced air cooling. The i7A series expands upon TDK-Lambda's existing 100 to 250W rated [i3A](#) / [i6A](#) series and reduces the need to parallel modules.

Features	Benefits
• Up to 750W in a 1/16th Brick Footprint	• High Power Density, Less Board Area Needed
• High Efficiency - Up to 98.5%	• Longer Battery Life / Less Power Consumed
• Wide 0.8 to 8V or 3.3 up to 32V Output Adjustment	• One Part Supports Multiple System Voltages
• 9 to 18V, 18 to 32V, 18 to 60V or 28 to 60V Input	• Can Operate From Different DC Source Voltages Including Batteries
• Low Component Count With Minimal External Components	• Low Cost
• Minimal Derating Requirements in Low Airflow Environments	• Easy To Cool In End System

Model Selector								
Model	Input Voltage (V)	Output Voltage (V)	Max O/P Current (A)	Max O/P Power (W)	Remote On/Off Logic	Adjustable (OCP) Current Limit	Integrated Heatsink	Integrated Baseplate
i7A4W033A033V-000-R	18 - 60	3.3 - 24	33	500	Positive	-	-	-
i7A4W033A033V-001-R	18 - 60	3.3 - 24	33	500	Negative	-	-	-
i7A4W033A033V-003-R	18 - 60	3.3 - 24	33	500	Negative	Yes	-	-
i7A4W033A033V-0C1-R	18 - 60	3.3 - 24	33	500	Negative	-	-	Yes
i7A4W033A033V-0C3-R	18 - 60	3.3 - 24	33	500	Negative	Yes	-	Yes
i7A4W033A033V-0F1-R	18 - 60	3.3 - 24	33	500	Negative	-	Yes	-
i7A4W033A033V-0F3-R	18 - 60	3.3 - 24	33	500	Negative	Yes	Yes	-
i7A24045A033V-000-R	18 - 32	3.3 - 18	45	750	Positive	-	-	-
i7A24045A033V-001-R	18 - 32	3.3 - 18	45	750	Negative	-	-	-
i7A24045A033V-003-R	18 - 32	3.3 - 18	45	750	Negative	Yes	-	-
i7A24045A033V-0C1-R	18 - 32	3.3 - 18	45	750	Negative	-	-	Yes
i7A24045A033V-0C3-R	18 - 32	3.3 - 18	45	750	Negative	Yes	-	Yes
i7A24045A033V-0F1-R	18 - 32	3.3 - 18	45	750	Negative	-	Yes	-
i7A24045A033V-0F3-R	18 - 32	3.3 - 18	45	750	Negative	Yes	Yes	-
i7A12060A008V-000-R	9 - 18	0.8 - 8	60	400	Positive	-	-	-
i7A12060A008V-001-R	9 - 18	0.8 - 8	60	400	Negative	-	-	-
i7A12060A008V-003-R	9 - 18	0.8 - 8	60	400	Negative	Yes	-	-
i7A12060A008V-0C1-R	9 - 18	0.8 - 8	60	400	Negative	-	-	Yes
i7A12060A008V-0C3-R	9 - 18	0.8 - 8	60	400	Negative	Yes	-	Yes
i7A12060A008V-0F1-R	9 - 18	0.8 - 8	60	400	Negative	-	Yes	-
i7A12060A008V-0F3-R	9 - 18	0.8 - 8	60	400	Negative	Yes	Yes	-
i7A48020A033V-000-R	28 - 60	3.3 - 32	20	500	Positive	-	-	-
i7A48020A033V-001-R	28 - 60	3.3 - 32	20	500	Negative	-	-	-
i7A48020A033V-003-R	28 - 60	3.3 - 32	20	500	Negative	Yes	-	-
i7A48020A033V-0C1-R	28 - 60	3.3 - 32	20	500	Negative	-	-	Yes
i7A48020A033V-0C3-R	28 - 60	3.3 - 32	20	500	Negative	Yes	-	Yes
i7A48020A033V-0F1-R	28 - 60	3.3 - 32	20	500	Negative	-	Yes	-
i7A48020A033V-0F3-R	28 - 60	3.3 - 32	20	500	Negative	Yes	Yes	-

Preferred Model

400W-750W, 9 to 18V, 18 to 32V or 18 to 60V Input Non-Isolated Ruggedized Step-Down DC-DC Buck Converter



Industrial



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Robotics

[Full Datasheet](#)

<https://product.tdk.com/en/power/rgb>

The rugged RGB non-isolated DC-DC step-down converters are encapsulated in a five-sided aluminum case that's rated for up to 115°C operation. These modules have the industry standard 1/16th brick pin-out, are qualified to MIL-STD-810G for shock and vibration, and are designed for fan-less, conduction-cooled applications. The series accepts a wide input range to accommodate various DC bus and battery voltages. The RGB modules come with standard features like remote On/Off, remote sense, output trim, and optional adjustable output current limit, making the modules a truly versatile power solution. The wide output adjustment range allows one model to be used in multiple DC output voltage positions, assisting inventory and part number reduction.

Features

- Up to 750W in a 1/16th Brick-Pin-Out
- Encapsulated in a 5-sided metal case
- 115°C Maximum Case Temperature
- Efficiency - Up to 98.5%
- Wide Output Adjustment from 0.8 up to 24V
- Wide Input Range
- Adjustable Current Limit

Benefits

- High Power Density, Less Board Area Needed
- Improves EMI
- Rugged deployment in harsh environment with high shock & vibration exposure
- Longer Battery Life / Low Power Consumed
- One Part Supports Multiple System Voltages
- Can Operate from Different DC Input Source Voltages
- Reduces stress on the input source, converter and load due to overloading

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Negative Logic On/Off	Full Feature
RGB4W500W033A-001	18 - 60	3.3 - 24	33	500	Yes	-
RGB4W500W033A-003	18 - 60	3.3 - 24	33	500	Yes	Yes
RGB24750W045A-001	18 - 32	3.3 - 18	45	750	Yes	-
RGB24750W045A-003	18 - 32	3.3 - 18	45	750	Yes	Yes
RGB12400W060A-001	9 - 18	0.8 - 8	60	400	Yes	-
RGB12400W060A-003	9 - 18	0.8 - 8	60	400	Yes	Yes

Related Products

Type	Part Number	Description
Ruggedized DC-DC Buck Converter	RGA	250W, Input 9-40V and Output 3.3-24V or, 9-53V Input and 3.3V up to 40V Output
Ruggedized DC-DC Buck-Boost Converter	RGC	300W, Input 9-53V, Output 9.6-48V 8A or 5-28V 12.5A
DC-DC Buck-Boost Converter	i7C	300W, Input 9-53V or 9-36V, Output 9.6-48V 8A, 5-28V 12.5A or 8-24V 20A
DC-DC Buck Converter	i7A	500-750W, Input 18-60V or 18-32V, Output 3.3-24V 33A or 3.3-18V 45A
DC-DC Buck Converter	i6A4W	250W, Input 9 - 53V, Output 3.3-40V 10A or 3.3-15V 20A
Non-Isolated DC-DC Converter	iCH	85W/12A, 4.5-14Vin, 0.7 - 8.5Vout, DOSA Compatible
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick
Evaluation Board	i7X-C01-EVK-S0	Evaluation board with no module. Order required RGB part number separately.



EMC/EMI Filters



Applications

- Improve EMC performance in complex equipment
- Improve EMC performance with long mains wires

Features

- Single-phase, three-phase and three-phase with Neutral
- 0.5A to 300A line current
- Single-stage and two-stage filters with high attenuation over a wide frequency range
- With surge protection
- Medical versions with reduced leakage currents
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EMC/EMI Filter Index by Wattage

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Listed by Wattage

Single phase 250Vac 3 to 10A Power Entry Module EMC Filters



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The RPA and RPE single-phase power entry module EMC filters are enclosed in a potted metal case and can be chassis mounted to accept an IEC320 line cord. They are rated for 250Vac with current ratings of 3A, 6A and 10A. The RPA series uses TDK's amorphous core material to provide both pulse and noise attenuation whereas the RPE uses the amorphous core for enhanced differential and common mode noise. Amorphous materials offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps. Connection to the filters are made via faston terminals #250 (t=0.8mm). Models with combinations of lower leakage current and an internal discharge resistor are also available.

Features

- Panel Mount with IEC320 Inlet
- 3A to 10A Current Ratings
- Low Leakage and/or Discharge Resistor Options
- Amorphous Core Technology
- Safety Certified

Benefits

- Combines a Filter and Input Connector
- Improved Noise Attenuation on Lower Current Models
- System Flexibility
- Reduces High Voltage Pulse Core Saturation
- Global Use

Model Selector

Model	Rated Current (A)	HV Pulse Protection	Discharge Resistor	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
						Common mode at 25dB	Differential mode at 25dB
RPA-2003	3	Y	N	0.5	150	2 to 30	3 to 30
RPA-2006	6	Y	N	0.5	100	3 to 30	5 to 30
RPA-2003R	3	Y	Y	0.5	150	2 to 30	3 to 30
RPA-2006R	6	Y	Y	0.5	100	3 to 30	5 to 30

Model	Rated Current (A)	HV Pulse Protection	Discharge Resistor	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
						Common mode at 10dB	Differential mode at 15dB
RPA-2003L	3	Y	N	0.01	150	0.4 to 10	1 to 30
RPA-2006L	6	Y	N	0.01	100	0.5 to 8	2 to 30
RPA-2003RL	3	Y	Y	0.01	150	0.4 to 10	1 to 30
RPA-2006RL	6	Y	Y	0.01	100	0.5 to 8	2 to 30

Model	Rated Current (A)	HV Pulse Protection	Discharge Resistor	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
						Common mode at 25dB	Differential mode at 25dB
RPE-2003	3	N	N	0.5	150	1 to 30	3 to 30
RPE-2006	6	N	N	0.5	100	2 to 30	5 to 30
RPE-2010	10	N	N	0.5	30	5 to 30	10 to 30
RPE-2003R	3	N	Y	0.5	150	1 to 30	3 to 30
RPE-2006R	6	N	Y	0.5	100	2 to 30	5 to 30
RPE-2010R	10	N	Y	0.5	30	5 to 30	10 to 30

Model	Rated Current (A)	HV Pulse Protection	Discharge Resistor	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
						Common mode at 10dB	Differential mode at 15dB
RPE-2003L	3	N	N	0.01	150	0.3 to 5	1 to 30
RPE-2006L	6	N	N	0.01	100	0.4 to 5	2 to 30
RPE-2010L	10	N	N	0.01	30	1 to 5	3 to 30
RPE-2003RL	3	N	Y	0.01	150	0.3 to 5	1 to 30
RPE-2006RL	6	N	Y	0.01	100	0.4 to 5	2 to 30
RPE-2010RL	10	N	Y	0.01	30	1 to 5	3 to 30

Single phase 250Vac 3 to 6A Fused Power Entry Module EMC Filters



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The RPE-F single-phase fused power entry module EMC filters are enclosed in a potted metal case and can be chassis mounted to accept an IEC320 line cord. They are rated for 250Vac with current ratings of 3A and 6A. The RPE-F series uses an amorphous core for enhanced differential and common mode noise. Amorphous materials offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps. Connection to the filters are made via faston terminals #250 (t=0.8mm). Models are available with single (line) or dual fuses (line and neutral) and a low leakage current option for medical applications.

Features

- Panel Mount with IEC320 Inlet
- 3A and 6A Current Ratings
- Low Leakage Current Option
- Amorphous Core Technology
- Safety Certified

Benefits

- Combines a Fuse, Filter and Input Connector
- Improved Noise Attenuation on Lower Current Models
- System Flexibility
- Reduces High Voltage Pulse Core Saturation
- Global Use

Model Selector

Model	Rated Current (A)	HV Pulse Protection	Fuse	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
						Common mode at 25dB	Differential mode at 25dB
RPE-2003F01	3	N	Single	0.5	150	0.5 to 10	2 to 10
RPE-2006F01	6	N	Dual	0.5	100	2 to 10	3 to 10
RPE-2003F02	3	N	Single	0.5	150	0.5 to 10	2 to 10
RPE-2006F02	6	N	Dual	0.5	100	2 to 10	3 to 10
Model	Rated Current (A)	HV Pulse Protection	Fuse	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
						Common mode at 10dB	Differential mode at 15dB
RPE-2003F01L	3	N	Single	0.01	150	0.2 to 10	1 to 10
RPE-2006F01L	6	N	Dual	0.01	100	0.3 to 10	2 to 10
RPE-2003F02L	3	N	Single	0.01	150	0.2 to 10	1 to 10
RPE-2006F02L	6	N	Dual	0.01	100	0.3 to 10	2 to 10

Part Numbering Scheme

RPE	-	2	003	F02	L
Series Name RPE		Rated Voltage 2 = 250Vac	Rated Current 003 = 3A 006 = 6A	Fuse F01 = single F02 = dual	Low Leakage Current

Single phase 250Vac 0.5 to 6A EMC Filters



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The RSEG and RSAG single-phase EMC filters are enclosed in a compact plastic case and can be mounted directly on a printed circuit board. This enables the filter to be placed closer to noise generating components and can reduce interference radiating from internal system wiring to the AC supply. The filters are lightweight making them ideal for portable equipment. They are rated for 250Vac with current ratings of 0.5 to 6A, enabling the best attenuation with low current requirements. The RSEG series utilize TDK's ferrite core technology for noise attenuation. The RSAG series uses TDK's amorphous core material to provide both pulse and noise attenuation. Amorphous materials offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps.

Features	Benefits
• Compact Size	• Less Board Space Utilized
• 0.5 to 6A Current Ratings	• Optimizes the Attenuation for Lower Current Requirements
• Lightweight	• Ideal for Portable Equipment
• Amorphous Core Technology (RSAG series)	• Reduces High Voltage Pulse Core Saturation
• Safety Certified	• Global Use

Model Selector

Model	Rated Current (A)	HV Pulse Protection	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz) at 20dB	
				Common Mode	Differential Mode
RSEG-20R5	0.5	N	400	0.3 to 10	1.5 to 30
RSAG-20R5	0.5	Y	400	0.5 to 10	1.5 to 30
RSEG-2001	1	N	350	0.3 to 10	1.5 to 30
RSAG-2001	1	Y	350	0.5 to 10	1.5 to 30
RSEG-2002	2	N	310	0.5 to 20	1.5 to 30
RSAG-2002	2	Y	310	1 to 20	1.5 to 30
RSEG-2003	3	N	150	0.5 to 20	1.5 to 30
RSAG-2003	3	Y	150	1 to 20	1.5 to 30
RSEG-2004	4	N	130	1 to 20	1.5 to 30
RSAG-2004	4	Y	130	2 to 20	1.5 to 30
RSEG-2006	6	N	100	1 to 20	1.5 to 30
RSAG-2006	6	Y	100	2 to 20	1.5 to 30

RSAG	-	2	0R5
Series Name RSAG RSEG		Rated Voltage 2 = 250Vac	Rated Current 0R5 = 0.5A 001 = 1A 006 = 6A

Single phase 250Vac 3 to 60A EMC Filters with DIN rail option



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The RSAN single-phase EMC filters are enclosed in a compact case and part numbers up to 30A can be either chassis or DIN rail mounted (up to 30A) with low leakage current options. They are rated for 250Vac with nine current ratings of 3 to 60A enabling the optimum attenuation to match the current rating. The series uses TDK's amorphous core material to provide both pulse and noise attenuation. Amorphous materials offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps. The connection terminals are integrated into the case with both the screws and terminal covers captive. This avoids dropped or lost hardware. The RSAN 3A to 30A models are UL certified for a short circuit current rating of up to 14kA and the 40, 50 and 60A models 35kA with the appropriate breaker.

Features	Benefits
• 3 to 60A Current Ratings	• Optimizes the Attenuation for the Current Rating
• DIN Rail Bracket Option	• Flexible Mounting
• Amorphous Core Technology	• Reduces High Voltage Pulse Core Saturation
• Captive Hardware	• No Lost Screws or Terminal Covers
• Safety Certified	• Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Common mode at 20dB	Differential mode at 25dB
RSAN-2003	3	14	Y	1.0	250	0.1 to 10	-	0.1 to 30
RSAN-2006	6	14	Y	1.0	110	0.1 to 10	-	0.1 to 30
RSAN-2010	10	14	Y	1.0	40	0.3 to 10	-	0.2 to 30
RSAN-2016	16	14	Y	1.0	20	0.8 to 10	-	0.3 to 30
RSAN-2020	20	14	Y	1.0	10	1 to 10	-	0.3 to 30
RSAN-2030	30	14	Y	1.0	6	2 to 10	-	0.4 to 30
RSAN-2040	40	35	Y	1.0	6	0.8 to 10	-	0.1 to 30
RSAN-2050	50	35	Y	1.0	4	-	1 to 10	0.1 to 30
RSAN-2060	60	35	Y	1.0	3	2 to 10	-	0.2 to 30

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 20dB	Common mode at 10dB	Differential mode at 25dB
RSAN-2003L	6	14	Y	0.01	250	0.1 to 3	-	0.1 to 30
RSAN-2006L	6	14	Y	0.01	110	0.1 to 3	-	0.1 to 30
RSAN-2010L	10	14	Y	0.01	40	0.5 to 6	-	0.2 to 30
RSAN-2016L	16	14	Y	0.01	20	-	0.3 to 10	0.3 to 30
RSAN-2020L	20	14	Y	0.01	10	-	0.5 to 8	0.3 to 30
RSAN-2030L	30	14	Y	0.01	6	-	3 to 20	0.4 to 30

Single phase 250Vac 0.5 to 6A EMC Filters



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The RSAL single-phase EMC filters are enclosed in a compact case and rated at 250Vac with current levels of 0.5 to 6A, enabling the best attenuation for low current requirements. The RSAL series utilize TDK's amorphous core material to provide both pulse and noise attenuation. Amorphous materials offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps. A choice of models with either wire leads or Faston terminals #110 are available and low leakage current versions.

Features

- Compact Size
- 0.5 to 6A Current Ratings
- Lightweight
- Amorphous Core Technology
- Safety Certified

Benefits

- Less Space Utilized
- Optimizes the Attenuation for Lower Current Requirements
- Ideal for Portable Equipment
- Reduces High Voltage Pulse Core Saturation
- Global Use

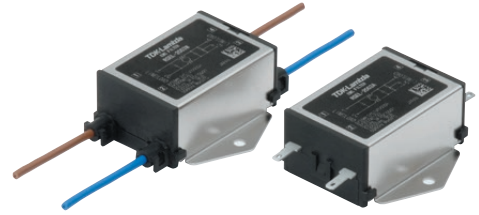
Model Selector

Model	Rated Current (A)	HV Pulse Protection	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		Weight (g)
				Common mode at 25dB	Differential mode at 25dB	
RSAL-20R5W	0.5	Y	700	0.3 to 8	0.4 to 30	58
RSAL-2001W	1	Y	600	0.3 to 8	0.5 to 30	58
RSAL-2002W	2	Y	250	0.5 to 8	0.7 to 30	61
RSAL-2003W	3	Y	150	1 to 7	0.8 to 30	61
RSAL-2006W	6	Y	80	3 to 7	1 to 30	61
RSAL-20R5A	0.5	Y	700	0.3 to 8	0.4 to 30	43
RSAL-2001A	1	Y	600	0.3 to 8	0.5 to 30	43
RSAL-2002A	2	Y	250	0.5 to 8	0.7 to 30	46
RSAL-2003A	3	Y	150	1 to 7	0.8 to 30	46
RSAL-2006A	6	Y	80	3 to 7	1 to 30	46

Model Selector

Model	Rated Current (A)	HV Pulse Protection	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		Weight (g)
				Common mode at 15dB	Differential mode at 25dB	
RSAL-20R5WL	0.5	Y	700	0.1 to 5	0.4 to 30	56
RSAL-2001WL	1	Y	600	0.1 to 5	0.5 to 30	56
RSAL-2002WL	2	Y	250	0.1 to 5	0.7 to 30	59
RSAL-2003WL	3	Y	150	0.2 to 5	0.8 to 30	59
RSAL-2006WL	6	Y	80	1 to 30	1 to 30	59
RSAL-20R5AL	0.5	Y	700	0.1 to 5	0.4 to 30	41
RSAL-2001AL	1	Y	600	0.1 to 5	0.5 to 30	41
RSAL-2002AL	2	Y	250	0.1 to 5	0.7 to 30	44
RSAL-2003AL	3	Y	150	0.2 to 5	0.8 to 30	44
RSAL-2006AL	6	Y	80	1 to 30	1 to 30	44

Single phase 250Vac 0.5 to 6A EMC Filters



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The RSEL single-phase EMC filters are enclosed in a compact case and rated at 250Vac with current levels of 0.5 to 6A, enabling the best attenuation for low current requirements. The RSEL series utilize TDK's ferrite core material to provide noise attenuation. A choice of models with either wire leads or Faston terminals #110 are available and low leakage current versions.

Features

- Compact Size
- 0.5 to 6A Current Ratings
- Lightweight
- Safety Certified

Benefits

- Less Space Utilized
- Optimizes the Attenuation for Lower Current Requirements
- Ideal for Portable Equipment
- Global Use

Model Selector

Model	Rated Current (A)	HV Pulse Protection	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		Weight (g)
				Common mode at 25dB	Differential mode at 25dB	
RSEL-20R5W	0.5	N	700	0.2 to 10	0.3 to 30	58
RSEL-2001W	1	N	600	0.3 to 10	0.5 to 30	58
RSEL-2002W	2	N	250	0.5 to 10	0.5 to 30	61
RSEL-2003W	3	N	150	0.5 to 10	0.5 to 30	61
RSEL-2006W	6	N	80	1 to 10	1 to 30	61
RSEL-20R5A	0.5	N	700	0.2 to 10	0.3 to 30	43
RSEL-2001A	1	N	600	0.3 to 10	0.5 to 30	43
RSEL-2002A	2	N	250	0.5 to 10	0.5 to 30	46
RSEL-2003A	3	N	150	0.5 to 10	0.5 to 30	46
RSEL-2006A	6	N	80	1 to 10	1 to 30	46

Model Selector

Model	Rated Current (A)	HV Pulse Protection	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		Weight (g)
				Common mode at 15dB	Differential mode at 25dB	
RSEL-20R5WL	0.5	N	700	0.1 to 5	0.3 to 30	56
RSEL-2001WL	1	N	600	0.1 to 5	0.5 to 30	56
RSEL-2002WL	2	N	250	0.1 to 5	0.5 to 30	59
RSEL-2003WL	3	N	150	0.1 to 5	0.5 to 30	59
RSEL-2006WL	6	N	80	1 to 30	1 to 30	59
RSEL-20R5AL	0.5	N	700	0.1 to 5	0.3 to 30	41
RSEL-2001AL	1	N	600	0.1 to 5	0.5 to 30	41
RSEL-2002AL	2	N	250	0.1 to 5	0.5 to 30	44
RSEL-2003AL	3	N	150	0.1 to 5	0.5 to 30	44
RSEL-2006AL	6	N	80	1 to 30	1 to 30	44

Single phase 250Vac 3 to 300A EMC Filters with DIN rail option



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The RSEN single-phase EMC filters are enclosed in a compact case and part numbers up to 30A can be either chassis or DIN rail mounted (up to 30A) with low leakage current options. They are rated for 250Vac with fifteen current ratings of 3 to 300A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material to provide noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive. This avoids dropped or lost hardware. The RSEN 3A to 30A models are UL certified for a short circuit current rating of up to 14kA and the 40, 50 and 60A models 35kA with the appropriate breaker.

Features	Benefits
• 3 to 300A Current Ratings	• Optimizes the Attenuation for the Current Rating
• DIN Rail Bracket Option	• Flexible Mounting
• Captive Hardware	• No Lost Screws or Terminal Covers
• Safety Certified	• Global Use

Model Selector								
Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Common mode at 10dB	Differential mode at 25dB
RSEN-2003	3	14	N	1.0	250	0.1 to 20	-	0.2 to 30
RSEN-2006	6	14	N	1.0	110	0.1 to 10	-	0.2 to 30
RSEN-2010	10	14	N	1.0	40	0.2 to 20	-	0.2 to 30
RSEN-2016	16	14	N	1.0	20	0.3 to 20	-	0.3 to 30
RSEN-2020	20	14	N	1.0	10	0.4 to 20	-	0.3 to 30
RSEN-2030	30	14	N	1.0	6	2 to 30	-	0.4 to 30
RSEN-2040	40	35	N	1.0	6	2 to 10	-	0.2 to 30
RSEN-2050	50	35	N	1.0	4	2 to 10	-	0.2 to 30
RSEN-2060	60	35	N	1.0	3	2 to 10	-	0.2 to 30
RSEN-2080	80	-	N	1.0	3.4	2 to 10	-	0.1 to 30
RSEN-2100	100	-	N	1.0	2.7	2 to 10	-	0.1 to 30
RSEN-2150	150	-	N	1.0	2	2 to 10	-	0.1 to 30
RSEN-2200	200	-	N	1.0	1.4	-	0.4 to 30	0.1 to 30
RSEN-2250	250	-	N	1.0	1	-	1 to 20	0.1 to 30
RSEN-2300	300	-	N	1.0	0.7	-	2 to 20	0.1 to 30

Model Selector								
Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Common mode at 10dB	Differential mode at 25dB
RSEN-2003L	3	14	N	0.01	250	0.1 to 3	-	0.2 to 30
RSEN-2006L	6	14	N	0.01	110	0.1 to 3	-	0.2 to 30
RSEN-2010L	10	14	N	0.01	40	-	0.1 to 10	0.2 to 30
RSEN-2016L	16	14	N	0.01	20	-	0.1 to 10	0.2 to 30
RSEN-2020L	20	14	N	0.01	10	-	0.2 to 10	0.3 to 30
RSEN-2030L	30	14	N	0.01	6	-	0.3 to 5	0.3 to 30

Single phase 250Vac 6 to 30A EMC Filters with DIN rail option



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The RSEV single-phase EMC filters are enclosed in a compact plastic case and can be either chassis or DIN mounted with an optional bracket. They are rated for 250Vac with five current ratings of 6 to 30A in one package size, enabling the optimum attenuation to match the current rating. The connection terminals are integrated into the case and the screws recessed and captive. This avoids dropped or lost hardware. The RSEV series is UL certified for a short circuit current rating of 14,000A with the appropriate breaker.

Features	Benefits
• Compact Size	• Less System Space Utilized
• 6 to 30A Current Ratings	• Optimizes the Attenuation for the Current Rating
• DIN Rail Bracket Option	• Flexible Mounting
• Recessed Captive Screws	• No Lost Hardware
• Safety Certified	• Global Use

Model Selector						
Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz) at 25dB	
					Common Mode	Differential Mode
RSEV-2006	6	14	N	110	0.1 to 30	0.2 to 30
RSEV-2010	10	14	N	40	0.2 to 30	0.2 to 30
RSEV-2016	16	14	N	20	0.6 to 30	0.3 to 30
RSEV-2020	20	14	N	10	0.8 to 30	0.4 to 30
RSEV-2030	30	14	N	6	2 to 30	0.5 to 30
DIN-RSEV (DIN Bracket)	-	-	-	-	-	-

Part Numbering Scheme

RSEV	-	2	06
Series Name		Rated Voltage 2 = 250Vac	Rated Current 006 = 6A 030 = 30A

Single phase 250Vac 3 to 300A EMC Filters with DIN rail mount and low leakage options



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https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rshn.html

The RSHN single-phase high attenuation EMC filters are enclosed in compact cases and part numbers up to 30A have DIN rail mount and low leakage current options. They are rated for 250Vac with multiple current ratings of 3 to 300A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material to provide noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RSHN 3A to 30A models are UL certified for a short circuit current rating of up to 14kA, the 40, 50 and 60A 35kA with the appropriate breaker.

Features

- 3 to 300A Current Ratings
- DIN Rail Mount Option
- Captive Hardware
- Safety Certified (up to 60A)

Benefits

- Optimizes the Attenuation for the Current Rating
- Flexible Mounting
- No Lost Screws or Terminal Covers
- Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)			Weight (g)
					Common mode at 25dB	Common mode at 10dB	Differential mode at 25dB	
RSHN-2003	3	14	1.0	350	0.1 to 10	-	0.2 to 30	190
RSHN-2006	6	14	1.0	140	0.1 to 10	-	0.2 to 30	240
RSHN-2010	10	14	1.0	60	0.1 to 30	-	0.3 to 30	240
RSHN-2016	16	14	1.0	35	0.2 to 30	-	0.3 to 30	350
RSHN-2020	20	14	1.0	22	0.2 to 30	-	0.4 to 30	350
RSHN-2030	30	14	1.0	12	0.3 to 30	-	0.6 to 30	350
RSHN-2040	40	35	1.0	10	0.2 to 30	-	0.1 to 30	1500
RSHN-2050	50	35	1.0	8	0.3 to 30	-	0.2 to 30	1400
RSHN-2060	60	35	1.0	6	0.3 to 30	-	0.3 to 30	1400
RSHN-2080	80	-	1.0	7	0.2 to 8	-	0.1 to 30	5500
RSHN-2100	100	-	1.0	6	0.2 to 8	-	0.1 to 30	6000
RSHN-2150	150	-	1.0	4	0.2 to 7	-	0.1 to 30	9000
RSHN-2200	200	-	1.0	3	0.4 to 7	-	0.1 to 30	13000
RSHN-2250	250	-	1.0	2	-	0.4 to 10	0.1 to 30	13000
RSHN-2300	300	-	1.0	1.5	-	1 to 7	0.1 to 30	13000

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		Weight (g)
					Common mode at 25dB	Common mode at 25dB	
RSHN-2003L	3	14	0.10	350	0.2 to 10	0.2 to 30	190
RSHN-2006L	6	14	0.10	140	0.2 to 10	0.2 to 30	240
RSHN-2010L	10	14	0.10	60	0.3 to 10	0.3 to 30	240
RSHN-2016L	16	14	0.10	35	0.3 to 30	0.3 to 30	350
RSHN-2020L	20	14	0.10	22	0.4 to 30	0.4 to 30	350
RSHN-2030L	30	14	0.10	12	0.6 to 30	0.6 to 30	350

Single phase 250Vac 6 to 30A EMC Filters



Industrial



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https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rskn.html

The RSKN single-phase, wide band, two stage high attenuation EMC filters are enclosed in a low profile metal case and are rated for 250Vac. Four current ratings of 6 to 30A enables the optimum attenuation to match the current rating. The RSKN series uses a nano crystal core for enhanced performance. The connection terminals are integrated into the case and a terminal cover provided for safety protection to avoid lost hardware. The RSKN series is UL certified for a short circuit current rating of 5,000A with the appropriate breaker.

Features

- Wide Band, High Attenuation
- 6 to 30A Current Ratings
- Integrated Terminal Block
- Safety Certified

Benefits

- Improved Performance
- Optimizes the Attenuation for the Current Rating
- No Lost Hardware
- Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA)	HV Pulse Protection	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
					Common mode at 30dB	Differential mode at 25dB
RSKN-2006	6	5	Y	300	0.2 to 30	0.4 to 30
RSKN-2010	10	5	Y	100	0.2 to 30	0.5 to 30
RSKN-2020	20	5	Y	20	0.3 to 30	0.4 to 30
RSKN-2030	30	5	Y	10	0.4 to 30	0.4 to 30

RSKN	-	2	06
Series Name		Rated Voltage 2 = 250Vac	Rated Current 006 = 6A 030 = 30A

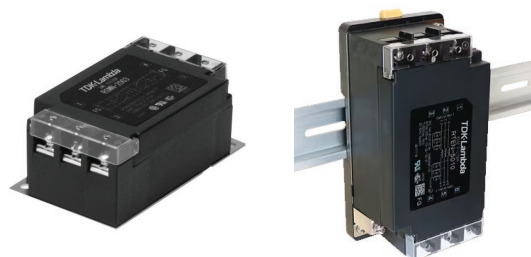
Related Single Phase Filter Products

Type	Current Rating (A)	Series	Options						
			Low Leakage	Faston on terminals	Wire leads	DIN Rail Mount	Fused	Discharge Resistor	Metal case
Board mount line filter, HV Pulse	0.5 - 6	RSAG							
Board mount line filter	0.5 - 6	RSEG							
General purpose with faston terminals	6	RSEC							
General purpose	0.5 - 6	RSEL	Y	Y	Y				Y
HV pulse protection	0.5 - 6	RSAL	Y	Y	Y				
Power Entry Module with line filter	3, 6, 10	RPE	Y				Y	Y	
Power Entry Module with line filter, HV Pulse	3, 6, 10	RPA	Y					Y	
Multipurpose	3 - 300	RSEN	Y (Up to 30A)			Y (Up to 30A)			
Multipurpose with HV pulse protection	3 - 60	RSAN	Y (Up to 30A)			Y (Up to 30A)			
High attenuation	3 - 300	RSHN	Y (Up to 30A)			Y (Up to 30A)			
High attenuation with pulse protection	3 - 300	RSMN	Y (Up to 30A)			Y (Up to 30A)			
Wide band, high attenuation	6 - 30	RSKN							

* Separate mounting bracket

[Click here for TDK-Lambda three phase filters](#)

Single phase 250Vac 3 to 60A EMC Filters with DIN rail mount option



Medical



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https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rsmn.html

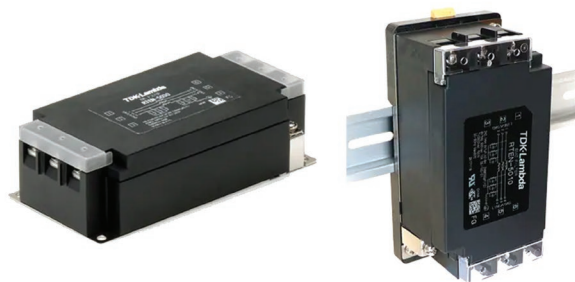
The RSMN single-phase EMC filters are enclosed in a compact case and part numbers up to 30A can be either be chassis or DIN rail mounted with low leakage current options. They are rated for 250Vac with nine current ratings of 3 to 60A enabling the optimum attenuation to match the current rating. The series uses TDK's amorphous core materials in a two-stage configuration to provide excellent pulse and noise attenuation. Amorphous cores offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RSMN 3A to 30A models are UL certified for a short circuit current rating of up to 14kA and the 40, 50 and 60A models 35kA with the appropriate breaker.

Features	Benefits
• 3 to 60A Current Ratings	• Optimizes the Attenuation for the Current Rating
• DIN Rail Mount Option	• Flexible Mounting
• Captive Hardware	• No Lost Screws or Terminal Covers
• Safety Certified	• Global Use

Model Selector								
Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Common mode at 20dB	Differential mode at 25dB
RSMN-2003	3	14	Y	1.0	350	0.1 to 30	-	0.1 to 30
RSMN-2006	6	14	Y	1.0	140	-	0.1 to 30	0.2 to 30
RSMN-2010	10	14	Y	1.0	60	0.2 to 30	-	0.2 to 30
RSMN-2016	16	14	Y	1.0	35	0.2 to 30	-	0.3 to 30
RSMN-2020	20	14	Y	1.0	22	0.3 to 30	-	0.4 to 30
RSMN-2030	30	14	Y	1.0	12	0.4 to 20	-	0.6 to 30
RSMN-2040	40	35	Y	1.0	10	0.3 to 30	-	0.1 to 30
RSMN-2050	50	35	Y	1.0	8	0.4 to 30	-	0.3 to 30
RSMN-2060	60	35	Y	1.0	6	0.5 to 30	-	0.3 to 30

Model Selector								
Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Common mode at 10dB	Differential mode at 25dB
RSMN-2003L	3	14	Y	0.10	350	0.3 to 30	-	0.2 to 30
RSMN-2006L	6	14	Y	0.10	140	0.4 to 20	-	0.2 to 30
RSMN-2010L	10	14	Y	0.10	60	0.7 to 20	-	0.3 to 30
RSMN-2016L	16	14	Y	0.10	35	0.7 to 20	-	0.3 to 30
RSMN-2020L	20	14	Y	0.10	22	-	0.6 to 20	0.3 to 30
RSMN-2030L	30	14	Y	0.10	12	-	1 to 20	0.4 to 30

Three phase 500Vac 6 to 60A EMC Filters with DIN rail mount option



Industrial



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https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rtan.html

The RTAN three-phase EMC filters are enclosed in compact cases and part numbers up to 30A have a DIN rail mount option. They are rated for 500Vac with seven current ratings of 6 to 60A enabling the optimum attenuation to match the current rating. The series uses TDK's amorphous core material to provide pulse and noise attenuation. Amorphous cores offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RTAN 6A to 30A models are UL certified for a short circuit current rating of up to 14kA, the 40, 50 and 60A models 10kVA with the appropriate breaker.

Features

- 6 to 60A Current Ratings
- Amorphous Core Technology
- DIN Rail Mount Option
- Captive Hardware
- Safety Certified

Benefits

- Optimizes the Attenuation for the Current Rating
- Reduces High Voltage Pulse Core Saturation
- Flexible Mounting
- No Lost Screws or Terminal Covers
- Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Leakage Current 500V/60Hz* (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
						Common mode at 25dB	Common mode at 25dB
RTAN-5006	6	14	Y	5.0	145	0.2 to 10	0.2 to 30
RTAN-5010	10	14	Y	5.0	60	0.3 to 10	0.2 to 30
RTAN-5020	20	14	Y	5.0	25	0.4 to 10	0.2 to 30
RTAN-5030	30	14	Y	5.0	13	0.6 to 10	0.3 to 30
RTAN-5040	40	10	Y	5.0	10	0.5 to 8	0.2 to 30
RTAN-5050	50	10	Y	5.0	7	0.6 to 10	0.3 to 30
RTAN-5060	60	10	Y	5.0	5	0.7 to 10	0.3 to 30

*2.5mA at 250V/60Hz

RTAN	-	5	006	D
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 060 = 60A	DIN Rail Mount 6A to 30A models

Related Products

Type	Current Rating (A)	Series	DIN Rail Mount	For use with secondary side inverters
Multipurpose with HV pulse protection	6 - 60	RTEN	Y (Up to 30A)	
High attenuation, narrow package, 2 stage	6 - 150	RTHB		
High attenuation, low profile, 2 stage	6 - 60	RTMN		
High attenuation, low leakage (250V)	3 - 600	RTHN		
Multipurpose with HV pulse protection	6 - 60	RTAN	Y (Up to 30A)	
Compact package size, 1 stage	6 - 300	RTCN	-	Y

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Three phase 500Vac 6 to 300A Filters for Secondary Side Inverters



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The RTCN three-phase filters are purpose designed for secondary side inverters and have a low profile package. They are rated for 500Vac with thirteen current ratings from 6 to 300A enabling the optimum attenuation to match the current rating. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RTCN 6A to 150A models are UL certified for a short circuit current ratings of between 10kA and 35kA with the appropriate breaker. (See model selector).

Features	Benefits
• 6 to 300A Current Ratings	• Optimizes the Attenuation for the Current Rating
• Low Profile Package	• Space Saving for Cabinets
• Captive Hardware	• No Lost Screws or Terminal Covers
• Safety Certified	• Global Use

Model Selector							
Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	Leakage Current 500V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		Weight (g)
					Common mode at 10dB	Common mode at 5dB	
RTCN-5006	6	14	Not Applicable	145	0.1 to 5	-	300
RTCN-5010	10	14	Not Applicable	60	0.1 to 5	-	300
RTCN-5020	20	14	Not Applicable	25	0.1 to 5	-	490
RTCN-5030	30	14	Not Applicable	13	0.2 to 4	-	490
RTCN-5040	40	10	Not Applicable	10	0.2 to 3	-	960
RTCN-5050	50	10	Not Applicable	7	-	0.2 to 3	900
RTCN-5060	60	10	Not Applicable	5	-	0.2 to 3	900
RTCN-5080	80	35	Not Applicable	5	-	0.1 to 3	3600
RTCN-5100	100	35	Not Applicable	4	-	0.1 to 3	3900
RTCN-5150	150	10	Not Applicable	3	-	0.1 to 3	6200
RTCN-5200	200	-	Not Applicable	4	-	-	8900
RTCN-5250	250	-	Not Applicable	3	-	-	8400
RTCN-5300	300	-	Not Applicable	2	-	-	8000

RTCN	-	5	006
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 300 = 300A

Related Products				
Type	Current Rating (A)	Series	DIN Rail Mount	For use with secondary side inverters
Multipurpose with a low profile	6 - 60	RTEN	Y (Up to 30A)	
High attenuation, narrow package, 2 stage	6 - 150	RTHB		
High attenuation, low profile, 2 stage	6 - 60	RTMN		
High attenuation, low leakage (250V)	3 - 600	RTHN		
Multipurpose with HV pulse protection	6 - 60	RTAN	Y (Up to 30A)	
Compact package size, 1 stage	6 - 300	RTCN	-	Y

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Three phase 500Vac 6 to 300A EMC Filters with DIN rail mount option



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https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rten.html

The RTEN three-phase EMC filters are enclosed in compact cases and part numbers up to 30A have a DIN rail mount option. They are rated for 500Vac with multiple current ratings of 6 to 300A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material to provide noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RTEN 6A to 30A models are UL certified for a short circuit current rating of up to 14kA, the 40, 50, 60A and 150A 10kA and 35kA for the 80 and 100A models the with the appropriate breaker.

Features

- 6 to 300A Current Ratings
- Low Profile
- DIN Rail Mount Option
- Captive Hardware
- Safety Certified

Benefits

- Optimizes the Attenuation for the Current Rating
- Space Saving for Cabinets
- Flexible Mounting
- No Lost Screws or Terminal Covers
- Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	Leakage Current 500V/60Hz* (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)			Weight (g)
					Common mode at 25dB	Common mode at 10dB	Differential mode at 25dB	
RTEN-5006	6	14	5.0	145	0.2 to 10	-	0.2 to 30	360
RTEN-5010	10	14	5.0	60	0.2 to 10	-	0.2 to 30	360
RTEN-5020	20	14	5.0	25	0.3 to 8	-	0.2 to 30	560
RTEN-5030	30	14	5.0	13	0.5 to 8	-	0.2 to 30	560
RTEN-5040	40	10	5.0	10	0.3 to 7	-	0.2 to 30	1100
RTEN-5050	50	10	5.0	7	0.5 to 7	-	0.2 to 30	1100
RTEN-5060	60	10	5.0	5	0.7 to 5	-	0.2 to 30	1100
RTEN-5080	80	35	5.0	5	0.3 to 5	-	0.2 to 5	3900
RTEN-5100	100	35	5.0	4	0.3 to 5	-	0.2 to 5	4200
RTEN-5150	150	10	5.0	3	0.3 to 5	-	0.2 to 5	6500
RTEN-5200	200	-	5.0	2	0.5 to 5	-	0.2 to 5	9200
RTEN-5250	250	-	5.0	1.5	-	0.5 to 10	0.2 to 5	8700
RTEN-5300	300	-	5.0	1	-	0.5 to 10	0.2 to 5	8300

*2.5mA at 250V/60Hz

RTEN	-	5	006	D
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 300 = 300A	DIN Rail Mount 6A to 30A models

Three phase 500Vac 6 to 150A EMC Filters with high attenuation



[Full Datasheet](#)

https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rthb.html



Industrial



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The RTHB three-phase EMC filters are enclosed in compact cases with a narrow package size. They are rated for 500Vac with multiple current ratings of 6 to 150A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material to provide high noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RTHB models are UL certified for a short circuit current rating of up to 5kA with the appropriate breaker.

Features

- 6 to 150A Current Ratings
- Narrow Profile
- Two Stage Filter
- Captive Hardware
- Safety Certified

Benefits

- Optimizes the Attenuation for the Current Rating
- Space Saving for Cabinets
- Greater Attenuation
- No Lost Screws or Terminal Covers
- Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	Leakage Current 500V/60Hz* (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
					Common mode at 25dB	Differential mode at 25dB	Weight (g)
RTHB-5006	6	5	5.0	290	0.1 to 30	0.1 to 30	750
RTHB-5010	10	5	5.0	120	0.1 to 20	0.2 to 30	780
RTHB-5020	20	5	5.0	50	0.1 to 20	0.2 to 30	1100
RTHB-5030	30	5	5.0	26	0.2 to 20	0.2 to 30	1100
RTHB-5040	40	5	5.0	20	0.2 to 20	0.1 to 30	2240
RTHB-5050	50	5	5.0	14	0.2 to 20	0.2 to 30	2240
RTHB-5060	60	5	5.0	10	0.2 to 20	0.2 to 10	2240
RTHB-5080	80	5	5.0	10	0.1 to 10	0.2 to 30	7700
RTHB-5100	100	5	5.0	8	0.1 to 10	0.2 to 30	8200
RTHB-5150	150	5	5.0	6	0.1 to 10	0.2 to 30	12500

*2.5mA at 250V/60Hz

RTHB	-	5	006
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 150 = 150A

Related Products

Type	Current Rating (A)	Series	DIN Rail Mount	For use with secondary side inverters
Multipurpose with a low profile	6 - 60	RTEN	Y (Up to 30A)	
High attenuation, narrow package, 2 stage	6 - 150	RTHB		
High attenuation, low profile, 2 stage	6 - 60	RTMN		
High attenuation, low leakage (250V)	6 - 600	RTHN		
Multipurpose with HV pulse protection	6 - 60	RTAN	Y (Up to 30A)	
Compact package size, 1 stage	6 - 300	RTCN	-	Y

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Three phase 500Vac 6 to 300A EMC Filters with high attenuation



[Full Datasheet](#)

https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rthc.html



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The RTHC three-phase EMC filters are enclosed in compact cubic case formats. They are rated for 500Vac with multiple current ratings of 6 to 300A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material to in a two stage configuration to provide excellent noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware.

Features

- 6 to 300A Current Ratings
- Cubic Profile
- High Noise Attenuation
- Captive Hardware
- Safety Certified

Benefits

- Optimizes the Attenuation for the Wide Range Current Rating
- Space Saving
- Reduces EMI and Voltage Surge Levels
- No Lost Screws or Terminal Covers
- Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA)	Leakage Current 500V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
					Common mode at 25dB	Differential mode at 25dB	Weight (g)
RTHC-5006	6	5	5.0	290	0.1 to 10	0.2 to 30	800
RTHC-5010	10	5	5.0	120	0.1 to 10	0.2 to 30	820
RTHC-5020	20	5	5.0	50	0.1 to 10	0.2 to 30	1200
RTHC-5030	30	5	5.0	26	0.2 to 10	0.2 to 30	1200
RTHC-5040	40	5	5.0	20	0.2 to 10	0.2 to 30	2260
RTHC-5050	50	5	5.0	14	0.2 to 10	0.2 to 30	2260
RTHC-5060	60	5	5.0	10	0.2 to 10	0.2 to 30	2260
RTHC-5080	80	5	5.0	10	0.1 to 10	0.2 to 30	7400
RTHC-5100	100	5	5.0	8	0.1 to 10	0.2 to 30	7800
RTHC-5150	150	10	5.0	6	0.1 to 10	0.2 to 30	12000
RTHC-5200	200	10	5.0	4	0.3 to 10	0.2 to 30	16300
RTHC-5250	250	10	5.0	3	0.3 to 10	0.2 to 30	15600
RTHC-5300	300	10	5.0	2	0.5 to 6	0.2 to 30	14800

RTHC	-	5	006
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 060 = 60A

Three phase 500Vac 6 to 300A EMC Filters with high attenuation



Industrial



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https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_RTHN.html

The RTHN three-phase EMC filters are enclosed in low profile cases. They are rated for 500Vac with multiple current ratings of 6 to 300A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material in a two stage configuration to provide excellent noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RTHN 6A to 30A models are UL certified for a short circuit current rating of up to 14kA, the 40A to 100A for 35kA and 10kA for the 150A models with the appropriate breaker.

Features

- 6 to 300A Current Ratings
- Low Profile Case Sizes
- Two Stage, High Attenuation
- Captive Hardware
- Safety Certified

Benefits

- Optimizes the Attenuation for the Current Rating
- Space Saving for Cabinets
- Lower Noise
- No Lost Screws or Terminal Covers
- Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	Leakage Current 500V/60Hz* (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
					Common mode at 25dB	Differential mode at 25dB	Weight (g)
RTHN-5006	6	14	5.0	290	0.1 to 10	0.2 to 30	700
RTHN-5010	10	14	5.0	120	0.1 to 10	0.2 to 30	700
RTHN-5020	20	14	5.0	50	0.1 to 10	0.2 to 30	1000
RTHN-5030	30	14	5.0	26	0.2 to 10	0.2 to 30	1000
RTHN-5040	40	35	5.0	20	0.2 to 10	0.2 to 30	2100
RTHN-5050	50	35	5.0	14	0.2 to 10	0.2 to 30	2000
RTHN-5060	60	35	5.0	10	0.2 to 10	0.2 to 30	2000
RTHN-5080	80	35	5.0	10	0.1 to 10	0.2 to 30	7000
RTHN-5100	100	35	5.0	8	0.1 to 10	0.2 to 30	7500
RTHN-5150	150	10	5.0	6	0.1 to 10	0.2 to 30	11600
RTHN-5200	200	-	5.0	4	0.3 to 10	0.2 to 30	15800
RTHN-5250	250	-	5.0	3	0.3 to 10	0.2 to 30	15000
RTHN-5300	300	-	5.0	2	0.5 to 6	0.2 to 30	14300

*2.5mA at 250V/60Hz

RTHN	-	5	006
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 300 = 300A

Three phase 500Vac 6 to 60A EMC Filters with high attenuation and surge protection



Industrial

Test

LED

COMM

Broadcast

[Full Datasheet](#)

https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rtmn.html

The RTMN three-phase EMC filters are enclosed in compact cases with a low profile package size. They are rated for 500Vac with multiple current ratings of 6 to 60A enabling the optimum attenuation to match the current rating. The series uses TDK's amorphous core materials in a two-stage configuration to provide excellent pulse and noise attenuation. Amorphous cores offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RTMN 6A to 30A models are UL certified for a short circuit current rating of 14kA and 35kA for the 40 to 60A models with the appropriate breaker.

Features

- 6 to 60A Current Ratings
- Low Profile
- High Noise and Pulse Attenuation
- Captive Hardware
- Safety Certified

Benefits

- Optimizes the Attenuation for the Current Rating
- Space Saving for Cabinets
- Reduces EMI and Voltage Surge Levels
- No Lost Screws or Terminal Covers
- Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA) ⁽¹⁾	HV Pulse Protection	Leakage Current 500V/60Hz* (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Differential mode at 25dB	Weight (g)
RTMN-5006	6	14	Y	5.0	290	0.1 to 20	0.1 to 30	670
RTMN-5010	10	14	Y	5.0	120	0.1 to 20	0.2 to 30	700
RTMN-5020	20	14	Y	5.0	50	0.2 to 20	0.2 to 30	1000
RTMN-5030	30	14	Y	5.0	26	0.2 to 20	0.3 to 30	1000
RTMN-5040	40	35	Y	5.0	20	0.2 to 20	0.1 to 30	2050
RTMN-5050	50	35	Y	5.0	14	0.3 to 20	0.2 to 30	2050
RTMN-5060	60	35	Y	5.0	10	0.3 to 20	0.3 to 10	2050

*2.5mA at 250V/60Hz

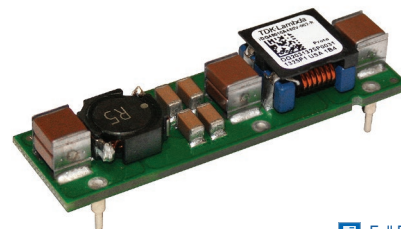
RTMN	-	5	006
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 060 = 60A

Related Products

Type	Current Rating (A)	Series	DIN Rail Mount	For use with secondary side inverters
Multipurpose with a low profile	6 - 300	RTEN	Y (Up to 30A)	
High attenuation, narrow package, 2 stage	6 - 150	RTHB		
High attenuation, low profile, 2 stage	6 - 60	RTMN		
High attenuation, low leakage (250V)	3 - 600	RTHN		
Multipurpose with HV pulse protection	6 - 60	RTAN	Y (Up to 30A)	
Compact package size, 1 stage	6 - 300	RTCN	-	Y

[Click here for TDK-Lambda single phase filters](#)

10A 75VDC Board Mount EMI Filter



Industrial



Test



LED



COMM



Broadcast

[Full Datasheet](#)

<https://product.tdk.com/en/power/idq>

The board mount iDQ filter modules are designed to reduce emissions from high frequency DC-DC converters. The high on-board capacitance minimizes the need for additional external components and provides exceptional differential mode filtering. The iDQ filter is rated at 75Vdc, 10A and will operate at full current with natural convection or forced air cooling in ambient temperatures between -40 to +85°C. Differential mode attenuation at 300kHz is 63dB with a 50Ω source & load impedance. The package size is just 50mm long, 15mm wide and 10.8mm high. The filters have 1500Vdc input/output to ground isolation, allowing them to be used with either positive or negative grounded systems. A pin is provided to connect additional capacitance to increase common mode attenuation.

Features	Benefits
• Rated at 75Vdc	• Can be used with 24V or 48V Nominal Inputs
• High On-board Capacitance	• Greater Noise Reduction
• Compact Size	• Less Board Space Used
• Pin for Additional Capacitance	• Easy to Increase Common Mode Attenuation

Model Selector				
Model	Rated Current (A)	Maximum DC Resistance (mΩ)	Differential Mode Attenuation at 300 kHz	Common Mode Attenuation at 300MHz
iDQ48010A480V-002-R	10	Positive leg 11.5 Negative leg 6.5	63dB	36dB

Part Numbering Scheme

iDQ480	10A	480V	002-R
Series Name	10A rated	Nominal Voltage 480V = 48Vdc	Option Code

Specification

Model

Input

Rated Voltage	Vdc	75 maximum
Safety Certifications and Markings	-	CE, UKCA Mark

Environmental

Operating Temperature	°C	-40 to 120 (see detailed specification)
Storage Temperature	°C	-55 to 125
Cooling	-	Convection
Withstand Voltage	Vdc	1,500 input ground to other terminals

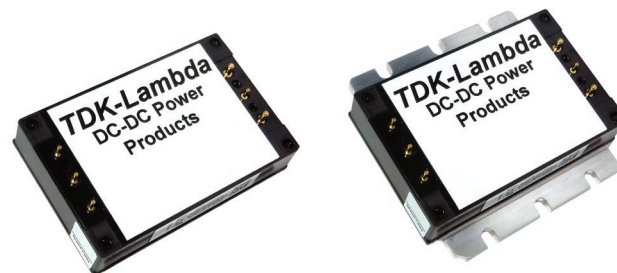
Other

Weight (Typ)	g	11.3
Size (LxWxH)	mm	50 x 15 x 10.8
Size (LxWxH)	Inches	1.97 x 0.59 x 0.43
Connections	Pins	
MTBF Telcordia SR332 (40°C)	Hours	40,000,000
Warranty	Years	5

*Notes

See website for detailed [specifications](#)

MIL-COTS 20A, 40Vdc Passive EMC Filters



[Full Datasheet](#)

<https://product.tdk.com/en/power/fqa>

The FQA filter modules have been designed to reduce differential and common mode conducted emissions from dc-dc switching converters. The series takes advantage of TDK technologies to simplify system level compliance to MILSTD-461. The encapsulated rugged package design and a choice of baseplate options make the FQA modules suitable for use in a wide variety of harsh and demanding environments, including MIL-COTS.

Features

- Filtering for Compliance to MIL-STD-461G
- Input Spike suppression per MIL-STD-1275D and RTCA/DO-160G
- High Differential and Common Mode Noise Attenuation
- -55 to 115°C Temperature Range (M-Grade)
- Standard (S-Grade) or Enhanced Screening (M-Grade) Options
- Quarter Brick Size

Benefits

- Simplifies the system EMC filter
- Suitable for vehicle and airborne use
- Reduces system EMI
- For operation in harsh environments
- Reduces cost for COTS applications
- Industry standard mounting and heatsinks

Model Selector

Model	Input Voltage (Vdc)	Maximum Current (A)	Flanged Baseplate	Non-Flanged Baseplate	Standard Screening (-S)	Enhanced Screening (-M)
FQA020ADC-007-S	-40 to +40	20	X		X	
FQA020ADC-N07-S	-40 to +40	20		X	X	
FQA020ADC-007-M	-40 to +40	20	X			X
FQA020ADC-N07-M	-40 to +40	20		X		X

Screening Options

Operation	S-Grade (Standard Screening)	M-Grade (Enhanced Screening)
Functional Test	Room and Hot Test	Cold, Room, and Hot Test
Burn in	Yes	Extended, 96 hour
Temperature Cycling	No	10 Cycles
Hi-Pot	2250VDC	2250VDC
Visual Inspection	Yes	Yes

Evaluation Kit

Type	Part Number	Description
Evaluation Kit	FQX-HQA-EVK-D0	Evaluation board for FQA or FQB filter plus two (2) HQA DC-DC quarter brick modules. Fitter and DC-DC modules are not included.

MIL-COTS 20A, 40Vdc Active EMC Filters



[Full Datasheet](#)

<http://product.tdk.com/en/power/fqb>

The FQB filter modules have been designed to reduce differential and common mode conducted emissions from dc-dc switching converters. In addition, the series contains active suppression circuitry to block input voltage surges and transients. The FQB takes advantage of TDK technologies to simplify system level compliance to MIL-STD-461, MIL-STD-1275, RTCA/DO-160 and MIL-STD-704 per MIL-HDBK-704-8. The encapsulated rugged package design and a choice of baseplate options make the modules suitable for use in a wide variety of harsh and demanding environments, including MIL-COTS.

Features	Benefits
• Filtering for Compliance to MIL-STD-461(F,G)	• Simplifies the system EMC filter
• Input Spike and Surge Suppression per MIL-STD-1275(D,E), MIL-STD-704(A-F) and RTCA/DO-160G (Sec 16-18)	• Suitable for vehicle and airborne use
• High Differential and Common Mode Noise Attenuation	• Reduces system EMI
• -55 to 115°C Temperature Range (M-Grade)	• For operation in harsh environments
• Standard (S-Grade) or Enhanced Screening (M-Grade) Options	• Reduces cost for COTS applications
• Quarter Brick Size	• Industry standard mounting and heatsinks

Model Selector						
Model	Operating Input Voltage (Vdc)	Maximum Current (A)	Flanged Baseplate	Non-Flanged Baseplate	Standard Screening (-S)	Enhanced Screening (-M)
FQB020ADC-007-S	8.5 to 40	20	X		X	
FQB020ADC-N07-S	8.5 to 40	20		X	X	
FQB020ADC-007-M	8.5 to 40	20	X			X
FQB020ADC-N07-M	8.5 to 40	20		X		X

Screening Options		
Operation	S-Grade (Standard Screening)	M-Grade (Enhanced Screening)
Functional Test	Room and Hot Test	Cold, Room, and Hot Test
Burn in	Yes	Extended, 96 hour
Temperature Cycling	No	10 Cycles
Hi-Pot	2250VDC	2250VDC
Visual Inspection	Yes	Yes

Related Products		
Evaluation Kit	FQX-HQA-EVK-D0	Evaluation board for FQA or FQB filter plus two (2) HQA DC-DC quarter brick modules. Filter and DC-DC modules are not included.
Filter Module	FQA	MIL-COTS 20A, 40 V Passive EMC Filter
Isolated DC-DC Converter	HQA120	120W MIL-COTS, Input 9-40V, Isolated Quarter Brick with M-Grade screening available
Isolated DC-DC Converter	HQA85	85W MIL-COTS, Input 9-40V, Isolated Quarter Brick
Isolated DC-DC Converter	GQA	120W Industrial, Input 9-36V, Isolated Quarter Brick

48Vdc 50A EMC Filter



[Full Datasheet](#)

https://product.tdk.com/en/search/emc/emc/power-line/info?part_no=RDEN-048050

The cost effective RDEN EMC filter is enclosed in a compact, low profile metal case and is rated at up to 76Vdc at 50A. The filter uses TDK's ferrite core material to provide high noise attenuation over a wide frequency range. Major applications for the filter are ITE (Information Technology Equipment) and telecommunications. Terminations are made via the product's large studs for easy connection. The filter is certified to EN60939 -1/-2.

Features	Benefits
• Wide Frequency Range	• Assists Compliance to Common Standards
• High Noise Attenuation	• Greater Noise Reduction
• Large Termination Studs	• Easier Connection
• Low Profile	• Space Saving in Cabinets

Model Selector				
Model	Rated Current (A)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)	
			Common mode at 30dB	Differential mode at 25dB
RDEN-048050	50	3	0.2 to 10	0.7 to 30

RDEN	-	048	050
Series Name		Rated Voltage 048 = 48Vdc	Rated Current 050 = 50A



Value Add Solutions



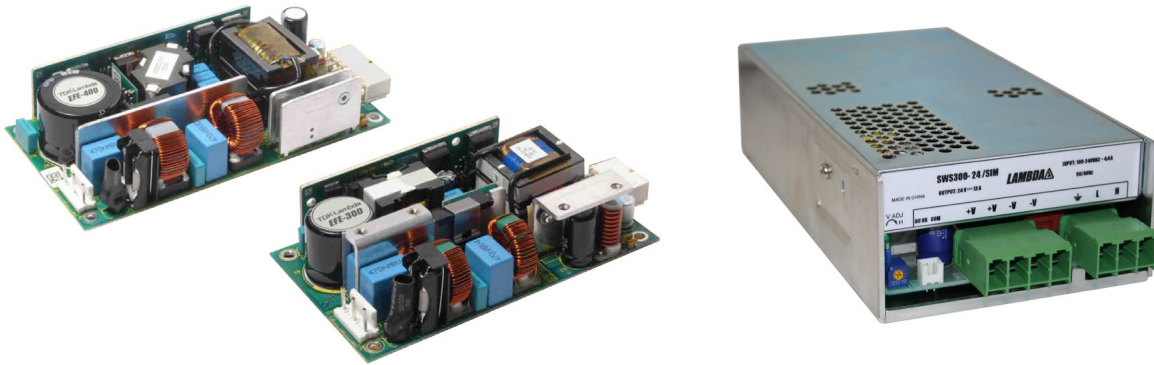
Features

- Technical draft
- Field-proven technology from our standard products
- Careful component selection
- Design Verification Test (DVT)
- Approvals (Safety, EMC, Environment and etc...)

Value Add Solutions

Modified Standard (Low Complexity)

- A slight modification (electrical or physical) to a Standard / Existing TDK-Lambda product.
- The product retains the inherent reliability of the product from which it was modified.
- Examples include Input/Output connector, signal, output voltage, or paint changes, reduced leakage current, and addition of test points or indicator lights.



Value-Added (Medium Complexity)

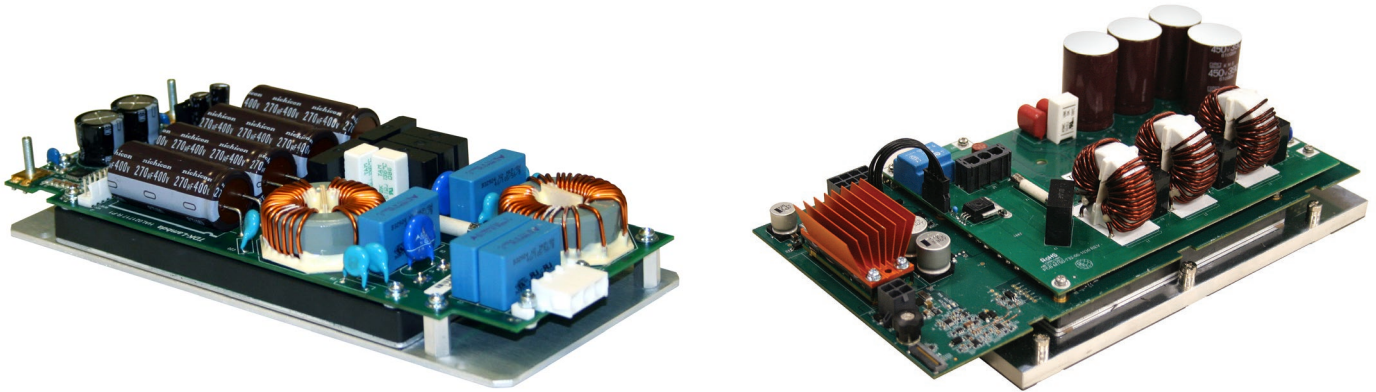
- A customized power solution which builds added circuitry or packaging around a Standard/Existing TDK-Lambda Power Supply to meet exact specifications.
- Any TDK-Lambda supply may be used as a starting point and these customized solutions also retain the proven reliability of the product from which it was modified.
- Examples include custom racks or enclosures, special wire harnesses, switches, fuses, fans, or heat sinks, and additional functionality to a standard product.



Value Add Solutions

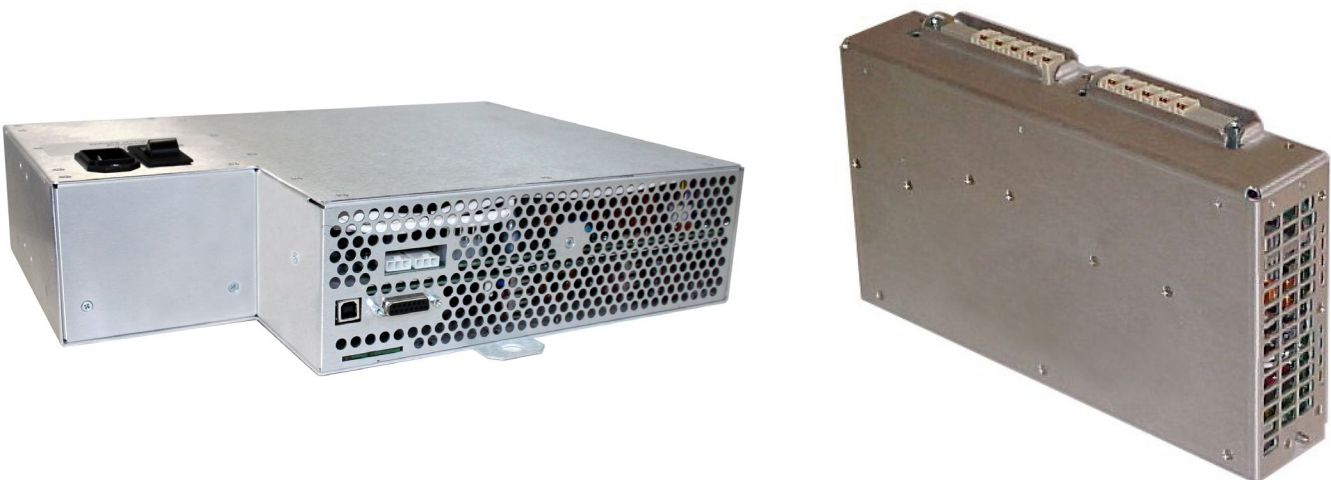
Brick-on-Board (Medium Complexity)

- A customized power solution which builds added circuitry around Standard / Existing TDK-Lambda PCB Power Modules.
- Oftentimes, custom enclosures are built around the brick-on-board power supply.
- These high reliability customized solutions are built around TDK-Lambda's industry leading power modules and designs have fast turnaround times.

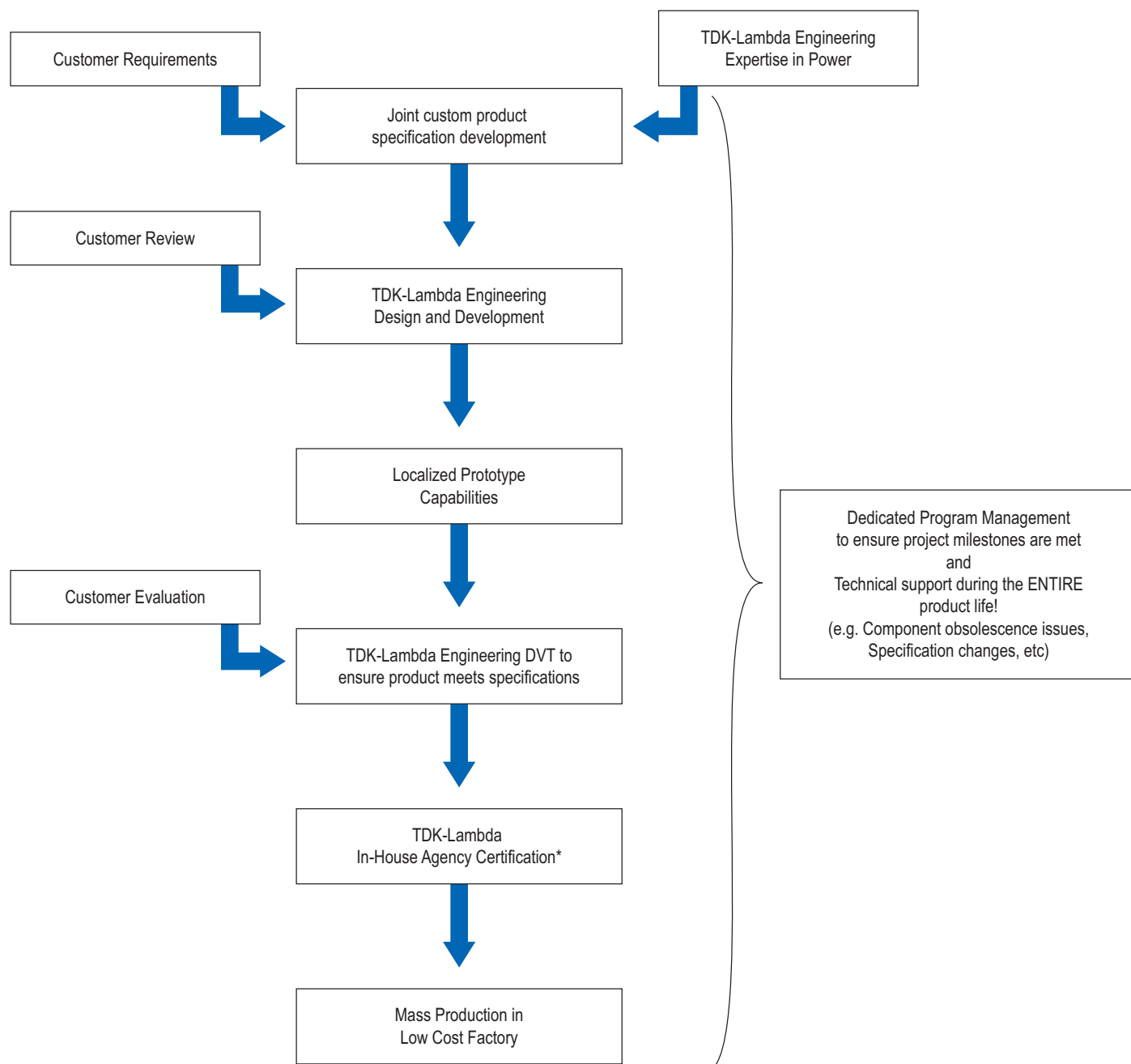


Full Custom (High Complexity)

- A power supply designed “from scratch” electrically using discrete components to meet the customer’s unique set of requirements.
- Designs may build upon existing circuitry, but packaging is typically unique.
- Examples include multiple input/output, high power density, high technology, severe temperature range, or very low noise.



Process Flow

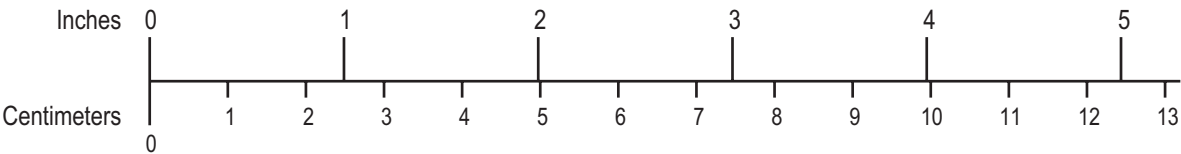


* For Modified Standard Products. New designs will be tested by external agencies.

Conversion Factors & Equations

English & Metric Conversions	
English to Metric	Multiply English Unit by:
inch to millimeter (mm)	25.4
inch to centimeter (cm)	2.54
foot to meter (m)	0.3048
ounce (oz) to gram (gm)	28.35
pound (lb) to kilogram (kg)	0.45
Metric to English	Multiply Metric Unit by:
millimeter (mm) to inch	0.03937
centimeter (cm) to inch	0.3937
Meter (m) to foot (ft)	3.2808
gram (gm) to ounce (oz)	0.0353
kilogram (kg) to pound (lb)	2.2

Inches to Centimeters (cm) Conversion



Air Flow Conversions

1m/s (meters per second)= 3.28 feet per second = 196.85 LFM (linear feet per minute)

Weight Conversions

453.6 grams = 16 ounces = 1 pound

Rack Height Units

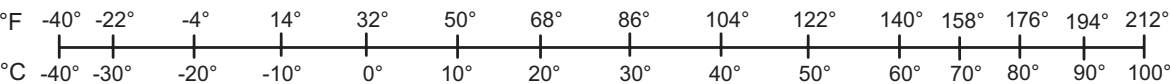
1U = 1.75 inch = 44.45mm

2U = 3.50 inch = 88.90mm

Fahrenheit - Celsius Temperature Conversions

$^{\circ}\text{C} = \frac{^{\circ}\text{F} - 32^{\circ}}{1.8}$ $^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32^{\circ}$

Conversion Formulas



DC Circuit Equations

$V = IR$ $I = \frac{V}{R}$ $R = \frac{V}{I}$ $P = IV$ $P = \frac{V^2}{R}$ $P = I^2R$

V = Voltage (in volts) R = Resistance (in ohms)
I = Current (in amperes) P = Power (in watts)

Global Facilities



Neptune (USA)

Manufacturing and R&D

Programmable and High Voltage Power Supplies



Ilfracombe Plant (U.K.)

Manufacturing and R&D

Modular (Vega, Alpha, NV) & DC-DC power supplies



Nagaoka (Japan)

Manufacturing & R&D

AC-DC, DC-DC & custom power supplies



Senai Plant (Malaysia)

Manufacturing

AC-DC, DC-DC power modules & custom products



Wuxi Plant (China)

Manufacturing and R&D

AC-DC Converters, filters & custom products



Kuantan Plant (Malaysia)

Manufacturing

AC-DC Converters & custom products



Karmiel Plant (Israel)

Manufacturing & R&D

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EMI Filters



Healthcare Products



Convection/Conduction
Cooled Products



Value Add Solutions



DIN Rail



Configurable



CUS-M Series



Board Mount

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