



Product Catalog

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

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
- Low Cost Manufacturing (Reduced System Cost)
- Increase Customer Productivity with High Level Assembly and Turnkey Solutions
- 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: tla.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.

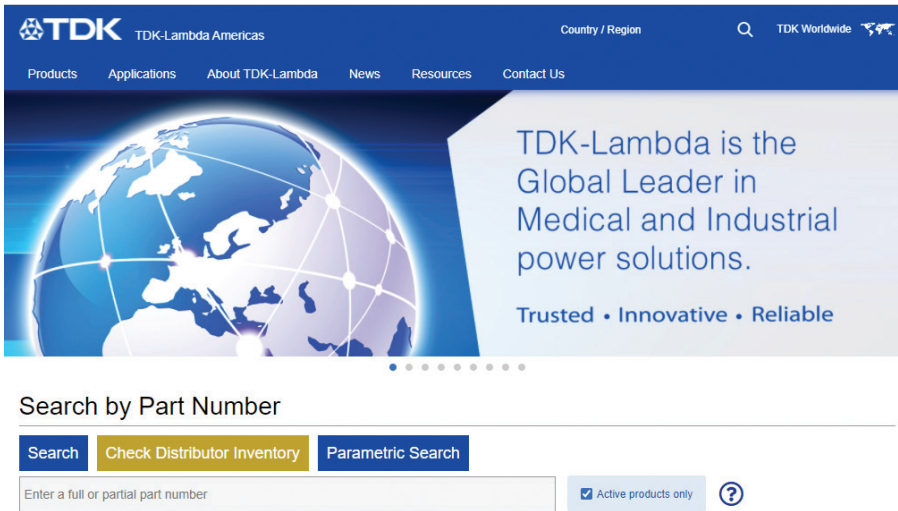
Each product page contains the following symbols to indicate the main applications that each product is designed for. The symbols are intended to give a quick guideline for many applications. For assistance in finding a product for your application, please contact our technical support department.



Thank you for your interest in TDK-Lambda products

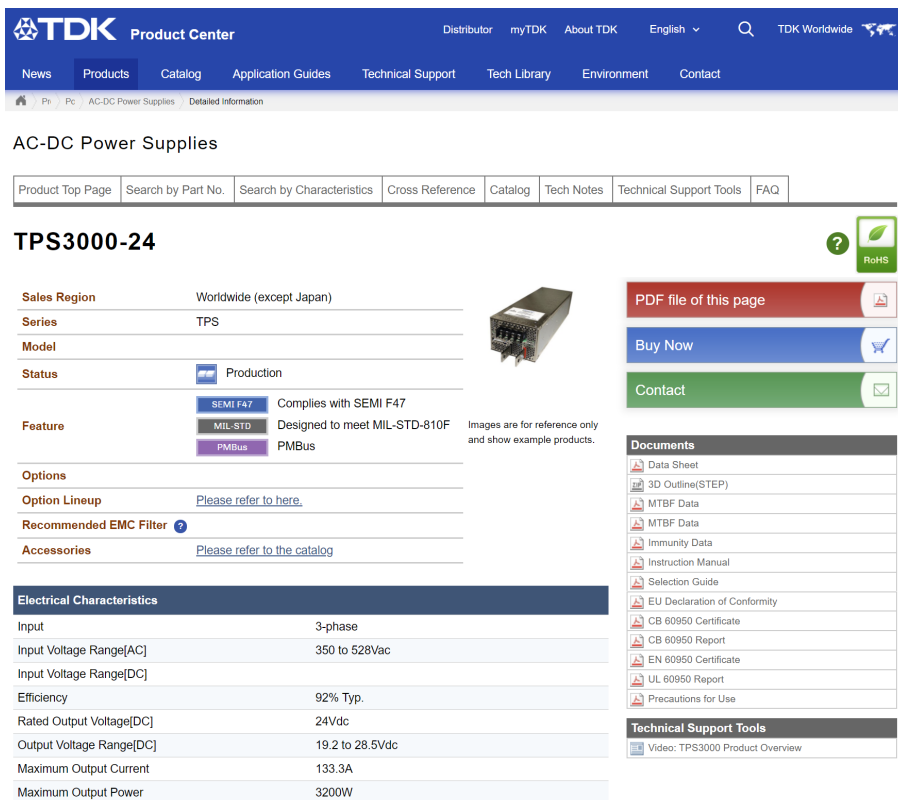
Need Technical Information?

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

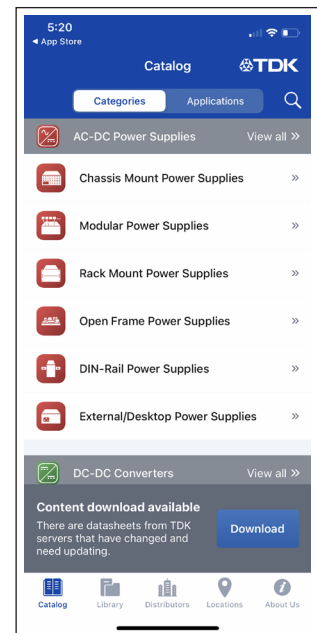


- Installation manuals
- Detailed specifications
- Evaluation data
- to Outline drawings & 3D files
- MTBF predictions
- Reliability data
- Application notes
- Power Guy videos
- Educational Blogs

TDK-Lambda Product Center:



TDK-Lambda App:



Download here:



iTunes Store

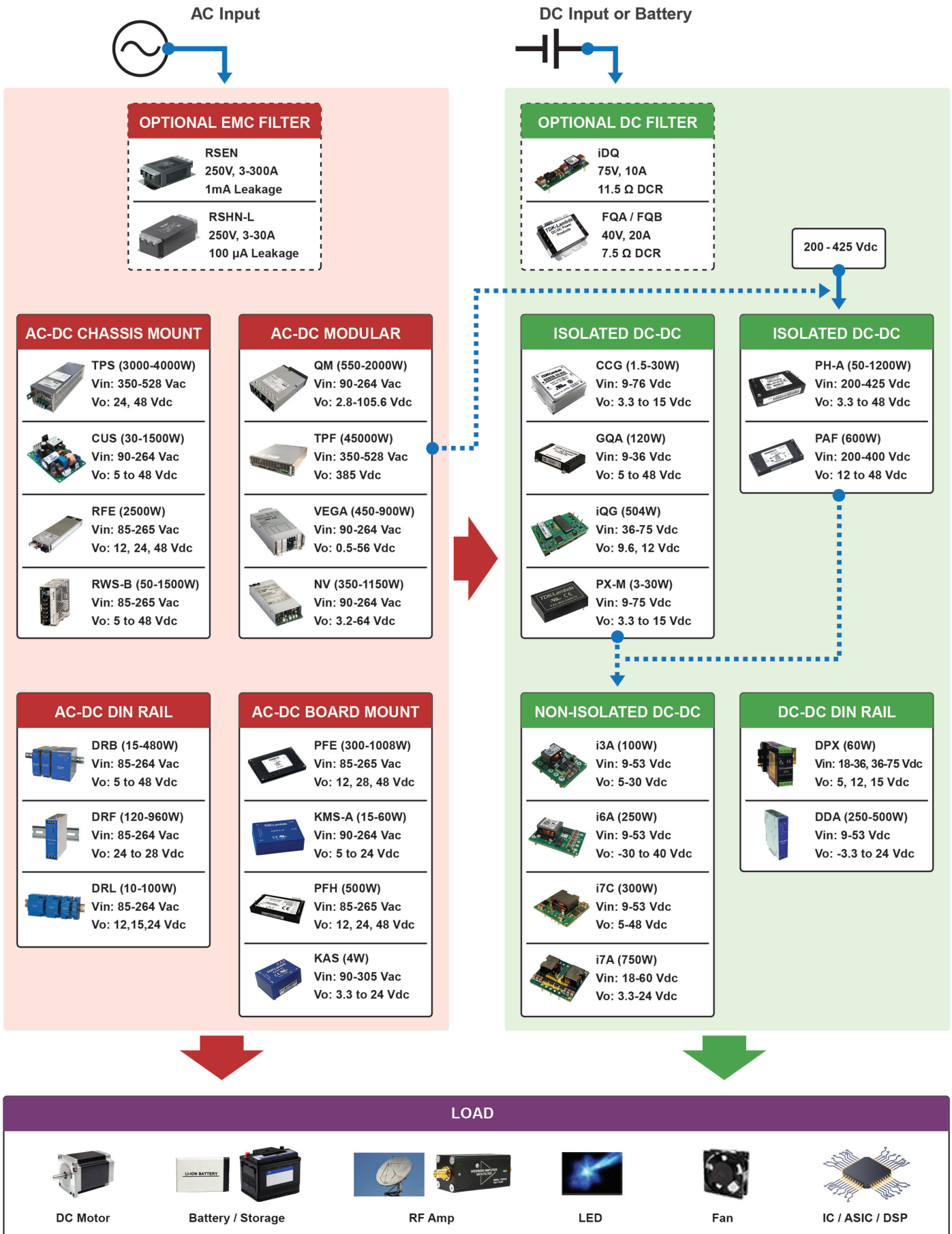


Android Store

Want Technical Support?

- Please call 1-800-LAMBDA-4 (1-800-526-2324) to speak to our inside technical support team, or email ta.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)

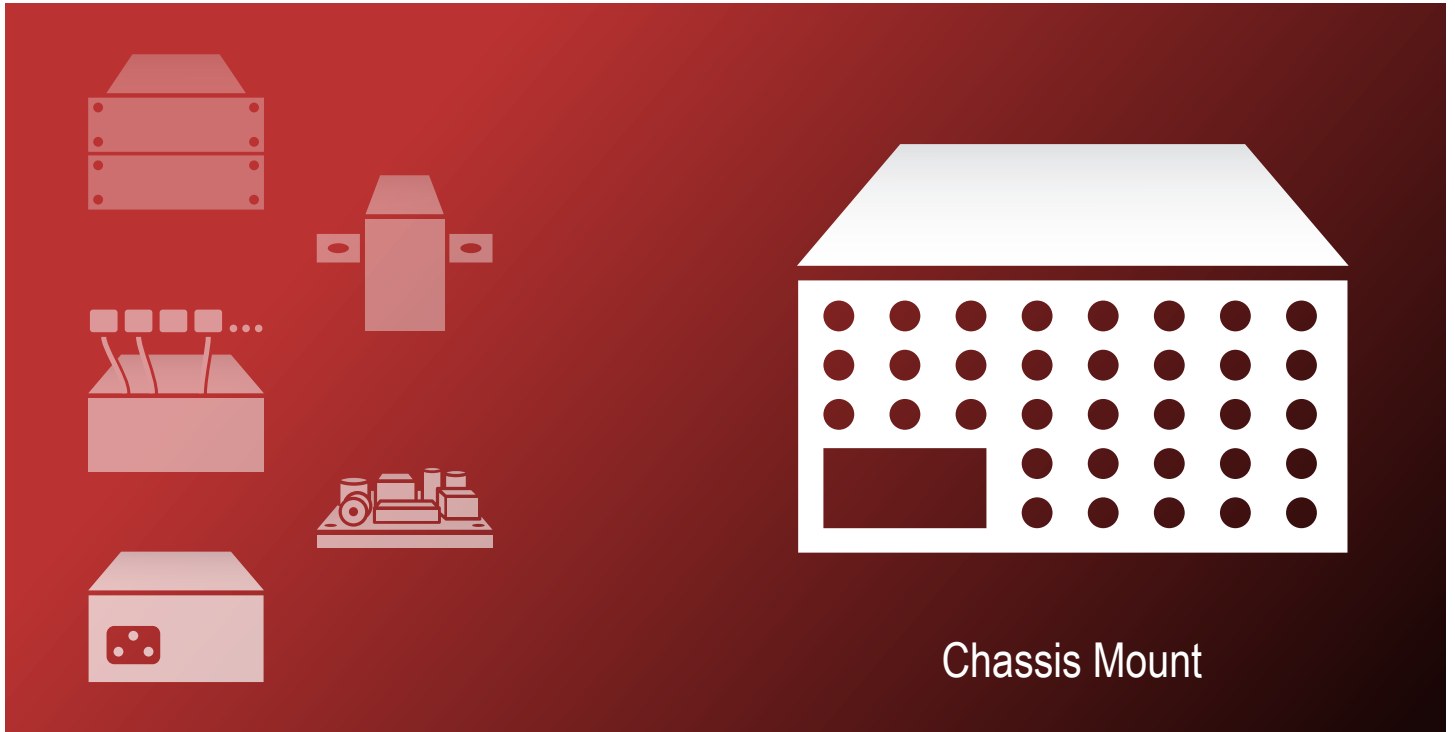
AC/DC Product Index by Wattage

Wattage	Number of Outputs	Series	Page	Wattage	Number of Outputs	Series	Page
5-25W	1	KPSB	68	300W	1	DTM300-D	83
5-25W	1	KWSA	69	300-1000W	1	PFE300SA/500F/1000FA	71
10-30W	1	ZWS10-30B	50	300-1500W	1	HWS300-1500	20
10-100W	1	DRL	89	350-420W	1	CUS350M	21
15-60W	1	KMS-A	70	350-1000W	1	CUS350MP	62
15-100W	1	DRB15-100	90	350-1150W	1-8	NV350/700	38
15-150W	1	HWS15A-150A/A	11	400W	1	CUS400M	63
25-150W	1	LS	12	450-900W	1-10	Vega	39
25-30W	1	WMM30	75	480W/380ms holdup	1	ZBM20 (Hold Up Module)	67
25-36W	1	DTM36-C8	76	500W	1	CUS500M1	64
30-60W	1	CUS30/60M	51	500W	1	PFH500F	72
30-1500W	1	HWS/HD	14	500W	1	XMS500	65
33-302W	1	ZWS-BAF	52	500-1500W	1	LZSA	22
35W	2,3	CUT35	53	550-900W	1-10	Vega-Lite	40
40-65W	1	CSW65	16	600W	1	CUS600M	66
40-65W	1	DTM65-C8	77	600W	1	CUS600M and CUS600M1	25
40-65W	1	DTM65-D	78	600W	1	GXE600	24
40-80W	1	DT62-80D	79	600-1200W	1	QS	23
50-600W	1	RWS-B	17	550-2000W	1-18	QM	41
62-80W	1	DT62-80D	80	720-1000W	1	CPFE1000F	26
75W	2,3	CUT75	54	720-1000W	1	CPFE1000FI	27
79-153W	1	CUS200LD	18	1000-1500W	1	RWS1000/1500-B	28
90-110W	1	DTM110-C	82	1000-1500W	1	RWS1000/1500-B/ME	29
100W	1	CUS100ME	55	1500W	1	CUS1500M	30
100-150W	1	DT100-150-D	80	1600W	1	RFE1600	31
110W	1	DTM110-C8	81	1600W	1	HFE1600	45
120-480	1	DRB120-480	91	1800W	1	HWS1800T	32
120-960W	1	DRF120-960	93	2500W	1	HFE2500	46
150W	1	CUS150M	56	2500W	1	RFE2500	33
150-200W	1	LS200	19	3200W	1	TPS3000	34
150-240W	1	ZWS-BP	57	4080W	2	TPS4000	35
175-200W	1-5	NV175	58	4500-45000W	1	TPF45000-385	47
200-800W	1	Z+	99	4000	1	ALE 402	86
200-800W	1	Z+ HV	100	8000	1	ALE 802	86
200-250W	1	CUS200M	59	12000	1	ALE LC1202	86
240W	1	ZWS240RC-24	60	20000	1	ALE 203	86
250W	1	DTM250-D	82	30000	1	ALE 303	86
250W	1	CUS250M	61				

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	55
150W	1	CUS150M	56
150-200W	1	LS200	19
175-200W	1-5	NV175	58
250W	1	CUS250M	61
300-1500W	1	HWS300-1500	20
350-420W	1	CUS350M	21
350-1150W	1-8	NV350/700	38
400W	1	CUS400M	63
450-900W	1-10	Vega	39
500W	1	CUS500M1	64
500W	1	XMS500	65
500-1500W	1	LZSA	22
550-900W	1-10	Vega-Lite	40
550-2000W	1-18	QM	41
600W	1	GXE600	24
600W	1	CUS600M	66
600-1200W	1	QS	23
720-1000W	1	CPFE1000F	26
720-1000W	1	CPFE1000FI	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
3200W	1	TPS3000	34
4080W	1	TPS4000	35

Listed by Wattage

10-150W Single Output Industrial Power Supplies

 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, 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

- Limited Lifetime Warranty
- Very Conservative Electrolytic Capacitor Ratings
- Class B Conducted and Radiated EMI
- Low Off-Load Power Consumption
- UL 508 Certified

Benefits

- Low Cost of Ownership
- Long Service Life
- Easier System EMC Compliance
- Energy Saving
- 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

[Full Datasheet](#)

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



Industrial



Test



COMM



LED



Broadcast

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 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

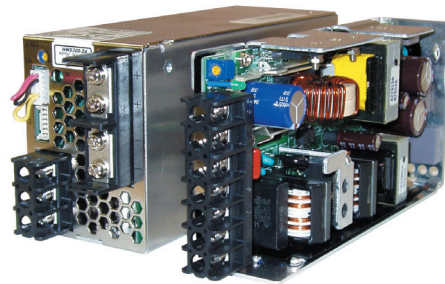
- Compact Package Sizes
- Low Cost
- Withstands 300Vac Input Surges
- Conservative Electrolytic Capacitor Temperatures
- Five Year Warranty

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)	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



The ultra reliable, conservatively rated HWS/HD series of 20W to 1500W AC-DC power supplies has a limited lifetime warranty, 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 Atart-up	• Operation in Harsh Environments
• Limited Lifetime Warranty	• 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) ⁽¹⁾	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 ⁽²⁾	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 ⁽²⁾	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

[Full Datasheet](#)

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



Industrial



Broadcast



Test



COMM

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

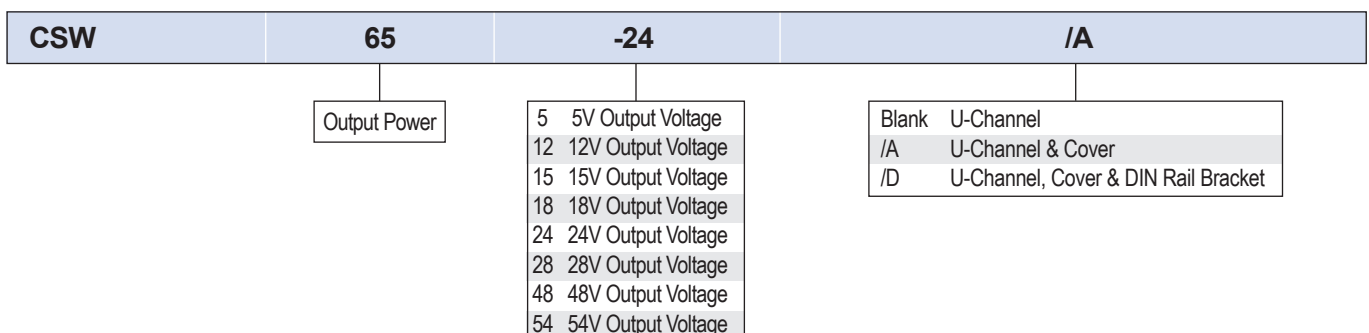
Benefits

- 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)	Overshoot (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.



50W to 600W Single Output General Purpose Power Supplies

[Full Datasheet](#)

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



The RWS50B to RWS6000B 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 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
- 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

[Full Datasheet](#)

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



Industrial



Test



LED



Broadcast



COMM

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 5V, 7.5V, 12V, 15V, 24V and 48Vdc. The 31mm height makes it suitable for mounting in low profile LED displays and enclosures.

Features

- Convection or Conduction Cooled
- Up to 206W Peak Power Capability
- Low 31mm Height
- -40°C Ambient Temperature Start Up

Benefits

- Quiet Operation
- Provides Short Term Current for Capacitive or Inductive Loads
- Suitable for Low Profile Enclosures
- 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

[Full Datasheet](#)

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



Industrial



Test



COMM



LED



Broadcast

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 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

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) ⁽¹⁾	Max Current Convection (A) ⁽²⁾	Peak Current (A) ⁽³⁾	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV) ⁽⁴⁾	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

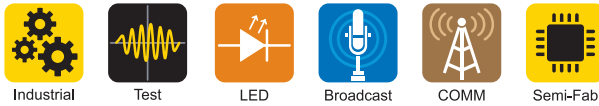
3.3	3.3V Output Voltage
5	5V Output Voltage
7.5	7.5V Output Voltage
12	12V Output Voltage
15	15V Output Voltage
24	24V Output Voltage
36	36V Output Voltage
48	48V Output Voltage

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

300-1500W Single Output Industrial Power Supplies

[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, unique to the industry. The series accepts a wide range 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	• 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) ⁽¹⁾	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 ⁽²⁾	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 ⁽²⁾	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 ⁽²⁾	42	360	240	400	69.0 - 75.0	86 / 90

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

[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

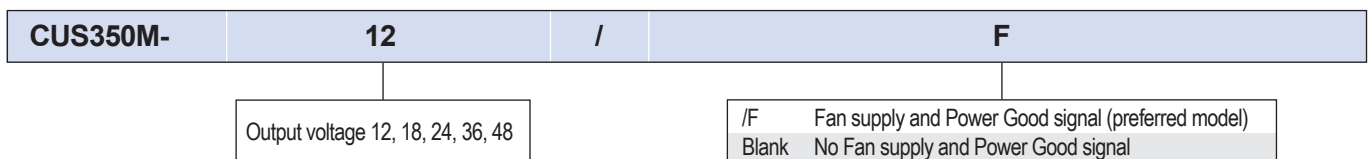
- 350W Convection Cooled
- Up to 420W with Forced Air
- Medical Certifications (2 x MOPP)
- Class B Conducted EMI
- 5V Standby Voltage, DC Good Signal, 12V Fan Supply and Remote On/Off
- Compact 7.5 x 3.4 x 1.6" Size

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



500-1500W Industrial Power supplies

[Full Datasheet](#)

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



Industrial



COTS



Test



COMM



Broadcast

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

- Rugged Mechanical Design With Coating on PCBs
- Superior Thermal Design
- Wide Range, Programmable Output Adjustment
- Input Voltage Transient Protection

Benefits

- High Reliability in Harsh Environments
- Long Life Even at 71°C Operation
- Reduces The Need For custom Outputs
- Reduced System Filtering

Model Selector

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

600-1200W Single Output Modular Power Supplies

[Full Datasheet](#)

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

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



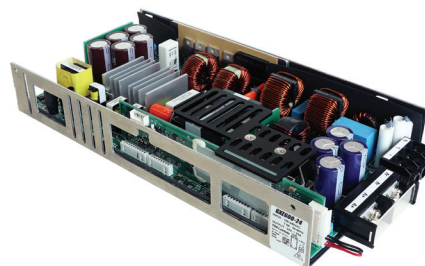
Specifications		
Model	QS	
Input Voltage Range	VAC	90-264Vac. QS5H limited to 700W output power below 180Vac input
Input Frequency Range	Hz	47 - 63Hz (440Hz with reduced PFC)
Inrush Current	A	QS5 & QS5H <40A, QS7 <45A at 25°C and 264Vac (cold start)
Touch Current	µA	<100µA
Leakage Current (maximum)	µA	<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 & Ouput: 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

[Full Datasheet](#)

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



Medical



Industrial



Test



Broadcast



COMM

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

- Convection Cooled
- Up to 95% Efficient
- RS-485 Read-Write Communication (Modbus RTU protocol)
- Constant Voltage & Constant Current Modes
- Monitoring & Programming Functions
- Digital or Analog Programming
- Seven Year Warranty

Benefits

- Quiet Operation
- Lower Operating Costs
- Suitable for Communication in Industrial Applications
- Versatile Use
- Allows Remote Monitoring and Operation
- Easier System Integration
- Low Cost of Ownership

Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment Manual (V)	Output Adjustment Programming ⁽¹⁾ (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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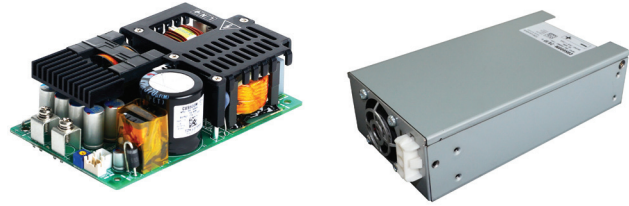
Output voltage 24, 48

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

3 x 5" 600W AC-DC Power Supplies

[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 Utilisation
• 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																							
<table border="1"> <thead> <tr> <th>Features</th> <th>CUS600M-</th> <th>CUS600M1-</th> </tr> </thead> <tbody> <tr> <td>Standby Voltage</td> <td></td> <td></td> </tr> <tr> <td>Remote On/Off</td> <td>Yes</td> <td>Not Available</td> </tr> <tr> <td>Remote Sense</td> <td></td> <td></td> </tr> <tr> <td>Power Good Signal</td> <td></td> <td></td> </tr> </tbody> </table>	Features	CUS600M-	CUS600M1-	Standby Voltage			Remote On/Off	Yes	Not Available	Remote Sense			Power Good Signal			Output voltage 12, 19, 24, 28, 32, 36, 48		<table border="1"> <tbody> <tr> <td>blank</td> <td>Open frame construction</td> </tr> <tr> <td>/EF</td> <td>Enclosed with end fan (exhaust air)*</td> </tr> <tr> <td>/ADJ</td> <td>Output adjustment potentiometer**</td> </tr> <tr> <td>/SF</td> <td>Single input fuse in line**</td> </tr> </tbody> </table>	blank	Open frame construction	/EF	Enclosed with end fan (exhaust air)*	/ADJ	Output adjustment potentiometer**	/SF	Single input fuse in line**
Features	CUS600M-	CUS600M1-																								
Standby Voltage																										
Remote On/Off	Yes	Not Available																								
Remote Sense																										
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blank	Open frame construction																									
/EF	Enclosed with end fan (exhaust air)*																									
/ADJ	Output adjustment potentiometer**																									
/SF	Single input fuse in line**																									

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

** Not available for CUS600M1 models

Other options are available, please contact sales

(1) Class II operation may require additional EMC filtering, contact factory for assistance.

720-1000W Conduction Cooled Power Supplies

[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	Benefits
• Fanless	• Longer Field Life and No Fan Noise
• Integral Baseplate Cooling	• Conducts Heat Outside of the System Enclosure
• Wide Range AC Input	• Supports Global Use
• I ² C Interface	• 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

[Full Datasheet](#)

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

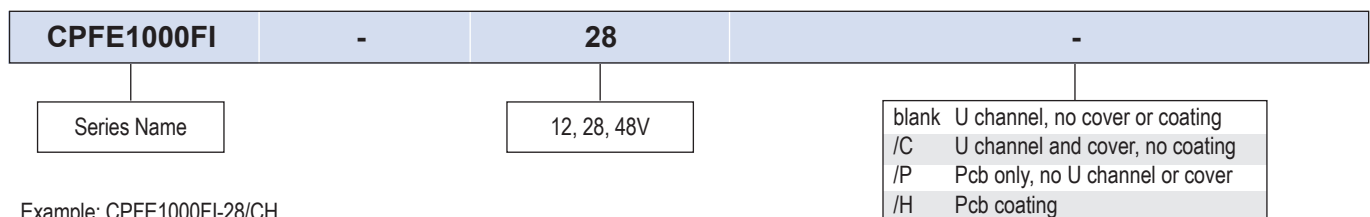


The CPFE1000FI series industrial AC-DC power supplies offer output power up to 1008W in a conduction cooled low profile package. Features include voltage and current programming, remote on/off, remote sense, a standby supply, i²C communication, and wide operating temperature range of -40°C to +70°C.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



Derating Ambient Temperature ⁽¹⁾					
Model	Input Voltage	Output Power (W)			
		45°C	50°C	60°C	70°C
CPFE1000FI-12	85Vac to 170Vac	720	720	720	720
	170Vac to 265Vac	720	720	720	720
CPFE1000FI-28	85Vac to 170Vac	1008	980	952	896
	170Vac to 265Vac	1008	1008	1008	1008
CPFE1000FI-48	85Vac to 170Vac	1008	1008	1008	1008
	170Vac to 265Vac	1008	1008	1008	1008

1000W to 1500W Single Output General Purpose Power Supplies

[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 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

- Seven Year Warranty
- Conservative Electrolytic Capacitor Ratings
- Class B Conducted and Radiated EMI
- Configurable Output Screw Terminal Block Orientation
- Compact, Enclosed Construction

Benefits

- Low Cost of Ownership
- Long Service Life
- Easier System EMC Compliance
- Simplified Cable Connections
- 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

[Full Datasheet](#)

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

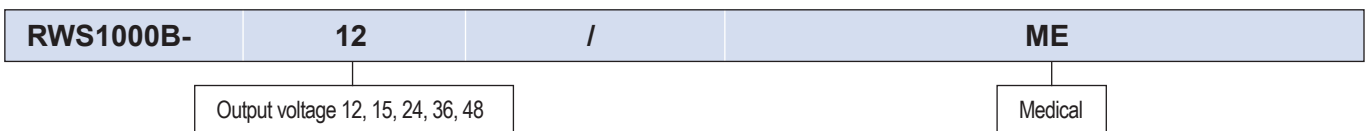


Medical

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 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	• 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



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

1500W Medical and Industrial Power Supplies

[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 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

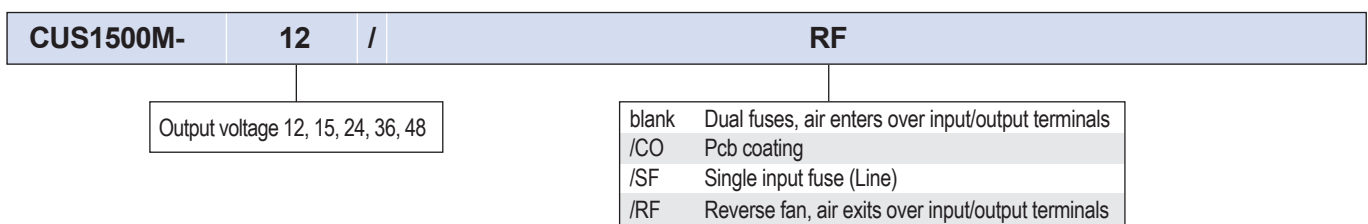
- Low Audible Noise Fan (<45dBA)
- Medical Certification (2 x MoPP)
- Class B Conducted and Radiated EMI
- Compact 127 x 63 x 261mm (5 x 2.48 x 10.28") Package
- Seven Year Warranty

Benefits

- Quiet Operation
- Suitable for B and BF Rated Equipment
- Easier System Compliance
- Space Saving in End Equipment
- 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



Option combinations are available, please contact your local sales office

1600W 1U Industrial Power Supplies

[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

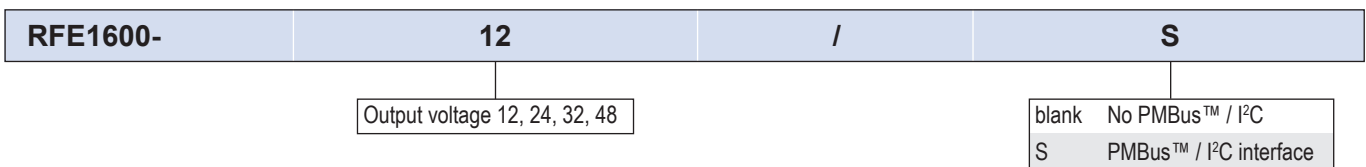
- Internal ORing MOSFET and Current Share
- Up to 1600W in 1U Height
- Full Array of Signals Available
- PMBus™ (I²C) and LAN options
- Analog Output Adjustment

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⁾
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



1800W 208Vac 3-Phase Industrial Power Supplies

[Full Datasheet](#)

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



Industrial



Test



Broadcast



COMM



Semi-Fab

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

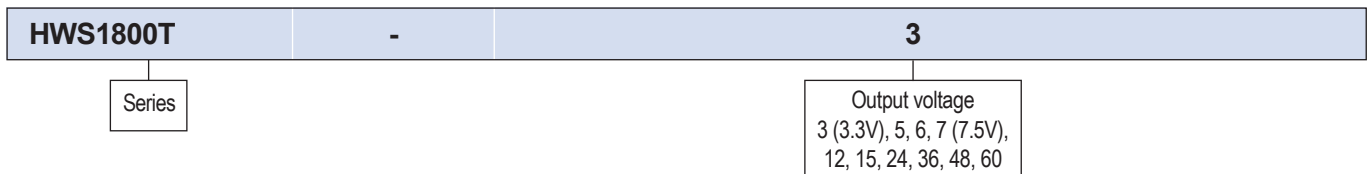
- Limited Lifetime Warranty
- Very Conservative Electrolytic Capacitor Ratings
- Output Voltage Programming
- Peak Power Capability

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



2500W 1U Industrial Power Supplies

[Full Datasheet](#)

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

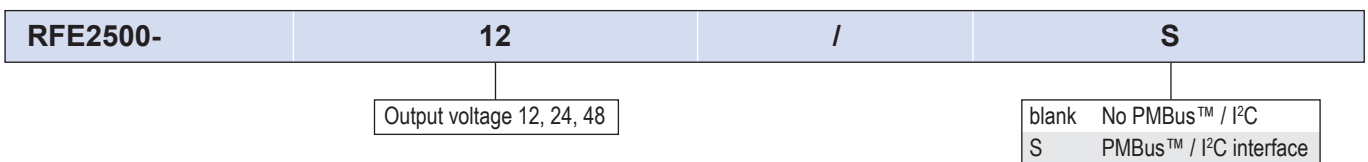


The RFE2500 AC-DC industrial power supplies are high efficiency and 1U in height. They have internal ORing MOSFETs and current share for parallel operation. Communication is possible with the power supplies using the optional isolated PMBus™ (I²C) interface. AC fail, DC good, remote output adjust, remote 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™ (I ² C) and LAN options	• Industry Standard Communication Interfaces
• 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



3200W 3-Phase Input Industrial Power Supplies

 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) ⁽⁴⁾	Maximum Current (A)	Maximum Power (W)	Max Current (A) ⁽³⁾	Maximum Power (W) ⁽³⁾
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.

Specifications

Model		TPF3000
Input		
Input Voltage range	Vac	350 - 528, Delta or Wye 3 phase
Input Frequency	Hz	47 - 63Hz
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 Agency Certifications	-	IEC/UL/CSA/EN62368-1, 60950-1, CE Mark
Voltage Dips	-	SEMI F47-0706

4080W 3-Phase Input Industrial Power Supplies

[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.

Features

- 400/440/480 VAC (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)	Max Current (A)	Max Power (W)	Max Current at Nominal Voltage (A)	Max Power at Nominal Voltage (V)
TPS4000-24	24	19.2 - 28.5	166	4000	170	4080
TPS4000-48	48	38.4 - 58	83.3	4000	85	4080

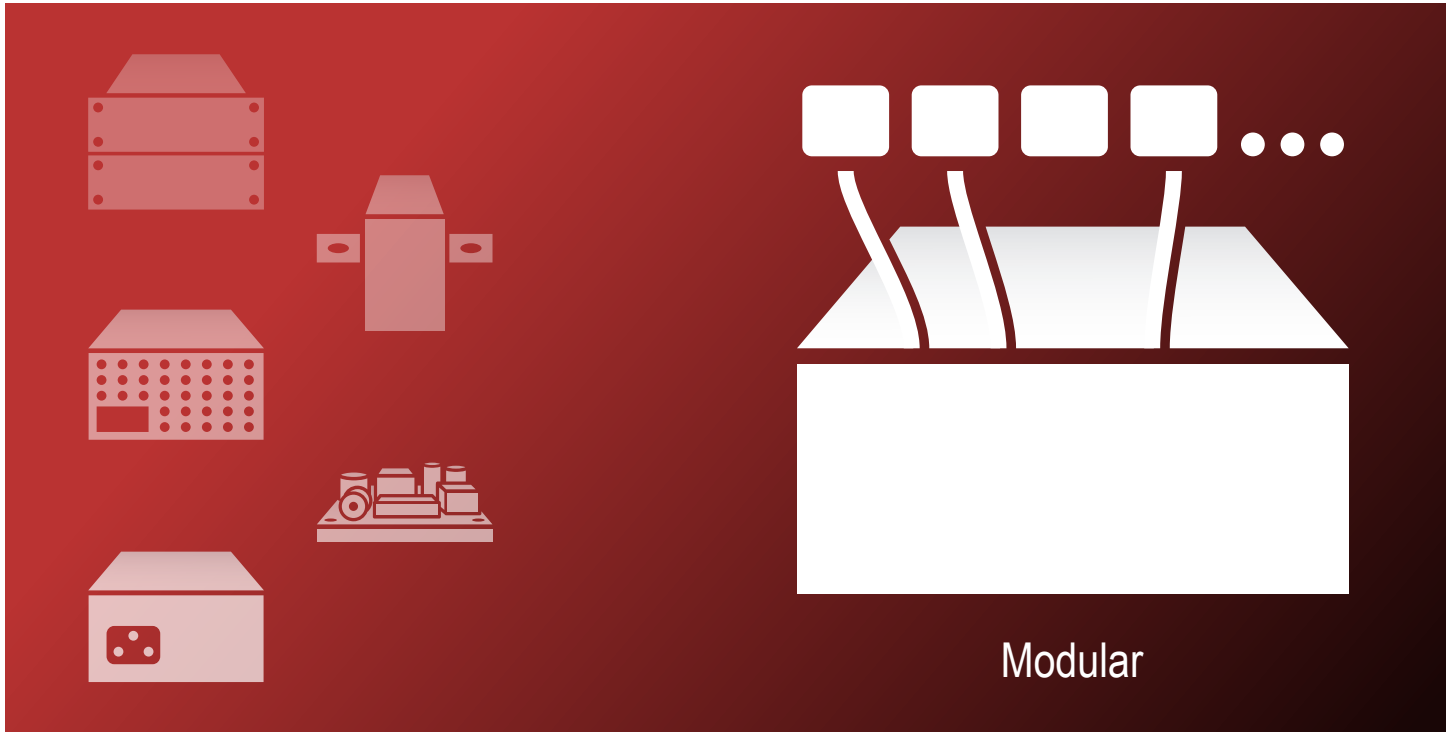
*Wider range adjustment as stated on the UL safety files are possible, although some parameters might not meet some of the listed specifications.

Specification

Model		TPS4000
Input		
Input Voltage range	V	350 - 528VAC, Delta or Wye 3 phase
Input Frequency	Hz	47 - 63Hz
Input Current (At nominal Vin)	A	8A per phase (steady state)
Inrush Current at 400-480VAC (Cold Start)	A	<25A per phase (excluding initial filter capacitor charging <2ms)
Dropped Phase Power	W	1600W. Not recommended for long term operation
Leakage Current	uA	<3mA
Power Factor (400-480VAC)	-	0.92 typical at rated load, nominal Vin
Harmonics	-	Not applicable
Hold Up Time (typ) at 115VAC Input	ms	>10ms at 80% of rated current, nominal input/output voltage
Efficiency (Typical)	-	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 Agency Certifications	-	IEC/UL/CSA/EN62368-1, 60950-1, CE Mark



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	38
450-900W	1-10	Vega	39
550-900W	1-10	Vega-Lite	40
550-2000W	1-18	QM	41

Listed by Wattage

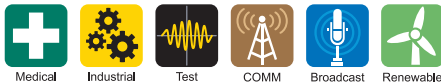
350W-1150W Modular Power Supplies

[Full Datasheet](#)

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

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



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 45C 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.

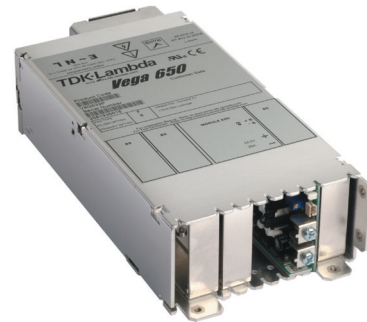
450-900W Multiple Output Modular Power Supply

[Full Datasheet](#)

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

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



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 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) 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

[Full Datasheet](#)

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

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



Specifications

Model		VEGA Lite 550	VEGA Lite 750
Input Voltage Range	(1)	-	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	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

550-2000W Multiple Output Modular Power Supplies

[Full Datasheet QM4](#)

[Full Datasheet QM5](#)

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

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



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 QM5: 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

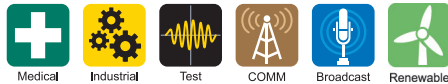
[Full Datasheet QM7](#)

[Full Datasheet QM8](#)

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

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



Specifications

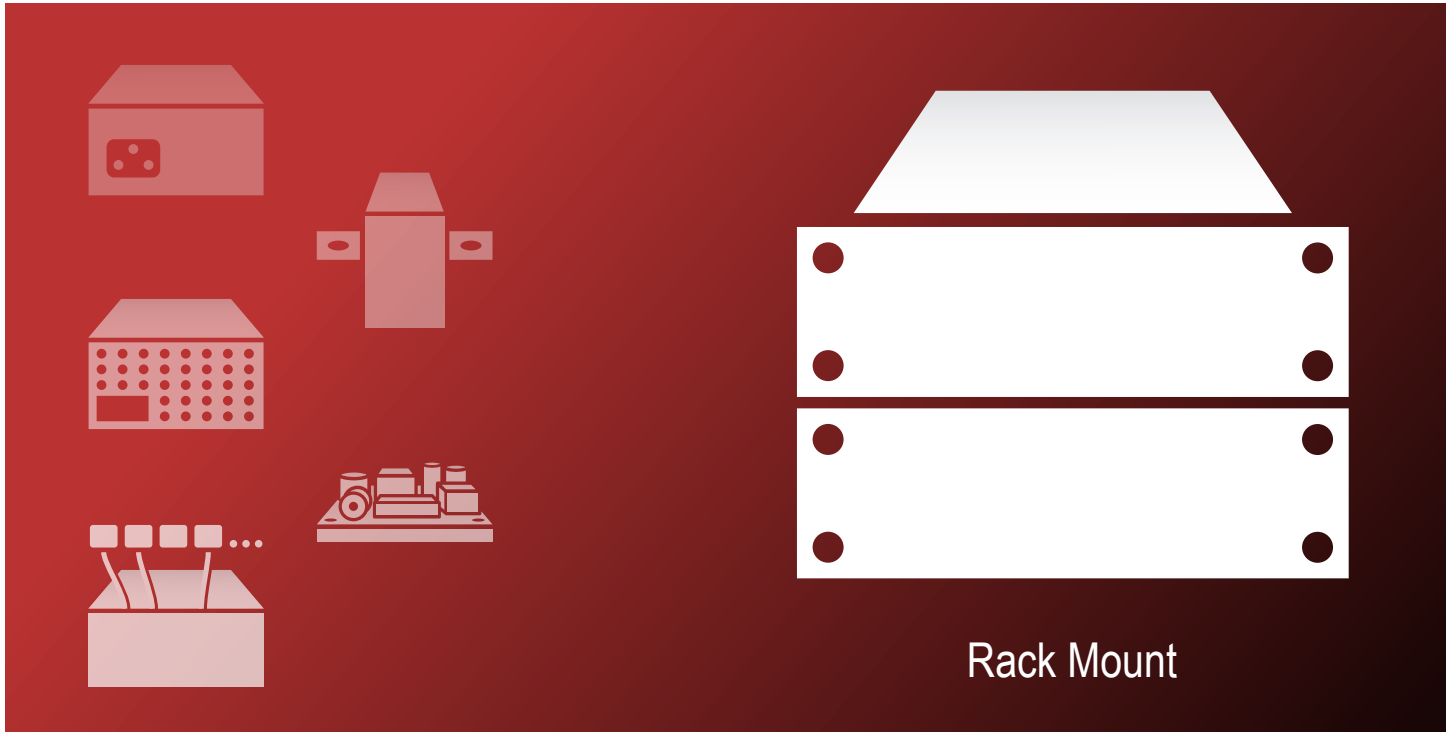
Model		QM7	QM8	QM8B
Input Voltage Range	VAC	1200W output 90 - 264 VAC 1500W output: 150 - 264VAC	1200W output 90 - 264 VAC 1500W output: 180 - 264VAC	1200W output 90 - 264 VAC 2000W output: 180 - 264VAC
Input Frequency Range	Hz	47 - 63Hz (440Hz with reduced PFC)		
Inrush Current	A	<45A at 25°C & 264VAC (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	45
2500W	1	HFE2500	46
200-800W	1	Z+ Low Voltage	99
200-800W	1	Z+ High Voltage	100
600-15000	1	<i>Genesys™</i>	101
1000-15600	1	<i>GENESYS+™</i>	107
4000-50000	1	ALE-Rack Mount	86
4500-45000	1	TPF45000	47
300-1000	1	SFL Electronic Loads	115
2500	1	EZA2500 (DC/DC)	140
11000	1	EZA11K-320240 (DC/DC)	141

Listed by Wattage

1600W 1U Front End Power Supplies

[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

[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

[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.

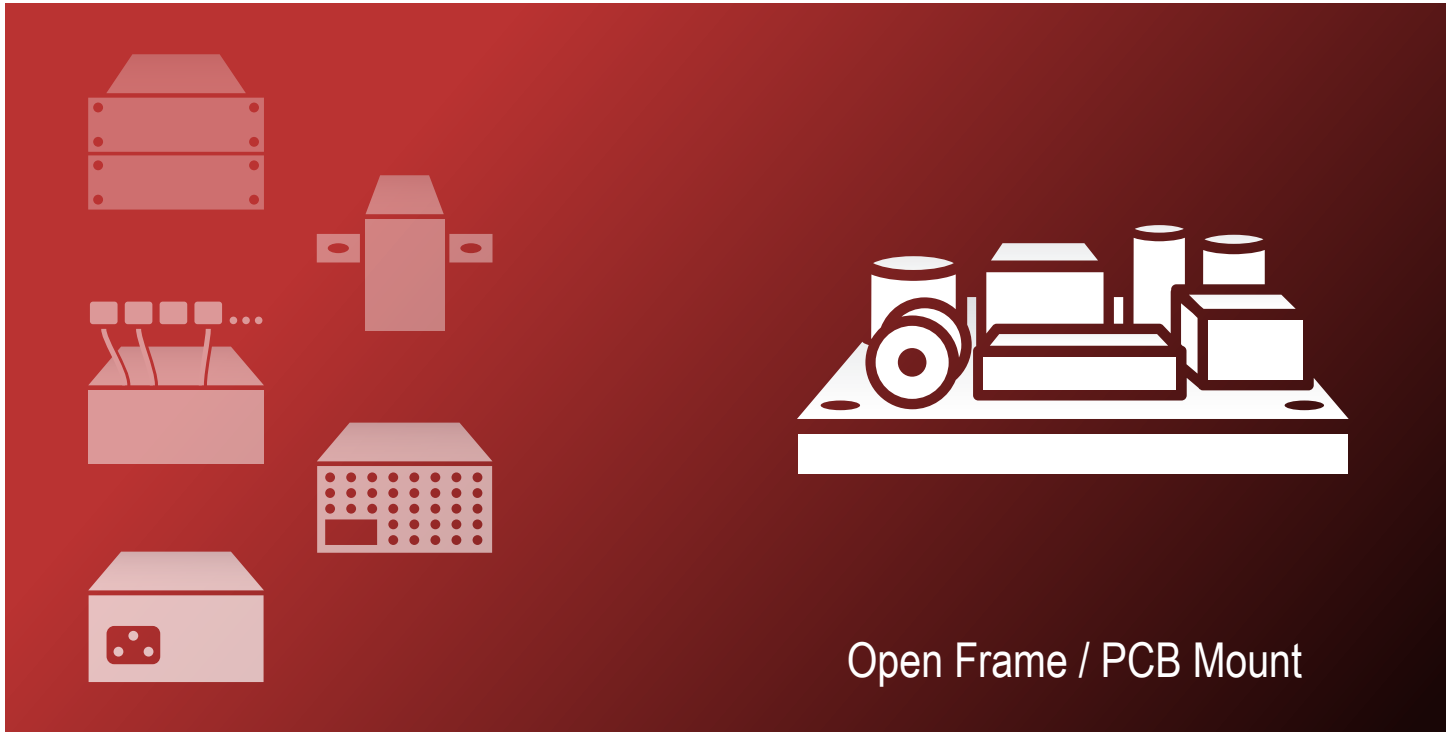
Features	Benefits
• 400/440/480 Vac (Nominal) 3 Phase Delta or Wye Inputs	• Global Use
• PMBus™ and USB Interfaces	• Flexible Control and Monitoring
• -20°C (Start-Up) to +50°C Operation	• Suitable for Industrial Environments
• 98% Efficient	• Less Energy Used
• Less than 30kg Weight	• Easier Handling

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

Specifications		
Model	TPF45000-385	
Input		
Input Voltage range	V	360 - 528Vac, Delta or Wye 3 phase
Input Frequency	Hz	47 - 63
Input Current (At nominal Vin)	A	75 at 400Vac, 65 at 480Vac per phase
Inrush Current (400-480Vac)	A	<150 per phase (excluding initial filter capacitor charging <2ms) at 25°C ambient, cold start
Dropped Phase Power	W	15,000
Leakage Current	mA	<40
Power Factor (400-480Vac)	-	0.94 typical at rated load, nominal Vin
Harmonics	-	Not applicable
Hold Up Time (typ at nominal input)	ms	10 (80V output drop)
Efficiency (Typical)	%	98 at 25°C ambient, nominal input and at 100% of the rated load
Conducted & Radiated EMI	-	EN55032 Class A, FCC part 15 Class-A (In end system with external filter)
Immunity	-	EN61000-4-2, -3, -4, -5, -6, -8, -11 (see immunity table)
Line Dip	-	SEMI F47-0706 at 480Vac nominal (see immunity table)
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, CE Mark and UKCA Mark



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	ZWS10-30B	50
30-60W	1	CUS30/60M	51
33-302W	1	ZWS-BAF	52
35W	3	CUT35	53
75W	2, 3	CUT75	54
100W	1	CUS100ME	55
150W	1	CUS150M	56
150-240W	1	ZWS-BP	57
175-200W	1-5	NV175	58
200-250W	1	CUS200M	59
240W	1	ZWS240RC-24	60
250W	1	CUS250M	61
300W	1	ZWS300BAF	52
350-1000W	1	CUS350MP	62
400W	1	CUS400M	63
500W	1	CUS500M1	64
500W	1	XMS500	65
600W	1	CUS600M	66
480W/380ms holdup	1	ZBM20 (Hold Up Module)	67

Listed by Wattage

AC/DC PCB Mount Index by Wattage

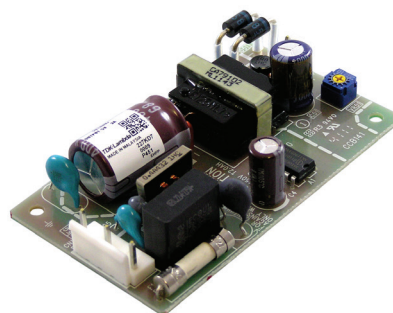
Wattage	Number of Outputs	Series	Page
5-25W	1	KPSB	68
5-25W	1	KWS-A	69
15-60W	1	KMS-A	70
300-1000W	1	PFE300SA/500F/1000FA	71
500W	1	PFH500F	72

Listed by Wattage

6.6 to 30W Single Output, High Reliability Power Supplies

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

The ZWS-B 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-B to provide a reliable source of power. Conservatively rated electrolytic capacitor temperatures offer improved field life-times of up to 10 years. Available in three power levels, 10W, 15W and 30W, the series provides a choice of 3.3 to 24V outputs. L bracket and cover 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)
ZWS10B-3	3.3	2.97-3.63	2	6.6	120	>2.1	4.0-5.25	70 / 70
ZWS15B-3	3.3	2.97-3.63	3	9.9	120	>3.15	4.0-5.25	70 / 71
ZWS30B-3	3.3	2.97-3.63	6	19.8	120	>6.3	4.0-5.25	75 / 77
ZWS10B-5	5	4.5-5.5	2	10	120	>2.1	5.75-7.0	77 / 78
ZWS15B-5	5	4.5-5.5	3	15	120	>3.15	5.75-7.0	76 / 78
ZWS30B-5	5	4.5-5.5	6	30	120	>6.3	5.75-7.0	80 / 82
ZWS10B-12	12	10.8-13.2	0.9	10.8	150	>0.95	13.8-16.2	82 / 83
ZWS15B-12	12	10.8-13.2	1.3	15.6	150	>1.37	13.8-16.2	80 / 83
ZWS30B-12	12	10.8-13.2	2.5	30	150	>2.63	13.8-16.2	84 / 86
ZWS10B-15	15	13.5-16.5	0.7	10.5	150	>0.74	17.3-20.3	83 / 84
ZWS15B-15	15	13.5-16.5	1	15	150	>1.05	17.3-20.3	81 / 84
ZWS30B-15	15	13.5-16.5	2	30	150	>2.1	17.3-20.3	85 / 87
ZWS10B-24	24	21.6-26.4	0.5	12	150	>0.53	27.6-32.4	84 / 85
ZWS15B-24	24	21.6-26.4	0.7	16.8	150	>0.74	27.6-32.4	82 / 85
ZWS30B-24	24	21.6-26.4	1.3	31.2	150	>1.37	27.6-32.4	86 / 88

ZWS	30	-B	-	3	/	
	Nominal power: 10, 15, 30			Output voltage: 3 (3.3V), 5, 12, 15, 24		
		Suffix		Description		
		Blank		Open frame		
		/A		L-bracket & cover		
		/L		L-bracket		
		/CO2		Double sided PCB coating		

Option combinations are available, please contact your local sales office

Single Output 30 to 60W Medical & ITE Power Supplies

[Full Datasheet](#)

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



Medical



Industrial



Test



COMM



Broadcast



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

- 30 to 60W Convection Cooled
- Medical Certification (2 x MoPP)
- Class B Conducted and Radiated EMI
- Suitable for Class I and II Installations
- Compact 2" x 3" Footprint
- Enclosure, Mounting and Connection Options

Benefits

- Quiet Operation
- Suitable for B and BF Rated Equipment
- Easier System Compliance
- Flexible Utilisation
- Space Saving in End Equipment
- 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

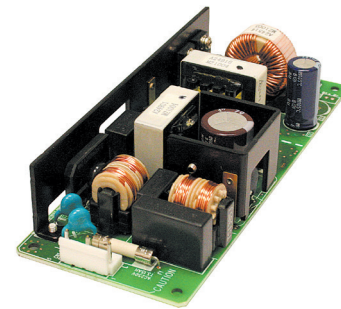
Suffix	Description
Blank	Open frame, JST connectors
/A	Cover, JST connectors. See website for derating
/CO	Open frame, JST connectors, pcb coating
/M	Open frame, Molex 5195-03 & -04 mating connectors
/P	Open frame, JST connectors, Pcb mount
/SF	Open frame, JST connectors, single fuse, (Line only)

Option combinations are available, please contact your local sales office

33 to 302W Single Output, High Reliability Power Supplies

[Full Datasheet](#)

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



LED



Industrial



Test



COMM



Broadcast

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

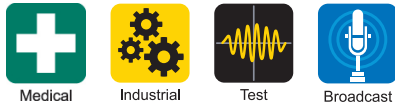
Model Selector

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

[Full Datasheet](#)

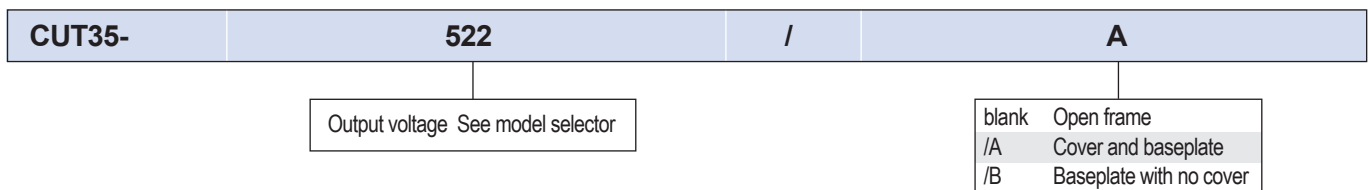
<https://product.tdk.com/en/power/cut>



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

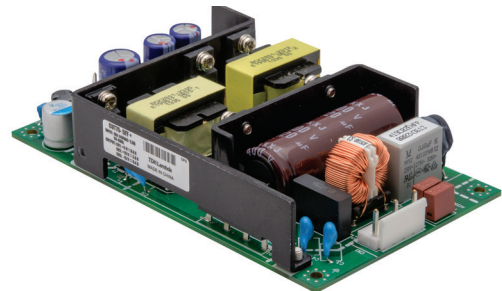
Model Selector								
Model		Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Power (W)	Load Reg (mV)	Line Reg (mV) ⁽¹⁾	Ripple Noise (mV) ⁽¹⁾
CUT35-522	V1	5	5 - 5.25	3.0	15.0	100	50	120
	V2	+12	Fixed	1.2	20.4	600	240	150
	V3	-12	Fixed	0.9		600	240	150
CUT35-522	V1	5	5 - 5.25	3	15	100	50	120
	V2	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)							



75W Dual or Triple Output Low Profile Power Supplies

[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

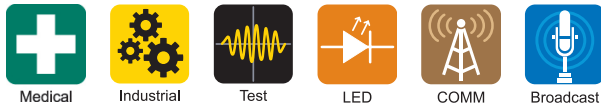
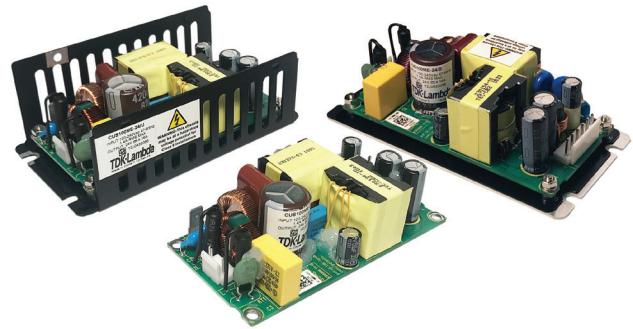
blank	Open frame with JST connectors
/A	Cover with JST connectors
/B	Baseplate with JST connectors
/T	Open frame with screw connections
/TA	Cover with screw connections
/TB	Baseplate with screw connections

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 be 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.

Features

- Up to 100W Utilizing Convection or Conduction Cooling
- Operation in Ambient Temperatures of up to 85°C
- Medical Certifications (2 x MOPP)
- Class B Conducted and Radiated EMI
- Suitable for Class I and Class II installations
- Compact 2 x 4 x 1.24" Size
- Enclosure & Cooling Options

Benefits

- Quiet Operation
- Suitable for High Ambient Temperature Environments
- Suitable for B and BF Type Medical Equipment
- Easier System EMC Compliance
- Flexible Utilisation
- Space Saving in End Equipment
- 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

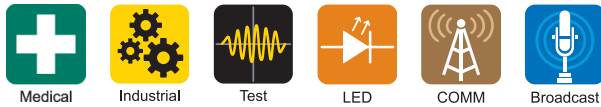
CUS100ME-	12	/	U	E	M
Output voltage 12, 15, 18, 24, 28, 36, 48			blank open frame U U channel A U channel with cover B baseplate	blank dual fuses E ⁽²⁾ single input fuse in line	blank JST connectors M ⁽²⁾ Molex connectors

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

2 x 4" 150W AC-DC Power Supplies

[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.

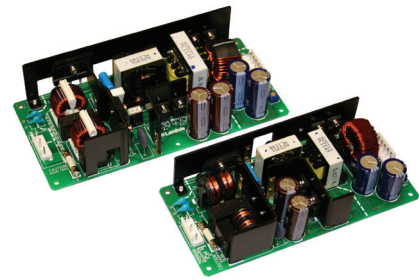
Features	Benefits
• Up to 150W Utilizing Convection or Conduction Cooling	• Quiet Operation
• Operation in Ambient Temperatures of up to 85°C	• Suitable for High Ambient Temperature Environments
• Medical Certifications (2 x MOPP)	• Suitable for B and BF Type Medical Equipment
• Class B Conducted and 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

[Full Datasheet](#)

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



Industrial



Test



COMM

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

[Full Datasheet](#)

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

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)



Specifications		NV175
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

[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

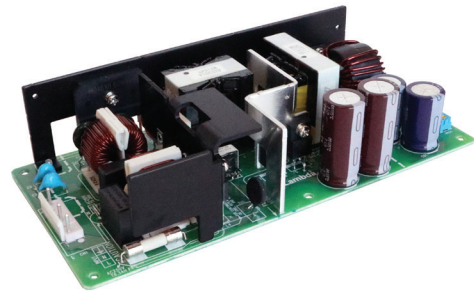
Options

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>

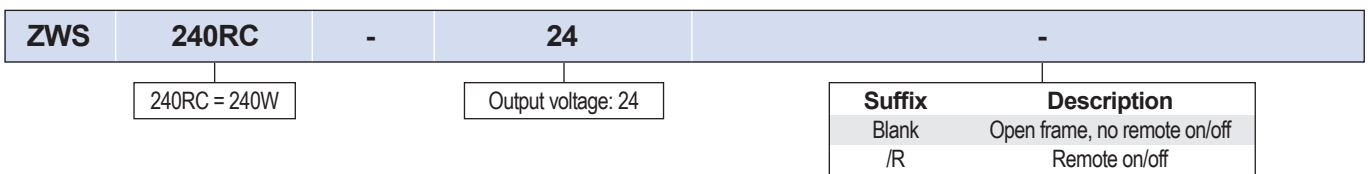


Industrial

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

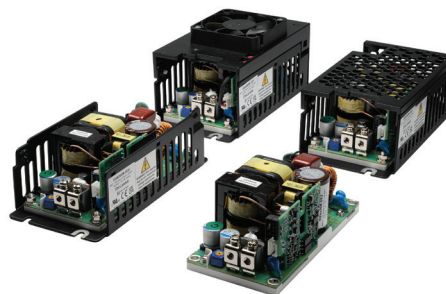
Model Selector				
Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Output Power (W)
ZWS240RC-24	24	21.6 - 26.4	10	240



2 x 4" 250W AC-DC Power Supplies

[Full Datasheet](#)

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



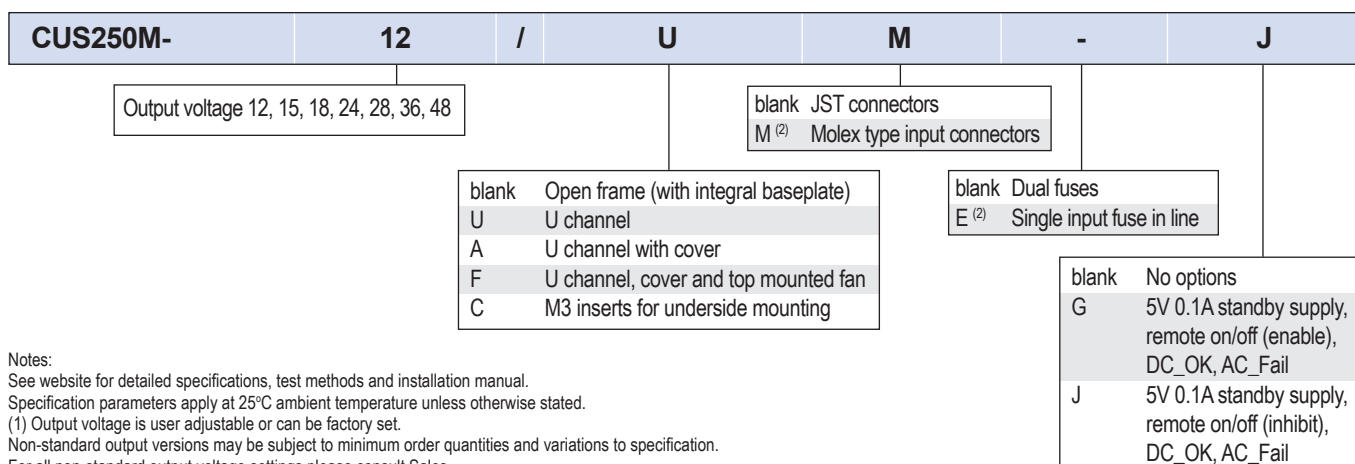
The compact CUS250M is packaged in the industry standard 2x4" footprint. The series can deliver 250W with forced air or conduction cooling in ambient temperatures of up to 50°C. With Medical & ITE certifications, the unit can be used in both Class I & Class II (no ground wire) applications, and meets Class B Conducted and Radiated EMI with generous margins. 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
• Suitable 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

Contact Factory for availability - expected Q2 2023

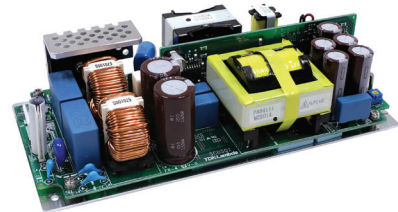


Notes:
See website for detailed specifications, test methods and installation manual.
Specification parameters apply at 25°C ambient temperature unless otherwise stated.
(1) Output voltage is user adjustable or can be factory set.
Non-standard output versions may be subject to minimum order quantities 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

[Full Datasheet](#)

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



Medical



Industrial



Test

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 (OVCI) 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

- Up to 350W Convection Cooled or 500W With External Airflow
- High Peak Power Rating up to 800W for 5s or 1,000W for 1s
- Medical Certification (2 x MoPP)
- Class B Conducted and Radiated EMI
- Compact 88 x 183 x 44mm (3.46 x 7.2 x 1.73") Package
- Five Year Warranty

Benefits

- Low Audible Noise
- Size and Cost Reductions Compared to Continuously Rated Products
- Suitable for B and BF Rated Equipment
- Easier System Compliance
- Space Saving in End Equipment
- 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

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TA

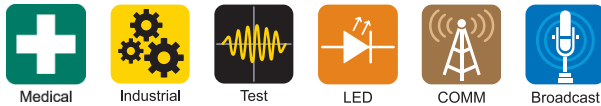
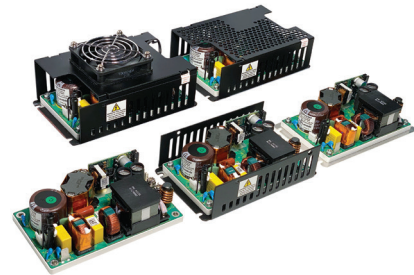
Output voltage 24, 30, 36, 48

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

[Full Datasheet](#)

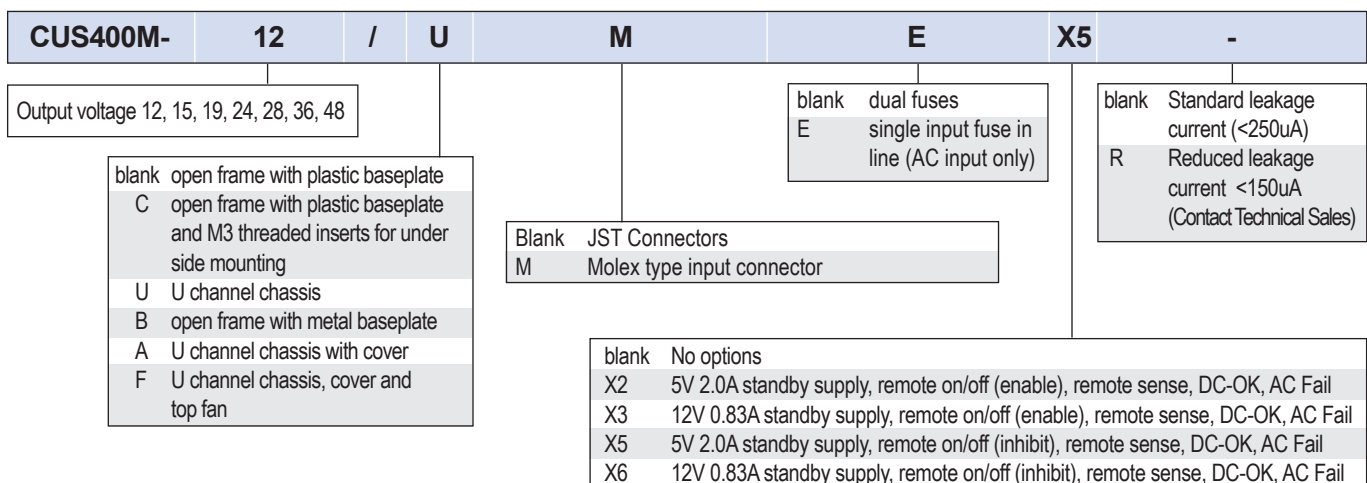
<https://product.tdk.com/en/power/cus-m>



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

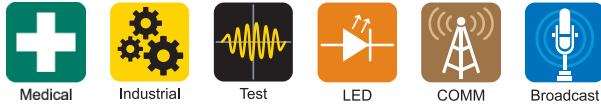
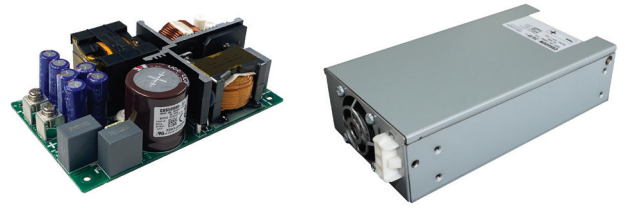


Example: CUS400M-15V25/FEX5 = 15.25V factory output voltage set point, U chassis, cover and fan, single fuse, X5 standby and signals

3 x 5" 500W AC-DC Power Supplies

[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	Benefits
• 300W (500W Peak) Convection Cooled	• Quiet Operation
• 500W 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 and end fan models	• 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
	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

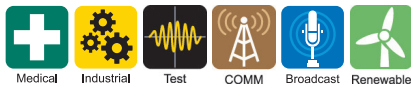
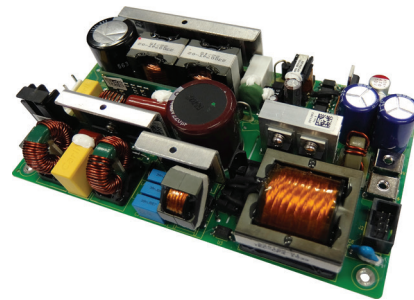
500W Configurable AC-DC Power Supplies

[Full Datasheet](#)

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

Features

- ITE & Medical Certifications (2 x MOPP)
- Class I and Class II operation with Level B EMC
- Compact 4 x 7.1" Footprint
- Suitable for B and BF Rated Equipment
- Five Year Warranty



Specifications ⁽¹⁾

Model		XMS500
Input Voltage range		90 - 264VAC (47 - 63Hz)
Inrush Current (Cold start at 264VAC input)	A	<40A
Hold Up Time (Typ)	ms	≥16ms
Harmonic Compliance	-	EN/IEC61000-3-2 compliant. 0.97 at 110Vac input
Leakage Current	uA	<150uA (Class I construction) - See model selector
Touch Current (enclosure leakage)	uA	<100uA - See model selector
Ripple & Noise	mV (pk-pk)	≤1%
Total Regulation	%	≤2% (Line, load and temperature)
Short Circuit Protection	-	Hiccup mode, automatic recovery
Overvoltage Protection	V	Latching (unit shutdown), cycle AC input to reset
Efficiency	%	Up to 92% (230VAC input, 100% load)
Operating Temperature	°C	0 to +70°C, derate linearly to 50% load from 50 to 70°C. -20°C start-up
Storage Temperature	°C	-40 to +85°C (+70°C for top fan versions)
Humidity (non condensing)	%RH	5 - 95%RH
Cooling	-	Forced air (500W): 1m/s airflow or top mount fan; Convection (250W minimum) ⁽²⁾
Withstand Voltage	VAC	Input to Ground 1.5kVAC (1xMOPP) Class I only, Input to Output 4kVAC (2xMOPP), Output to Ground 1.5kVAC (1xMOPP) Class I only
Insulation Class	-	Class I or Class II - See model selector
Vibration (non operating)	-	10 to 200Hz at 2G. Conforms to IEC610068-2-6, IEC68-2-6 MIL-STD-810G, Method 514.6, Pro I, Cat 4, 10
Shock	-	±3 x 30g shocks in each plane, total 18 shocks, 30g shock = 11ms (±0.5msec), half sine Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987. Conforms to MIL-STD-810G, Method 516.6, Pro I, IV
Safety Agency Certifications	-	IEC/ENUL60950-1, 62368-1 & 60601-1. ANSI/AAMI ES60601-1. Designed to meet IEC61010-1
Altitude	m	-200 to 5000m operational (3000m for 60601-1) (-200 to 5000m storage/transportation)
Conducted & Radiated EMI	-	EN55011 / EN55032 Class B, EN60601-1-2:2015 4th Edition
Immunity	-	EN61000-4-2, -3, -4, -5, -6, -8, -11, -12 and -14, EN60601-1-2:2015 4th Edition
Weight (Typ)	g	See application notes
Size (WxLxH) Open frame version	In (mm)	4 x 7.1 x 1.46" (102 x 180 x 37mm)
Warranty	yrs	Five years
Connectors	-	Molex as standard with separate ground faston See Installation Manual for part numbers

Note: 1. See website for detailed specifications

2. Higher convection rating possible depending on configuration, mounting orientation, and specific application operating conditions. Please contact Tech Support with detailed requirements.

3 x 5" 600W AC-DC Power Supplies

[Full Datasheet](#)

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



Medical



Industrial



Test



LED



COMM



Broadcast



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

- 400W (600W Peak) Convection Cooled
- 600W 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 & Other Options

Benefits

- Quiet Operation
- Can Utilize System Airflow or Integrated Fan
- Suitable for B and BF Type Medical Equipment
- Easier System EMC Compliance
- Flexible Utilisation
- Space Saving in End Equipment
- 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-	
Standby Voltage			
Remote On/Off	Yes	Not Available	
Remote Sense			
Power Good Signal			
	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**

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

** Not available for CUS600M1 models

Other options are available, please contact sales

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

[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	Benefits
• Provides 380ms Additional Hold-Up Time at Max Buffer Power	• Avoids Loss of Data During AC Power Interruptions
• Utilizes Electrolytic Capacitors to Store Energy	• No Batteries to Service or Maintain
• Five Year Warranty	• Lower Cost of Ownership
• Parallel Capable	• Hold-Up Time Can Be Extended
• Output Remote On/Off Function	• 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

5-25W AC-DC Board Mount Power Supplies

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast



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

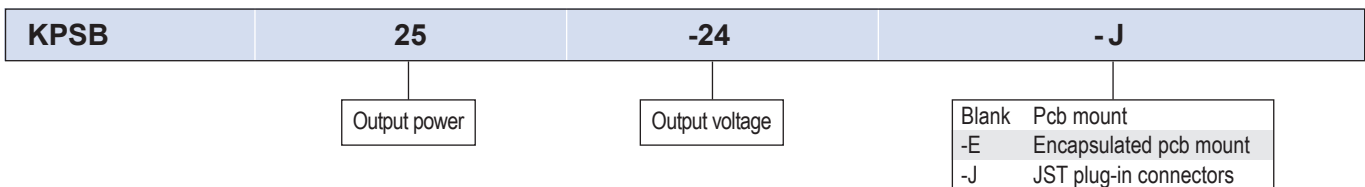
- High Efficiency, Up to 87%
- Class B EMI
- Low No Load Power Consumption
- Wide Operating Temperature
- Class II, Wide Range Input (90-264VAC)

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



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

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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)% 115/230V
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

[Full Datasheet](#)

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



Medical



Industrial



Test



COMM



Broadcast

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

- 4kVac Input to Output Isolation (2 x MoPP)
- Wide Temperature Range (up to -40 to +80°C)
- Low No Load Power Consumption
- Class II Double Insulated Construction
- Epoxy Encapsulated

Benefits

- Suitable for B & BF Applications Worldwide
- Suitable for Harsh Environments
- Energy Saving
- No Ground Connection Needed
- Improved Shock and Vibration Performance

Model Selector

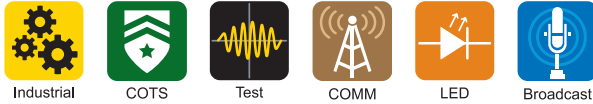
Model	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	Ripple & Noise (mVpk-pk)	Efficiency (at 230Vac) (%)	Maximum Load Capacitance (uF)
KMS15A-5	5	3	15	120	79	7,000
KMS30A-5	5	5	25	100	84	6,800
KMS60A-5	5.1	10	51	100	86	10,000
KMS15A-9	9	1.666	15	120	80	5,000
KMS60A-9	9	6.666	60	100	87	5,000
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

[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
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Output voltage 12, 28, 48

blank / T Threaded mounting hole non threaded mounting hole

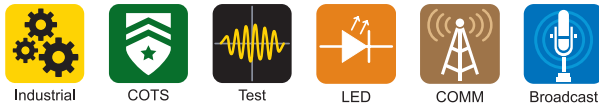
Related Products

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

[Full Datasheet](#)

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

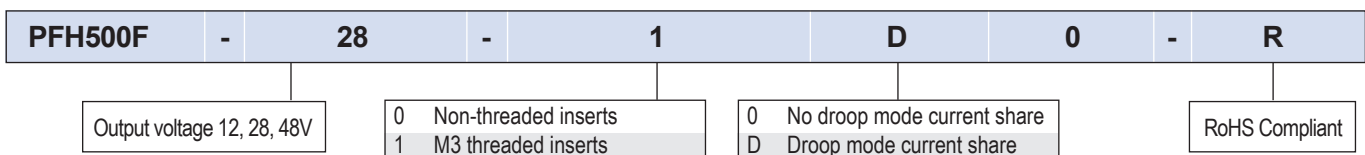


The 4" x 2.4" footprint, high efficiency PFH500 series of AC-DC power modules are used in environments where convection or forced air cooling is not viable. Suitable for use in outdoor enclosures or liquid cooled applications, these pcb mounted power modules accept a wide range AC input and deliver an 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	Benefits
• Compact 4" x 2.4" x 0.53" Brick Package	• Less Board Area Required
• Metal Case	• Easier Thermal Management and Lower Radiated EMI
• High Power Density, High Efficiency	• Less Waste Heat to Manage and Reduced AC Power Consumption
• 100°C Rated Baseplate Temperature	• Cold plate / Conduction Cooling for Fanless and Rugged Environments
• PMBus™ Interface	• Remote Monitoring and Programming via i ² C
• Optional Droop Mode Load Sharing	• Simplified Paralleling for Higher Power or Redundant Applications

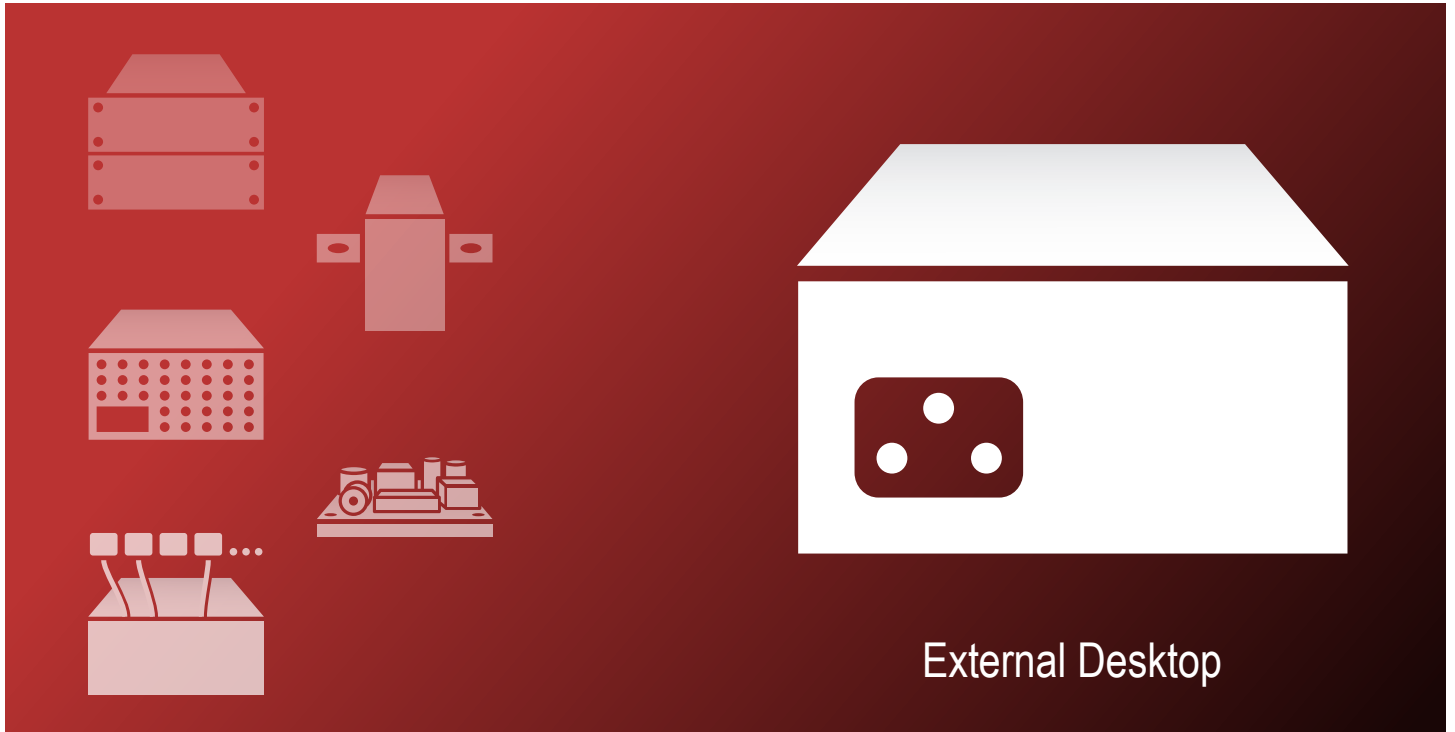
Model Selector

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





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	75
25-36W	1	DTM36-C8	76
40-65W	1	DTM65-C8	77
40-65W	1	DTM65-D	78
40-80W	1	DT62-80D	79
100-150W	1	DT100-150-D	80
110W	1	DTM110-C8	81
250W	1	DTM250-D	82
300W	1	DTM300-D	83

Listed by Wattage

25 to 30W Medical Wall Mount Power Supplies

[Full Datasheet](#)

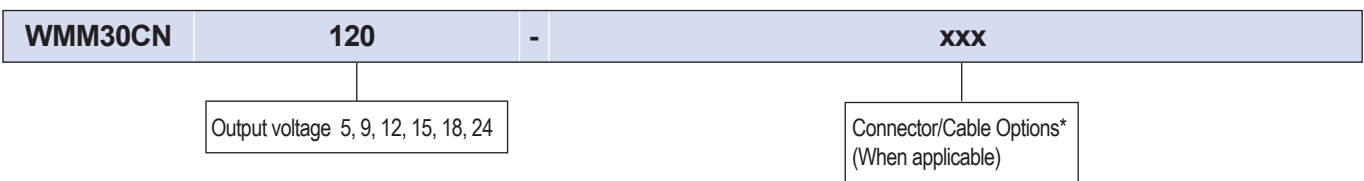
<https://product.tdk.com/en/power/wmm>



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	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, <0.075W 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)	Oversvoltage 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



* 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

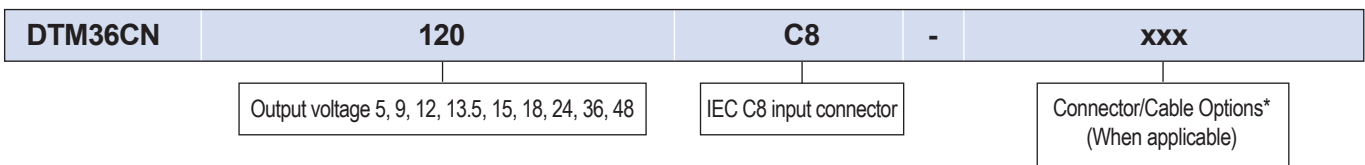


Medical Home Medical

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



*** 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

[Full Datasheet](#)

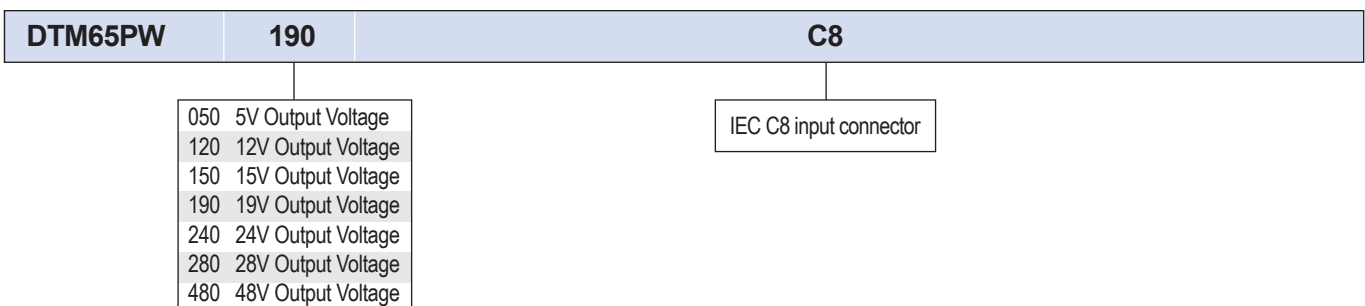
<https://product.tdk.com/en/power/dtm>



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



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

[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)	Overshoot 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

[Full Datasheet](#)

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



Industrial



Broadcast



Test



COMM

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
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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

100-150W AC-DC External Power Supplies

[Full Datasheet](#)

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



Industrial



Broadcast



Test



COMM

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
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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

[Full Datasheet](#)

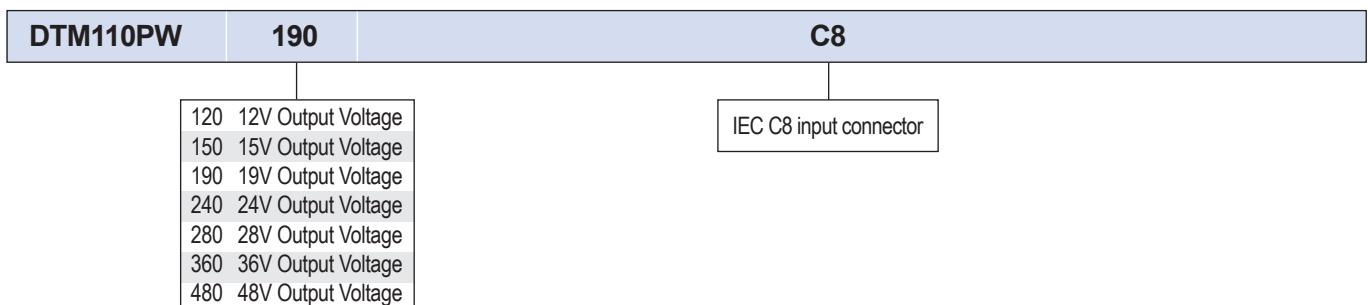
<https://product.tdk.com/en/power/dtm>



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)	Oversvoltage 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



250W Medical/ITE AC-DC External Power Supplies

[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

[Full Datasheet](#)

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



Medical



Industrial



Test



COMM



Broadcast

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

- Wide Range AC Input (Class I or Class II Input Options)
- Meets DoE Level VI Efficiency
- 60601-1 Medical Certifications /2xMoPP
- 62368-1 ITE Certifications
- < 0.5W Off-load Power Draw

Benefits

- Global Operation
- Meets US Energy Saving Legislation
- Suitable for B & BF Rated Equipment
- Suitable for Industrial Applications
- 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

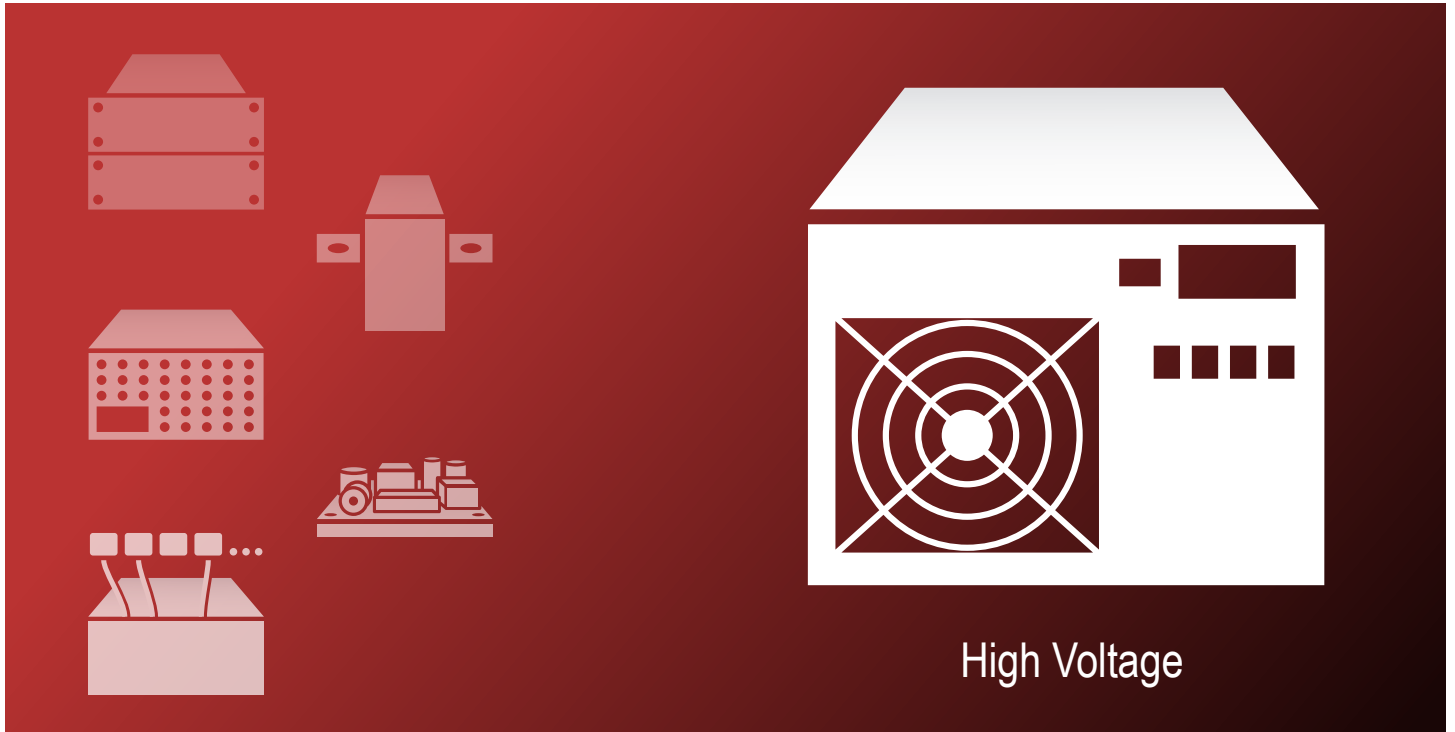
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- 120 12V Output Voltage
- 150 15V Output Voltage
- 190 19V Output Voltage
- 240 24V Output Voltage
- 280 28V Output Voltage
- 480 48V Output Voltage
- 540 54V Output Voltage

- 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	86
8000	1	ALE 802	Capacitor Charging Power Supply	86
12000	1	ALE LC1202	Capacitor Charging Power Supply	86
20000	1	ALE 203	Capacitor Charging Power Supply	86
30000	1	ALE 303	Capacitor Charging Power Supply	86
4500-45000	1	TPF45000	Front End Non-Isolated 385Vdc Power Supply	47

Listed by Wattage

Compact OEM and Rack Mount capacitor charging supplies

<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 500J/sec to 30,000J/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.

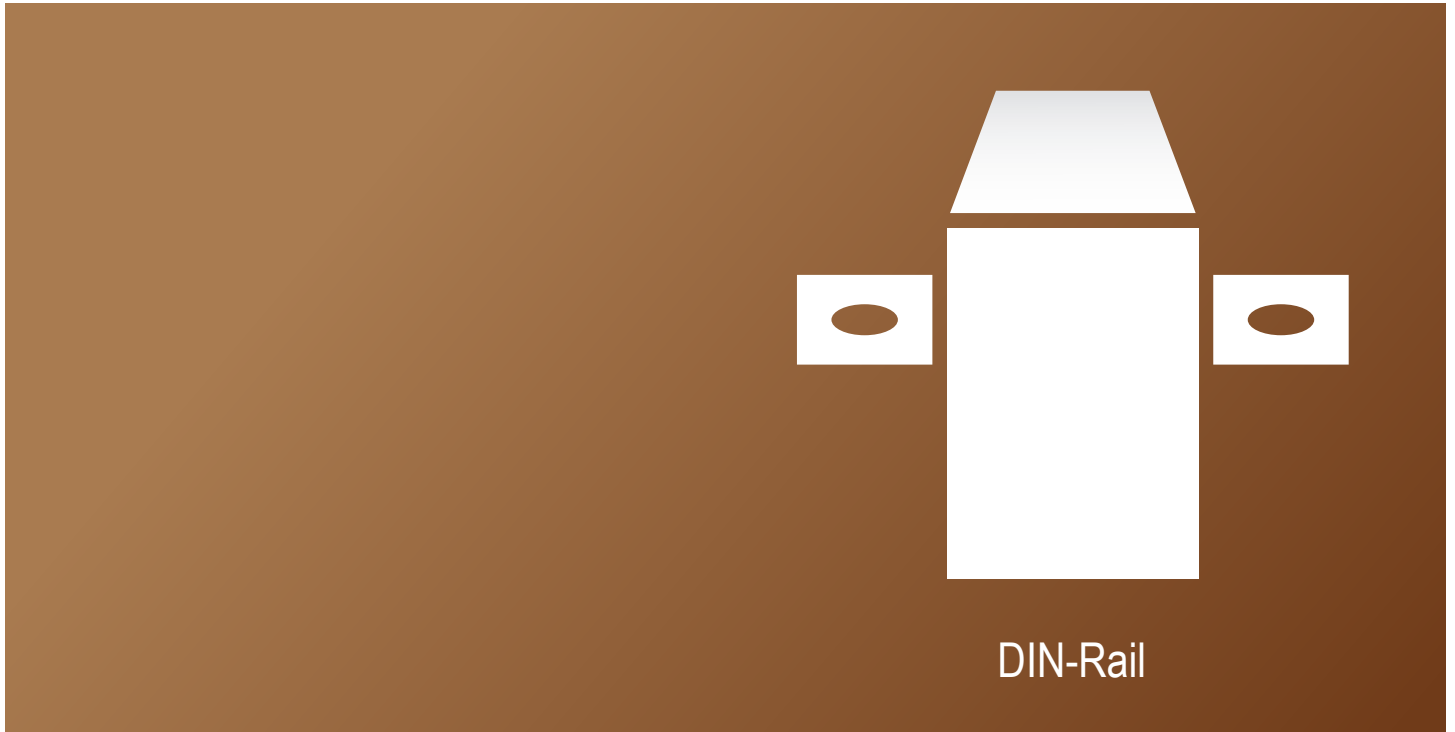
Features	Benefits
• Compact air and water cooled OEM or rack mount packages	• Significant Space Saving in End Equipment
• Simple parallel operation for higher power	• Upgradable for increased power
• Constant current resonant inverter topology	• No need for series current limit resistor for optimum efficiency
• Excellent pulse to pulse repeatability	• Improved performance in load circuits
• Full remote control interface	• Simple and precise operation
• High EMI-RFI immunity	• Proven operation in noisy environments
• 110/230VAC inputs for 1Ø, 208, 400, 480VAC for 3Ø	• Worldwide operation

Model	500A	102A	152A	202A	402	802	LC1202	203	303
Voltage Range	1, 1.5, 2, 3, 4, 5, 6, 10, 15, 20, 30, 40kV				1, 2, 4, 5, 10, 15, 20, 30, 40, 50kV		30kV max	1, 2, 4, 5, 10, 15, 20, 30, 40, 50kV	
Charging Power (Av)	500J/s	1kJ/s	1.5kJ/s	2kJ/s	4kJ/s	8kJ/s	12kJ/s	20kJ/s	30kJ/s
Charging Power (Pk)	550J/s	1.1kJ/s	1.65kJ/s	2.2kJ/s	5kJ/s	9kJ/s	13.5kJ/s	25kJ/s	37.5kJ/s
CW DC Power	500W	1kW	1.5kW	2kW	4kW	8kW	15kW	30kW	50kW
AC Input	110/230 1Ø		230 1Ø		208/400 3Ø		208/400/480 3Ø		400/480 3Ø
Power factor	0.65/0.98 (with active PFC)			0.98	0.85		0.9	0.85	
Polarity	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-10kV-POS, 202A-4kV-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	89
15-100W	1	DRB15-100	90
120-480W	1	DRB120-480	91
40-60W	1	DPX40, DPX60 (DC Input)	92
40-65W	1	CSW65 (DIN mount option)	17
120-960W	1	DRF120-960	93
250-500W	1-2	DDA (DC Input)	94
250ms	1	DBM20 (Hold Up Module)	95
20-40A	1	DRM40 (Redundant Module)	96

Listed by Wattage

10-100W Low Profile DIN Rail Mount Power Supplies

[Full Datasheet](#)

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



Industrial



Test



Semi-Fab



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

[Full Datasheet](#)

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



Industrial



Test



Semi-Fab

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	5.5 - 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

[Full Datasheet](#)

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



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)	Oversvoltage 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

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

[Full Datasheet](#)

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



Industrial



COMM



Broadcast

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

- All In One Package
- Wide Range Input
- 1600Vdc Input to Output Isolation
- CE and UKCA Marks

Benefits

- Easy to Use and Mount
- Less Parts to Inventory
- Output Voltages Can Be Isolated for Lower Noise
- 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 No Remote On/Off -N Negative Logic Remote On/Off -P Positive 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/drf>



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		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	Benefits
• Provides 250ms Additional Hold-Up Time at 448W	• Avoids Loss of Data During AC Power Interruptions
• Utilizes Electrolytic Capacitors to Store Energy	• No Batteries to Service or Maintain
• Narrow 49mm Width	• Increases Available Space on the DIN Rail
• Parallel Capable	• Hold-Up Time Can Be Extended
• Output Remote On/Off Function	• 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

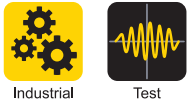
Related Products		
Type	Part Number(s)	Description
Redundancy module	DRM40	20 to 40A DIN Rail Redundancy Module
Low power DIN rail power supplies	DRB15, 30, 50, 100	15 to 100W AC-DC DIN rail power supplies
Mid to high power DIN rail power supplies	DRB120, 240, 480	120 to 480W AC-DC DIN rail power supplies
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

[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

- Compact Size
- Low 200mV Voltage Drop
- Current Balance Indicator Option
- Isolated Alarm Signals

Benefits

- Occupies Less Space on the DIN rail
- Reduced Voltage Drop and Power Loss
- Ensure and Monitor Power Supply Load Sharing
- 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



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 (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 Power Supply Index by Wattage

Wattage	Number of Outputs	Series	Description	Page
200-800	1	Z+	Programmable Bench top or 2U Rack Mount Power supplies	99
200-800	1	Z+ High Voltage	Programmable Bench top or 2U Rack Mount Power supplies	100
600-15000	1	Genesys™	Programmable Bench top or Rack Mount Power supplies	101
1000-15600	1	GENESYS+™	Programmable Bench top or Rack Mount Power supplies	107
30,000-60,000	1	GENESYS+™	Programmable Rack DC Systems	113
300-1000		SFL Electronic Loads	Programmable Bench top or Rack Mount DC Electronic Loads	115

Listed by Wattage

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

Full Datasheet

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



Industrial



Test



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	Voltage Adjust Range	Current Adjust Range	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-U	0 - 10	0 - 20	200	5	50	25	80 / 82	Yes
Z10-40-U	0 - 10	0 - 40	400	5	50	70	80 / 82	Yes
Z10-60-U	0 - 10	0 - 60	600	5	50	150	80 / 82	Yes
Z10-72-U	0 - 10	0 - 72	720	5	50	180	80 / 82	Yes
Z20-10-U	0 - 20	0 - 10	200	6	50	15	82 / 84	Yes
Z20-20-U	0 - 20	0 - 20	400	6	50	40	81 / 83	Yes
Z20-30-U	0 - 20	0 - 30	600	5	50	75	82 / 84	Yes
Z20-40-U	0 - 20	0 - 40	800	5	50	100	82 / 84	Yes
Z36-6-U	0 - 36	0 - 6	216	6	50	8	83 / 85	Yes
Z36-12-U	0 - 36	0 - 12	432	6	50	15	83 / 85	Yes
Z36-18-U	0 - 36	0 - 18	648	5	50	25	84 / 85	Yes
Z36-24-U	0 - 36	0 - 24	864	5	50	31	84 / 85	Yes
Z60-3.5-U	0 - 60	0 - 3.5	210	7	50	4	83 / 85	Yes
Z60-7-U	0 - 60	0 - 7	420	7	50	8	83 / 85	Yes
Z60-10-U	0 - 60	0 - 10	600	12	50	8	83 / 85	Yes
Z60-14-U	0 - 60	0 - 14	840	12	60	28	83 / 85	Yes
Z100-2-U	0 - 100	0 - 2	200	8	80	3	83 / 85	No
Z100-4-U	0 - 100	0 - 4	400	8	80	3	84 / 86	No
Z100-6-U	0 - 100	0 - 6	600	15	80	5	84 / 86	No
Z100-8-U	0 - 100	0 - 8	800	15	80	12	84 / 86	No

Part Number Example

Z10	-	20	-	LAN	-	L	-	U
Series and 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 (insulated) jacks*		U North America AC cord blank No AC Cord Other countries upon request (special order)
						Preferred		

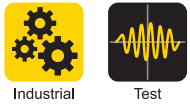
* Special order, requires wide body case (105mm wide), limited to 24A maximum

** Requires wide body case (105mm wide)

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

[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	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	Voltage Adjust Range (V)	Current Adjust Range (A)	Max Power (W)	Ripple (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-U	0 - 160	0 - 1.3	208	10	100	1.2	79 / 81	Yes
Z160-2.6-U	0 - 160	0 - 2.6	416	10	100	1.5	84 / 86	Yes
Z160-4-U	0 - 160	0 - 4	640	10	100	2	86.5 / 88.5	Yes
Z160-5-U	0 - 160	0 - 5	800	10	100	2	86.5 / 88.5	Yes
Z320-0.65-U	0 - 320	0 - 0.65	208	25	150	0.8	79 / 81	Yes
Z320-1.3-U	0 - 320	0 - 1.3	416	25	150	1	84 / 86	Yes
Z320-2-U	0 - 320	0 - 2	640	30	150	1.5	87 / 88.5	Yes
Z320-2.5-U	0 - 320	0 - 2.5	800	30	150	1.5	86.5 / 89	Yes
Z375-2.2-U	0 - 375	0 - 2.2	825	30	150	1.5	87.5 / 89.5	Yes
Z650-0.32-U	0 - 650	0 - 0.32	208	60	150	0.5	79 / 81	Yes
Z650-0.64-U	0 - 650	0 - 0.64	416	60	150	0.6	84 / 86	Yes
Z650-1-U	0 - 650	0 - 1	650	60	250	1	86.5 / 88.5	Yes
Z650-1.25-U	0 - 650	0 - 1.25	812	60	250	1	87 / 89	Yes

Part Number Example

Z160		-	1.3		-	LAN				-	L2		-	U					
Series and output voltage	Output current	blank	IEEE	IS510	IS420	LAN	USB, RS-232/RS-485 (All models)	GPIB Interface*	Voltage Programming Isolated Analog Interface*	Current Programming Isolated Analog Interface*	LAN Interface (Complies with "LXI" Class C)	blank	-L2	No front output jacks	Output (insulated) jacks*	U	blank	North America AC cord	No AC Cord
											Preferred		Other countries upon request (special order)						

* Requires wide body case (105mm wide)

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.

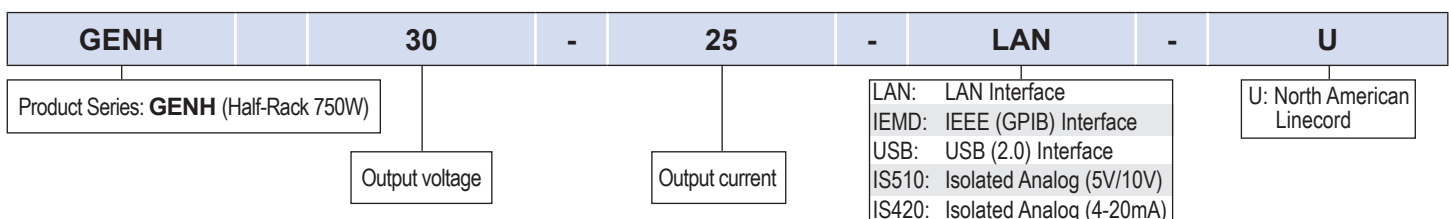
Remote interfaces include the built-in Analog (5V/10V) Program/Monitor/Control and Digital (RS-232/RS-485) Communication Interfaces along with the optional LAN (**LXI** 1.5), IEEE (488.2), USB (2.0) and Isolated Analog (5V/10V or 4-20mA) Interfaces.

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

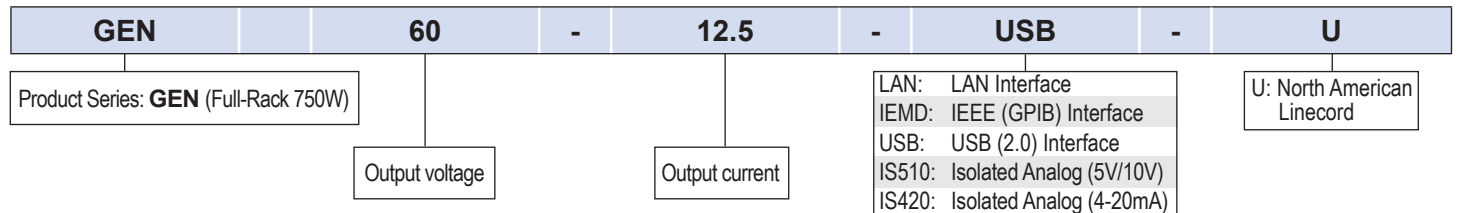


Examples: **GENH 30-25-U**, **GENH 60-12.5-LAN-U**, **GENH 100-7.5-IEEE-U**

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) (mAmps)	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

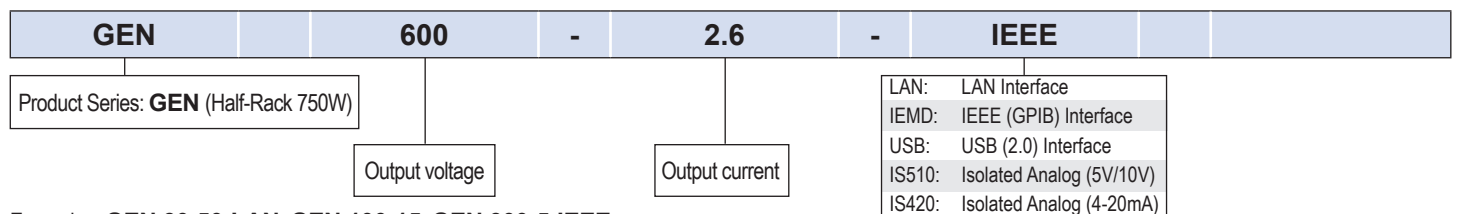


Examples: **GEN 60-12.5-U**, **GEN 600-1.6-USB-U**, **GEN 100-7.5-IEEE-U**

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) (mAmps)	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

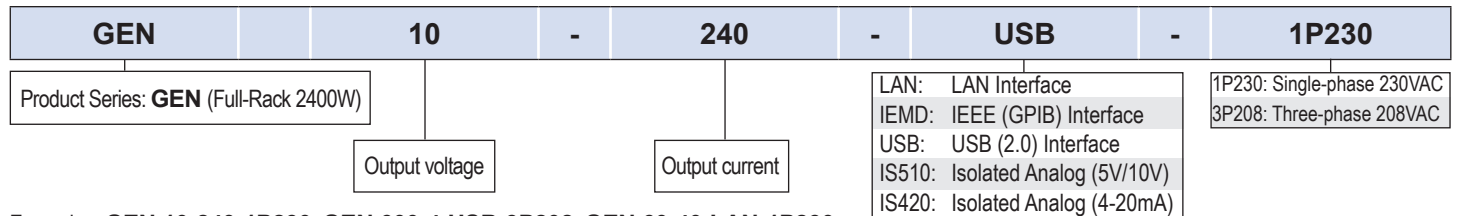


Examples: **GEN 30-50-LAN**, **GEN 100-15**, **GEN 300-5-IEEE**

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

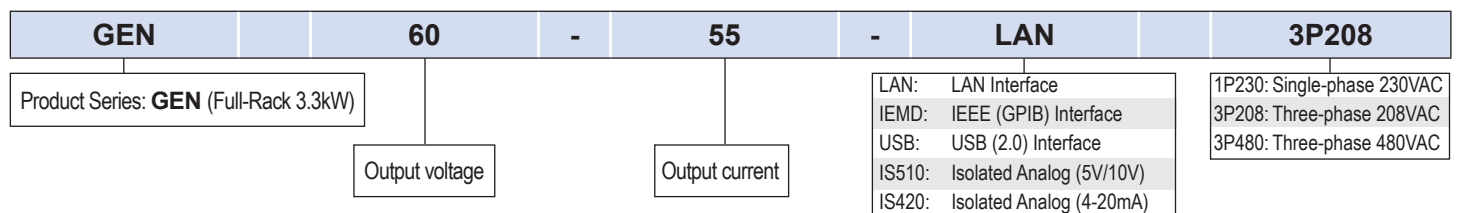


Examples: **GEN 10-240-1P230**, **GEN 600-4-USB-3P208**, **GEN 60-40-LAN-1P230**

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

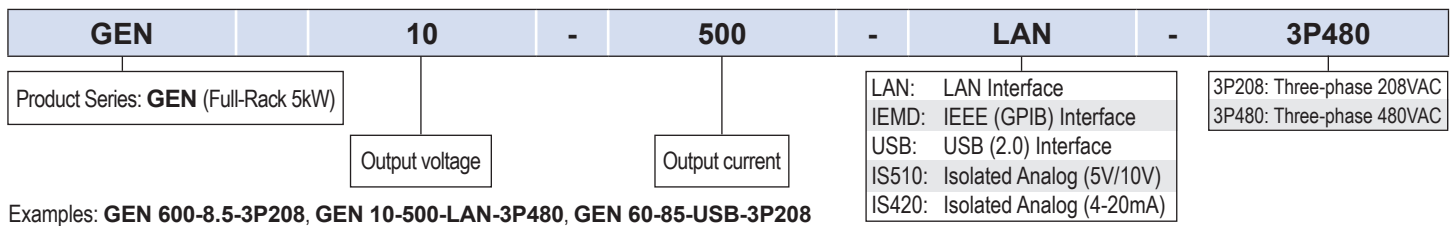


Examples: **GEN 20-165-LAN-1P230**, **GEN 300-11-3P208**, **GEN 8-400-USB-3P480**

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) (mA _{rms})	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

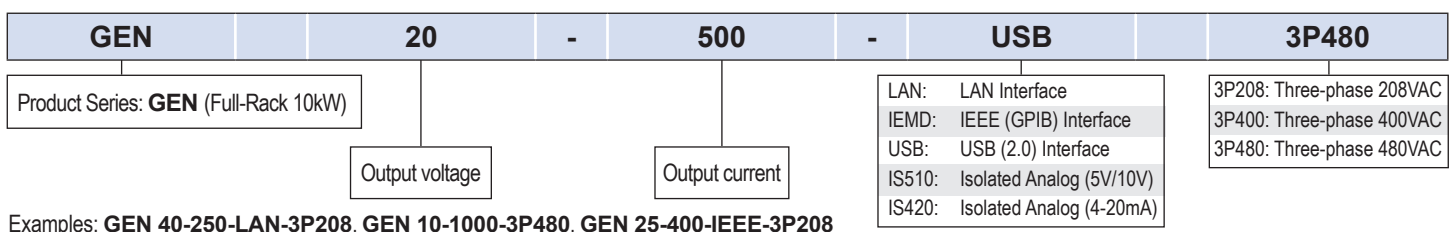


10kW Programmable DC Power Supplies (Single Output in 3U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mA _{rms})	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

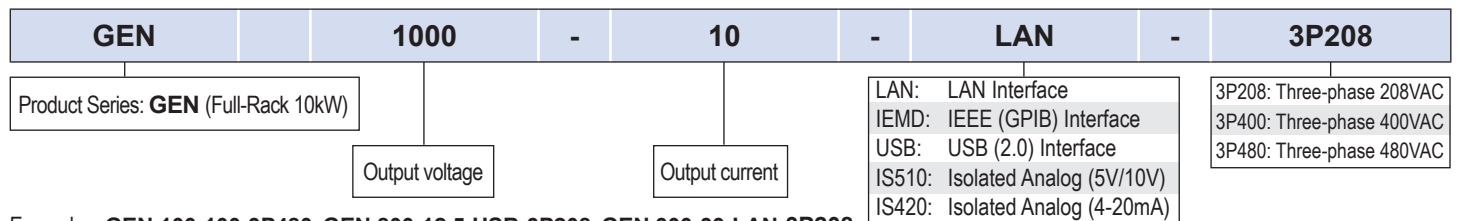
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10kW Programmable DC Power Supplies (Single Output in 3U Full-Rack Profile)



Model Number	Voltage Adjust Range (V)	Current Adjust Range (A)	Rated Output Power (W)	Voltage Ripple (20MHz) (mVpp)	Current Ripple (5Hz ~ 1MHz) (mAmps)	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



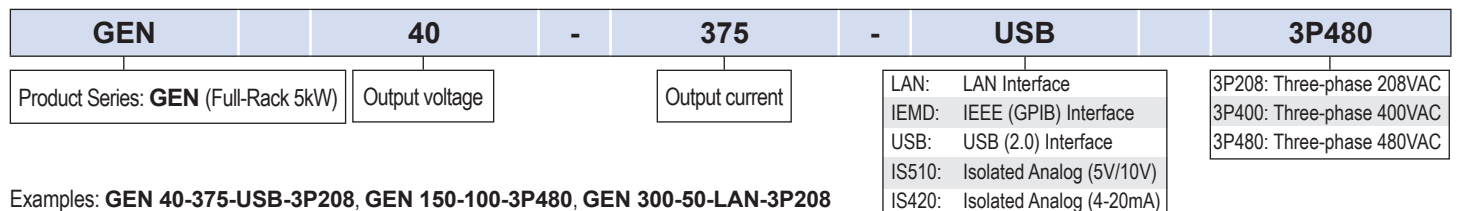
Examples: **GEN 100-100-3P480**, **GEN 800-12.5-USB-3P208**, **GEN 300-33-LAN-3P208**

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) (mAmps)	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

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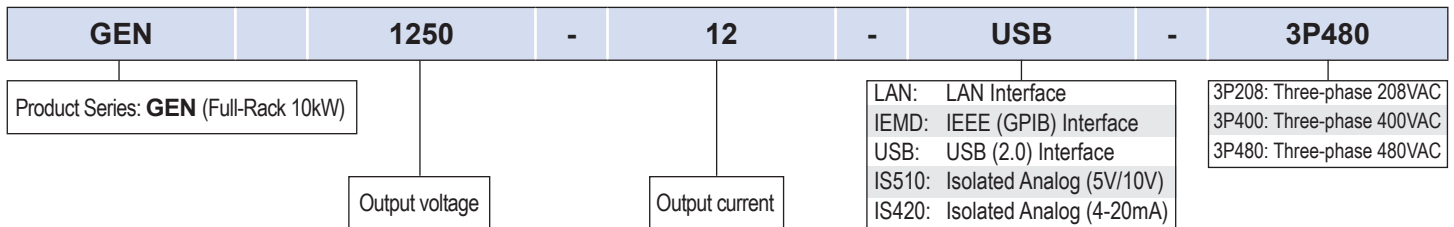


Examples: **GEN 40-375-USB-3P208**, **GEN 150-100-3P480**, **GEN 300-50-LAN-3P208**

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



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/genesysplus.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.

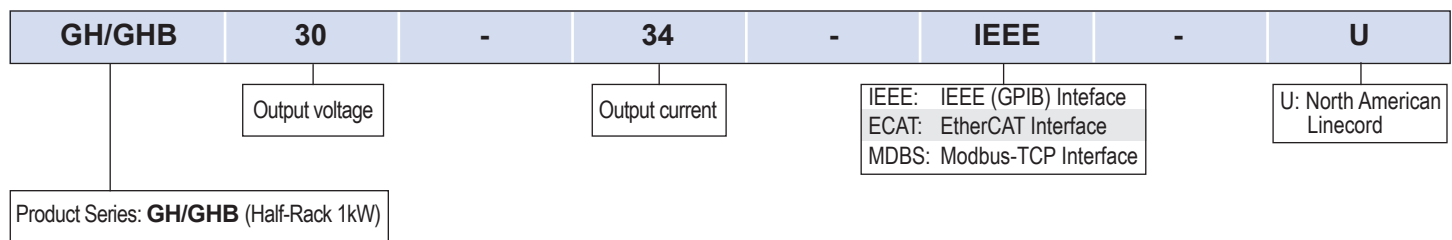
Remote interfaces include the built-in Isolated Analog (5V/10V) Program/Monitor/Control, LAN (**LXI** 1.5), USB (2.0) and RS-232/RS-485 along with the optional IEEE (488.2), Modbus-TCP, EtherCAT and Isolated Analog (4-20mA) interfaces.

Features	Benefits
• Single Output: Models from 6V to 1500V (1U Half-Rack 1kW to 3U Full-Rack 15kW)	• Flexibility in model choice and AC Input
• Worldwide AC Inputs (single/three-phase) with Active Power-Factor-Correction	• Higher efficiency, lighter weight, reliable operation
• 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	• Bench-top or rack-mount capability built-in
• Analog Interfaces (optional): IS420 (4-20mA)	• Quiet operation (reduced audible noise)
• Worldwide Safety Agency Approvals / CE Mark / 5Yr Warranty	• 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	



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

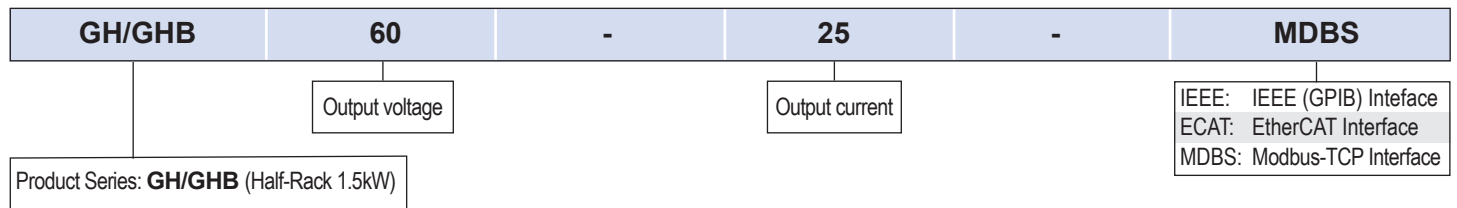
1.5kW Programmable DC Power Supplies

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) (mA rms)	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



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

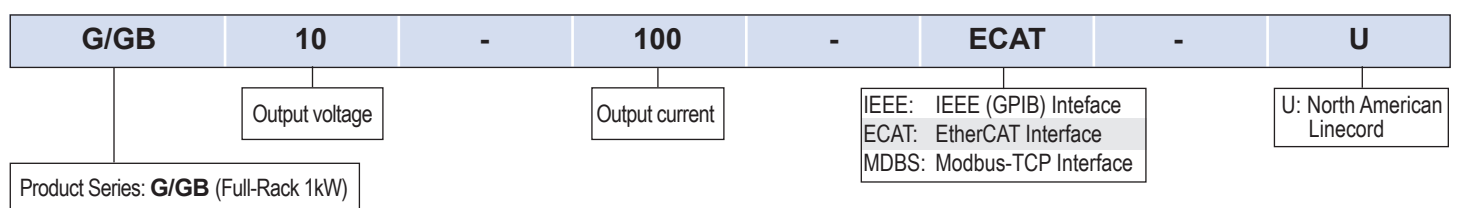
1kW Programmable DC Power Supplies

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) (mA rms)	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



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

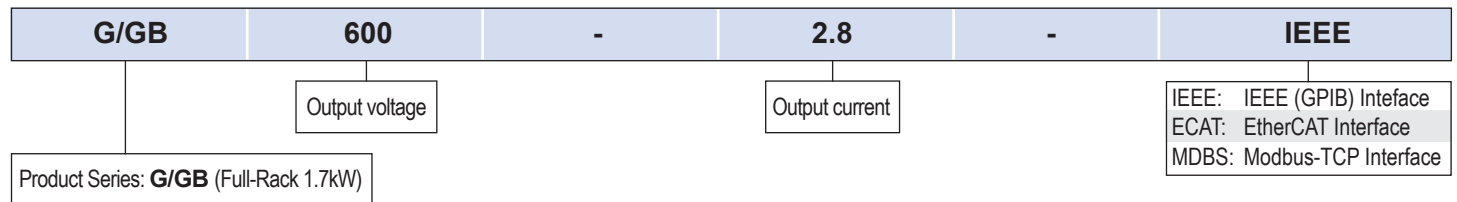
1.7kW Programmable DC Power Supplies

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) (mAmps)	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



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

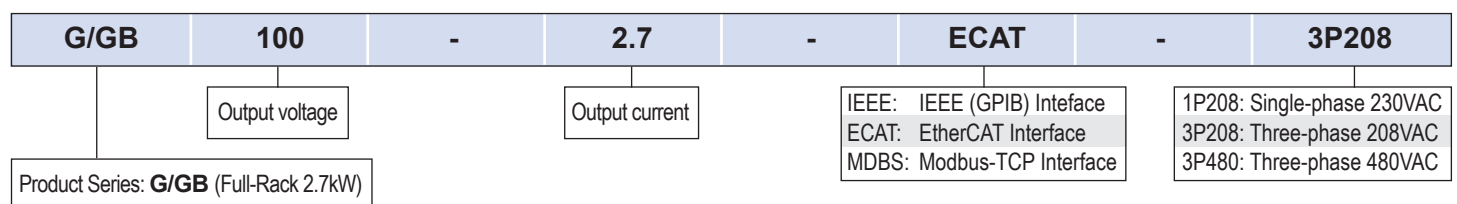
2.7kW Programmable DC Power Supplies

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) (mAmps)	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



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
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Product Series: G/GB (Full-Rack 3.4kW)	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
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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
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Product Series: G/GB (Full-Rack 5kW)	Output voltage	Output current	IEEE: IEEE (GPIO) Interface ECAT: EtherCAT Interface MDBS: Modbus-TCP Interface	3P208: Three-phase 208VAC 3P480: Three-phase 480VAC
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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**

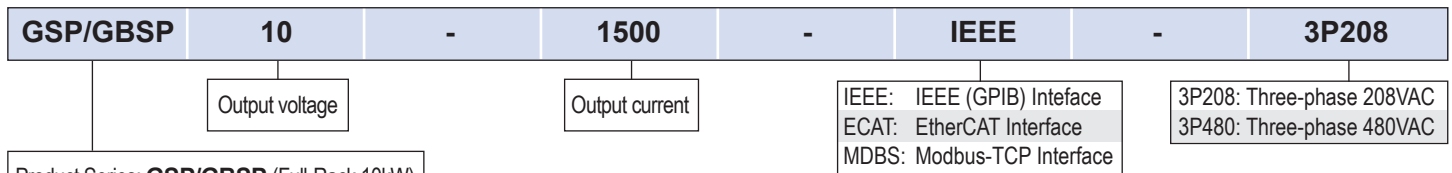
15kW Programmable DC Power Supplies

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



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.

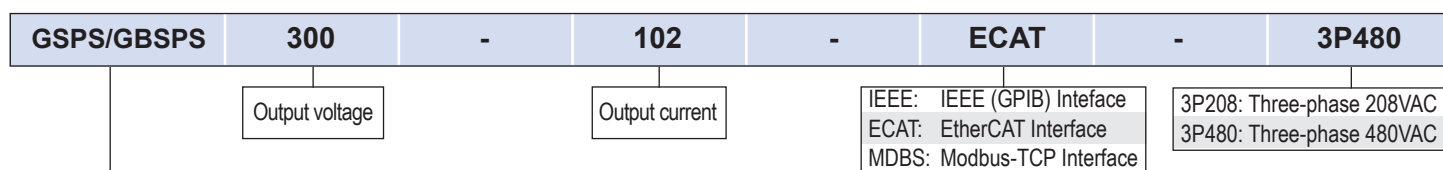
Remote interfaces include the built-in Isolated Analog (5V/10V) Program/Monitor/Control, LAN (**LXI** 1.5), USB (2.0) and RS-232/RS-485 along with the optional IEEE (488.2), Modbus-TCP, EtherCAT and Isolated Analog (4-20mA) interfaces.

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



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

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

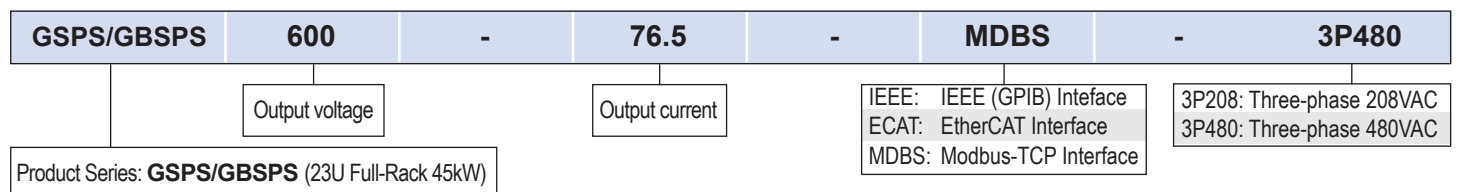
45kW Programmable DC Power Supplies

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



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

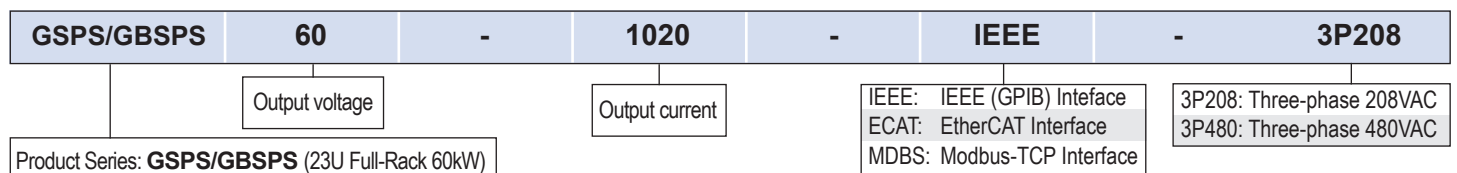
60kW Programmable DC Power Supplies

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



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

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>



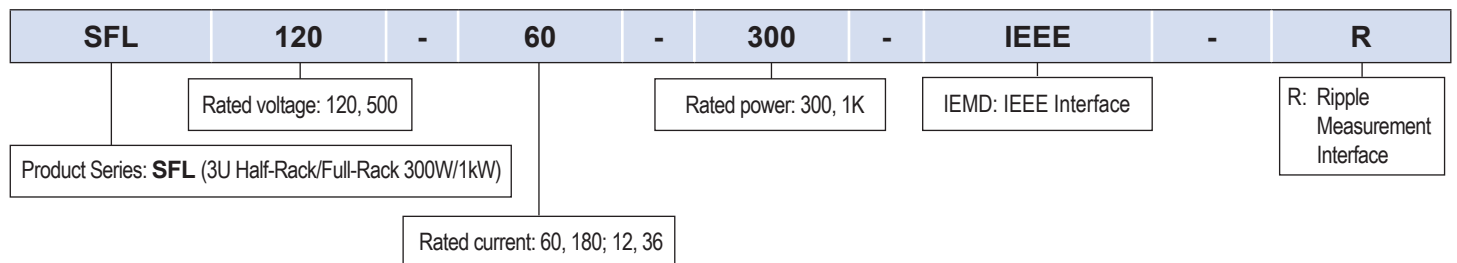
The SFL DC Programmable Electronic Load Series is a high performance multi-functional solution available in two voltage levels (120V/500V) over two power levels (300W/1kW) and offers the user flexible load current control to simulate different load conditions. A user-friendly front panel along with built-in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

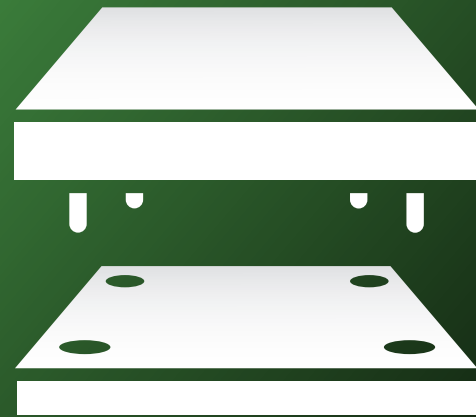
Model Number	Load Voltage Rating (V)	Load Current Rating (A)	Load Power Rating (W)	Slew Rate (mA/us or A/us)	Voltage Measurement Range (V)	Current Measurement Range (A)
SFL 120-60-300	120	60	300	5mA/us to 20A/us	0-20 / 0-120	0-0.6 / 0-6 / 0-60
SFL 500-12-300	500	12	300	0.25mA/us to 1A/us	0-85 / 0 - 500	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



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	118
CC-E	1.5-25	1,2	4.5-76	3.3-30	up to 7.5	DIP/SIP	PCB Mount	119
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	118
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	120
PXG-M	15-20	1,2	9-75	5-24	up to 1.67	1.6 x 1 x 0.4	PCB Mount	121
CCG15-30	15-30	1,2	9-76	3.3 - ±15	up to 7.5	1 x 1 x 0.39	PCB Mount	122
PXD-M	30	1,2	9-75	5-24	up to 6	2 x 1.6 x 0.4	PCB Mount	123
CN-A110	30-200	1	60-160	5-24	up to 40	2.28 x 1.45 x 0.5	Quarter Brick	124
PXD60	39.6-60	1,2	9-75	3.3-24	up to 12	2 x 1 x 0.4	PCB Mount	125
PXD40	40	1,2	9-75	3.3-48	up to 12.2	2 x 1 x 0.4	PCB Mount	126
IEA	48-78	1	18-75	5-28	up to 15	2.3 x 0.9 x 0.35	Eighth Brick	127
IQE	49-204	1	18-75	5,12,16	up to 30	2.28 x 1.45 x 0.41	Quarter Brick	128
CN-A24	50-100	1	14-36	5-24	up to 20	2.28 x 1.45 x 0.5	Quarter Brick	129
PH-A280	50-150	1	200-425	3.3-48	up to 20	1.46 x .05 x 2.3	Quarter Brick	130
IQL	72-308	1	18-75	1.2-28	up to 60	2.28 x 1.45 x 0.52	Quarter Brick	131
HQA-85	85	1	9-40	3.3-28	up to 25	2.39 x 2.2 x 0.5	Quarter Brick	132
GQA120	120	1	9-36	5-48	up to 24	2.39 x 1.95 x 0.5	Quarter Brick	133
HQA120	120	1	9-40	5-48	up to 24	2.39 x 2.2 x 0.5	Quarter Brick	134
CN-200A110	200	1	60-160	5-24	up to 40	2.4 x 2.28 x 0.5	Half Brick	124
IEH	300	1	36-75	10.8, 12	up to 25	2.3 x 0.9 x 0.52	Eighth Brick	135
PAH300-450	300-450	1	18-76	12-48	up to 29	2.4 x 2.28 x 0.5	Half Brick	136
IQG	300-504	1	36-75	9.6-12	up to 47	2.28 x 1.45 x 0.52	Quarter Brick	137
PAF600F	600	1	19-76	12, 28	up to 45.8	4.6 x 2.4 x 0.5	Half Brick	138
IQK	1008	1	48-56	11.2	up to 90	2.28 x 1.45 x 0.57	Quarter Brick	139
EZA2500	2,500	1	260-400	36-60	up to 52	11 x 15.5 x 1.72	1U Rack Mount	140
EZA11K-320240	11,000	1	240-400	150-300	up to 51	16.65 x 20.87 x 1.72	1U Rack Mount	141

Listed by Wattage

1.3 to 3W DC-DC Converters

[Full Datasheet](#)

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



Industrial



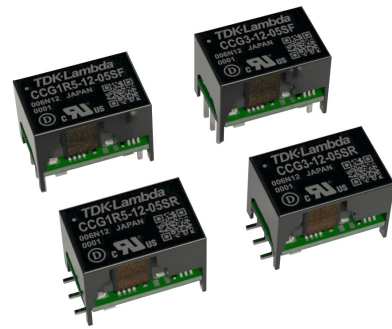
Test



COMM



Broadcast



The space saving CCG1R5 and CCG3 series of isolated DC-DC converters operate from wide range 4.5 to 18V, 9 to 36Vdc or 18 to 76V inputs with 1.5W and 3W 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 -40 to 100°C and have an input to output isolation of 1,500Vdc. Both through hole and surface mount packages are offered.

Features

- Wide 4:1 Input Ranges
- Space Saving Package Sizes
- Certified to IEC 62368-1
- Reduced Derating at High Ambient Temperatures
- No Silicone Potting

Benefits

- Supports Dual 5/12V 12/24V or 24/48V System Voltages
- Less Board Area Needed
- Easier System Compliance
- More Useable Power
- Reduced Quality Risk During Surface Mount Reflow Process

Part Numbering Scheme

CCG	1R5	-12	-03	S	F
Series Name CCG	Output Power 1R5 = 1.5W 3 = 3W	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 C = Pcb Coating

1.3 to 10W DC-DC Converters

[Full Datasheet](#)

<https://product.tdk.com/en/power/cc-e>



Industrial



Test



COMM



Broadcast

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

- Low Profile
- Remote on/off
- Five Sided Metal Case Design
- Reduced Derating at High Ambient Temperatures
- No Potting

Benefits

- Supports Vertical Mount Cards
- Individual Control
- Reduced Radiated Noise
- More Useable Power
- 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)	



Medical



COMM

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

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

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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 temperature of -40 to 100°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	

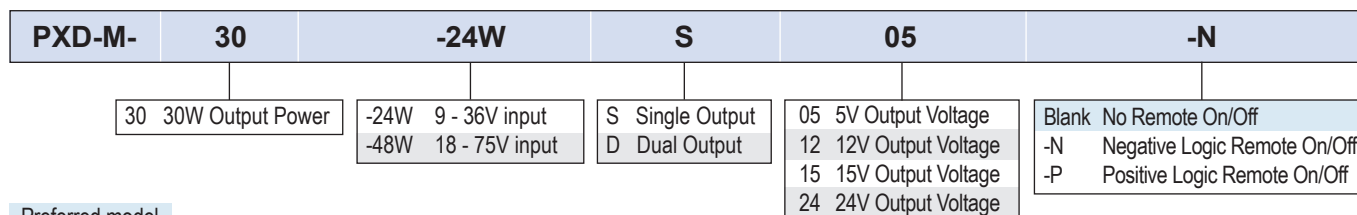
(1) ±12V dual output models can provide a 24V single output by utilizing just the +Vout and -Vout pins, leaving the COM unconnected. Similarly ±15V dual output models can be used as a 30V single output.



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	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 60601-1 and IEC 62368-1	• Suitable For Medical and Industrial 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 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



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

[Full Datasheet](#)

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



Industrial



Railway

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

- Wide Input Range
- Quarter and Half Brick Packages
- Certified to IEC 62368-1, Designed to Meet IEC 61373
- Current Share Function (200W Model)
- No Derating at High Ambient Temperatures

Benefits

- Supports 110V Input Rail and Substation Systems
- Less Board Area Needed
- Easier System Compliance
- Can be Paralleled for Higher Power Applications
- 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

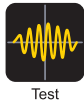
Part Numbering Scheme

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

[Full Datasheet](#)

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



Industrial

Test

COMM

Broadcast

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

- 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							
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



Test



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Broadcast

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

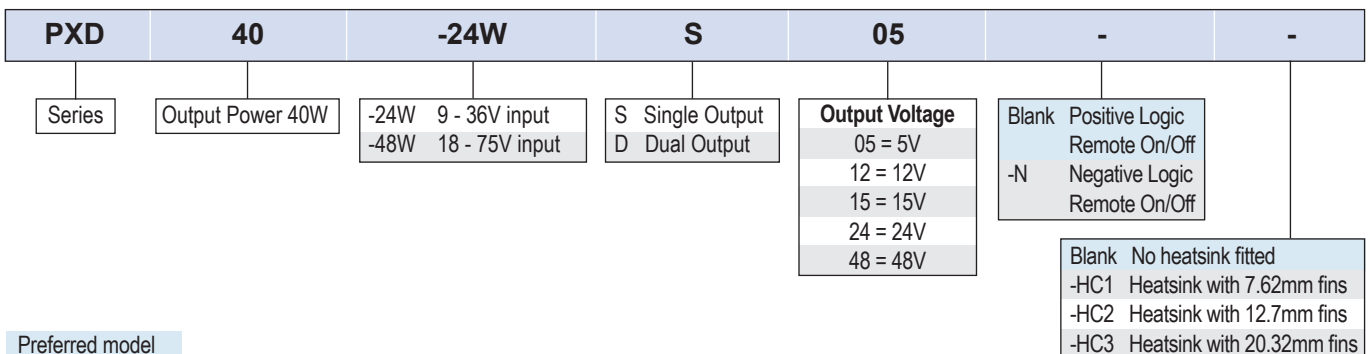
- Wide 4:1 Input Range
- Compact 2" x 1" Industry Package
- Certified to IEC/UL/CSA/EN 62368-1
- Low No Load Power Consumption
- Six Sided Shielding

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

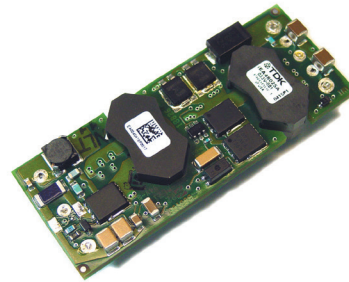
Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (A)	Maximum Power (W)	No Load Input Current (mA)	Efficiency (%)	Maximum Load Capacitance (uF)
Single Outputs							
PXD40-24WS3P3	9 - 36	3.3	12.2	40.3	15	89.5	22,000
PXD40-48WS3P3	18 - 75	3.3	12.2	40.3	10	90	22,000
PXD40-24WS05	9 - 36	5	8	40	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



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

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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

[Full Datasheet](#)

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



Industrial



COTS



Railway

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

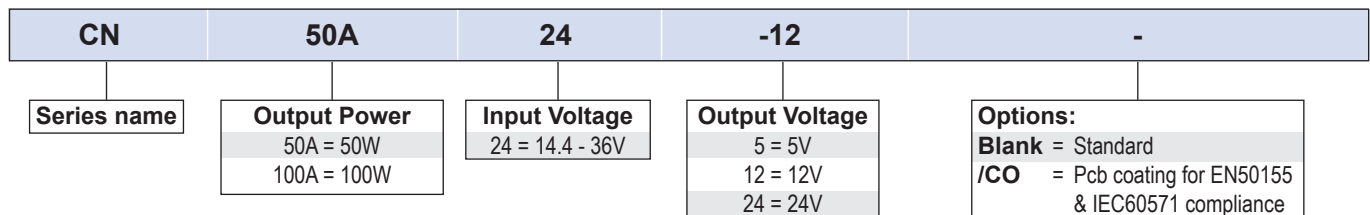
Benefits

- 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



Related Products

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

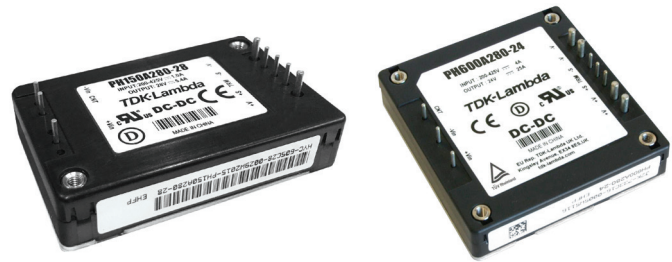
Specifications

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

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

[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.

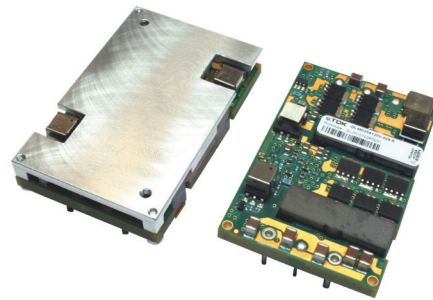
Features	Benefits
• Wide Range 200 to 425Vdc Input	• Suitable for HVDC Applications
• Baseplate Cooled	• Can be Conduction or Convection Cooled (With an Optional Heatsink)
• -40 to 100°C Baseplate Temperature	• Operates in Harsh Environments
• Certified to IEC/EN62477-1 (OVC III)	• No External Transformer 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	Oversvoltage 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

72-308W, 18 to 36V or 36 to 75V Input Isolated DC-DC Quarter Brick

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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 (A)	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

85W MIL-COTS , 9 to 40V Input Isolated Quarter Brick

[Full Datasheet](#)

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



Industrial



COTS



COMM

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

- Up to 85 W in an Industry Quarter Brick package
- Encapsulated and Rugged design
- Maximum Baseplate Temperature of 115°C
- No Optocouplers used
- 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
- 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

[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
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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

[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-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-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 <i>See Screening Option Table below</i>

300W, 36 to 75V Input Isolated DC-DC Eighth Brick

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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

- High Operating Efficiency up to 94.6%
- Open Frame or Baseplate Construction
- 10.8V or 12V Intermediate Bus Voltage
- 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
- Optimized Distributed Power Architecture (DPA) for Driving Point-Of-Loads (POL)
- Predictable EMI
- 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-DO	Evaluation board (no modules) accepting standard Eighth or Quarter brick and FQx or iDQ input filters

300-450W Half Brick DC-DC Converters

[Full Datasheet](#)

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

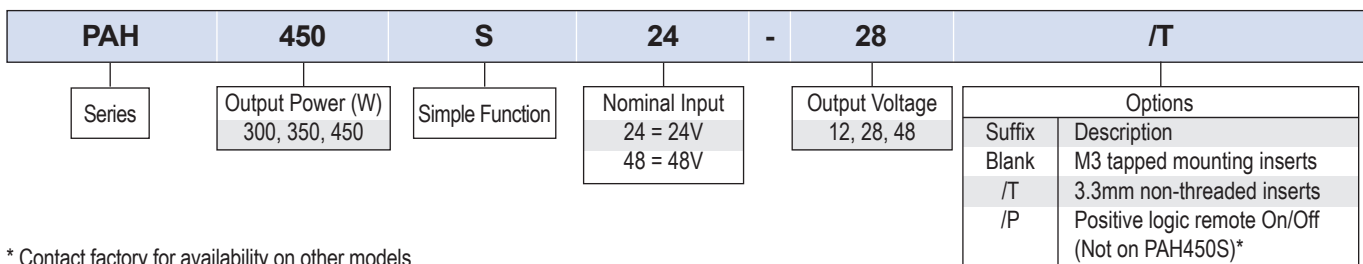


The PAH300, PAH350 and PAH450 series of isolated half brick DC-DC converters operate from a 24V or 48V nominal dc input and are rated at 300W to 450W. Output voltages are 12V, 28V or 48V and can be adjusted over a wide range using the trim terminal by up to -40% to +18%. Remote sense and remote on/off 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	Oversvoltage 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



* Contact factory for availability on other models

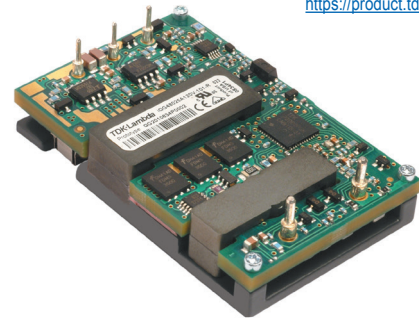
Related Products

	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

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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

- High Operating Efficiency up to 96%
- Open frame or Baseplate Construction
- 9.6V or 12V Intermediate Bus Voltage
- Droop Mode Option for Parallel Operation
- 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
- Optimized Distributed Power Architecture (DPA) for Driving Point-Of-Loads (POL)
- Power Scalability or Redundancy
- Predictable EMI
- 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

[Full Datasheet](#)

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



Industrial



COTS



Test



COMM

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

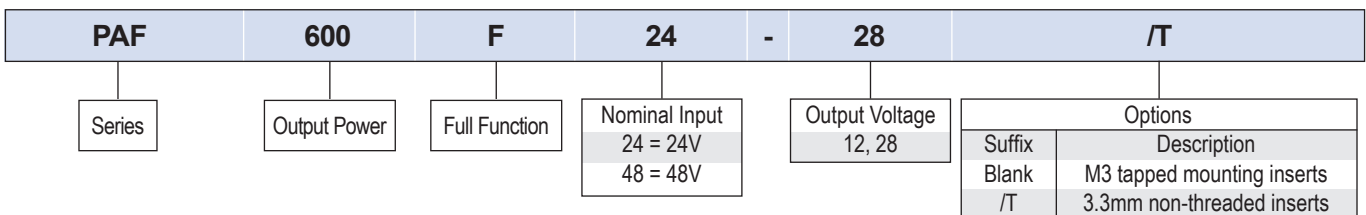
- Wide Range Inputs
- Baseplate Cooled
- -40 to +100°C Baseplate Temperature
- Parallel Function
- Up to 90% Efficient

Benefits

- Operates From Batteries or DC Power Systems
- Can be Conduction or Convection Cooled with a Heatsink
- Operates in Harsh Environments
- Suitable for Higher Power or N+1 Redundant Systems
- Easier To Cool In the End System

Model Selector

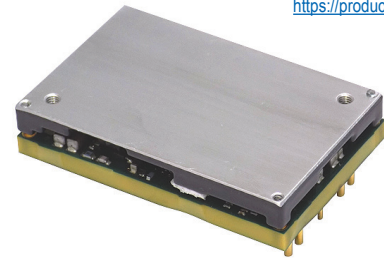
Model	Input Voltage (V)	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)	Input Current (A) nominal input, 100% load	Efficiency (%) nominal input, 100% load
PAF600F24-12	20 - 36	12	7.2 - 13.2	50	600	28.9	89
PAF600F24-28	19 - 36	28	16.8 - 30.8	21.5	602.0	28.9	89
PAF600F48-12	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



1008W Isolated Quarter Brick DC-DC Converter

[Full Datasheet](#)

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



Test



COMM



Broadcast

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

- 1008W in a Quarter Brick Footprint
- High Efficiency - Up to 97%
- Baseplate Cooled
- Constant Switching Frequency
- Optional Droop Current Share

Benefits

- High Power Density, Less Board Area Needed
- Lower Dissipated Power
- Suitable for Cold plate or Heatsink Mounting
- Simplified EMI Filtering
- 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.

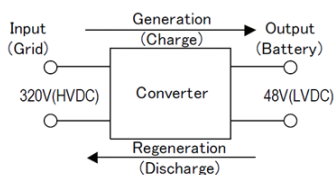
2500W Bi-Directional Isolated DC-DC Converters

[Full Datasheet](#)

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



Renewable



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

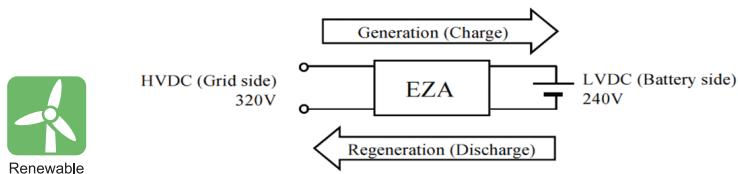
Specifications

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

[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	144
i6AN	75	1	9-40	-3.3 to -30	up to 8	1.3 x 0.9 x 0.47	1/16 Brick	145
iBH	80	1	3.5-14	0.7-5.5	up to 20A	0.8 x 0.45 x 0.39	PCB Mount	146
iCH	85	1	4.5-14	0.7-8.5	up to 12A	0.48 x 0.48 x 0.335	PCB Mount	147
i3A	100	1	9-53	3.3-30	up to 8	0.75 x 0.92 x 0.38	1/32 Brick	148
iAH	150	1	3.5-17	0.7-5.5	up to 40A	1.3 x 0.53 x 0.40	PCB Mount	149
i6A	250	1	9-40	3.3-24	up to 14	1.3 x 0.9 x 0.47	1/16 Brick	150
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	151
RGA	250	1	9-53	3.3-40	up to 20	1.40 x 1.01 x 0.51	PCB Mount	152
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	153
i7A	750	1	18-60	3.3-24	up to 45	1.34 x 1.45 x 0.45/1.34 x 1.45 x 0.50	1/16 Brick	154

Listed by Wattage

1.4-3W, 12V Input, 180-2000V Output DC-DC Converters

[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

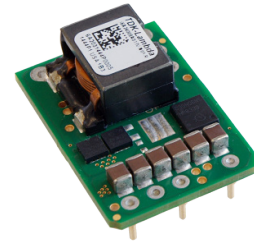
Model	Input Voltage (V)	Output Voltage (V)	Maximum Current (mA)	Maximum Power (W)	Input Current (mA) (Typical)	Typical Ripple & Noise (mV)	Maximum Ripple & Noise (mV)
CHVM1R5-12-1000P	11.0 - 13.0	0 to +1000	1.5	1.5	220	5	15
CHVM1R5-12-1000N	11.0 - 13.0	0 to -1000	1.5	1.5	220	5	15
CHVM1R5-12-1500P	11.0 - 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>



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

- Up to 75W in a 1/16th Brick Pin-Out
- Efficiency - Up to 94%
- Wide -3.3 to -30 V Output Adjustment
- Wide 9 to 40V Input Range
- Low Component Count With Minimal External Components

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
- 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

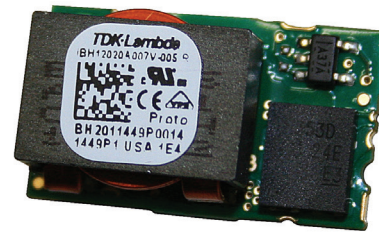
Related Products

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

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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

- 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)
iBH12020A007V-006-R	3.5 - 14	0.7 - 5.5	20	80	Neg	96%
iBH12020A007V-007-R	3.5 - 14	0.7 - 5.5	20	80	Pos	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

85W, 12A Non-Isolated SMT Point-Of-Load

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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

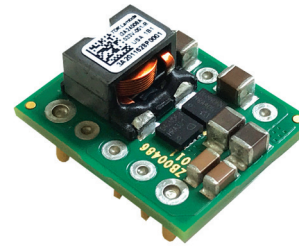
Related Products

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

[Full Datasheet](#)

<https://product.tdk.com/en/power/i3a>



Industrial



COTS



Test



COMM



Broadcast



Robotics

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
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

[Full Datasheet](#)

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



Industrial



Test



COMM



Broadcast

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	Neg	96%
iAH12040A007V-007-R	3.5 - 17	0.7 - 5.0	40	150	Pos	96%

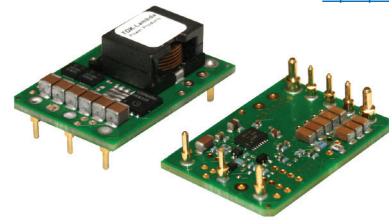
Related Products

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

250W, 9 to 40V Input Non-Isolated Step-Down DC-DC Buck Converter

[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	Benefits
• Up to 250 W in a 1/16th brick package	• High Power Density, Less Board Area Needed
• High Efficiency Up to 98%	• Longer Battery Life / Less Power Consumed
• Wide Output Adjustment 3.3 to 24 V	• One Part Supports Multiple System Voltages
• 9 to 40V 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	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
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

[Full Datasheet](#)

<https://product.tdk.com/en/power/i6a>



Industrial



Test



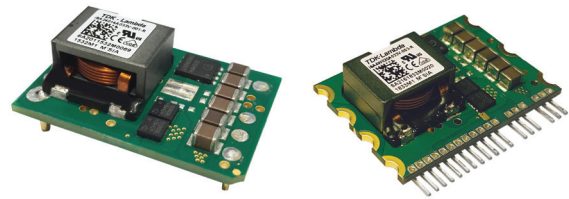
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Broadcast



Robotics



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

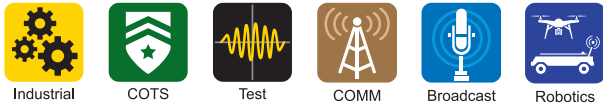
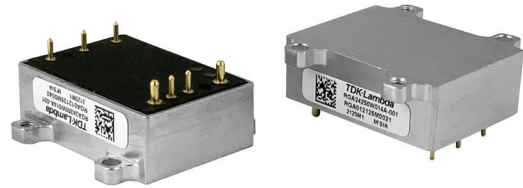
Preferred model

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
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	Compact Evaluation kit with i6A4W010A033V-001-R module
	i6A20A-001-EVK-S1CC	Evaluation kit with i6A4W020A033V-001-R modules set for constant current operation
	i6A20A-C01-EVK-S1	Compact Evaluation kit with i6A4W020A033V-001-R module
	i6A10A-001-EVK-S1CC	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

[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	Benefits
• Up to 250W in a 1/16th Brick Pin-Out	• High Power Density, Less Board Area Needed
• Encapsulated in a 5-sided Aluminum case	• Improves EMI
• 110 °C maximum case temperature	• Ruggedized deployment in harsh environment with high shock & vibration exposure
• Efficiency - Up to 98%	• Longer Battery Life / Low Power Consumed
• Wide 3.3 to 15V, 3.3 to 24V or 3.3 to 40V Output Adjustment	• One Part Supports Multiple System Voltages
• Wide 9 to 40V or 9 to 53V 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	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
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

[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. A full feature* Power Good signal, switching frequency synchronization and output current monitoring option is available.

Features	Benefits
• Up to 300W in a 1/16th Brick Pin-Out	• High Power Density, Less Board Area Needed
• High Efficiency - Up to 97%	• Longer Battery Life / Low Power Consumed
• Wide 5 to 28V, 8 to 24V or 9.6 to 48V Output Adjustment	• One Part Supports Multiple System Voltages
• Wide 9 to 36V or 9 to 53V Input Range	• Can Operate From Different DC Source Voltages
• Low Component Count With Minimal External Components	• Low Cost
• Low Airflow With Minimal Derating Requirements	• Easy To Cool In End System

Model Selector

Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Max Power (W)	Positive Logic On/Off	Negative Logic On/Off	Full Feature*	Integrated Heatsink	Integrated Baseplate
i7C4W008A120V-001-R	9 - 53	9.6 - 48	8	300	-	Yes	-	-	-
i7C4W008A120V-002-R	9 - 53	9.6 - 48	8	300	Yes	-	Yes	-	-
i7C4W008A120V-003-R	9 - 53	9.6 - 48	8	300	-	Yes	Yes	-	-
i7C4W008A120V-0C1-R	9 - 53	9.6 - 48	8	300	-	Yes	-	-	Yes
i7C4W008A120V-0C3-R	9 - 53	9.6 - 48	8	300	-	Yes	Yes	-	Yes
i7C4W008A120V-0F1-R	9 - 53	9.6 - 48	8	300	-	Yes	-	Yes	-
i7C4W008A120V-0F3-R	9 - 53	9.6 - 48	8	300	-	Yes	Yes	Yes	-
i7C4W012A050V-001-R	9 - 53	5 - 28	12.5	300	-	Yes	-	-	-
i7C4W012A050V-002-R	9 - 53	5 - 28	12.5	300	Yes	-	Yes	-	-
i7C4W012A050V-003-R	9 - 53	5 - 28	12.5	300	-	Yes	Yes	-	-
i7C4W012A050V-0C1-R	9 - 53	5 - 28	12.5	300	-	Yes	-	-	Yes
i7C4W012A050V-0C3-R	9 - 53	5 - 28	12.5	300	-	Yes	Yes	-	Yes
i7C4W012A050V-0F1-R	9 - 53	5 - 28	12.5	300	-	Yes	-	Yes	-
i7C4W012A050V-0F3-R	9 - 53	5 - 28	12	300	-	Yes	Yes	Yes	-
i7C2W020A120V-001-R	9 - 36	8 - 24	20	300	-	Yes	-	-	-
i7C2W020A120V-002-R	9 - 36	8 - 24	20	300	Yes	-	Yes	-	-
i7C2W020A120V-003-R	9 - 36	8 - 24	20	300	-	Yes	Yes	-	-

Preferred model * Consult factory for a part number suffix of other feature combinations.

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
DC-DC Buck Converter	i6A4W	250W, Input 9-53V, Output 3.3-40V 10A or 3.3-15V 20A
DC-DC Buck Converter	i7A	500-750W, Input 18-60V or 18-32V, Output 3.3-24V 33A or 3.3-18V 45A
Evaluation Kit	i7C08A-C03-EVK-S1	Evaluation kit with i7C4W008A120V-003-R Full Featured Module
	i7C12A-C03-EVK-S1	Evaluation kit with i7C4W012A050V-003-R Full Featured Module
	i7C20A-C03-EVK-S1	Evaluation kit with i7C2W020A120V-003-R Full Featured Module

400-750W, 9 to 18V, 18 to 32V or 18 to 60V Input Non-Isolated Step Down DC-DC Converter

[Full Datasheet](#)

<https://product.tdk.com/en/power/i7a>



Industrial



Test



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Broadcast



Robotics



The i7A series of up to 750W non-isolated DC-DC step-down converters are ideal for creating additional high current/high power 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. 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 24V Output Adjustment	• One Part Supports Multiple System Voltages
• 9 to 18V, 18 to 32V or 18 to 60V Input Ranges	• 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)	Output Current (A)	Max Power (W)	Positive Logic On/Off	Negative Logic On/Off	Integrated Baseplate	Integrated Heatsink
i7A4W033A033V-000-R	18 - 60	3.3 - 24	33	500	Yes	-	-	-
i7A4W033A033V-001-R	18 - 60	3.3 - 24	33	500	-	Yes	-	-
i7A4W033A033V-0C1-R	18 - 60	3.3 - 24	33	500	-	Yes	Yes	-
i7A4W033A033V-0F1-R	18 - 60	3.3 - 24	33	500	-	Yes	-	Yes
i7A24045A033V-000-R	18 - 32	3.3 - 18	45	750	Yes	-	-	-
i7A24045A033V-001-R	18 - 32	3.3 - 18	45	750	-	Yes	-	-
i7A24045A033V-0C1-R	18 - 32	3.3 - 18	45	750	-	Yes	Yes	-
i7A24045A033V-0F1-R	18 - 32	3.3 - 18	45	750	-	Yes	-	Yes
i7A12060A008V-000-R	9 - 18	0.8 - 8	60	400	Yes	-	-	-
i7A12060A008V-001-R	9 - 18	0.8 - 8	60	400	-	Yes	-	-
i7A12060A008V-0C1-R	9 - 18	0.8 - 8	60	400	-	Yes	Yes	-
i7A12060A008V-0F1-R	9 - 18	0.8 - 8	60	400	-	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	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
DC-DC Buck Converter	i6A4W	250W, Input 9-53V, Output 3.3-40V 10A or 3.3-15V 20A
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	RGA	250W, Input 9 up to 53V, Output 3.3 up to 40V, Rugged Modules
Evaluation Kit	i7A33A-C01-EVK-S1	Evaluation kit with i7A4W033A033V-001-R Full Module
	i7A45A-C01-EVK-S1	Evaluation kit with i7A24045A033V-001-R Module
	i7A60A-C01-EVK-S1	Evaluation kit with i7A12060A008V-001-R Module



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
- Models for DIN-Rail mounting

EMC/EMI Filter Index by Wattage

Current	Series	Description	Page
3-300A	RSHN	Single Phase, High Attenuation, Low Profile	157
6-30A	RSEV	Single Phase, Multipurpose	158
6-60A	RTAN	Three Phase, 500V High For high-Voltage Pulse Noise	159
6-300A	RTHN	Three Phase, 500V High Attenuation, Low Profile	160
10A	iDQ	75V DC input, PCB mount	161
20A	FQA	40V DC input, 1/4 brick MIL-STD-461	162
20A	FQB	40V DC input, 1/4 brick MIL-STD-461, 704, 1275 and RTCA DO-160	163
50A	RDEN	48VDC input for ITE Equipment	164

Listed by Wattage

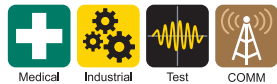
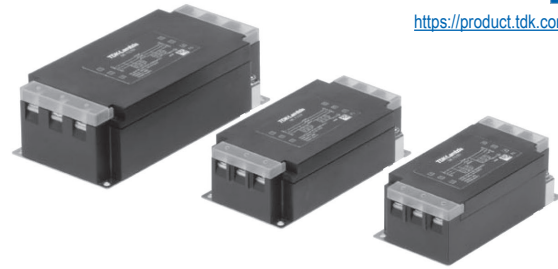
3A to 300A, 250VAC EMI Filters

[Full Datasheet](#)

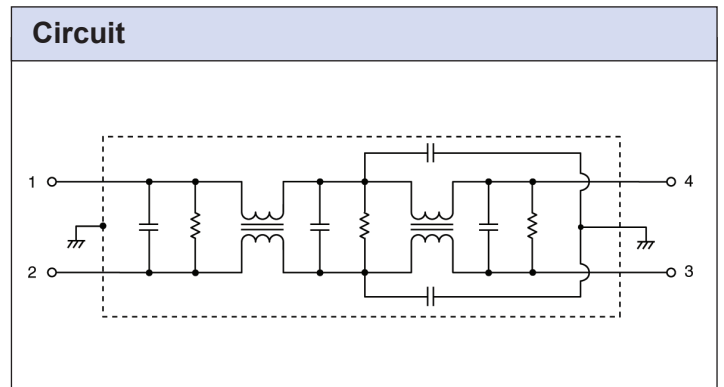
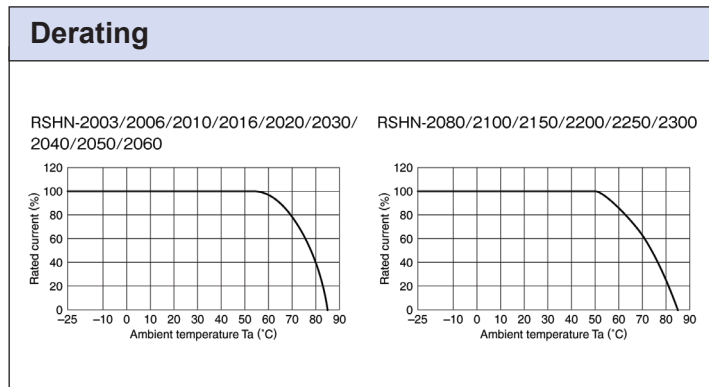
<https://product.tdk.com/en/power/filters>

Features

- Two Stage Filter for Better Performance
- DIN Rail Mount Option (Up 30A)
- Low Earth Leakage Current Option (Up to 30A)
- Conforms to UL, CSA and EN Safety Agency Certifications



Specifications						
Model		RSHN-2003 RSHN-2003D RSHN-2003L	RSHN-2006 RSHN-2006D RSHN-2006L	RSHN-2010 RSHN-2010D RSHN-2010L	RSHN-2016 RSHN-2016D RSHN-2016L	RSHN-2020 RSHN-2020D RSHN-2020L
Rated Voltage (AC, DC)	V	250V				
Rated Current	A	3A	6A	10A	16A	20A
DC Resistance (total)	mΩ	350	140	60	35	22
Model		RSHN-2030 RSHN-2030D RSHN-2030L	RSHN-2040	RSHN-2050	RSHN-2060	RSHN-2080
Rated Voltage (AC, DC)	V	250V				
Rated Current	A	30A	40A	50A	60A	80A
DC Resistance (total)	mΩ	12	10	8	6	7
Model		RSHN-2100	RSHN-2150	RSHN-2200	RSHN-2250	RSHN-2300
Rated Voltage (AC, DC)	V	250V				
Rated Current	A	100A	150A	200A	250A	300A
DC Resistance (total)	mΩ	6	4	3	2	1.5
Withstand Voltage	V	Terminals to Case: 2500VAC (1 Minute)				
Isolation Resistance	MΩ	100MΩ minimum (500VDC, 1 Minute)				
Leakage Current (max)	A	RSHN-20xx 1mA; RSHN20xxL 100uA (250VAC, 60Hz)				
Operating Temperature	°C	-25 to +85°C (Derate above 50 / 55°C, see derating curve)				
Storage Temperature	°C	-25 to +85°C				
Safety Agency Certifications	-	Up to 30A Models - UL1283, CSA C22.2 No.8, EN60939				
Weight	g	190g to 13000g model dependant (See weights chart on website)				
Warranty	yr	5 Year				



Options

Chassis Mount & Standard Leakage Current	RSHN-20xx
DIN Rail Mount & Standard Leakage Current	RSHN-20xxD
Chassis Mount & Low Leakage Current	RSHN-20xxL

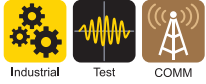
6A to 30A, 250VAC EMC Filters

[Full Datasheet](#)

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

Features

- Integrated Terminal Block With Captive Screws
- Compact Size
- DIN Rail Mount Accessory Kit
- Conforms to UL, CSA and EN Safety Agency Certifications



Specifications		RSEV-2006	RSEV-2010	RSEV-2016	RSEV-2020	RSEV-2030
Rated Voltage (AC, DC)	V	250V				
Rated Current	A	6A	10A	16A	20A	30A
Withstand Voltage	V	Terminals to Case: 2500VAC (1 Minute)				
Isolation Resistance	MΩ	100MΩ minimum (500VDC, 1 Minute)				
Leakage Current (max)	A	1mA (250VAC, 60Hz)				
DC Resistance (total)	mΩ	110	40	20	10	6
Operating Temperature	°C	-25 to +85°C (Derate above 55°C, see derating curve)				
Storage Temperature	°C	-25 to +85°C				
Safety Agency Certifications	-	UL1283, CSA C22.2 No.8, EN60939-3				
Weight	g	150g				
Size (W x L x H)	mm	39 x 85 x 30mm				
Warranty	yr	5 Year				

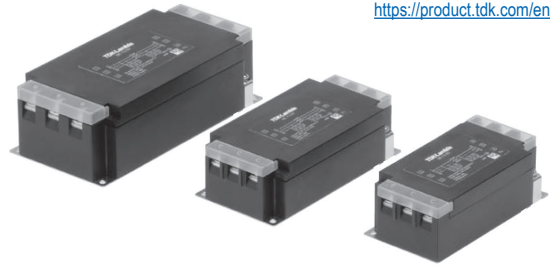
6A to 60A, 500VAC EMI Filters

[Full Datasheet](#)

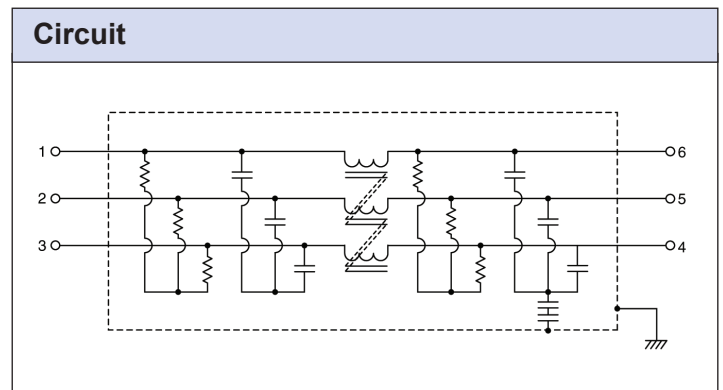
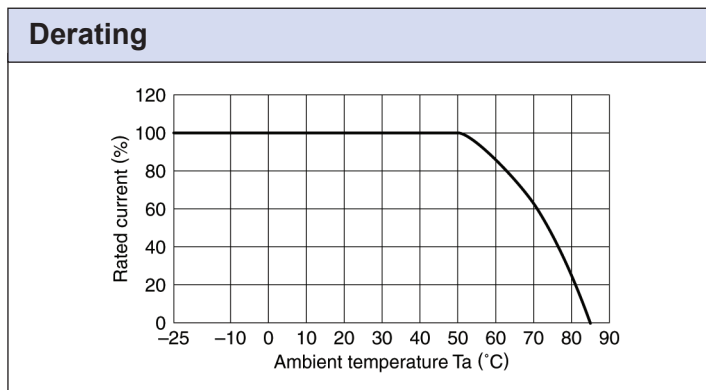
<https://product.tdk.com/en/power/filters>

Features

- High Voltage Pulse Attenuation
- DIN Rail Mount Option (Up 30A)
- Conforms to UL and EN Safety Agency Certifications



Specifications						
Model		RTAN-5006 RTAN-5006D	RTAN-5010 RTAN-5010D	RTAN-5020 RTAN-5020D	RTAN-5030 RTAN-5030D	RTAN-5040
Rated Voltage (AC, DC)	V	500V Three phase				
Rated Current	A	6A	10A	20A	30A	40A
DC Resistance (total)	mΩ	350	140	60	35	22
Model		RTAN-5050	RTAN-5060			
Rated Voltage (AC, DC)	V	500V Three phase				
Rated Current	A	50A	60A			
DC Resistance (total)	mΩ	7	5			
Withstand Voltage	V	Terminals to Case: 2500VAC (1 Minute)				
Isolation Resistance	MΩ	100MΩ minimum (500VDC, 1 Minute)				
Leakage Current (max)	A	2.5mA at 250VAC 60Hz, 5mA at 500VAC 60Hz				
Operating Temperature	°C	-25 to +85°C (Derate above 50°C, see derating curve)				
Storage Temperature	°C	-25 to +85°C				
Safety Agency Certifications	-	UL1283 & EN60939				
Weight	g	360g to 1120g model dependant (See weights chart on website)				
Warranty	yr	5 Year				



Options

Chassis Mount	RTAN-50xx
DIN Rail Mount (Models up to 30A)	RTAN-50xxD

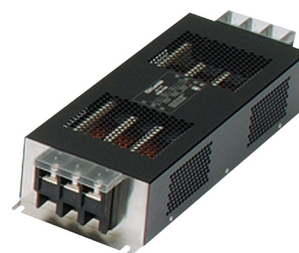
6A to 300A, 500VAC EMI Filters

[Full Datasheet](#)

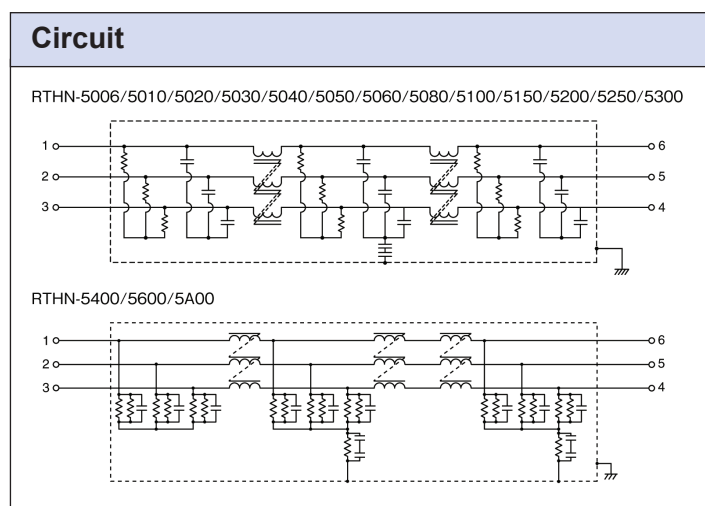
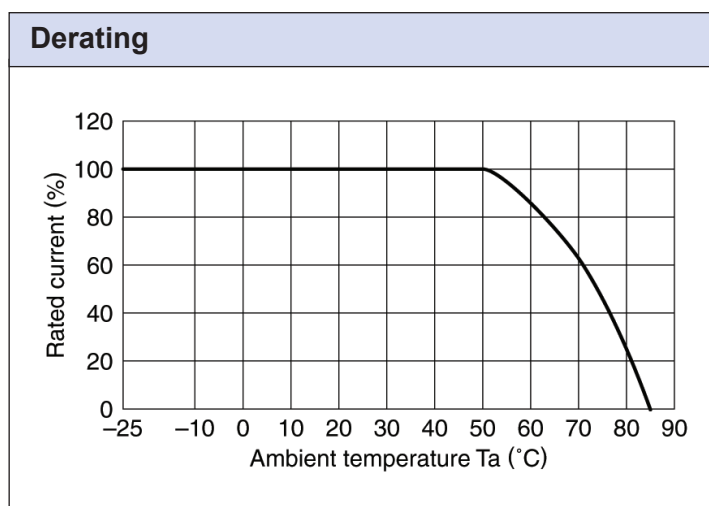
<https://product.tdk.com/en/power/filters>

Features

- Two Stage Filter for Better Performance
- Low Profile
- Conforms to UL and EN Safety Agency Certifications



Specifications		RTHN-5006	RTHN-5010	RTHN-5020	RTHN-5030	RTHN-5040
Model		RTHN-5006	RTHN-5010	RTHN-5020	RTHN-5030	RTHN-5040
Rated Voltage (AC, DC)	V	500V Three phase				
Rated Current	A	6A	10A	20A	30A	40A
DC Resistance (total)	mΩ	290	120	50	25	20
Model		RTHN-5050	RTHN-5060	RTHN-5080	RTHN-5100	RTHN-5150
Rated Voltage (AC, DC)	V	500V Three phase				
Rated Current	A	50A	60A	80A	100A	150A
DC Resistance (total)	mΩ	14	10	10	8	6
Model		RTHN-5200	RTHN-5250	RTHN-5300		
Rated Voltage (AC, DC)	V	500V Three phase				
Rated Current	A	200A	250A	300A		
DC Resistance (total)	mΩ	4	3	2		
Withstand Voltage	V	Terminals to Case: 2500VAC (1 Minute)				
Isolation Resistance	MΩ	100MΩ minimum (500VDC, 1 Minute)				
Leakage Current (max)	mA	6A to 300A Models: 2.5mA at 250VAC 60Hz, 5mA at 500VAC 60Hz 400A to 1000A Models: 17.5mA at 250VAC 60Hz, 35mA at 500VAC 60Hz				
Operating Temperature	°C	-25 to +85°C (Derate above 50°C, see derating curve)				
Storage Temperature	°C	-25 to +85°C				
Safety Agency Certifications	-	UL1283 (Up to 150A) & EN60939 (Up to 300A)				
Weight	g	700g to 18000g model dependant (See weights chart on website)				
Warranty	yr	5 Year				



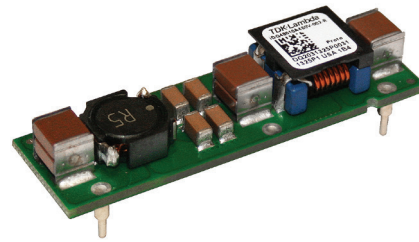
10A, 75VDC EMI Filters

[Full Datasheet](#)

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

Features

- Exceptional Differential Mode Performance
- Very Compact Size
- Minimal External Components Required*



Specifications

Model		iDQ48010A480V
Rated Voltage	VDC	75VDC (100VDC for 100ms)
Rated Current	A	10A
Withstand Voltage	VDC	Terminals to Ground: 1500VDC
Leakage Current	mA	Not Applicable
DC Resistance	mΩ	Positive leg: 11.5, Negative leg: 6.5
Operating Temperature (1)	°C	-40 to +120 (see derating curve and measurement point)
Storage Temperature	°C	-55 to +125
Safety Agency Certification	-	CE Mark
Size (LxWxH)	mm	50 x 15 x 10.8mm
Weight (Typ)	g	11.3
Warranty	yrs	3

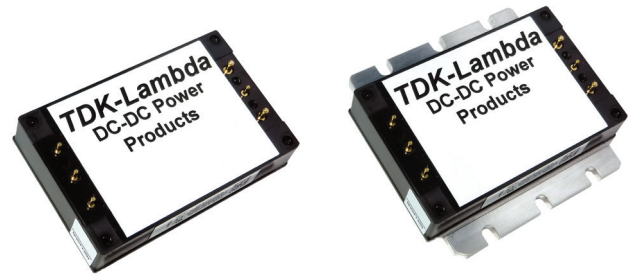
Notes:

- 1) See full specification on website

MIL-COTS 20A, 40Vdc Passive EMC Filters

[Full Datasheet](#)

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



COTS

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. Filter and DC-DC modules are not included.

MIL-COTS 20A, 40Vdc Active EMC Filters

[Full Datasheet](#)

<https://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

50A 48VDC EMI Filters

 Full Datasheet

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

Features

- High Attenuation
- Stud Terminal Connection
- Compact Size



Specifications

Model		RDEN-048050
Rated Voltage	VDC	48VDC (76VDC Max)
Rated Current	A	50A
Withstand Voltage	VDC	Terminals to Case: 1500VDC 60s
Isolation Resistance	MΩ	500MΩ minimum at 500VDC for 1 minute
Leakage Current	mA	Not Applicable
DC Resistance	mΩ	3
Operating Temperature	°C	-30 to +85 (see derating curve)
Storage Temperature	°C	-30 to +85
Safety Agency Certification	-	UL/CSA60950-1, EN60939
Weight (Typ)	g	310
Warranty	yrs	1 Year



Value Add Solutions



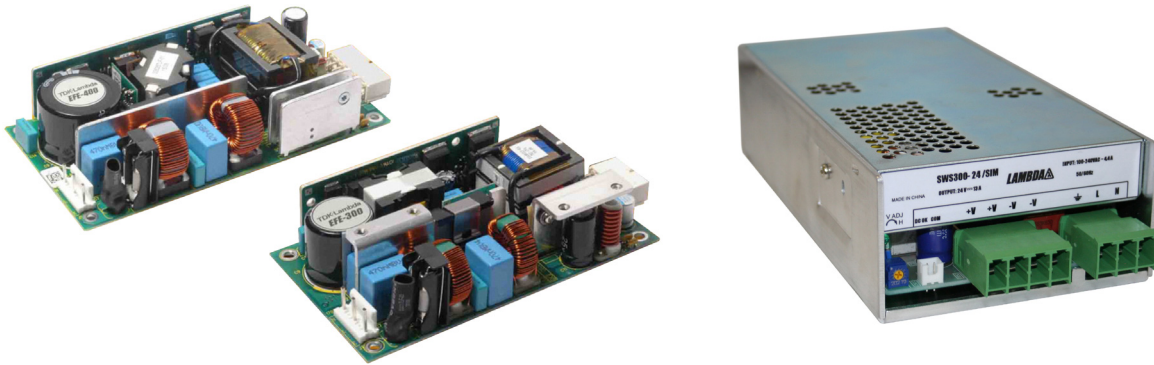
Features

- 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)

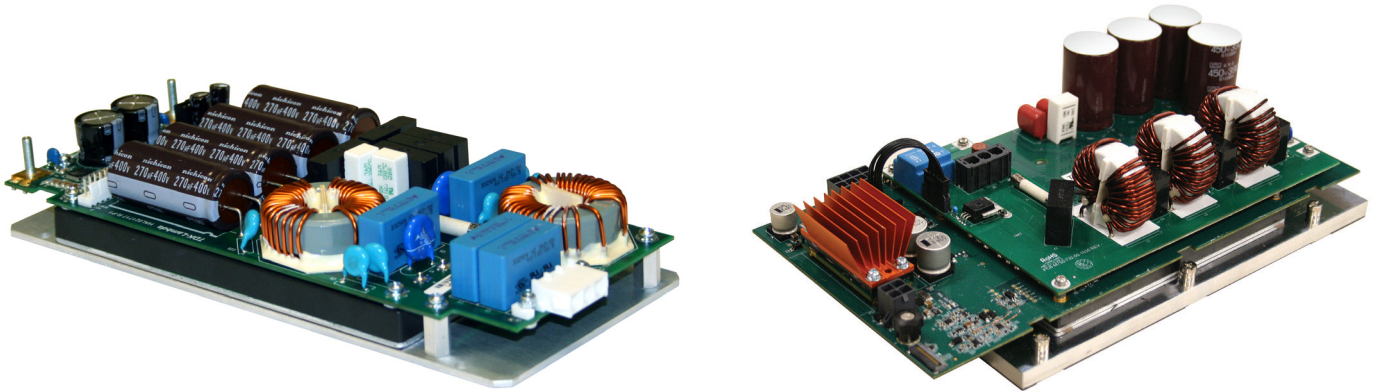
- A customized power solution which builds added circuitry or packaging around a Standard/Existing TDK-Lambda Power Supply to meet exact specifications.
- Any TDK-Lambda supply may be used as a starting point and these customized solutions also retain the proven reliability of the product from which 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.

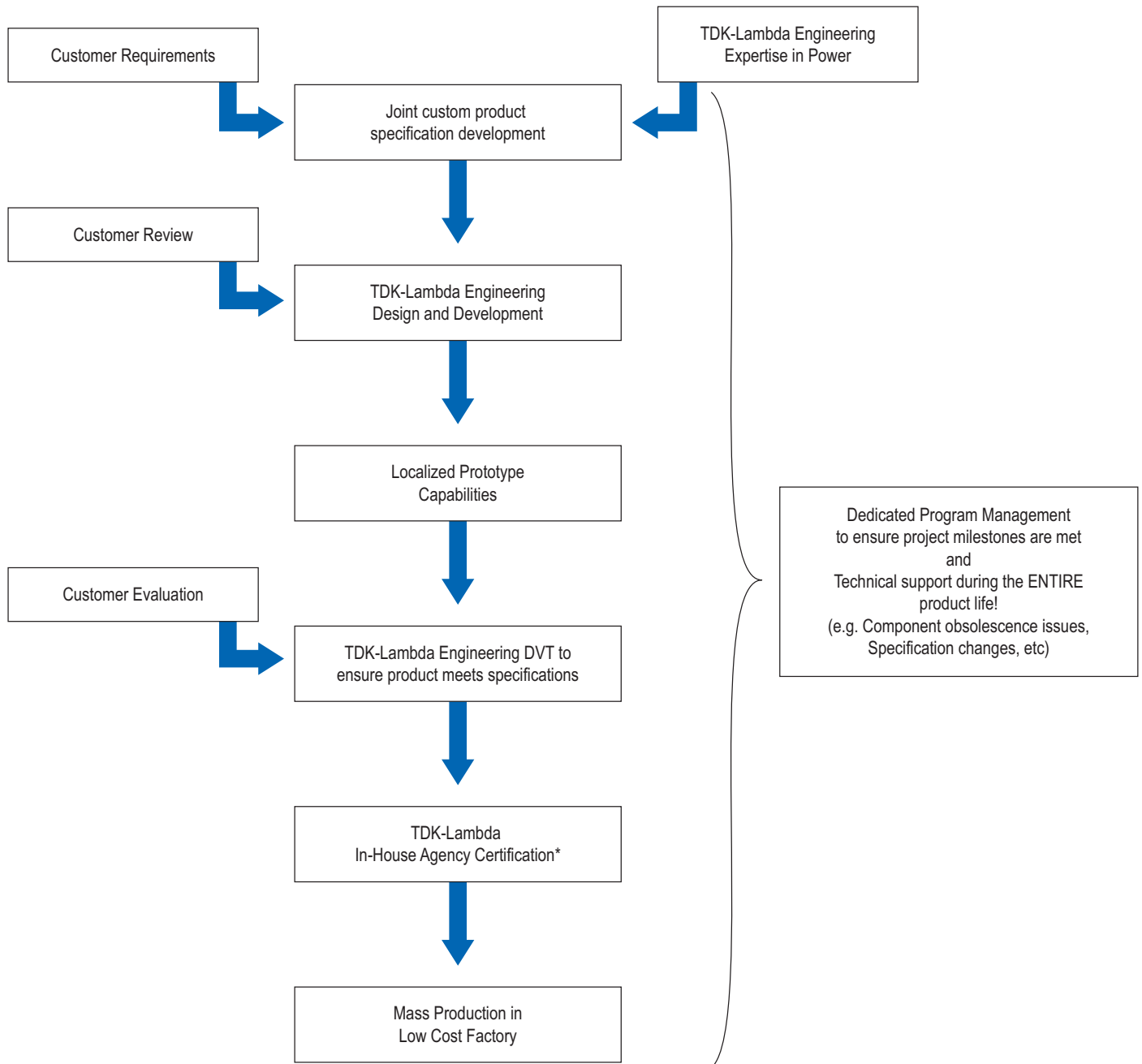


Full Custom (High Complexity)

- 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

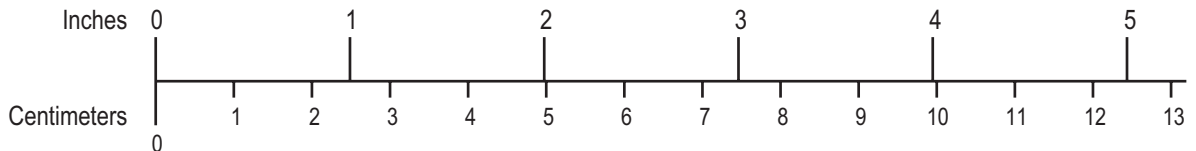


* For Modified Standard Products. New designs will be tested by external agencies.

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

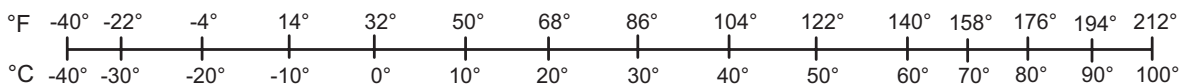
1U = 1.75 inch = 44.45mm

2U = 3.50 inch = 88.90mm

Fahrenheit - Celsius Temperature Conversions

$$^{\circ}\text{C} = \frac{^{\circ}\text{F} - 32^{\circ}}{1.8} \quad ^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32^{\circ}$$

Conversion Formulas



DC Circuit Equations

$$V = IR \quad I = \frac{V}{R} \quad R = \frac{V}{I} \quad P = IV \quad P = \frac{V^2}{R} \quad P = I^2R$$

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
AC-DC & programmable products

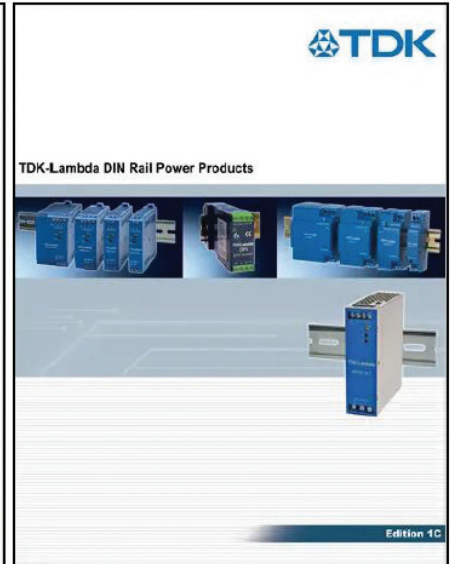
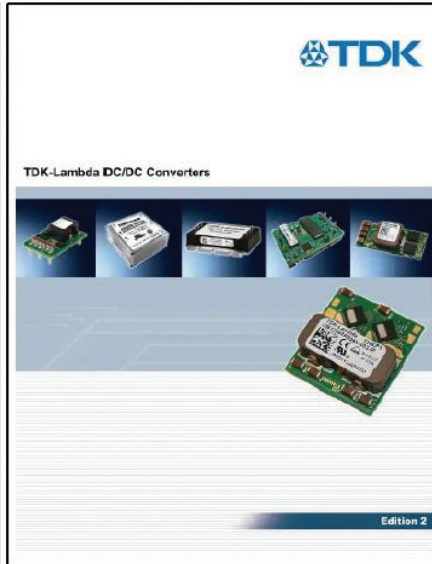
Additional Brochures

Written by Engineers, for Engineers. Find the part you need and get to market faster!
Download Catalogs & Brochures at <https://www.us.lambda.tdk.com/resources/catalogs/>

Value Add Solutions

DC/DC Converters

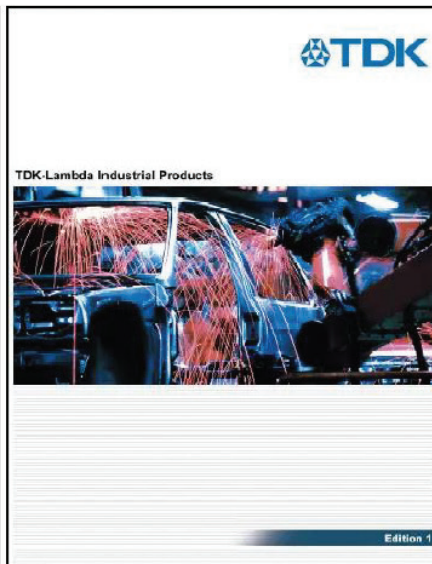
DIN Rail Products



Healthcare Products

Industrial Products

Convection/Conduction Cooled Products



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