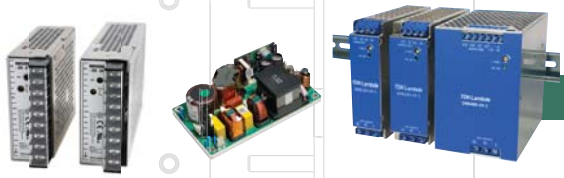
TDK·Lambda

Products Selection Guide



UNIT/PCB Type p13



CVCC p34



Power Module p41



Onboard Type p48



EMC Filter p52



Buffer Module p16

Power+ Solutions & Custom Made are available

For further enquiry please contact local sales office

TDK

Unit/PCB Type

Outupt	Type	Input Voltage	Features	Series
Single	Enclosed Type	100/200VAC	Ultra small, High efficiency, Full function	HWS-A, HWS
			Harsh environment-resistant, MIL-STD-810 compliant	HWS/HD
			Medical std. approved, Input-Output 2×MOOPs	HWS/ME
			Class I Div.2 Harzardous Location Cert., With Dry Contact Relay	HWS/RY
			Simple function, Long service life	RWS-B
			Medical std. Ed.3 approved, Input-Output 2xMOPPs	RWS-B/ME
			High efficiency, ErP compliant, Peak power (24V/36V)	GWS
			Economic type, Withstand 300VAC surge 5 sec.	LS
			Low profile, Designed to meet EN61010	SWS-L
			Conduction cooled, MIL-STD-461/462D CE102 conducted EMC, I²C Interface	CPFE
			MIL-COTS with STD-810E Vibration/Shock, Approved UL508, SEMI-F47(>100VAC)	LZSA
			Medical std. approved, External power supply	DTM
		400/440/480VAC	3-Phase industrial power supply	TPS
		DC Input	Best for instruments related signal or vehicle of railway system and factory automation	RDS-A New
	DIN Rail Mount	100/200VAC	MOSFET redundancy module	DRM
			Suitable for hazardous environment, 150% peak power 4 sec.	DRF
			ATEX/ IEC Ex/ DNV-German Lloyd approved, Conformal coating	DRF/HL
			Slim type, High efficiency	DRB
			Suitable for building automation, 55.6mm dimension	DRL
			NEC Class II compliant (DLP180 & 240), SEMI-F47 (DLP180 & 240)	DLP
			3 Phase DIN Rail Mounting	DPP
		DC Input	Non-isolated DC-DC, Single/ Dual output	DDA New
			Isolated DC-DC, Single/ Multiple output	DPX
			Buffer module	DBM New
	PCB Type	DC Input	Buffer module	ZBM New
		100/200VAC	Medical Std. Ed.4 approved, Input-Output 2×MOPPs	CUS-M New
			Medical std. approved, Input-Output 2×MOPPs	CSS
			Medical std. approved, Input-Output 2×MOPPs, 133% peak power	EFE/EFE-M
			Convection cooled, Height 31mm	CUS-LD
			EN62477-1 (OVC III) approved	ZWS-RC
			High Efficiency, High reliability	ZWS-BAF
			Up to 200% peak power, EN62477-1 (OVC III) approved	ZWS-BP
			Low profile, 2"×4" to 3"×5" footprint, Low power	ZPSA
		115/230/277VAC	90~305VAC input voltage, NEC Class II (24V model)	CSW
	Modular/ Configurable	100/200VAC	Modular type, Medical std. approved, Input-Output 2×MOPPs	QS New
			Modular type, Conduction cooled, Medical std. approved, Input-Output 2×MOPPs	CM4
			Configurable, BF ready medical isolation	XMS500
	Front-End	100/200VAC	1U rack mount, Mountable up to 5 units	HFE
			Stand-alone type	RFE
			1U rack mount, Mountable up to 3 units	FPS
		400/440/480VAC	3-Phase, -40°C (Start up)	TPF45000 New
	Battery Charging	100/200VAC	Usable for both DC and AC lines	HMS
			Constant current/voltage, option part: backflow prevention module (RP-60-20)	EVS
			Medical std. approved, CVCC Programmable with communication function	GXE
			Height 61mm, Constant current, Designed to meet medical std.	HWS-L/BAT
		48 to 320VDC; 240 to 320VDC	Isolated bidirectional DC-DC converter, RS-485	EZA
		300 to 1000VDC	Hight voltage/Wide input voltage range, Isolated DC-DC	TEP200-280
Dual	PCB	100/200VAC	Peak power capability	ZWD-PAF
Triple	PCB	100/200VAC	Medical Std. Ed.3 approved, Input-Output 2×MOOPs	CUT
			EN/UL60950 approved, EMI Class B	JWT
Multiple	PCB	100/200VAC	<1U height, Floating adjustable fourth output	ZWQ
	Modular/ Configurable		Fits 1U height application, Up to 8 modular outputs	NV
			Up to 11 modular outputs	Vega
				Vega-lite
			Medical std. approved, Input-Output 2×MOPPs	QM New

* Please refer to our website product page of each product for more information.

10	15	20	25	30	35	40	50	60	65	75	80	100	110	120	130	150	165	175	180	200	225	240	250	280	300	350	400	425	450	480	500	550	600	650	700	750	800	900	960	1K	1.2K	1.5K	1.6K	1.8K	2.5K	3K	4K	11K	45K	Warranty (Year)	Page
	●			●			●				●	●				●									●								●							●		●		●						5	13
				●			●					●				●									●								●							●		●		●						5	Web
				●			●					●				●									●								●							●		●								5	Web
																								●								●							●		●								5	13
							●					●				●									●								●							●		●								5	14
																																							●		●								5	14
																						●								●																			5	19
			●		●		●			●		●				●				●																														3	18
																																●							●										3	Web
																																							●										2	22
																														●									●		●								5	Web
				●					●				●				●						●		●																								2	25
																																													●	●			3	21
				●				●				●							●																														5	20
																																																	5	15
													●								●								●									●											5	15
													●								●								●																				5	Web
	●			●			●					●		●							●								●																				3	17
●				●				●				●																																					3	17
										●		●		●					●			●																												3	Web
													●								●								●									●											2	Web
																																																	3	19
	●	●		●		●		●																																									2	Web
																												●																					5	16
																				●			●					●																					5	16
				●				●				●				●				●						●	●						●								●								3	23
									●							●								●																									2	Web
																								●		●																						5	Web
																			●			●																										3	24
																					●																											5	26
							●			●		●				●									●																									5	Web
																●						●																												5	26
		●				●		●				●																																					2	Web
									●																																								3	25
																																●							●	●									7	30
																											●					●																	5	28
																														●																			5	29
																																										●		●					3	22
																																										●		●					2	22
																																							●										3	Web
																																																●	3	21
							●				●	●				●																																	5	18
																								●								●																	5	14
																																●																	5	39
																																●							●										5	Web
																																												●			●		5	20
																			●																															5	Web
												●				●					●																												2	27
					●					●																																							3	24
										●		●																																					3	Web
											●				●																																		1	27
																		●								●									●					●	●									3	32-33
																												●					●				●												3	Web
																																		●			●												3	Web
																															●		●	●		●					●	●								7	31

Selection Guide

Programmable Power Supplies (CVCC)

Outupt	Type	Input Voltage	Features	Series
Single	Programmable PS (1U Half rack)	85 to 265VAC	Built-in LAN, USB, RS-232 & RS-485 Interface; Isolated analog program/Monitor/Control; Interface option: GPIB, EtherCAT, Modbus-TCP; Scalable power systems up to 60kW	Genesys + New 
	Programmable PS (1U)	3-phase 200/400/480VAC, 1-phase 200VAC		
	Programmable PS (2U)	3-phase 200/400/480VAC		
	Programmable PS (3U)			
	Programmable PS (1U Half rack)	85 to 265VAC	Built-in RS-232 & RS-485 Interface; Interface option: LAN, GPIB, USB, isolated analog; Output voltage up to 1500V	Genesys 
	Programmable PS (1U)	1-phase 230VAC, 3-phase 208VAC		
	Programmable PS (2U)	1-phase 230VAC, 3-phase 208/400VAC		
		3-phase 208/400VAC		
	Programmable PS (3U)	3-phase 208/400/480VAC		
	Programmable PS (2U)	85 to 265VAC	2U height, Built-in USB/RC232/RC485, output voltage up to 650V	Z + 
	Programmable PS (3U)		3U height, Built-in RC232/RC485	ZUP 
	Programmable Electronic Loads (3U)	85 to 264VAC	3U height, 7 operation modes: CC, CR, CP, CV, EXT, Short, CV+Climit; Built-in LAN; Interface option: IEEE, Ripple measurement; Scalable power up to 10kW	SFL New 
	Programmable High Voltage DC (3U~12U)		High precision; Low ripple output; Output voltage up to 300kVDC; Optional Analog and Digital Interfaces, Electronic Polarity Reversal	PHV New 
	Programmable High Voltage DC (2U)		Multi-function digital display; Variable speed fan for quiet operation; Output voltage up to 50kVDC	FLX-HV New 

* Please refer to our website product page of each product for more information.

Onboard

AC-DC

Input Voltage	Series	Output: Single	Output: Dual	Output: Triple	Features
AC100V/200V	KAS 	●			90~305VAC input, Class II
	KMS-A 	●			Medical PCB mount
	KMD/KMT 		●	●	
	KPSA 	●			Low cost open PCB mount
	KWS-A 	●			Ultra compact enclosed PCB mount
	KWD 		●		Compact enclosed PCB mount

DC-DC

Input Voltage (VDC) 3	5	12	24	48	Series	Output: Single	Output: Dual	Output: Triple	Features
					Isolated				
			●	●	CCG 	●	●		1 × 1" Wide input voltage 4 : 1
●	●	●	●	●	CC-E 	●	●		Ultra compact metal shielded
	●	●	●	●	PV, PVD 	●	●		Vertical mounting (Mold type)
		●	●	●	PXA 	●			1 × 1" Open PCB
		●	●	●	PXB 	●	●		1 × 1" Closed metal case (Shield type)
			●	●	PXC-M 	●	●		5kVAC Isolation 2×MOPPs (Shield type)
			●	●	PXG-M New 	●	●		
			●	●	PXD-M New 	●	●		
		●	●	●	PXD 	●	●		2 × 1" Closed metal case (Shield type)
		●	●	●	PXE 	●	●		2 × 1.6" Closed metal case (Shield type)
		●	●	●	PXF 	●	●	●	2 × 2" Closed metal case (Shield type)

Output Power (W)																												
14	35	140	200	300	350	400	450	500	600	700	750	800	1K	1.4K	1.5K	1.7K	2.4K	2.7K	2.8K	3.3K	3.4K	4.2K	5K	10K	15K	Warranty (Year)	Page
													●		●											5	34
													●			●										5	34
																		●			●					5	35
																							●			5	35
																								●		5	35
																									●	5	35
											●															5	36
											●				●											5	36
																	●									5	37
																				●						5	37
																							●			5	37
																								●	●	5	37
			●			●			●			●															5	38
			●						●			●															3	38
				●									●														2	39
●	●	●			●					●				●					●			●	●	●	●	3	Web
			●					●					●														3	Web

Terminal Type			Output Voltage (V)								Output Power (W)									Warranty (Year)	Page
DIP	SMD	SIP	3.3	5	8	9	12	14	15	24	2	4	5	10	15	25	30	40	60		
●			●	●	●	●	●	●	●	●	●	●								3	41
●				●		●	●		●	●					●		●		●	3	41
●				●			●		●	●					●			●		3	41
●			●	●			●		●	●			●	●	●					3	Web
●				●			●		●	●			●	●	●	●				3	41
●							●		●					●	●					3	Web

Terminal Type			Output Voltage (V)										Output Power (W)										Warranty (Year)	Page
DIP	SMD	SIP	3.3	5	12	15	24	±5	±12	±15	3.3, ±12	5, ±15	1.5	3	6	10	15	20	25	30	40	60		
●			●	●	●	●			●	●							●			●			5	48
●	●	●	●	●	●	●			●	●			●	●	●	●							5	47
		●	●	●	●				●				●	●									3	Web
●	●		●	●	●	●											●						2	Web
●			●	●	●	●		●	●	●							●						2	Web
●			●	●	●	●	●	●	●	●				●	●	●							2	49
●				●	●	●	●	●	●	●							●	●					2	49
●				●	●	●	●	●	●	●										●			2	49
●			●	●	●	●		●	●	●						●	●	●		●			2	Web
●			●	●	●	●		●	●	●								●		●			2	Web
●			●	●	●	●			●	●	●	●									●	●	2	Web

Selection Guide

Onboard

DC-DC

Input Voltage (VDC)							Series	Output			Features
2.4 to 5.5	4.5 to 14	3 to 14	3 to 17	8 to 14	9 to 40	9 to 53		Single	Dual	Triple	
							Non-Isolated				
					•	•	i3A, i6A 	•			Wide output adjustment POL
•	•		•				iAF, iAH 	•			20~40A POL converter
•	•	•					iBF, iBH 	•			12~20A POL converter
•	•						iCF, iCG, iCH 	•			SMT DOSA 2 POL converter
						•	i7C New 	•			Step-up / Step-down converter

Input Voltage (VDC)			Series	Output			Features
10.8 to 13.2	10.8 to 16.5	11 to 13		Single	Dual	Triple	
•	•	•	CHVM New 	•			High output voltage

Power Module

DC-DC

Input Voltage (VDC)							Series	Features
24	48	110	280	2W#	4N#	4W#		
			•				PH-A280 New 	Flagship HVDC input power module
•	•		•				PAF 	Full brick size, 100°C baseplate temperature, 1.5kVDC isolation
•	•						PAH 	1/2 brick size, 100°C baseplate temperature, 1.5kVDC isolation
	•						PAE 	1/8 brick size, 1.5kVDC isolation
•		•					CN 	For railway related instruments, IEC61373 shock & vibration
•				•			HQA 	Heavy duty environment, 1/4 brick size, 115°C baseplate temperature, 2.25kVDC isolation
•				•			GQA 	1/4 brick size, 105°C baseplate temperature, 1.5kVDC isolation
•	•					•	iQE, iQG, iQL 	1/4 brick size, 1.5kVDC isolation
	•				•		iEA, iEH 	1/8 brick size, 1.5kVDC isolation
	•						iSA 	1/16 brick size, 1.5kVDC isolation

2W: 9 to 40VDC 4W: 18 to 60VDC 4N: 49.5 to 55.5VDC

AC-DC

Input Voltage (VAC)		Series	Features
85 to 265	170 to 265		
•		PFH500F 	4×2.4", 3kVAC isolation, with PFC
•		PFE-F/PFE-FA 	Full brick size, Parallel operation
•		PFE-SA 	Full brick size
•	•	PF-A 	Rectifier & PFC modules

* Please refer to our website product page of each product for more information.

Terminal Type			Output Voltage (V)															Output Current (A)													Warranty (Year)	Page
DIP	SMD	SIP	-2K	-30	-3.3	0.6	0.7	1.5	2	3.3	5.5	8.5	15	17	24	30	40	48	2K	0.056	0.1	0.2	3	4.5	5	6	8	10	12	14	20	35	40		
	•			Variable																				•			•	•		•	•			3	50
	•					Variable																									•		•	3	48
	•					Variable																								•		•			3	48
	•					Variable																		•		•	•			•					3	48
	•					Variable																							•		•				3	50

Terminal Type			Output Voltage (kV)												Output Current (mA)									Warranty (Year)	Page
DIP	SMD	SIP	-2K	-1.5	-1	-0.47	-0.35	-0.30	-0.18	0.30	0.35	0.47	1	1.5	2	0.7	1	1.3	1.5	2	5.6	7	10	15		
	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1	42

Output Voltage (V)															Output Power (W)																Warranty (Year)	Page
1.2	1.5	1.8	2.5	3.3	5	9.6	12	13.8	15	18	24	28	48	360	30	50	65	75	85	100	120	150	200	300	350	400	450	500	600	700	1000		
				•	•		•		•		•	•	•			•		•		•		•		•					•			5	45
				•	•		•				•	•	•														•	•	•	•		2	44
							•					•	•											•	•		•					2	44
		•	•	•	•											•				•												2	44
					•		•	•	•		•				•	•				•			•	•								5	45
					•		•		•		•	•	•						•		•											3	46
					•		•		•		•	•	•								•											3	46
•			•	•	•	•	•		•			•						•			•	•	•	•		•	•	•				3	47
					•		•		•	•		•					•	•						•					•			3	46
•	•	•	•	•	•		•								•	•	•	•	•													3	50

Output Voltage (V)														Output Power (W)																Warranty (Year)	Page
1.2	1.5	1.8	2.5	3.3	5	9.6	12	15	18	24	28	48	360	30	50	65	75	85	100	120	150	200	300	350	400	450	500	600	700	1000		
							•				•	•																•				3	42
							•				•	•																•			•	5	43
							•				•	•												•				•		•		5	43
													•															•			•	2	43

Power Line EMC Filters

Power Supply	Performance	Case Shape	Terminal Structure	Function: High Frequency Noise Correspondence	Function: High Voltage Pulses Correspondence	Function: Low Leakage Current*1	Function: DIN Rail Mount*1	Function: Output Inverter Correspondence	Series*1
Single Phase	Multipurpose	IEC Inlet	Faston #250 *2	●	-	-	-	-	RPE
				●	-	-	-	-	RPE-R
				●	-	●	-	-	RPE-L
				●	-	●	-	-	RPE-RL
				●	●	-	-	-	RPA
				●	●	-	-	-	RPA-R
				●	●	●	-	-	RPA-L
				●	●	●	-	-	RPA-RL
				●	-	-	-	-	RPE-F01
				●	-	-	-	-	RPE-F02
				●	-	●	-	-	RPE-F01L
				●	-	●	-	-	RPE-F02L
		Small Size	Pin Terminal	●	-	-	-	-	RSEG
				●	●	-	-	-	RSAG
			Faston #110 *2	●	-	-	-	-	RSEC
				●	-	-	-	-	RSEL-A
				●	-	●	-	-	RSEL-AL
			UL1015 Wire	●	-	-	-	-	RSEL-W
				●	-	●	-	-	RSEL-WL
				●	●	-	-	-	RSEL-M
			Faston #110 *2	●	●	-	-	-	RSAL-A
				●	●	●	-	-	RSAL-AL
			UL1015 Wire	●	●	-	-	-	RSAL-W
				●	●	●	-	-	RSAL-WL
			Block Terminal (Self-up Screw)	●	-	-	DIN-RSEV (separately sold)	-	RSEV
		Low Profile		●	-	-	-	-	RSEN
				●	-	●	-	-	RSEN-L
				●	-	-	●	-	RSEN-D
				●	-	●	●	-	RSEN-LD
				●	●	-	-	-	RSAN
				●	●	●	-	-	RSAN-L
				●	●	-	●	-	RSAN-D
				●	●	●	●	-	RSAN-LD
				●	-	-	-	-	RSHN
				●	-	●	-	-	RSHN-L
				●	-	-	●	-	RSHN-D
				●	-	●	●	-	RSHN-LD
				●	●	-	-	-	RSMN
				●	●	●	-	-	RSMN-L
				●	●	-	●	-	RSMN-D
				●	●	●	●	-	RSMN-LD
	Wide Range High Attenuation		Block Terminal	●	-	-	-	-	RSKN

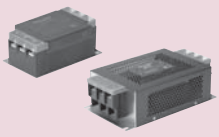
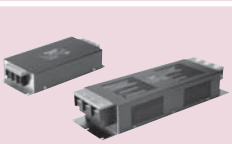












*1 L: For low-leakage (current to 30A), D: For a DIn -rail (current to 30A)

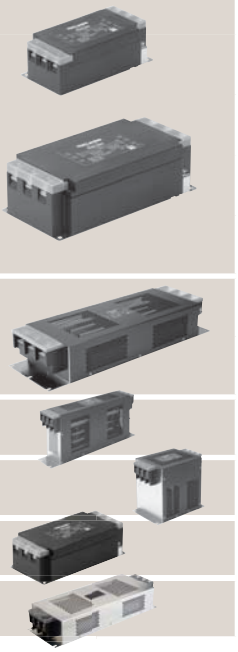
*2 "Faston" is a registered trademark of TE Connectivity

Rated Current (A)																				Page
0.5	1	2	3	4	5	6	10	16	20	30	40	50	60	80	100	150	200	250	300	400	
			•			•	•														52
			•			•	•														52
			•			•	•														52
			•			•	•														52
			•			•															52
			•			•															52
			•			•															52
			•			•															52
			•			•															52
			•			•															52
			•			•															52
			•			•															52
•	•	•	•	•		•															52
•	•	•	•	•		•															52
						•															52
•	•	•	•			•															52
•	•	•	•			•															52
•	•	•	•			•															52
•	•	•	•			•															52
•	•	•	•		•																52
•	•	•	•			•															52
•	•	•	•			•															52
•	•	•	•			•															52
•	•	•	•			•															52
						•	•	•	•	•											53
			•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	*3	53
			•			•	•	•	•	•											53
			•			•	•	•	•	•											53
			•			•	•	•	•	•											53
			•			•	•	•	•	•	•	•	•								53
			•			•	•	•	•	•											53
			•			•	•	•	•	•											53
			•			•	•	•	•	•											53
			•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	*3	53
			•			•	•	•	•	•											53
			•			•	•	•	•	•											53
			•			•	•	•	•	•											53
			•			•	•	•	•	•	•	•	•	*3							53
			•			•	•	•	•	•											53
			•			•	•	•	•	•											53
			•			•	•	•	•	•											53
						•	•		•	•											53

*3 ▭ See our website product page for details about safety standard certification of models enclosed in blue boxes.

Power Line EMC Filters

Power Supply	Performance	Case Shape	Terminal Structure	Function: High Frequency Noise Correspondence	Function: High Voltage Pulses Correspondence	Function: Low Leakage Current*1	Function: DIN Rail Mount*1	Function: Output Inverter Correspondence	Series*1
Three Phase	Multipurpose	Low Profile	Block Terminal (Self-up Screw)	●	-	-	-	-	RTEN
				●	-	-	●	-	RTEN-D
				●	●	-	-	-	RTAN
				●	●	-	●	-	RTAN-D
				●	-	●	-	●	RTCN
	Wide Range High Attenuation			●	-	-	-	-	RTHN
				●	●	-	-	-	RTMN
		Book		●	-	-	-	-	RTHB
		Cube		●	-	-	-	-	RTHC
	Low Leakage Current	Low Profile		●	-	●	-	-	RTEN-2
				●	-	●	-	-	RTHN-2



*1 L: For low-leakage (current to 30A), D: For a DIn -rail (current to 30A)

*2 "Faston" is a registered trademark of TE Connectivity

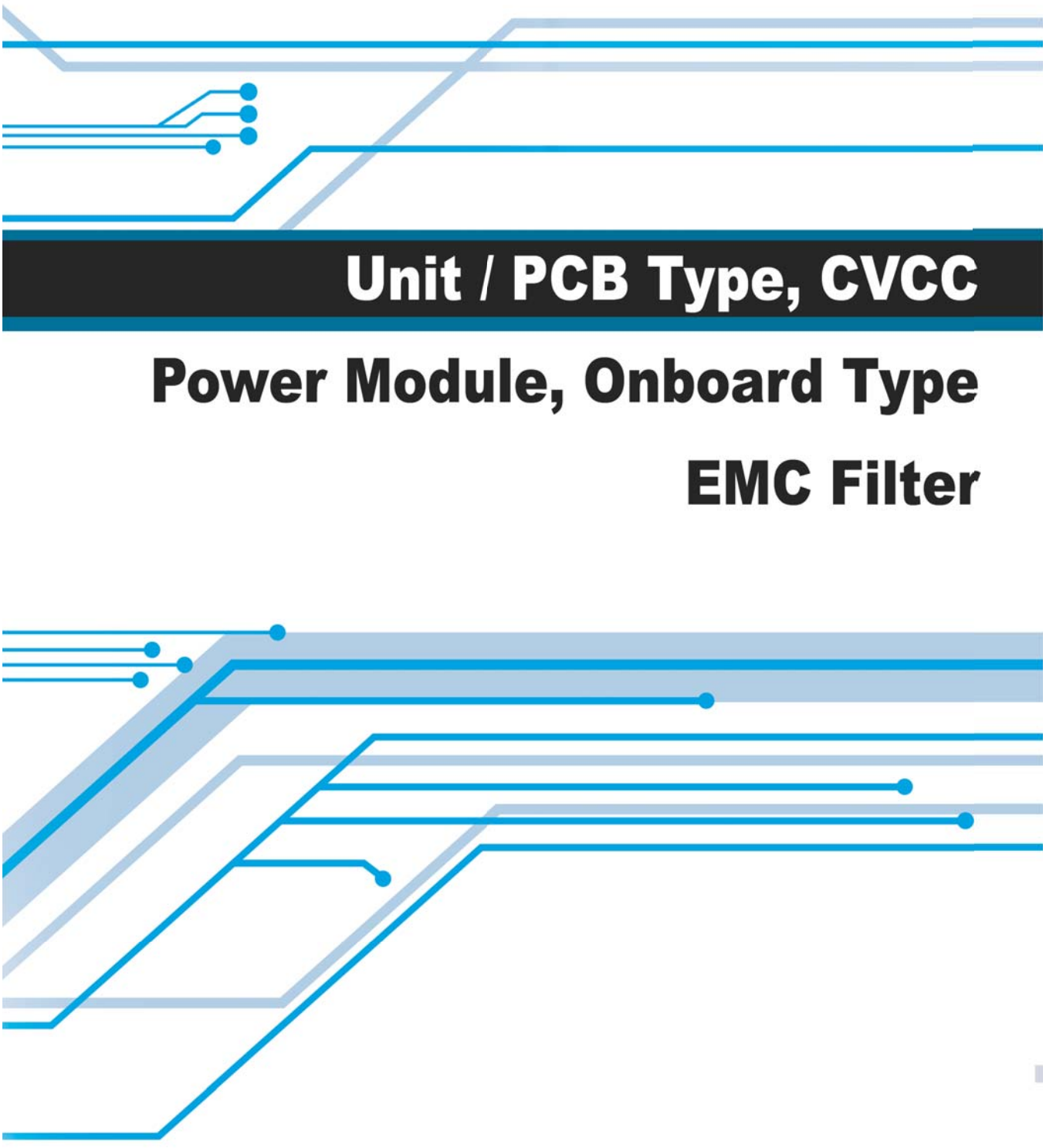
Input	Feature	Terminal Structure	Series
48VDC	DC48V Input only, For Information and Telecommunication equipment	Stud type	RDEN
75VDC	Compact size, Exceptional differential mode performance	Through hole or surface mount type (option)	iDQ
40VDC	EMI filter, Harsh environment	1/4 brick size module	FQA
-40 to +40VDC	Input transient filter, Harsh environment		FQB



Rated Current (A)																						
0.5	1	2	3	4	5	6	10	16	20	30	40	50	55	60	80	100	150	200	250	300	400	Page
						•	•		•	•	•	•		•	•	•	•	•	•	•	*3	53
						•	•		•	•												53
						•	•		•	•	•	•		•								53
						•	•		•	•												53
						•	•		•	•	•	•		•	•	•	•	•	•	•	*3	53
						•	•		•	•	•	•		•	•	•	•	•	•	•	*3	54
						•	•		•	•	•	•		•								54
						•	•		•	•	•	•		•	•	•	•					54
						•	•		•	•	•	•		•	•	•	•	•	•	•	*3	54
						•	•		•	•	•	•		•	•	•	•	•	•	•	*3	53
						•	•		•	•	•	•		•	•	•	•	•	•	•	*3	54

*3 ▭ See our website product page for details about safety standard certification of models enclosed in blue boxes.

Rated Current (A)																						
0.5	1	2	3	4	5	6	10	16	20	30	40	50	55	60	80	100	150	200	250	300	400	Page
												•										54
							•															55
									•													55
									•													55



Unit / PCB Type, CVCC

Power Module, Onboard Type

EMC Filter

HWS-A/HWS series

15W～1800W Full Function Single Ouptut AC-DC Power Supplies



HWS HWS/HD HWS/ME

Features

- Full function flagship model
- High efficiency up to 91%
- UL508 approved
- SEMI-F47 compliant (200VAC line only)
- Limited lifetime warranty (with terms and conditions)
- HWS1800T: 3-phase 1800W industrial power suppply

Specification

HWS-A series	HWS15A	HWS30A	HWS50A	HWS80A	HWS100A	HWS150A
Rated Output Voltage	3.3V/5V/12V/15V/24V/48V					
Input Voltage Range	85 to 265VAC (47 to 63Hz), 120 to 370VDC					
Max. Output Power	15W (3.3V:9.9W)	30W (3.3V:19.8W)	50W (3.3V:33W)	80W (3.3V:52.8W)	100W (3.3V:66W)	150W (3.3V:99W)
Efficiency	Up to 91%					
Size (WXHXD mm)	26.5×82×80	26.5×82×95	26.5×82×120	28×82×160	28×82×160	37×82×160
Weight (g)	180	220	280	420	450	500

HWS series	HWS300	HWS600	HWS1000	HWS1500	HWS1800T
Rated Output Voltage	3.3V/5V/12V/15V/24V/48V		3.3V/5V/6V/7.5V/12V/15V/24V/36V/48V/60V		
Input Voltage Range	85 to 265VAC/120 to 330VDC (DC Input for 300W/600W/1000W only)				3ø 170 to 265VAC
Max. Output Power	300W (3.3V:198W)	600W (3.3V:396W)	1000W	1500W	1800W
Efficiency	Up to 90%				
Size (WXHXD mm)	61×82×165	100×82×165	126.5×82×240	126.5×82×280	126.5×82×280
Weight (g)	1000	1600	3200	3800	3800

Options

/A	Screw terminals, with cover (300-1800W fitted as standard)	/HD	High environment-resistant type MIL-STD-810F compliant, PCB conformal coating, -40°C start up
/ADIN	Cover and din rail mounting bracket (15-150W only)		
/R	Remote ON/OFF (exclude 15W & 30W; 300-1800W fitted as standard)	/PV	Output voltage control with a external voltage (300-600W only, 1000-1500W fitted as standard)
-P	Up to 300% peak power capability (300W & 600W only)		
/ME	With UL/EN60601 medical approval, 2xMOOPs primary-secondary	-L/BAT	600W & 1000W (36V/60V) battery charging power supply

HWS-RY series

300W～1500W with Dry Contact Relay AC-DC Power Supplies



Features

- Relay built-in for power fail signal
- ISA 12.12.01 (UL1604) Class I, Division 2 for hazardous locations
- Built to meet SEMI-F47 (200VAC only)
- Designed to meet DENAN

Specification

HWS series	HWS300-24/RY	HWS600-24/RY	HWS1000-24/RY	HWS1500-24/RY
Rated Output Voltage	24V			
Input Voltage Range	85 to 265VAC (47 to 63Hz), 120 to 330VDC			
Max. Output Power	336	648	1104	1680
Efficiency (100/200VAC)	Up to 88%			
Size (WXHXD mm)	61×82×165	100×82×165	126.5×82×240	126.5×82×280
Weight (g)	1000	1600	3200	3800

Options

/HD Relay signal outputs with solder side and component side coating, guaranteed −40°C start-up and comply with MIL-STD-810F for shock and vibration

RWS-B series

50W～1500W Simple Function Single Output AC-DC Power Supplies



Features

- Compact and high efficiency up to 89.5%
- Basic functions power supply with built-in PFHC
- EMI Class B
- UL508 Certification on select models

RWS-B　RWS-B/ME

Specification

Model	RWS50B	RWS100B	RWS150B	RWS300B	RWS600B	RWS1000B	RWS1500B
Rated Output Voltage	5V/12V/ 24V/48V	5V/12V/15V/ 24V/48V	5V/12V/15V/ 24V/28V/48V	5V/12V/15V/ 24V/36V/48V	5V/12V/15V/ 24V/36V/48V	12V/15V/24V/ 36V/48V	12V/24V/ 36V/48V
Input Voltage Range	85 to 265VAC (47 to 63Hz), 120 to 370VDC				85 to 265VAC (47 to 63Hz), 120 to 330VDC	85 to 265VAC (47 to 63Hz), 120 to 340VDC	
Max. Output Power	52.8W	108W	158.4W	308W	601.2W	1008W	1536W
Efficiency	Up to 88%	Up to 87.5%	Up to 89.5%	Up to 88%	Up to 88.5%	Up to 88%	Up to 88%
Size (W×H×D mm)	34×82×81.5	39×94×108	41×94×128	41×102×170	61×120×170	127×63×198	127×63×261
Weight (g)	230	400	480	900	1600	2000	3000

Options

/CO2　Double coating
/DIN　DIN rail (available in 50/100/150/300W)
/R　Remote ON/OFF (available in 300/600/1000/1500W)
/S　Stand-by supply (5V/1A), Remote ON/OFF control (available in 1000/1500W)
/FO　Remote sensing, Parallel operation, Low output voltage signal (available in 600/1000/1500W)
/RFO　Remote sensing, Parallel operation, Low output voltage signal, Remote ON/OFF (available in 600/1000/1500W)
/RF　Reverse fan/Intake air (available in 1000/1500W)
/ME　Approved by safety standards for medical equipment (available in 1000/1500W)

EVS series

300W & 600W Battery Charging Basic Constant Current Power Supplies



EVS300W



RP-60-20



EVS600W

EVS　RP

Features

- Charging current and charging voltage can be preset by trimmer
- 300W model features fanless design
- High efficiency up to 91%
- Parallel operation
- Options: Remote ON/OFF control, Backflow prevention module RP-60-20

Specification

Model	EVS18-16R7	EVS36-8R4	EVS57-5R3	EVS36-16R7	EVS57-10R6	RP-60-20
Rated Output Voltage	18V	36V	57V	36V	57V	–
Max. Output Power	300.6W	302.4W	302.1W	601.2W	604.2W	4W
Input Voltage Range	85 to 265VAC (47 to 63Hz), 120 to 370VDC			85 to 265VAC (47 to 63Hz), 120 to 330VDC		7 to 60VDC
Efficiency	Up to 91%			Up to 88%		–
Cooling	Convection			Forced air		Convection
Size (W×H×D mm)	84×42×180			120×61×190		50×26×77.5
Weight (g)	540			1600		60

Options

With chassis model (/L) for RP-60-20

DRF series

120W~960W Din Rail Power Supplies for Hazardous Environment



Features

- High efficiency up to 95%
- 150% Peak power for 4 seconds
- ErP compliant
- Remote ON/OFF and remote voltage adjustment
- ATEX, IEC Ex, DNV-GL approval on select models (/HL)

Specification

Model	DRF120-24-1	DRF240-24-1	DRF480-24-1	DRF960-24-1
Rated Output Voltage	24V			
Input Voltage Range	85 to 264VAC (47 to 63Hz), withstand 300VAC surge for 5 sec.			180 to 264VAC (47 to 63Hz)
Max. Output Power	120W	240W	480W	960W
Peak Output Power	180W	360W	720W	1440W
Efficiency	Up to 91%	Up to 94%	Up to 94%	Up to 95%
Size (W×H×D mm)	36.5×123.4×115.4	49×123.4×115.4	82×123.4×115.4	110×123.4×139
Weight (g)	600	900	1300	1735

DRM series

DIN-Rail Type MOSFET Redundancy Module



Features

- 150% peak load
- Reverse polarity protection (40V)
- Dual input (2×20A) with Single output (1×40A)
- DC_OK relay, DC_OK LED, Current balancing LED
- Approved safety UL62368-1, UL508

Specification

Model	DRM40
Input Voltage Range	10 to 30VDC
Max. Input Current	2×20A
Peak Input Current	2×30A
Max. Output Current	40A
Peak Output Current	60A
Size (W×H×D mm)	35×124×125
Weight (g)	330

DRM40B Basic type (without monitoring signal)

NEW

DBM/ZBM series

DC Output Buffer Module Din Rail and PCB Type

Buffer module is a supplementary device to our DC output power supply.
Its main function is to provide extended hold-up time during AC input loss.



Features

- Compact size in Din rail mounting type
- Longer buffer time with parallel operation
- With DC OK contact relay (30V/0.2A)
- Inhibit function for safe discharge
- Approved by IEC/EN/UL 62368-1, UL508 (DBM20)





Main Application

- Robot controllers
- Factory Automation
- Telecommunication equipment
- Semiconductor manufacturing equipment, etc.



Specification

Model	DRM20	ZBM20-12	ZBM20-15	ZBM20-24
Rated Output Voltage	22.4VDC	11VDC	13.8VDC	22.4VDC
Input Voltage Range	24VDC (23 to 30V)	12VDC (11.5 to 14.4V)	15VDC (14.4 to 18V)	24VDC (23 to 30V)
Buffer Time/Current	250ms/20A	380ms/20A		
Buffer Power	448W	220W	276W	448W
Charging Time	40s (typ)			
Operating Temperature	-25°C to +70°C			
Cooling Method	Convection cooling			
Size (W×H×D mm)	49×123.6×115.4	85×57×175		
Weight (g)	740	550		
Function	DC OK signal, Buffer signal (Buffer mode), Ready signal (Power supply mode), Inhibit (Disable buffer, ready and charging)			

Please contact TDK-Lambda sales for detail product information.

TDK

DRB series

15W～480W Compact and Narrow Width Din Rail Power Supplies



Features

- Active average efficiency (ErP) over 87%
- No load input power consumption <0.5W
- NEC Class 2 compliant output in accordance with UL1310 on select models
- Designed to meet SEMI-47 (200VAC line only) on select models
- Compliant to EN62477 (OVC III) on select models

Specification

Model	DRB15-**-1	DRB30-**-1		DRB50-**-1				DRB100-**-1	DRB120-**-1	DRB240-**-1	DRB480-**-1	
Rated Output Voltage	24V	12V	24V	5V	12V	24V	48V	24V	24V	24V	24V	48V
Input Voltage Range	85 to 264VAC (47 to 63Hz) or 120 to 373VDC, withstand 300VAC surge for 5 sec.								85 to 264VAC (47 to 63Hz), withstand 300VAC surge for 5 sec.		90 to 264VAC (47 to 63Hz)	
Output Power	15.12W	30W			50.4W			100.8W	120W	240W	480W	
Peak Output Power#	-								144W	288W	-	
Efficiency	90%	88%	90%	80%	90%		91%		93%		92%	93%
Size (WXHXD mm)	18×75×90	21×75×90		30×75×90				45×75×100	35×125×124	41×125×124	84×125×124	
Weight (g)	85	95		175				300	500	750	1000	

** Specifics output voltage

<10 sec., Duty Cycle < 35%

DRL series

10W～100W Slim Step Shape Din Rail Power Supplies



Features

- Low profile suitable for many industrial applications and building automation
- Class II double insulation
- NEC Class 2 compliant output in accordance with UL1310
- High efficiency up to 90% @ 230VAC
- No load input power consumption <0.5W

Specification

Model	DRL10-**-1		DRL30-**-1		DRL60-**-1		DRL100-**-1
Rated Output Voltage	12V	24V	12V/15V	24V	12V/15V	24V	24V
Input Voltage Range	85 to 264VAC (47 to 63Hz), 120 to 373VDC (withstand 300VAC surge for 5 sec.)						
Max. Output Power	10.08W		25.2W	30W	54W	60W	100.8W
Efficiency	85%	87%	88%	90%	87%	90%	90%
Size (WXHXD mm)	18×91×55.6		36×91×55.6		54×91×55.6		72×91×55.6
Weight (g)	65		120		200		280

** - Specifics output voltage

LS series

25W～200W Economical Type Single Output AC-DC Power Supplies



Features

- Compact size and high efficiency up to 87%
- Less than 1mA leakage current
- Able to withstand 300VAC surge for 5 seconds
- Low and high voltage full line up (36V is suitable for applications like printer head or LED display panel)

Specification

Model	LS25	LS35	LS50	LS75	LS100	LS150	LS200
Rated Output Voltage	3.3V/5V/12V/15V/24V/36V/48V						3.3V/5V/7.5V/ 12V/15V/24V/ 36V/48V
Input Voltage Range	85 to 264 (47 to 63 Hz), 125 to 373VDC					88 to 132VAC/ 176 to 264VAC (47 to 63 Hz) Input Selectable, 248 to 373VDC	85 to 264 (47 to 63 Hz), 120 to 373VDC
Max. Output Power	27.36W	38.4W	52.8W	76.8W	110.4W	158.4W	201.0W
Peak Power	–						250W (24/36V only)
Efficiency (Typ)	Up to 85%	Up to 84%	Up to 86%	Up to 87%	Up to 86%	Up to 87%	
Size (W×H×D mm)	75×51×28	99×82×36	99×97×36	129×98×38	159×97×38	199×98×38	199×98×41
Weight (g)	170	270	350	410	600	700	700

*** Specifies output voltage**
For others option, please contact with TDK-Lambda sales

Accessory
Din-rail mounting bracket (exclude LS200)

HMS series

50W～150W Support Both DC and AC lines Power Supplies



Features

- Support for both DC and AC lines
- High efficiency up to 90%
- Wide operating temperature range
- Optional: Remote ON/OFF control

Specification

Model	HMS50	HMS80	HMS100	HMS150
Rated Output Voltage	5V/12V/15V/24V/48V			
Max. Output Power	52.8W	81.6W	108W	158.4W
Input Voltage Range	85 to 265VAC (47 to 63Hz) or 80 to 370VDC 75 to 85VAC : Operation time within 20 sec.			
Efficiency	Up to 87%	Up to 88%	Up to 89%	Up to 90%
Size (W×H×D mm)	82×31.5×120	82×33×120		82×42×160
Weight (g)	300	470		520

GWS series

High Grade AC-DC Power Supplies with ErP Compliance



GWS250



GWS500

Features

- 41mm height and high efficiency up to 93%
- No load input power <0.5W
- Convection cooled (250W), Forced air cooled (500W)
- Auxiliary supply (5V, 0.3A max.)
- Peak power capability 120% on select models
- Output remote programming
- Designed to meet Class C Harmonics for lighting equipment

Specification

Model	GWS250				GWS500			
Rated Output Voltage	12V	24V	36V	48V	12V	24V	36V	48V
Input Voltage Range	85 to 264VAC (47 to 63Hz) or 120 to 373VDC (withstand 300VAC surge for 5 sec.)							
Max. Output Power	252W			254.4W	504W			
Peak Output Power	-	300W (<10 sec.)		-	-	600W (<10 sec.)		-
Efficiency	92%		93%		89%	90%		
Size (WXHXD mm)	105×41×198				105×41×218			
Weight (g)	850				1020			

Options

/C02 Double coating　　/L Without cover (available in 500W)　　/BAT Battery charging (24V and 48V only)

DDA series

New

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



Features

- 250W single output, 325W and 500W dual output power levels
- High efficiency up to 95%
- Wide input range −9 up to 53V
- Wide 3.3 to 24V output adjustment
- Positive remote sense, Remote ON/OFF, power good signal

Specification

Model	DDA250N	DDA325N	DDA500N
Input Voltage Range	9 to 53VDC	9 to 40VDC	9 to 53VDC
Output Voltage 1	+3.3 to 15VDC	+3.3 to 24VDC	+3.3 to 15VDC
Output Voltage 2	-	-3.3 to -24VDC	-3.3 to 15VDC
Max. Output Power	250W	250W / 75W	250W / 250W
Efficiency	92 to 95%	88 to 94%	92 to 95%
Size (WXHXD mm)	36.5×123.4×115		
Weight (g)	450		

RDS-A series

New

30W～180W Single Output Isolated DC-DC Converters



Features

- Safety approved by UL/CSA/EN62368-1
- Designed to meet EN55011/ EN55032-B, FCC-B, VCCI-B
- Coatings on both sides of the component mounting board
- Suitable for railway signal related equipment, transport automation system, power plant control equipment

Specification

Model	RDS30A-24	RDS30A-48	RDS60A-24	RDS60A-48	RDS100A-24# (Under development)	RDS180A-24# (Under development)
Rated Output Voltage	5V / 12V / 15V / 24V					
Input Voltage Range	24VDC (18 to 32V)	48VDC (36 to 63V)	24VDC (18 to 32V)	48VDC (36 to 63V)	24VDC (18 to 32V)	24VDC (18 to 32V)
Max. Output Power	31.2W		60W		100.8W	180W
Efficiency	Up to 83%		Up to 84%		85% (Typ)	86% (Typ)
Size (W×H×D mm)	38×95×130		43×95×130		60×95×220	80×95×220
Weight (g)	400		500		850	1400

#Contact TDK-Lambda to check the availability of RDS100A, RDS180A

EZA series

2500W/11000W Isolated Bi-Directional DC-DC Converters



Features

- 1U height and full rack size
- Step-up/step-down is bi-directionally converted in one converter
- High efficiency at 95% or greater in both directions
- Power up by parallel operation
- RS-485 communication & control
- Manual/Automatic operation mode: Battery CV mode, Grid CV mode, Grid CV with battery CC mode
- Protection: Over/under voltage/current/power, abnormal temperature, Fan lock

Specification

Model	EZA2500-32048	EZA11k-320240
Low Voltage DC (Battery Side)	48V (36 to 60VDC)	240V (150 to 300VDC)
High Voltage DC (Grid Side)	320V (300 to 380VDC)	320V (240 to 400VDC)
Efficiency (Typ)	Up to 92%	Up to 95%
Output Power	2.5kW	11kW
Size (W×H×D mm)	422.8×43.6×400	422.8×43.6×530
Weight (g)	8000	15000

TPS series

3-Phase Input 2200W~4400W Industrial Power Supplies



Features

- 400/440/480VAC, 3-Phase delta or wye input
- Fully regulated, Wide range adjustable output
- Voltage and current programming, remote ON/OFF
- −40°C (Start up) to +70°C operation
- High efficiency up to 93%
- Built-in ORing FET for redundant/parallel operation
- PMBus™ Communication

Specification

Model	TPS3000		TPS4000		
Rated Output Voltage	24V	48V	12V	24V	48V
Input Voltage Range	350 to 530VAC, 3-Phase Delta or Wye input				
Max. Output Power	3200W		2200W	4400W	
Efficiency	92.5%		93.0%		
Size (WXHXD mm)	107×84.4×324 (excluding output busbars)		107×85×335 (excluding output busbars)		
Weight (g)	3500		4000		

TPF45000 series

New

3-Phase Input 45kW Front-end Power Supplies



Features

- 400/440/480VAC, 3-Phase delta or wye input
- −40°C (Start up) to +70°C operation
- Scalable from 1-10 Modules - 4500W each
- 98% efficiency at 43kW, variable speed fans
- PMBus™ and USB Communication

Specification

Model	TPF45000
Rated Output Voltage	385V
Input Voltage Range	350 to 528VAC, 3-Phase Delta or Wye input
Max. Output Power	45000W
Efficiency	Up to 98%
Size (WXHXD mm)	45×48.4×115
Weight (g)	12000

For more information on TPF45000, please contact TDK-Lmabda sales

HFE/RFE series

1600W~2500W AC-DC Front-end Power Supplies



HFE



RFE

HFE RFE

Features

- High power density: HFE1600 (25.2W/in³), HFE2500 (29W/in³)
- Power for distributed power architecture industrial automation
- Mountable in 1U rack: up to 5 units HFE1600, 4 units HFE2500
- Stand-alone 1U height power supply: RFE1600, RFE2500
- Internal ORing MOSFET/FETs & current share
- Optional: PMBus™, I²C and LAN

Specification

Model		HFE/RFE 1600				HFE/RFE 2500		
Input Voltage Range		85 to 265VAC (47 to 63Hz)						
Rated Output Voltage		12V	24V	32V	48V	12V	24V	48V
Max. Current	Vin>170VAC	133A	67A	47A	33A	200A	104A	52A
	100<Vin<170VAC	100A	50A		25A	125A	62.5A	31.25A
Max. Output Power	Vin>170VAC	1596W	1608W	1504W	1584W	2400W	2496W	
	100<Vin<170VAC	1200W				1500W		
Efficiency (At 75% load, 100/230VAC)		87/90%	88/90%		89/92%	90/92%		91/93%
Size (W×H×D mm)		85×41×300				107×41×325		
Weight (g)		1550				2100		

HFE****/S, RFE****/S With I²C connectionn
HFE****-S1U Five slot (1600W)/Four slot (2500W) 19" rack, IEC320 input connector
HFE****-S1U-TB Five slot (1600W)/Four slot (2500W) 19" rack, Terminal Block input connector
More information on RFE1000, please contact TDK-Lambda sales

HFE****/BP One slot blanking panel, four (1600W)/two (2500W) provided with each rack
HFE1600-D1U Four slot (two isolated pairs), dual output 19" rack, IEC320 input connector
HFE1600-D1U-TB Four slot (two isolated pairs), dual output 19" rack, Terminal Block input connector
HFE****-LAN Plug in LAN module. Takes up one rack slot (use with /S models only)

CPFE series

1000W Single Output Conduction Cooled Power Supplies



CPFE1000



CPFE1000FI

Features

- Universal Input
- MIL STD 461/462D CE102 EMC (CPFE1000 series)
- Baseplate cooled, no fan required
- I²C Interface
- High efficiency up to 86%
- Conformal coating
- Parallel operation with active current share

Specification

Model	CPFE1000			CPFE1000FI		
Input Voltage Range	90 to 265VAC, 47 to 63Hz					
Rated Output Voltage	12V	28V	48V	12V	28V	48V
Rated Output Current	60A	36A	21A	60A	36A	21A
Max. Output Power	720W	1008W		720W	1008W	
Efficiency	81%	86%		81%	86%	
Size (W×H×D mm)	270×61×190			254×44×112		
Weight (g)	2400			1220 (without cover)		

CPFE1000FI options
/C Cover /P No U channel /H PCB coating

CUS-M series

30W～1500W Single Output Medical & ITE Power Supplies





Features

- Medical safety certification (up to 2×MOPPs)
- High efficiency up to 96%
- High operating temperatures up to 85°C (CUS100ME, CUS150M)
- 4kVAC input-output isolation
- Low earth leakage current <300μA
- Protection Class I and II installations
- Suitable for BF rated equipment
- Many options available!

Specification

Model		CUS30M	CUS60M	CUS100MB	CUS100ME	CUS150M	CUS200M
Rated Output Voltage		12V/24V/48V	5V/12V/15V/18V/24V/48V	5V/12V/15V/18V/24V/28V/36V/48V	12V/15V/18V/24V/28V/36V/48V		12V/18V/24V/36V/48V
Max. Output Power	@ Convection Cooling	30.6W	60.3W	100.8W	100W	150W	201.6W
	@ Forced Air Cooling	-		100.8W	-	150W	254.4W
Peak Output Power		-					
Input Voltage Range		85 to 265VAC (47 to 63Hz)			85 to 264VAC (47 to 63Hz**)		85 to 265VAC (47 to 63Hz)
Efficiency		Up to 90%	Up to 91%	Up to 90%	Up to 94%		
Operating Temperature		-20°C to +70°C			-20°C to +85°C		-20°C to +70°C
Leakage Current		<250μA	<200μA	<300μA	<250μA		<300μA
Size (W×H×D mm)		76.2×24.4×50.8	76.2×26.7×50.8	101.6×25.4×50.8	101.6×31.5×50.8		127×34×76.2
Weight (g)		62	120	165	180	185	350
Warranty (Yrs)		3			5		3

** For operation at 440Hz please consult Technical Sales

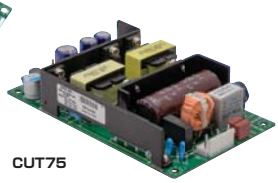
Model		CUS350M	Under development CUS350MP	New CUS400M	New CUS600M	CUS1500M
Rated Output Voltage		12V/18V/24V/36V/48V	24V/30V/36V/48V	12V/24V	12V/19V/24V/28V/32V/36V/48V	12V/15V/24V/36V/48V
Max. Output Power	@ Convection Cooling	352.8W	350.4W	250W	403.2W	-
	@ Forced Air Cooling	420W	499.2W	400W	604.8W	1536W
Peak Output Power		-	1008W	-		
Input Voltage Range		85 to 265VAC (47 to 63Hz) or 120 to 370VDC		85 to 264VAC (47 to 63Hz)	85 to 265VAC (47 to 63Hz)	85 to 265VAC (47 to 63Hz) or 120 to 340VDC
Efficiency		Up to 94%			Up to 96%	Up to 88%
Operating Temperature		-20°C to +70°C				-20°C to +60°C
Leakage Current		<300μA		<250μA	<200μA	<300μA
Size (W×H×D mm)		190×40×87	183×44×84	128×39.5×77.5	127×37×76.2	127×63×261
Weight (g)		850	750	440	470	3000
Warranty (Yrs)		3	5		3	5

CUT series

35W～75W Tripple Output Medical & ITE Power Supplies



CUT35



CUT75

Features

- 2×MOOPs primary - secondary
- 3kVAC input-output isolation
- Output 1 isolated from output 2 and 3
- Low earth leakage current <300μA
- High efficiency up to 85%

Specification

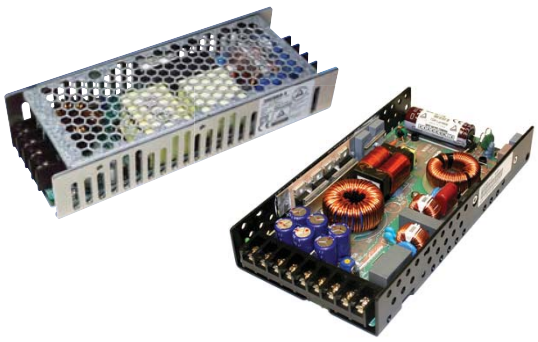
Model	CUT35-522			CUT35-5FF			CUT75-522			CUT75-5FF		
Rated Output Voltage	+5V	+12V	-12V	+5V	+15V	-15V	+5V	+12V	-12V	+5%	+15V	-15V
Max. Output Current	3A	1.2A	0.85A	3A	1A	0.3A	8A	3A	1A	8A	2.5A	1A
Max. Output Power (per Channel)	15W	14.4W	10.2W	15W	15W	9.75W	40W	36W	12W	40W	37.5W	15W
		20.4W			19.5W			36W			37.5W	
Max. Output Power	35.4W			34.5W			76.0W			77.5W		
Input Voltage Range	85 to 265VAC (47 to 63Hz), 88 to 370VDC (No safety certification)						85 to 265VAC (47 to 63Hz), 120 to 370VDC (No safety certification)					
Efficiency	Up to 82%						Up to 85%					
Size (W×H×D mm)	50.8×26×101.6						76.2×27×127					
Weight (g)	90						210					

Options

/A With chassis & cover type
/B With baseplate type
/TA With chassis & cover With terminal connector type
/L With chassis type
/T With terminal connector type
/TB With baseplate With terminal connector type

CUS-LD series

200W/250W Single Output ITE Power Supplies



Features

- Less than 1U height
- High efficiency up to 90%
- Peak power capability (CUS200LD)
- −40°C ambient temperature start-up (CUS200LD)
- Coated PCB as standard (CUS250LD)

Specification

Model		CUS200LD	CUS250LD
Rated Output Voltage		3.3V/4.2V/5V/7.5V/12V/15V/24V/28V/48V	3.3V/4.2V/5V/12V/24V
Max. Output Power	@ Convection cooling	120.4W	252W
	@ Conduction cooling	151.2W	-
Peak Output Power		201.6W	-
Input Voltage Range		85 to 265VAC (47 to 63Hz)	85 to 265VAC (47-63Hz) or 120 to 370VDC (Withstand 300VAC Surge for 5 seconds)
Efficiency		Up to 90%	
Size (W×H×D mm)		160×31×62	198×30×102
Weight (g)		430	700

CSW series

40W~65W, 90V~305V AC-DC Power Supplies



Features

- Suitable for 115/230/277VAC Nominal inputs
- Off-load power consumption <150mW
- DoE efficiency level VI, ErP Tier 2
- 24V model with UL1310 Class 2

Specification

Model	CSW65
Rated Output Voltage	5V/12V/15V/18V/24V/28V/48V/54V
Input Voltage Range	90 to 305VAC (47 to 63Hz)
Max. Output Power	65W
Average Efficiency	Up to 89%
Size (WXHXD mm)	63.5×38.1×120.7 (U-channel)
Weight (g)	250

Options
/A U-channel & cover /D U-channel , cover & DIN rail mount

DT-M series

25W~300W Medical AC-DC External Power Supplies



Features

- 2×MOPPs primary - secondary
- 4kVAC input-ouptut isolation
- No load power consumption <0.5W
- Low touch current <80μA on select models
- Medical safety certification
- DoE level V/VI, EU CoC Tier 2 efficiency compliant on select models
- Class I and Class II AC input on select models

Specification

Model	DTM36-C8 New	DTM65-D	DTM65-C8	DTM110-C	DTM110-C8	DTM165-C	DTM250-D	DTM300-D
Rated Output Voltage	5V to 48V			12V to 24V	12V to 48V		12V to 54V	
Max. Output Power	36W	65W		110W		165W	250W	300W
Input Voltage Range	85 to 264VAC (47 to 63Hz)	90 to 264VAC (47 to 63Hz)						
Average Efficiency	>85%	>89%	>88%	>87%	>89%	>87%	>89%	>88%
No Load Power Consumption	<0.75W	<0.15W	<0.21W	<0.5W	<0.15W	<0.5W	<0.15W	<0.5W
Leakage Current	<80μA	<100μA	<300μA		<100μA	<300μA	<100μA	
Size (WXHXD mm)	100×45×22.5	69×40×132	60×31×106	64.8×38.5×170	63×33×140	85×44×170	90×45×200	112×45×222
Weight (g)	150	390	240	605	780	790	1300	1570
Output Connector	Straight barrel DC power plug inside Ø 2.1mm. outside Ø 5.5mm, length 12mm	Kycon KPP-4P or equivalent					Molex Mini Fit 39-28-1063 or equivalent	10 PIN Mini Fit Jr. Pitch: 4.2mm Mating Connector: Molex P/N: 39-28-1103 or equivalent
Medical Input	Class II	Class I	Class II	Class I				Class I & II

ZWS-BP series

AC-DC PCB Single Ouptut Power Supplies (Peak Power Capability)



Features

- 200% peak power capability
- With power factor correction
- Low earth leakage current 0.4mA max.

Specification

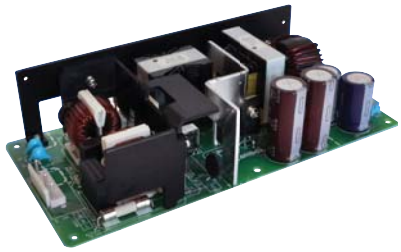
Model	ZWS150BP			ZWS240BP		
Input Voltage Range	85 to 265VAC (47 to 63Hz), 120 to 370VDC					
Rated Output Voltage	24V	36V	48V	24V	36V	48V
Max. Output Power	151.2W		153.6W	240.0W	241.2W	240.0W
Peak Output Power	302.4W		307.2W	480.0W	482.4W	480.0W
Efficiency (100/200VAC) (Typ)	87%/90%			88%/91%		
Size (W×H×D mm)	75×37×160			84×42×180		
Weight (g)	360			520		

Options

/L	With chassis type
/A	With chassis & cover type
/R	With remote ON/OFF control
/CO2	With coating on both sides of PCB
/T	With terminal connector (ZWS240BP only)
/TL	With chassis type with terminal connector type
/TA	With chassis & cover type with terminal connector type

ZWS-RC series

240W PCB Single Output Power Supplies



Features

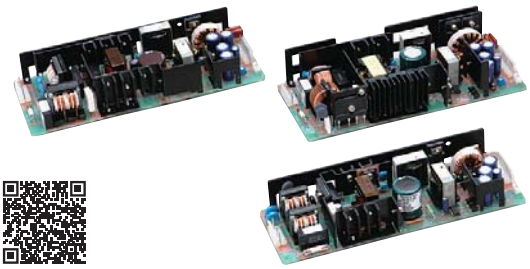
- High efficiency up to 90%
- Adjustable output voltage
- Longer hold up time 31ms
- 12-year electrolytic capacitor lifetimes
- EN62477-1 (OVC III) certification eliminates the need for an in-line isolation transformer

Specification

Model	ZWS240RC
Rated Output Voltage	24V
Input Voltage Range	85 to 265VAC (47 to 63Hz)
Max. Output Power	240W
Efficiency (100/200VAC) (Typ)	87%/90%
Size (W×H×D mm)	84×42×180
Weight (g)	520

ZWD-PAF series

AC-DC PCB Dual Output Power Supplies (Peak Power Capability)



Features

- 200% peak power capability on select models
- With power factor correction
- Low earth leakage current 0.75mA max.
- Individual output adjustment

Specification

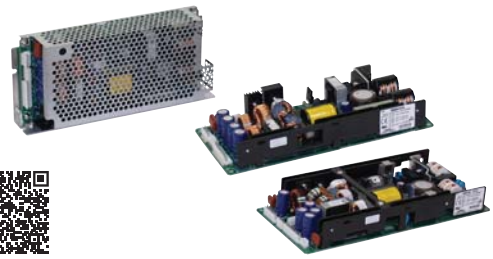
Model	ZWD100PAF-0524		ZWD150PAF-0524		ZWD225PAF-0524	
Input Voltage Range	85 to 265VAC (47 to 63Hz), 120 to 370VDC					
Rated Output Voltage	5V	24V	5V	24V	5V	24V
Max. Output Current	5A	4A	5A	6A	5A	9A
Max. Peak Output Current (100/200VAC)	–	7A/8A	–	10A/12A	–	14A/18A
Total Average Output Power	100W		150W		225W	
Max. Peak Output Power (100/200VAC)	–	168W/192W	–	240W/288W	–	336W/432W
Efficiency (100/200VAC) (Typ)	79%/81%		80%/82%		81%/83%	
Size (W×H×D mm)	75×35×222		85×40×222		95×45×222	
Weight (g)	460		530		670	

Options

/L With chassis type
/A With chassis & cover type
/J JST connector
/JL With chassis type with JST connector type
/JA With chassis & cover type with JST connector type
/T With terminal connector
/TL With chassis type with terminal connector type
/TA With chassis & cover type with terminal connector type

ZWQ series

AC-DC PCB Power Supplies (Quad Output)



Features

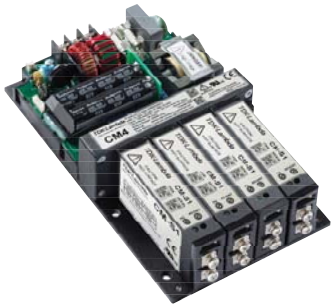
- Peak power capability
- With power factor correction
- Floating adjustable fourth output

Specification

Model		ZWQ80-5222	ZWQ80-5223	ZWQ80-5224	ZWQ80-5225	ZWQ130-5222	ZWQ130-5223	ZWQ130-5224	ZWQ130-5225
Max. Output Power		80W				130W			
Output	Output Voltage	Output Current							
	V1 +5V	8A				15A			
	V2 +12V	2A				4A			
	V3 −12V	2A				4A			
	V4 +3.3V	–	7A	–		10A	–		
	V4 +5V	–		7A		–		10A	
	V4 +12V	3A	–			4A	–		
	V4 +24V	–		1.5A		–		2A	–
Input Voltage Range		85 to 265VAC (47 to 63 Hz), 120 to 370VDC							
Size (W×H×D mm)		93.5×35×20				106×35×225			
Weight (g)		550				730			

CM4series

600W Conduction Cooled Modular Power Supplies



Features

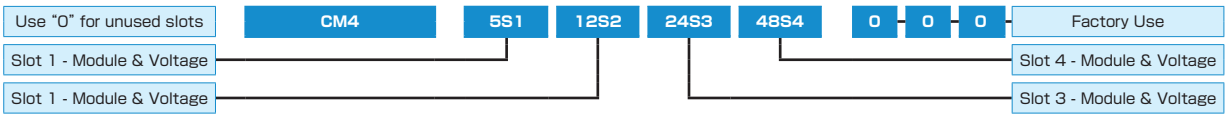
- Medical safety certification (2×MOPPs)
- Low leakage current <200μA
- MIL-STD-810G, -461F, -704F compliant
- Compact design 4"×7" footprint
- Up to 4 programmable outputs
- 4kVAC input-output isolation
- Stand-by supply (5V/1A)
- External voltage control

Specification

Model	CM4	
Max. Output Power	425W	600W
Peak Output Power	-	750W (for 5 sec.)
Input Voltage Range	85 to 264VAC	120 to 264VAC
Input Frequency Range	47 to 63Hz (contact factory for operation 400Hz)	
Efficiency	Up to 90%	
Size (W×H×D mm)	101.6×41×177.8	
Weight (g)	650 + 100 for each output module used	

How To Create A Product Description

Part Number Configuration



Contack TDK-Lambda for special configuration requirements. The factory may allocate a 3 digit suffix to identify such requirements.

1. Select Output Modules from the table, based on output voltage and current. Ensure that the maximum number of slots does not exceed 4
2. For an S1 module set at 5V, S2 set at 12V, S3 set at 24V and a S4 set at 48V, please use the following nomenclature style: CM4 5S1 12S2 24S3 48S4
3. Contact TDK-Lambda to validate configuration and issue a part number

Output Modules

Module Name	Slots Used	Output Voltage			Max Output (A)	Max Output Power (W)	Max Peak Power (W) (5s)
		Min	Vnominal	Max			
S1	1	1.5V	5V	7.5V	25A	125W	187.5W
Z1	2	1.5V	5V	7.5V	50A	250W	375W
ZA	3	1.5V	5V	7.5V	75A	375W	562.5W
ZN	4	1.5V	5V	7.5V	100A	500W	750W
Y1	2	3V	10V	15V	25A	250W	375W
HA	4	3V	10V	15V	50A	500W	750W
S2	1	4.5V	12V	15V	15A	150W	225W
Z2	2	4.5V	12V	15V	30A	300W	450W
YA	3	4.5V	15V	22.5V	25A	375W	562.5W
ZB	3	4.5V	12V	15V	45A	450W	675W
ZP	4	4.5V	12V	15V	60A	600W	750W
YN	4	6V	20V	30V	25A	500W	750W
S3	1	9V	24V	30V	7.5A	150W	225W
Y2	2	9V	24V	30V	15A	300W	450W
ZC	3	9V	24V	30V	22.5A	450W	675W
HB	4	9V	24V	30V	30A	600W	750W
ZQ	4	9V	24V	30V	30A	600W	750W
YB	3	13.5V	36V	45V	15A	450W	675W
S4	1	18V	48V	58V	3.75A	150W	217.5W
Y3	2	18V	48V	60V	7.5A	300W	450W
ZD	3	18V	48V	58V	11.25A	450W	652.5W
ZR	4	18V	48V	58V	15A	600W	750W
YP	4	18V	48V	60V	15A	600W	750W
YC	3	27V	72V	90V	7.5A	450W	675W
Y4	2	36V	96V	116V	3.75A	300W	435W
YQ	4	36V	96V	120V	7.5A	600W	750W
YD	3	54V	144V	174V	3.75A	450W	652.5W
YR	4	72V	192V	232V	3.75A	600W	750W

Output Specification

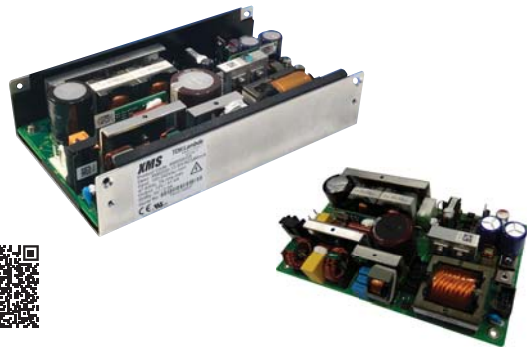
Module	S1	S2	S3	S4
Vnom	5V	12V	24V	48V
Load regulation (0-100% change)	±50mV	±100mV	±150mV	±300mV
Over voltage protection (typical)	9.5V	18V	36V	66V
Module	**Y1/HA**	**Y2/HB**	**Y3**	**Y4**
Vnom	10V	24V	48V	96V
Load regulation (0-100% change)	±100mV	±200mV	±300mV	±600mV
Over voltage protection (typical)	19V	36V	72V	132V
Module	**YA**	**YB**	**YC**	**YD**
Vnom	15V	36V	72V	144V
Load regulation (0-100% change)	±150mV	±300mV	±450mV	±900mV
Over voltage protection (typical)	28.5V	54V	108V	198V
Module	**YN**	**YP**	**YQ**	**YR**
Vnom	20V	48V	96V	192V
Load regulation (0-100% change)	±200mV	±400mV	±600mV	±1200mV
Over voltage protection (typical)	38V	72V	144V	264V
Module	**Z1/ZA/ZN**	**Z2/ZB/ZP**	**ZC/ZQ**	**ZD/ZR**
Vnom	5V	12V	24V	48V
Load regulation (0-100% change)	±50mV	±100mV	±150mV	±300mV
Over voltage protection (typical)	9.5V	18V	36V	66V

Output signal, programming & bias supply

Module good threshold	Open collector, off when output is below 90% of set point
Current monitor	The output current of the module can be measured using the ICONTROL signal
Remote Voltage Programming (S & Z modules only)	Adjusts the module set voltage by 0% to 131.5% with external 0 - 5V
Remote Current Programming (S & Z modules only)	Adjusts the module current limit point by 0% to 100% with external 0 to 4.5V
Current share accuracy	+/-5% for loads >20% of rating
Local bias supply	+4.2 - 5.V 10mA

XMS500series

500W Single Output Configurable Medical Power Supplies



Features

- Compact 4"×7.1" footprint
- Medical safety certification (2×MOPPs)
- 4kVAC input-ouptut isolation
- Earth leakage current less than 150μA (Class I construction)
- Suitable for B and BF rated equipment
- Dual or single (optional) fusing
- Low airflow requirement

Specification

Model	XMS500
Rated Output Voltage	12V/24V/36V/48V
Input Voltage Range	90 to 264VAC (47 to 63Hz)
Output Power	500W continuous with specified airflow or top fan
Efficiency	Up to 92%
Size (WXHXD mm)	102×37×180 (open frame version)
Weight (g)	1000

How To Create A Product Description

Channel 1 Output Voltage a	
Output	Max Current
12	41.6A
24	20.8A
36	13.8A
40*	12.5A
48	10.4A

Standby Supply	
Name	Output V/A
NN	Do not connect
5C	5V/0.5A
5H	5V/2A
12M	12V/1A

Fan/Fan Supply	
Name	Option
N	No fan supply
N2	12V variable
N3	12V fixed
TF	Top fan (needs "S" chassis)

Chassis Option	
Name	Option
N	Open frame
S	U chassis

Touch Current a	
Name	Option
B	<100μA

XMS500 | Vout | - | Stby | - | Fan supply | Chassis | Touch current | Earth leakage | Remote ON/OFF | AC Good | Fuses

Safety Class	
Entry	Safety Class
-	Class I
D-	Class II

Earth Leakage Current a	
Name	Option
D	Class II (no earth)
R	<150μA

Remote ON/OFF	
Name	Option
EN	Enable
In	Inhibit

AC Fail Feature	
Name	Option
N	None
A	AC Fail

Fuse Options	
Entry	Option
Blank	Dual fuses
FL	Single fuse in Live line

a - additional variants available, consult sales office

* Confirm availability of required product with sales office

Quick Selector (Standard models). Additional variants available - see "How To Create A Product Description"

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

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

QS series

600W～1200W Single Output Modular Power Supplies



Features

- Medical safety certification (2×MOPPs)
- 4kVAC input-ouptut isolation
- Suitable for BF rated equipment
- Low speed, low audible noise fan
- High power 1 output + up to 2 standby supplies
- Dual or single fusing
- PMBus™ communication option

Specification

Model	QS4 New	QS5	QS5H	QS7
Max. Output Power	600W		1080W	1200W
Rated Output Voltage	12V/24V/48V			
Input Voltage Range	90 to 264VAC, (47 to 63Hz, 440Hz with reduced PFC)			
Size (W×H×D mm)	108×63.3×270	127×63.3×270		176×63.3×270
Weight (g)	1900	2300		3200

QS5H limited to 700W output power below 180VAC input

Order Codes For Standard Models

See Standby/Signals section for details. Additional variants available - contact sales for details

Base Model	Output Voltage	Max Current	Max Output Power	No Standby	Standby 5V/2A			Standby 5V/0.25A	
					PMBus™ (-P5H)	Inhibit (-T5H)	Enable (-E5H)	Inhibit (-T5H)	Enable (-E5H)
QS5-400-12	12V	50A	600W	QS400011	QS40002K	QS400034	QS40004N	QS400057	QS40006S
QS5-400-24	24V	25A	600W	QS40007B	QS40008W	QS40009F	QS4000BD	QS4000CY	QS4000DH
QS5-400-48	48V	12.5A	600W	QS4000FL	QS4000G5	QS4000HP	QS4000JT	QS4000KC	QS4000LX
QS5-600-12	12V	50A	600W	QS5000VR	QS5000YW	QS50012N	QS50015M	QS50018X	QS5001C7
QS5-600-24	24V	25A	600W	QS5000WP	QS50010M	QS50013N	QS50016P	QS50019R	QS5001D2
QS5-600-48	48V	12.5A	600W	QS5000XN	QS50011G	QS50014G	QS50017F	QS5001B4	QS5001F8
QS5H-1080-12	12V	90A	1080W	QS50001M	QS5000GX	QS5000K7	QS50008F	QS5000ND	QS5000CX
QS5H-1200-24	24V	50A	1200W	QS50002N	QS5000HM	QS5000L6	QS50009G	QS5000PG	QS5000DY
QS5H-1200-48	48V	25A	1200W	QS500047	QS5000JP	QS5000M5	QS5000BW	QS5000RF	QS5000FY
QS7-1080-12	12V	90A	1080W	QS70001G	QS70008D	QS7000C5	QS7000GW	QS7000KY	QS7000NR
QS7-1200-24	24V	50A	1200W	QS700029	QS70009B	QS7000DL	QS7000HV	QS7000LS	QS7000PP
QS7-1200-48	48V	25A	1200W	QS70004B	QS7000BK	QS7000FM	QS7000JT	QS7000M0	QS7000RN

Other Variants (Input connection, cooling, etc)

The standard models listed are supplied with 'F' cooling, Screw terminal inputs and outputs, dual ac fuses and 300μA earth leakage current.
Other options are possible by selecting from the table below.

QS7-	1200-	24		-T5H	

Case Size	QS4 QS5 QS5H QS7
Output Power	600 1080 1200
Output Voltage	12 24 48
Output Connection	Blank / Screw

Unit options blank for all defaults or all of

-Cooling -F	Input S	Fuse D	Leakage L

Cooling	F	Variable speed Forward air (default)
	R	Reverse air (see handbook for derating)
Input Connection	S	Screw (default)
	I	IEC320 (QS5 and QS5H only)
Input Fuse	D	Dual AC fuses (default)
	E	Single AC fuse (in Live line)
Leakage Current (max at 264Vac, 63Hz)	L	300μA (default)
	R	150μA (contact sales for details)

Available Output Voltages (at PSU signal connector)

Option Type	Standby 1			Standby 2			PSU On/Off
	V	Max Current	Power	V	Max Current	Power	
E5L	5V	250mA	1.25W	Not available			Enable
E5H	5V	250mA	1.25W	5V	2A	10W	Enable
T5L	5V	250mA	1.25W	Not available			Inhibit
T5H	5V	250mA	1.25W	5V	2A	10W	Inhibit
P5H	5V	2A	10W	Not available			see PMBus™ application note

Contact TDK-Lambda to validate configuration and issue a part number.

QM series

550W～1500W Multiple Output Modular Power Supplies



Features

- Medical safety certification (2×MOPPs)
- 4kVAC input-ouptut isolation
- Suitable for BF rated equipment
- Low speed, low audible noise fan
- Up to 16 main outputs + 2 standby supplies
- PMBus™ communication option

Specification

Model	QM4 (New)		QM5		QM5H		QM7		QM8	
Input Voltage Range	550W	650W	700W	800W	700W	1200W	1200W	1500W	1200W	1500W
Max. Output Power	90 to 264VAC	180 to 264VAC	90 to 264VAC	180 to 264VAC	90 to 264VAC	180 to 264VAC	90 to 264VAC	150 to 264VAC	90 to 264VAC	180 to 264VAC
Input Frequency Range	47 to 63Hz (440Hz with reduced PFC)									
Size (W×H×D mm)	108×63.3×270		127×63.3×270				176×63.3×270		200×63.3×270	
Weight (g)	1900		2300				3200		3600	

How To Create A Product Description

1. Calculate total output power to select the appropriate converter, then select required Cooling, Connection, Leakage Current and Controls/Signals from the following table:

QM4	F	S	D	L	T5H

Converter	QM4	4 slots wide 550W low line, 650W high line
	QM5	5 slots wide 700W low line, 800W high line
	QM5H	5 slots wide 700W low line, 1200W high line
	QM7	7 slots wide 1200W low line, 1500W high line
	QM8	8 slots wide 1200W low line, 1500W high line

Cooling	F	Variable speed Forward air - Standard
	R	Reverse air (contact sales for details)
	C	Customer air - no fan

Input Connection	S	Screw
	I	IEC320 (QM5/QM5H only)

Leakage Current (max leakage current at 264VAC, 63Hz)	L	300A
	R	150A (contact sales for details)

Input Fuse	D	Dual AC fuses
	E	Single AC fuse in Live line (contact sales for details)

Option Type	Standby 1 V	Standby 1 Max Current	Standby 1 Power	Standby 2 V	Standby 2 Max Current	Standby 2 Power	PSU On/Off
E5L	5V	250mA	1.25W	Not available			Enable
E5H	5V	250mA	1.25W	5V	2A	10W	Enable
E12H	5V	250mA	1.25W	12V	1A	12W	Enable
T5L	5V	250mA	1.25W	Not available			Inhibit
T5H	5V	250mA	1.25W	5V	2A	10W	Inhibit
T12H	5V	250mA	1.25W	12V	1A	12W	Inhibit
P5H	5V	2A	10W	Not available			see PMBus™ application note

2. Select Output Modules using the output voltages tables and the module specifications.

Single Output Module Configurations

V1	SB	S	L

Required Output Voltage	Module Type	Output Connection	S	Screw terminal
		Option Code	R	Remote sense (5V SA module only)
			L	No remote sense (all other variants)

Single Output Modules

Module	V1 Voltage Range	Current	Power	Slots Used
DM (ch2)	2.8-3.8V	10A	33W	1 of 2 outputs in single slot
SB	3.3 - 3.63V	37A	122W	1
DM (ch2)	4.25 - 5.75V	10A	50W	1
SA	5-5V	15A	75W	1
SB	5-5.5V	30A	150W	1 of 2 outputs in single slot
SC	5-5.5V	60A	300W	2
ZD	5-5.3V	80A	400W	3
ZF	5-5.3V	110A	550W	4
YC	6.6-7.48V	37A	276W	2
YC	10-11V	30A	300W	2
YF	10-11V	60A	600W	4
DH (ch1 or ch2)	10.2-13.8V	10A	120W	1 of 2 outputs in single slot
DM (ch1)	11.9-16.1V	10A	120W	1 of 2 outputs in single slot
DM (ch2)	11.9-16.1V	8.3A	100W	1 of 2 outputs in single slot
SA	12-12V	12.5A	150W	1
SB	12-13.2V	2A	300W	1
SC	12-13.2V	50A	600W	2
ZD	12-12.8V	65A	780W	3
ZF	12-12.8V	90A	1080W	4
DH (ch1 or ch2)	12.75-17.25V	8A	120W	1 of 2 outputs in single slot
SA	15-15V	10A	150W	1
SB	15-5V	20A	300W	1
ZC	15-16V	36A	540W	2
SB	18-19.8V	16.7A	300W	1
ZC	18-19.2V	30A	540W	2
DH (ch1 or ch2)	20.4-27.6V	5A	120W	1 of 2 outputs in single slot
YB	20.4-27.6V	9.8A	200W	1
DM (ch1)	20.8-28.2V	5A	120W	1 of 2 outputs in single slot
DM (ch2)	23.5-24.5V	4.16A	100W	1 of 2 outputs in single slot
SA	24-24V	6.25A	150W	1
SB	24-26.4V	12.5A	300W	1
SC	24-26.4V	25A	600W	2
ZD	24-25.6V	30A	720W	3
YF	24-26.4V	50A	1200W	4
DH (ch1 or ch2)	20.3-31V	4.4A	120W	1 of 2 outputs in single slot
YB	27.6-34.5V	7.25A	200W	1
SB	28-30.8V	10.7A	300W	1
ZC	28-30V	19.3A	540W	2
YC	30-33V	20A	600W	2
SC	36-39.6V	16.6A	600W	2
ZF	36-38.41V	29A	1044W	4
YB	40.8-55.2V	4.9A	200W	1
SB	48-52.8V	6.25A	300W	1
SC	48-52.8V	12.5A	600W	2
ZD	48-51.2V	15A	720W	3
YF	48-52.8V	25A	1200W	4
YB	55.2-62V	3.62A	200W	1
YC	56-61.6V	10.7A	600W	2
YF	72-79.2V	16.6A	1200W	4
YC	96-105.6V	6.25A	600W	2
YF	96-105.6V	12.5A	1200W	4

Output Module Signals

See Long Form datasheet output module specifi cations for Module Good, Module Inhibit, Remote Sense availability.

Dual Output Module Configurations

V1	/	V2	DM	S

Output 1 Required Voltage (enter 0 if not required)			
Output 2 Required Voltage (enter 0 if not required)			
	Module Type		
	Output Connection	S	Screw terminal

Dual Output Modules (all single slot)
Maximum module power 200W (Total power from channel 1 + Channel 2)

Module	V1 Voltage Range	V1 Current	V1 Power	V2 Voltage Range	V2 Current	V1 Power
DH	10.2(1)-13.8V	10A	120W	10.2-13.8V	10A	120W
DH	10.2(1)-13.8V	10A	120W	12.75-17.25V	8A	120W
DH	10.2(1)-13.8V	10A	120W	20.4-27.6V	5A	120W
DM	11.9-16.1V	10A	120W	2.8-3.8V	10A	33W
DM	11.9-16.1V	10A	120W	4.25-5.75V	10A	50W
DM	11.9-16.1V	10A	120W	11.9-16.1V	8.3A	100W
DM	11.9-16.1V	10A	120W	23.5-24.5V	4.16A	100W
DH	12.75(2)-17.25V	8A	120W	12.75-17.25V	8A	120W
DH	12.75(2)-17.25V	8A	120W	20.4-27.6V	5A	120W
DH	20.4(3)-27.6V	5A	120W	20.4-27.6V	5A	120W
DM	20.8-28.2V	5A	120W	2.8-3.8V	10A	33W
DM	20.8-28.2V	5A	120W	4.25-5.75V	10A	50W
DM	21.6-28.2V	5A	120W	23.5-24.5V	4.16A	100W
DH	23(1)-31V	4.4A	120W	23-31V	4.3A	120W

Note: For DH module voltages below 10.8V(1), 13.5V(2), 21.6V(3), and 24.4V(4), a minimum load of 1W must be applied to channel 1. See long form datasheet for max capacitive load ratings.

3. Contact TDK-Lambda to validate configuration and issue a part number.

NV series

Configurable/Modular 100W~1150W AC-DC Power Supplies

Features

- Low profile, Fits 1U height applications
- Efficiency up to 90%
- Active power factor correction
- Universal input (90~264VAC)
- No minimum loads
- Input harmonics EN61000-3-2 compliant
- Medical approvals (basic insulation input-output)
- Up to 4 outputs NV100, 5 outputs NV175, 3 outputs NV175M, 6 outputs NV350, 8 outputs NV700

NV175



Size (W×H×D mm)	
Without Chasis or Cover	76.2×28.0×127.0
-U	84.4×39.1×127.0
-C	84.4×40.6×127.0
-F, -I	84.4×40.6×127.0
-N, -N*	94.0×28.0×127.0
-N-U, -N*-U	102.2×39.1×127.0
-N-C, -N*-C	102.2×40.6×127.0
-N-F, -N*-F, -N-I, -N*-I	102.2×40.6×162.5

Weight (g)

250

How To Create A Product Description — Confirm availability of created product with TDK-Lambda

NV1-	#o/p	Ch1	Ch2	Ch3[2]	Ch4[3]	Global Option	Case Option	Connector Option

- #o/p: Number of outputs (excluding standby supply)
- Ch1 - Ch4: Letter/number from 'Available Outputs' table to represent output voltage
- Global Option: Blank no option; -N 5V/2A standby; -N1 12V/1A standby; -N2 13.5V/1A standby; -N3 5V/2A standby, ATX compatible; -N4 12V/1A standby, ATX compatible
- Case Option: Blank no case; -C U chassis + cover; -U U chassis; -F End fan + case[1]; -I End fan + case + IEC inlet[1]
- Connector Option: Blank standard, vertical connector; -R Right angled connector (see handbook for 'R' connection and mechanical details)

1. Needs OH, 3H, 5H, TH or FH type channel 4. The fan speed is temperature dependent, ensuring optimum cooling and lowest audible noise.
2. For negative output channel 3, follow chosen letter by 'Y'. For example, TY channel 3 = −12V/5A.
3. For positive output channel 4, follow chosen letter by 'P'. For example, TP channel 4 = +12V/1A.

Quick Selector (Preferred Models)

Model	Ch1	Ch2	Ch3	Ch4	Ch5	Global Option
NV1-1T000	12V/15A					No
NV1-1G000	24V/7.5A					No
NV1-453TT-N3	5V/25A	3.3V/15A	12V/5A	−12V/1A	5V/2A	ATX (-N3)
NV1-453FF	5V/25A	3.3V/15A	15V/5A	−15V/1A	–	No
NV1-453FF-N3	5V/25A	3.3V/15A	15V/5A	−15V/1A	5V/2A	ATX (-N3)
NV1-4G5TT	24V/7.5A	5V/8A	12V/5A	−12V/1A	–	No
NV1-4G5TT-N3	24V/7.5A	5V/8A	12V/5A	−12V/1A	5V/2A	ATX (-N3)
NV1-4G5FF	24V/7.5A	5V/8A	15V/5A	−15V/1A	–	No
NV1-4G5FF-N3	24V/7.5A	5V/8A	15V/5A	−15V/1A	5V/2A	ATX (-N3)

Additional variants available 'Built to Order' - see 'How to create a product description'

Available Outputs

Channel 1	Adjustment Range[1]	Channel 2[1]	Adjustment Range	Channel 3[2]	Adjustment Range	Channel 4[3]	Adjustment Range
5 5V/25A[2]	5-5.5V	1 1.8V/15A 2 2.7V/15A 3 3.3V/15A O Omit	0.9-2.5V 2.5-3.3V 2.5-3.3V	T 12V/5A F 15V/5A G 24V/2.5A O Omit	12-15V 12-15V 18-24V	T −12V/1A F −15V/1A 3H −3.3V/2A[9] 5H −5V/2A[9] TH −12V/2A[9] FH −15V/2A[9] 0H Fan supply only O Omit	Fixed Fixed Fixed Fixed Fixed Fixed
T 12V/15A F 15V/12A	12-15V[5] 12-15V[6]	5 5V/10A[10] O Omit	3.3-5.5V				
G 24V/7.5A	24-28V[7]	5 5V/8A[8] O Omit	3.3-5.5V				

1. 1.8V, 2.7V, 3.3V channel 2 only available with 5V Channel 1. 5V/10A channel 2 only available with 12V or 15V Channel 1. 5V/8A channel 2 only available with 24V Channel 1.
2. Maximum combined output current from Ch1& Ch2 = 25A Models with 5V channel 1 are limited to 175W output power.
3. Follow letters in red by 'Y' for negative output channel 3.
4. Follow letters in red by 'P' for positive output channel 4.
5. 12-12.5V if 24V channel 3 fitted.
6. 14.5-15V if 24V channel 3 fitted.
7. 24-24.5V if 5V channel 2 fitted 24-26V if 24V channel 3 fitted.
8. 7A max. with '-F' or '-I' option.
9. 1.5A max. with '-F' or '-I'option.
10. 9A max. with '-F' or '-I'option.

NV175M (Medical Power Supplies)



Size (W×H×D mm)	
Without Chasis or Cover	76.2×28.0×127.0
-U	84.4×39.1×127.0
-C	84.4×40.6×127.0
-F, -I	84.4×40.6×162.0

Weight (g)

250

How To Create A Product Description — Confirm availability of created product with TDK-Lambda

NV1-	#o/p	Ch1	0	Ch3[2]	Ch4[3]	Case Option	-M	Connector Option

- #o/p: Number of outputs
- Ch1, Ch3, Ch4: Letter/number from 'Available Outputs' table to represent output voltage
- -M: Medical with 4kVAC (2×MOPPs) input to output isolation
- Case Option: Blank no case; -C U chassis + cover; -U U chassis; -F End fan + case[1]; -I End fan + case + IEC inlet[1]
- Connector Option: Blank standard, vertical connector; -R Right angled connector (see handbook for 'R' connection and mechanical details)

1. Needs OH, 3H, 5H, TH or FH type channel 4. The fan speed is temperature dependent, ensuring optimum cooling and lowest audible noise.
2. For negative output channel 3, follow chosen letter by 'Y'. For example, TY channel 3 = −12V/5A.
3. For positive output channel 4, follow chosen letter by 'P'. For example, TP channel 4 = +12V/1A.

Quick Selector (Preferred Models)

Model	Ch1	Ch2	Ch3
NV1-1T000-M	12V/15A	–	–
NV1-1G000-M	24V/7.5A	–	–
NV1-3G0TT-M	24V/7.5A	12V/5A	−12V/1A
NV1-3G0FF-M	24V/7.5A	15V/5A	−15V/1A

Additional variants available 'Built to Order' - see 'How to create a product description'

Available Outputs

Channel 1	Adjustment Range	Channel 2	Channel 3[1]	Adjustment Range	Channel 4[2]	Adjustment Range
T 12V/15A F 15V/12A	12-15V[3] 12-15V[4]	Not available	T 12V/5A F 15V/5A G 24V/2.5A O Omit	12-15V 12-15V 18-24V	T −12V/1A F −15V/1A 3HP +3.3V/2A[6] 5HP +5V/2A[6] TH −12V/2A[6] FH −15V/2A[6] 0H Fan supply only O Omit	Fixed Fixed Fixed Fixed Fixed Fixed
G 24V/7.5A	24-28V[5]					

1. Follow letters in red by 'Y' for negative output channel 3.
2. Follow letters in red by 'P' for positive output channel 4.
3. 12-12.5V if 24V channel 3 fitted.
4. 14.5-15V if 24V channel 3 fitted.
5. 24-26V if 24V channel 3 fitted.
6. 1.5A max. with '-F' or '-I'option.

NV350/700

NV350

Size (W×H×D mm)	
Screw terminal, without fan	95.0×40.6×256.7
Others:	95.0×40.6×279.4

Weight (g)
800



NV700

Size (W×H×D mm)	
Screw terminal, without fan	125.0×40.6×256.7
Others:	125.0×40.6×279.4

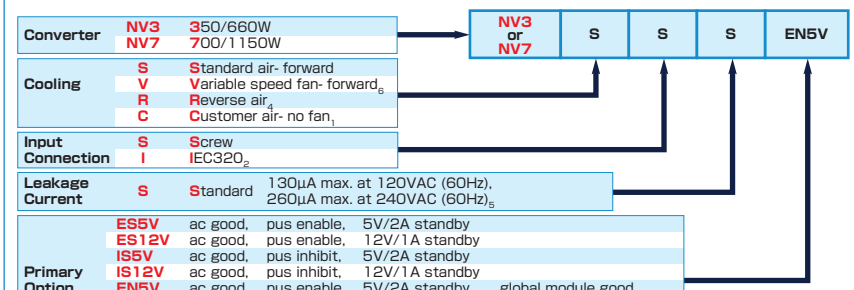
Weight (g)
1160

How To Create A Product Description

The extensive range of output modules and options make it possible to achieve almost any combination of Volts and Amps. You can create your own NV350 or NV700 configuration online at www.nv-power.com. This method checks your configuration and offers the optimum solution. Alternatively, you can do this manually by using the guide below.

1. Calculate total output power to select the appropriate converter, then select required Cooling, Connection and Controls/Signals from the following table:

Converter	**NV3**	350/660W
	NV7	700/1150W
Cooling	**S**	Standard air- forward
	V	Variable speed fan- forward[6]
	R	Reverse air[4]
	C	Customer air- no fan[1]
Input Connection	**S**	Screw
	I	IEC320[2]
Leakage Current	**S**	Standard 130µA max. at 120VAC (60Hz), 260µA max. at 240VAC (60Hz)[5]
Primary Option[3]	**ES5V**	ac good, pus enable, 5V/2A standby
	ES12V	ac good, pus enable, 12V/1A standby
	IS5V	ac good, pus inhibit, 5V/2A standby
	IS12V	ac good, pus inhibit, 12V/1A standby
	EN5V	ac good, pus enable, 5V/2A standby global module good
	EN12V	ac good, pus enable, 12V/1A standby global module good
	IN5V	ac good, pus inhibit, 5V/2A standby global module good
	IN12V	ac good, pus inhibit, 12V/1A standby global module good



1 - Thermocoupled sample recommended to ensure adequate cooling - consult sales
2 - Not with customer air Cooling
3 - The Primary Option uses 1 slot. Leave blank for no primary option.
4 - Not with NV7
5 - Worst case leakage current is less than 300µA at 264VAC, 63Hz Normal Condition (<500µA Single Fault Condition)
6 - Recommended for new designs for NV-350. Not with NV7 (variable speed fan standard on NV7).

Dual Output Modules

Module		Output 1				Output 2			
Code	Slots	Voltage Range			Current	Voltage Range			Current	Max. Power
DA	1[8]	12 (fixed)			3A	−12 (fixed)			1A	48W[8]
DB	2	3.2	–	3.6	25A	3.3	–	5.5	10A	55W
						7	–	15	5A	60W
						24	–	32	2A	50W
DB	2	4.75	–	5.5	25A	3.3	–	5.5	10A	55W
						7	–	15	5A	60W
						24	–	32	2A	50W
DB	2	5.5	–	6.5	25A	3.3	–	5.5	10A	55W
DB	2	12	–	15	13A[1]	3.3	–	5.5	10A	55W
						7	–	15	5A	60W
						24	–	32	2A	50W
DB	2	24	–	28	7A[2]	3.3	–	5.5	10A	55W
						7	–	15	5A	60W
						24	–	32	2A	50W

1. Derate linearly from 13A at 12.5V to 10A at 15.5V
2. Derate linearly from 7A at 25V to 6A at 28V
3. For NV3 - derate linearly from 40A at 5.2V to 36A at 5.5V
   For NV7 - derate linearly from 40A at 5V to 36A at 5.5V
4. Derate linearly from 22.5A at 8V to 20A at 9V
5. For NV3 - derate linearly from 20A at 13.2V to 16.5A at 15.5V
   For NV7 - derate linearly from 20A at 12.5V to 15.5A at 15.5V

Single Output Modules

Module		Output 1			Current	
Code	Slots	Voltage Range			Continuous	Peak
B	2	3.2	–	3.6	40A	48W[8]
		4.75	–	5.5	40A[3]	
		7	–	9	22.5A[4]	
BH	2	12	–	15.5	20A[5]	
		24	–	28	10A[6]	
C	3	12	–	13.2	37.5A[7]	50A[7]
		15	–	16.5	30A[7]	37.5A[7]
		24	–	26.4	18.75A[7]	25A[7]
		27	–	32	16.6A[7]	19.7A[7]
CM	3	24	–	26.4	18.75A[7]	25A[7]
CC	6	48	–	52.8	18.75A[9]	25A[9]
		54	–	64	16.6A[9]	19.7A[9]

Higher output voltages available by connecting output modules in series. Contact technical support for details

6. For NV3 - derate linearly from 10A at 25.7V to 8.5A at 28V
   For NV7 - derate linearly from 10A at 24V to 8.5A at 28V
7. For NV3 - 400W max.
   For NV7 - 600W peak for up to 10sec, 450W average
8. Only one per power supply, 48W max. total power for module
9. For NV3 - limited by total output power, see below

Output Power

		90~115VAC	115~150VAC	150~180VAC	180~264VAC	Comments	
NV-350	Continuous[6]	350W	450W	450W	660W	1. 350W average 2. 450W average 3. 600W average 4. 700W average	5. 1150W average 6. 250W for reverse air 7. Not for reverse air
	Peak (10s)[7]	400W[1]	500W[2]	500W[2]	740W[3]		
NV-700	Continuous	700W	700W	1150W	1150W		
	Peak (10s)		850W[4]	1150W	1450W[5]		

Genesys+series

CVCC Programmable Variable Power Supplies





Scalable Power System: 10kW in 2U



Scalable Power System: 15kW in 3U



Features

- Compact size and high efficiency up to 92%
- Output voltage up to 600V, current up to 1500A
- Parallel systems (up to 60kW) with auto-configure
- Built-in LAN (LXI 1.5), USB, RS-232 and RS-485 interfaces
- Built-in remote isolated analog program/monitor/control interface
- Fan speed profile controlled by ambient temperature and load
- Constant voltage/constant current/constant power operation modes
- Arbitrary waveform generator with auto-triggering
- Programmable slew-rate control (Vout/Iout)
- Internal resistance programming
- Optional interface: GPIB (IEEE), Anybus (Modbus-TCP, EtherCAT, etc.)
- Optional accessories: Dust filter kit, blank front panel

Specification

1U Half Rack Mount New
1000W

	GH*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	100	50	34	25	17	12.5	10	7	3.5	1.7
Input Voltage Range	85 to 265VAC continuous, 47 to 63Hz, 1-phase									
Efficiency	Up to 90%									
Size (W×H×D mm)	214×43.6×432									
Weight	3500									

* Specific output voltage ** Specific output current

1U Half Rack Mount New
1500W

	GH*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	150	75	50	38	25	19	15	10	5	2.6
Input Voltage Range	85 to 265VAC continuous, 47 to 63Hz, 1-phase									
Efficiency	Up to 90%									
Size (W×H×D mm)	214×43.6×432									
Weight	3500									

* Specific output voltage ** Specific output current

1U Rack Type New
1000W

	G*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	100	50	34	25	17	12.5	10	7	3.5	1.7
Input Voltage Range	85 to 265VAC continuous, 47 to 63Hz, 1-phase									
Efficiency	Up to 90%									
Size (W×H×D mm)	423×43.6×441.5									
Weight	5000									

* Specific output voltage ** Specific output current

1U Rack Type
1700W

	G*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	170	85	56	42	28	21	17	11.2	5.6	2.8
Input Voltage Range	1-phase 85 to 265VAC continuous, 47 to 63Hz									
Efficiency	Up to 90%									
Size (WXHXD mm)	423×43.6×441.5									
Weight	Less than 5.0kg									

* Specific output voltage ** Specific output current

1U Rack Type New
2700W

	G*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	265	135	90	68	45	34	27	18	9	4.5
4.5	3-phase 200V models: 170 to 265VAC, 47 to 63Hz (covers 200/230VAC) 3-phase 400V models: 342 to 460VAC, 47 to 63Hz (covers 380/400/415VAC) 3-phase 480V models: 342 to 528VAC, 47 to 63Hz (covers 380/400/415/440/460/480VAC) 1-phase 200V models: 170 to 265VAC, 47 to 63Hz (covers 200/208/230/240VAC)									
Efficiency	Up to 90.5%									
Size (WXHXD mm)	423×43.6×441.5									
Weight	6250									

* Specific output voltage ** Specific output current

1U Rack Type New
3400W

	G*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	100	50	34	25	17	12.5	10	7	3.5	1.7
4.5	3-phase 200V models: 170 to 265VAC, 47 to 63Hz (covers 200/230VAC) 3-phase 400V models: 342 to 460VAC, 47 to 63Hz (covers 380/400/415VAC) 3-phase 480V models: 342 to 528VAC, 47 to 63Hz (covers 380/400/415/440/460/480VAC) 1-phase 200V models: 170 to 265VAC, 47 to 63Hz (covers 200/208/230/240VAC)									
Efficiency	Up to 90.5%									
Size (WXHXD mm)	423×43.6×441.5									
Weight	6250									

* Specific output voltage ** Specific output current

1U Rack Type
5000W

	G*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	500	250	170	125	85	65	50	34	17	8.5
Input Voltage Range	3-phase 200V models: 170 to 265VAC, 47 to 63Hz (covers 200/230VAC) 3-phase 400V models: 342 to 460VAC, 47 to 63Hz (covers 380/400/415VAC) 3-phase 480V models: 342 to 528VAC, 47 to 63Hz (covers 380/400/415/440/460/480VAC)									
Efficiency	Up to 92%									
Size (WXHXD mm)	423×43.6×441.5									
Weight	Less than 7.5kg									

* Specific output voltage ** Specific output current

2U Rack Scalable Type
10000W

	GSP*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	1000	500	340	250	170	130	100	68	34	17
Input Voltage Range	3-phase 200V models: 170 to 265VAC, 47 to 63Hz (covers 200/230VAC) 3-phase 400V models: 342 to 460VAC, 47 to 63Hz (covers 380/400/415VAC) 3-phase 480V models: 342 to 528VAC, 47 to 63Hz (covers 380/400/415/440/460/480VAC)									
Efficiency	Up to 92%									
Size (WXHXD mm)	423×88×441.5									
Weight	Less than 15.5kg									

* Specific output voltage ** Specific output current

3U Rack Scalable Type
15000W

	GSP*-**									
Rated Output Voltage (V)	10	20	30	40	60	80	100	150	300	600
Rated Output Power (A)	1500	750	510	375	255	195	150	102	51	25.5
Input Voltage Range	3-phase 200V models: 170 to 265VAC, 47 to 63Hz (covers 200/230VAC) 3-phase 400V models: 342 to 460VAC, 47 to 63Hz (covers 380/400/415VAC) 3-phase 480V models: 342 to 528VAC, 47 to 63Hz (covers 380/400/415/440/460/480VAC)									
Efficiency	Up to 92%									
Size (WXHXD mm)	423×132.5×441.5									
Weight	Less than 23.5kg									

* Specific output voltage ** Specific output current

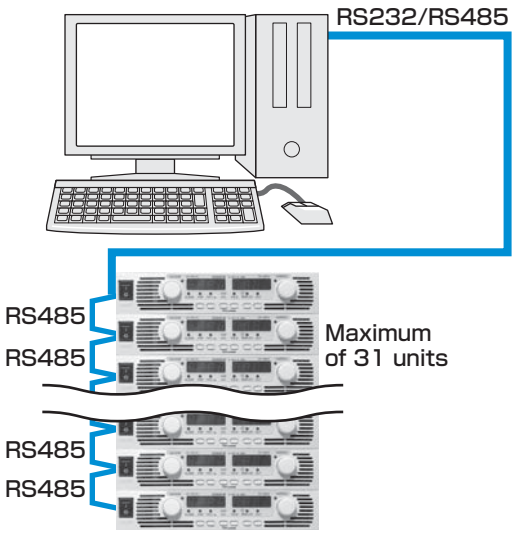
Genesys series

CVCC Programmable Variable Power Supplies



RS232/RS485 Remote Programing

Equipped as standard with RS232/RS485 interface. Daisy chain connection enables a maximum of 31 units to be controlled by computer.



Features

- High power density up to 15kW in 3U, efficiency up to 93.5%
- Wide range of AC inputs (1Ø: 230VAC; 3Ø: 208VAC/400VAC/408VAC)
- Output voltage up to 1500V, current up to 1,000A
- Active power factor correction (up to 0.99)
- Built-in RS232/RS485 interface standard
- Master slave parallel operation (max. 4 units)/series operation (max. 2 units)

Specification

Half/1U Rack Type 750W

	GEN *-**											
Max. Output Voltage (V)	6	8	12.5	20	30	40	60	80	100	150	300	600
Max. Output Power (A)	100	90	60	38	25	19	12.5	9.5	7.5	5	2.5	1.3
Input Voltage Range	1-phase 85 to 265VAC continuous, 47 to 63Hz											
Efficiency	Up to 87%											
Size (WxHxD mm)	214×43.6×437.5 (half-rack) 422.8×43.6×432.8 (full-rack)											
Weight	4.5kg (half-rack) 7kg (full-rack)											

* Specific output voltage ** Specific output current

1U Rack Type 1,500W

	GEN *-**											
Max. Output Voltage (V)	6	8	12.5	20	30	40	50	60	80	100	150	300	600
Max. Output Power (A)	200	180	120	76	50	38	30	25	19	15	10	5	2.6
Input Voltage Range	1-phase 85 to 265VAC continuous, 47 to 63Hz												
Efficiency	Up to 88%												
Size (WxHxD mm)	422.8×43.6×432.8												
Weight	8.5kg												

* Specific output voltage ** Specific output current

1U Rack Type 2,400W

	GEN *-**											
Max. Output Voltage (V)	8	10	16	20	30	40	60	80	100	150	300	600
Max. Output Power (A)	300	240	150	120	80	60	40	30	24	16	8	4
Input Voltage Range	1-phase 230V models: 170 to 265VAC, 47 to 63Hz 3-phase 208V models: 170 to 265VAC, 47 to 63Hz											
Efficiency	Up to 88%											
Size (WXHXD mm)	423×43.6×441											
Weight	Less than 10 kg											

* Specific output voltage ** Specific output current

2U Rack Type 3,300W

	GEN *-**												
Max. Output Voltage (V)	8	10	15	20	30	40	60	80	100	150	200	300	600
Max. Output Power (A)	400	330	220	165	110	85	55	42	33	22	16.5	11	5.5
Input Voltage Range	1-phase 230V models: 170 to 265VAC, 47 to 63Hz 3-phase 208V models: 170 to 265VAC, 47 to 63Hz 3-phase 400V models: 342 to 460VAC, 47 to63Hz												
Efficiency	Up to 88%												
Size (WXHXD mm)	423×88×442.5												
Weight	13kg												

* Specific output voltage ** Specific output current

2U Rack Type 5,000W

	GEN *-**														
Max. Output Voltage (V)	8	10	16	20	30	40	60	80	100	150	200	300	400	500	600
Max. Output Power (A)	600	500	310	250	170	125	85	65	50	34	25	17	13	10	8.5
Input Voltage Range	3-phase 208V models: 170 to 265VAC, 47 to 63Hz 3-phase 400V models: 342 to 460VAC, 47 to 63Hz														
Efficiency	Up to 88%														
Size (WXHXD mm)	423×88×442.5														
Weight	13kg														

* Specific output voltage ** Specific output current

3U Rack Type 10,000W

	GEN *-**																						
Max. Output Voltage (V)	7.5	10	12.5	20	25	30	40	50	60	80	100	125	150	200	250	300	400	500	600	800	1000	1250	1500
Max. Output Power (A)	1000	1000	800	500	400	333	250	200	167	125	100	80	66	50	40	33	25	20	17	12.5	10	8	6.7
Input Voltage Range	3-phase 208V models: 180 to 253VAC, 47 to 63Hz 3-phase 400V models: 360 to 440VAC (models Vout <=600V) or 342 to 440VAC (models Vout 800 to 150V), 47 to 63Hz 3-phase 480V models: 432 to 528VAC, 47 to 63Hz																						
Efficiency	Up to 93.5%																						
Size (WXHXD mm)	429×133×564																						
Weight	43kg (Vout<600V) 32kg (600V<Vout<1500V)																						

* Specific output voltage ** Specific output current

3U Rack Type 15,000W

	GEN *-**																	
Max. Output Voltage (V)	30	40	50	60	80	100	125	150	200	250	300	400	500	600	800	1000	1250	1500
Max. Output Power (A)	500	375	300	250	187.5	150	120	100	75	60	50	37.5	30	25	18.8	15	12	10
Input Voltage Range	3-phase 208V models: 180 to 253VAC, 47 to 63Hz 3-phase 400V models: 360 to 440VAC (models Vout 6 to 600V) or 342 to 440VAC (models Vout 30 to 50V, 800 to 150V), 47 to 63Hz 3-phase 480V models: 432 to 528VAC, 47 to 63Hz																	
Efficiency	Up to 93.5%																	
Size (WXHXD mm)	429×133×564																	
Weight	43kg (Vout<600V) 32kg (600V<Vout<1500V)																	

* Specific output voltage ** Specific output current

Z+series

Ultra-compact CVCC Programmable Variable Power Supplies





Z+ Series

Features

- 2U height bench or rack mount
- 85~265VAC universal input voltage
- Voltage up to 650V, current up to 72A
- Constant current/constant voltage auto-crossover
- Parallel operation with active current sharing allows up to 6 units
- Arbitrary functions for automotive or laser simulation/4 Pre-programmed functions
- Built-in USB, RS-232 & RS-485 interface
- Optional LAN, GPIB & Isolated Analog Programming Interface
- Optional front panel output jacks/insulated output sockets

Specification

Model		Z10-**	Z20-**	Z36-**	Z60-**	Z100-**	Z160-**	Z320-**	Z375-**	Z650-**
Output Voltage (VDC)		0~10V	0~20V	0~36V	0~60V	0~100V	0~160V	0~320V	0~375V	0~650V
Max. Output Current (A)	200W type	0~20	0~10	0~6	0~3.5	0~2	0~1.3	0~0.65	–	0~0.32
	400W type	0~40	0~20	0~12	0~7	0~4	0~2.6	0~1.3	–	0~0.64
	600W type	0~60	0~30	0~18	0~10	0~6	0~4	0~2	–	0~1
	800W type	0~72	0~40	0~24	0~14	0~8	0~5	0~2.5	0~2.2	0~1.25
Size (W×H×D mm)		Standard body 83×70×350; Wide body 83×105×350								
Weight (g)		900~2600								

** Specific output current

ZUPseries

CVCC Programmable Variable Power Supplies





ZUP 200W, 400W, 800W models

Features

- 3U height bench or rack mount
- 85~265VAC universal input voltage
- Voltage up to 120V, current up to 132A
- Constant current/constant voltage auto-crossover
- Parallel operation with active current sharing allows up to 5 units
- Built-in RS-232 & RS-485 interface
- Optional IEEE488 GPIB interface
- Optional front panel output jacks

Specification

Model		ZUP6-**	ZUP10-**	ZUP20-**	ZUP36-**	ZUP60-**	ZUP80-**	ZUP120-**
Output Voltage (VDC)		0~6V	0~10V	0~20V	0~36V	0~60V	0~80V	0~120V
Max. Output Current (A)	200W type	0~33	0~20	0~10	0~6	0~3.5	0~2.5	0~1.8
	400W type	0~66	0~40	0~20	0~12	0~7	0~5	0~3.6
	800W type	0~132	0~80	0~40	0~24	0~14	–	–
Size (W×H×D mm)		70×124×350 (200W, 400W) 140×124×350 (800W)						
Weight (g)		2900~5800						

** Specific output current

SFL series

New

300W or 1000W Programmable DC Electronic Loads





Features

- Fast current feedback control
- Low voltage operation with no turn-on delay
- Scalable up to 10kW (parallel operation)
- Built-in USB Interface
- Load modes: Constant Current, Constant Resistance, Constant Voltage, Constant Power, External Control, Short Circuit
- Operating modes: Normal (DC), Dynamic (Time/Freq), Sequence, Sweep
- EN61010-1 compliant
- Optional: IEEE interface, R (ripple measurement) Interface

Specification

Model	SFL120-60-300	SFL500-12-300	SFL120-180-1K	SFL500-36-1K
Load Voltage (V)	120	500	120	500
Load Current (A)	60	12	180	36
Rated Power (W)	300		1000	
Input Voltage Range	85 to 264VAC (Overvoltage category II)			
Size (WXHXD mm)	215×128.6×420		430×128.6×450	
Weight (g)	6500		13000	

GXE series

600W Convection Cooled Programmable Power Supplies



Features

- Constant Voltage & Constant Current modes
- RS-485 Read-Write Communication (Modbus RTU protocol)
- Standby power 5V/1A, OVP, Remote sense, Remote ON/OFF, Monitoring signal, External output voltage/current control, Parallel operation up to 5 units
- Medical safety certification (2×MOPPs), EN62368, EN62477-1 (OVC III)

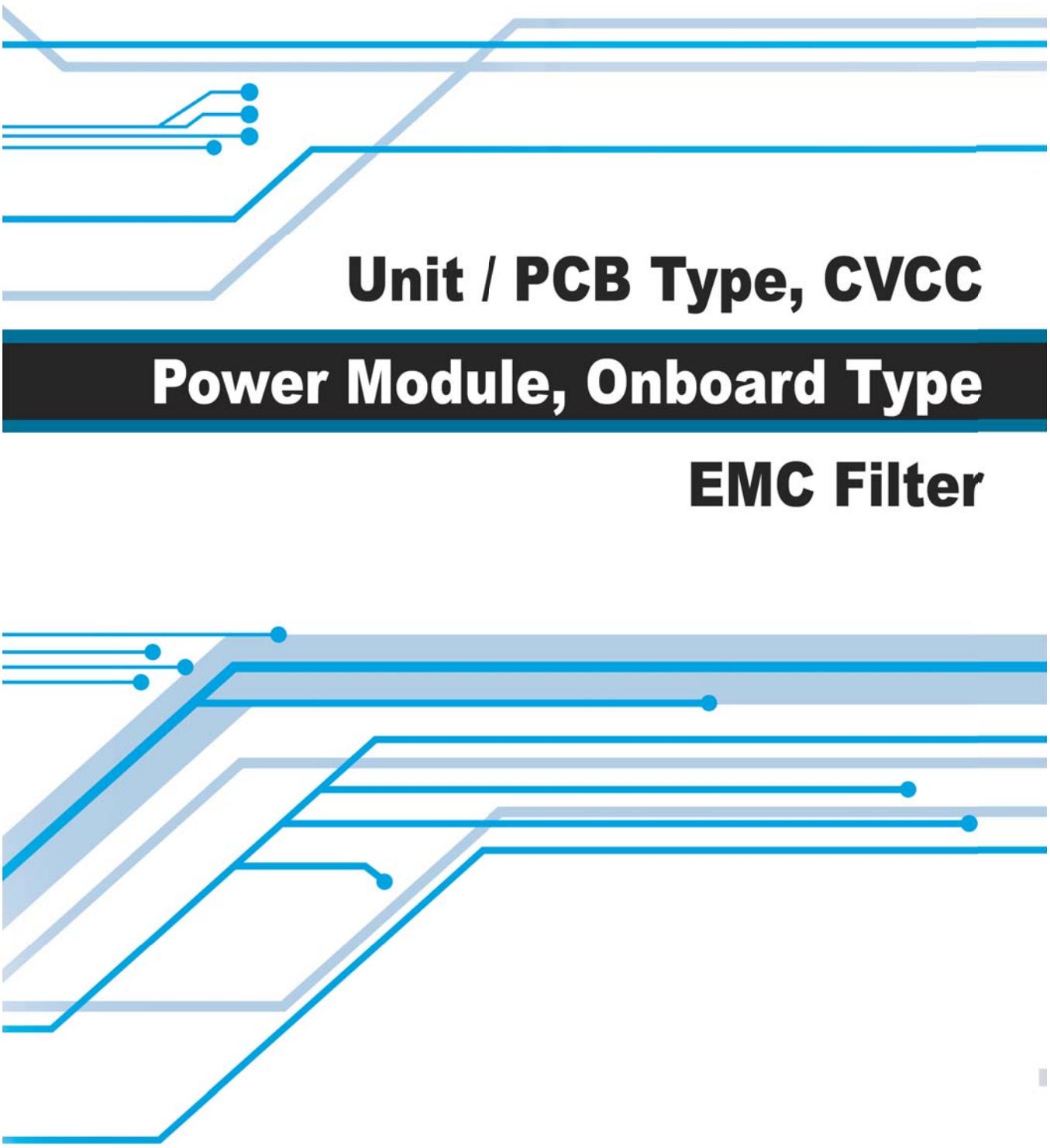
Specification

Model	GXE600
Rated Output Voltage	24V/48V
Input Voltage Range	85 to 265VAC (47 to 63Hz)
Max. Output Power	600W
Efficiency (Typ)	95%
Size (WXHXD mm)	127×41×254
Weight (g)	1300

Options

/A With cover type

/HD With coating



Unit / PCB Type, CVCC

Power Module, Onboard Type

EMC Filter

KAS series

2W~4W Wide Range Input AC-DC Power Supplies



Features

- 90~305VAC input voltage
- Wide operating temperature range −40°C to +80°C
- Class II (No ground needed)
- No load power consumption <0.3W
- Designed to meet IEC/EN60335
- EMC Class B

Specification

Model	KAS2-**	KAS4-**
Rated Output Voltage	3.3V/5V/9V/12V/15V/24V	3.3V/5V/8V/9V/ 12V/14V/15V/24V
Max. Output Power	2W	4W
Input Voltage Range	90 to 305VAC 47 to 63Hz or 120 to 430VDC	90 to 305VAC 47 to 440Hz or 120 to 430VDC
Efficiency	Up to 75%	Up to 77%
Size (W×H×D mm)	28.5×25.8×17.0	37×27.5×17.5
Weight (g)	19.9	26

* Safety certified for AC input, 47 to 63Hz only

** Specific output voltage

KWS-A series

5W~25W Ultra Compact Onboard Type AC-DC Power Supplies



Features

- All-in-one design eliminates need for external components such as fuses and electrolytic capacitors
- No load power consumption <0.5W
- High efficiency up to 88%
- Operating temperature range −10°C to +85°C (−40°C start up)

Specification

Model	KWS5A-**	KWS10A-**	KWS15A-**	KWS25A-**
Rated Output Voltage	5V/12V/15V/24V			
Max. Output Power	5.4W	12W	16.8W	26.4W
Input Voltage Range	85 to 265VAC (47 to 440Hz), 120 to 370VDC			
Efficiency	Up to 77%	Up to 84%	Up to 85%	Up to 88%
Size (W×H×D mm)	25.4×21.5×38.1		25.4×24×50.8	25.4×29×63.5
Weight (g)	35		60	85

KWD series with dual-output 5W/10W/15W (±12V / ±15V) is available. Please contact with TDK-Lambda sales

** Specific output voltage

KMS-A/KMD/KMT series

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

KMS-A

KMD/T



KMS Series



KMD/T Series

Features

- Medical safety certifications
- I/O isolation 4kVAC, 2×MOPPs
- High efficiency up to 87%
- No-load power consumption <0.3W (KMS-A)
- Operating altitude up to 5000m
- PCB board mountable

Specification

Model	KMS15A-**	KMS30A-**	KMS60A-**
Rated Output Voltage	5V/9V/12V/15V/24V	5V/12V/15V/24V	5.1V/9V/12V/15V/24V
Max. Output Power	15W	30W	60W
Input Voltage Range	90 to 264VAC (47 to 440Hz#), 120 to 370VDC		
Efficiency	Up to 85%	Up to 89%	Up to 88%
Size (W×H×D mm)	52.5×27.5×23.5	64.0×45.0×23.5	89.0×63.5×27.0
Weight (g)	59	130	280

Safety certified for AC input, 47 to 63Hz only

** Specific output voltage

Model	KMD15-**	KMD40-**	KMT15-**	KMT40-**
Rated Output Voltage	+5V, −5V/+5V, +12V/+5V, +24V/+12V, −12V/+15V, −15V		+5V, +12V, −12V/ +5V, +15V, −15V	
Max. Output Power	15W	40W	15W	40W
Input Voltage Range	90 to 264VAC (47 to 440Hz#), 100 to 375VDC			
Efficiency	Up to 81%	Up to 83%	Up to 78%	Up to 80%
Size (W×H×D mm)	64.0×46.0×24.0	89.0×64.0×27.0	64.0×46.0×24.0	89.0×64.0×27.0
Weight (g)	120	280	120	280

Safety certified for AC input, 47 to 63Hz only

** Specific output voltage

CHVM series

New

1.5W～3W, Medium-High Voltage DC-DC Converters



Features

- PCB mount type
- Adjustable output voltage: 0%～100%
- Low ripple noise
- High performance and high reliability
- 5 surface shield metal case (suppression of radiation noise)

Specification

Model	CHVM1R5-**-****						CHVM2						CHVM2R6		CHVM2R5		CHVM2R7		CHVM3	
Input Voltage Range	DC 12V																			
Output Voltage	1000V	-1000V	1500V	-1500V	2000V	-2000V	1000V	-1000V	1500V	-1500V	2000V	-2000V	470V	-470V	350V	-350V	180V	-180V	300V	-300V
Output Current	1.5mA		1.0mA		0.7mA		2.0mA		1.3mA		1.0mA		5.6mA		7.0mA		15mA		10mA	
Size (WxHxD mm)	44.5×30×16						111×20×12.7								81×20×12.7					
Weight (g)	30						70								50					

PFH500F series

New

500W AC-DC Power Module



Features

- 4"×2.4" footprint with metal case
- High efficiency up to 95%
- With power factor correction
- With PMBus™ interface, 12V Auxiliary Supply, ON/OFF control, Remote sensing, Power Good, Inrush control, Droop load share (option)

Specification

Model	PFH500F-12	PFH500F-28	PFH500F-48
Rated Output Voltage	12V	28V	48V
Max. Output Power	504W		
Input Voltage Range	85 to 265VAC (47 to 63Hz)		
Efficiency	Up to 92%		Up to 91%
Size (WxHxD mm)	101.6×61.0×13.3		
Weight (g)	225		

PFE-SA, -F & -FA series

300W～1000W Full Brick AC-DC Power Modules (Single Output)



Features

- Low profile and small size
- +100°C baseplate temperature
- High power density
- High efficiency up to 92%
- Suitable for conduction cooling
- With power factor correction

Specification

Model	PFE300SA			PFE500SA			PFE700SA	PFE500F			PFE1000FA		
Input Voltage Range	85 to 265VAC (47 to 63Hz)												
Rated Output Voltage	12V	28V	48V	12V	28V	48V	51V	12V	28V	48V	12V	28V	48V
Output Current	25A	10.8A	6.3A	33A	18A	10.5A	14A	42A	18A	10.5A	60A	36A	21A
Output Power	300W	302.4W		396W	504W		714W	504W			720W	1008W	
Efficiency	86%	89.5%	90.5%	86%	90%	91%	92%	83%	86%		87%	89.5%	90.5%
Size (W×H×D mm)	61×12.7×116.8							70×12.7×122			100×13.4×160		
Weight (g)	200						200	300			420		

Options

/T Mounting stand ϕ3.3 (Non-threaded through hole)

PF-A series

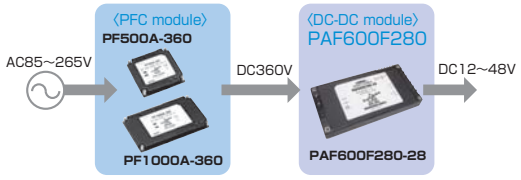
AC-DC Front-End Power Modules (Rectifier & Power Factor Correction Modules)



Features

- Provides high voltage DC to PH-A280 and PAF450/600 power modules
- High efficiency up to 94%
- With active power factor correction
- With baseplate operating temperature −20°C to +85°C (no derating)
- N+1 parallel redundant operation

AC-DC solution with built-in PFC circuit



Specification

Model	PF500A-360	PF1000A-360
Input : AC85V to 265V AC170 to 265V	Output: 360DC, 1.4A, 504W Output: 360DC, 2.1A, 756W	Output: 360DC, 2.8A, 1008W Output: 360DC, 4.2A, 1512W
Size (W×H×D mm)	83×12.7×86	146×12.7×86
Weight (g)	160	250

PAF series

450W~700W Full Brick Isolated DC-DC Converters



Features

- Full brick footprint conduction cooled
- Operation temperature −40°C to 100°C (baseplate)
- High efficiency up to 91%
- With full functions: Remote sensing, ON/OFF control, Output voltage trimming, Over voltage/ current protection, Parallel control, Inverter operation monitoring, Auxiliary power supply
- Optional: Through hole type

Specification

Model	PAF450F280-**				PAF500F24-**		PAF500F48-**			
Input Voltage	280VDC (200 to 400V)				24VDC (19 to 36V)	24VDC (18 to 36V)	48VDC (36 to 76V)			
Output Voltage	12V	24V	28V	48V	12V	28V	3.3V	5V	12V	28V
Output Current	38A	19A	16.5A	9.5A	42A	18A	80A		42A	18A
Output Power	456W		462W	456W	504W		264W	400W	504W	
Efficiency (Typ)	90%	91%			89%	90%	78%	83%	89%	90%
Size (WxHxD mm)	61×12.7×116.8									
Weight (g)	200				250					

** Specific output voltage

Model	PAF600F24-**		PAF600F48-**		PAF600F280-**				PAF700F48-**	
Input Voltage	24VDC (20 to 36V)	24VDC (19 to 36V)	48VDC (36 to 75V)		280VDC (200 to 400V)				48VDC (36 to 75V)	
Output Voltage	12V	28V	12V	28V	12V	24V	28V	48V	12V	28V
Output Current	50A	21.5A	50A	21.5A	50A	25A	21.5A	12.5A	58.5A	25A
Output Power	600W	602W	600W	602W	600W		602W	600W	702W	700W
Efficiency (Typ)	89%		90%		89%	91%			90%	91%
Size (WxHxD mm)	61×12.7×116.8									
Weight (g)	250				200					

** Specific output voltage

PAH series

50W~450W Half Brick Isolated DC-DC Converters



Features

- Half brick footprint conduction cooled (except PAH200S)
- Operation temperature −40°C to 100°C (baseplate)
- High efficiency up to 92%
- With functions: Remote sensing, ON/OFF control, Output voltage trimming, Over voltage/ current protection
- Optional: Through hole type, Positive logic remote ON/OFF (Not on PAH450S)

Specification

Model	PAH300S24		PAH300S48	
Input Voltage	24VDC (18 to 36V)		48VDC (36 to 76V)	
Output Voltage	12V	28V	12V	28V
Output Current	25A	11A	25A	11A
Output Power	300W	308W	300W	308W
Efficiency (Typ)	87%	88%	90%	
Size (WxHxD mm)	61×12.7×57.9			
Weight (g)	90			

Model	PAH350S24	PAH350S48		PAH450S48	
Input Voltage	24VDC (18 to36V)	48VDC (36 to 76V)			
Output Voltage	28V	12V	28V		48V
Output Current	12.5A	29.2A	12.5A	16A	9.4A
Output Power	350W	305.4W	350W	448W	451.2W
Efficiency (Typ)	88%	89%		92%	
Size (WxHxD mm)	61×12.7×57.9				
Weight (g)	100				

PAE series

50W, 100W Eighth Brick Isolated DC-DC Converters



Specification

Model	PAE50S48				PAE100S48			
Input Voltage	48VDC (36 to 76V)							
Output Voltage	1.8V	2.5V	3.3V	5.0V	1.8V	2.5V	3.3V	5.0V
Output Current	20A	18A	16A	10A	30A	25A	25A	20A
Output Power	36W	45W	52.8W	50W	54W	62.5W	82.5W	100W
Efficiency (Typ)	87%	89%	91%		87%	89%	91%	
Size (WxHxD mm)	22.76×8.5×57.9							
Weight (g)	25							

Features

- Eight brick footprint convection cooled
- Operation temperature −40°C to 85°C
- High efficiency up to 91%
- With functions: Remote sensing, ON/OFF control, Output voltage trimming, Over voltage/current protection
- Optional: Auto-reset OVP

PH-A series

50W～600W, High Voltage Input DC-DC Power Module



Features

- Wide input voltage range 200VDC to 425VDC
- High efficiency up to 92%
- Wide operating temperature: −40℃ to +100℃ (Baseplate)
- Optional: Through hole type

Specification

Model	PH50A280-**	PH75A280-**	PH100A280-**	PH150A280-**	PH300A280-**	PH600A280-** New
Input Voltage Range	280VDC (200 to 425V)					
Rated Output Voltage	5/12/24/48V	3.3/5/12/15/24/28/48V	3.3/5/12/24/48V	12/15/24/28/48V	5/12/24/28/48V	24V
Max. Output Power	52.8W	76.8W	100.8W	153.6W	302.4W	600W
Efficiency	Up to 89%	Up to 90%			Up to 92%	93%
Size (W×H×D mm)	37.2×12.7×58.3				61.0×12.7×57.9	
Weight (g)	55				100	

** Specific output voltage

CN series

30W～300W Railway Isolated DC-DC Converters



Features

- IEC 61373 Shock and Vibration
- Quarter brick size (30W/50W/100W), Half brick size (200W)
- Wide operating temperature: −40℃ to +100℃ (Baseplate)
- Parallel operation (200W/300W selected models)
- Optional: Conformal coating

Specification

Model	CN30A110-**	CN50A110-**	CN100A110-**	CN200A110-**	CN200B110-** Under development	CN300B110-** Under development	CN50A24-**	CN100A24-**
Rated Output Voltage	5V/12V/15V/24V				12/13.8/15/24V		5V/12V/24V	
Max. Output Power	31.2W	51W	100.8W	201.6W		300W	50.4W	100.8W
Efficiency	Up to 84%	Up to 86%	Up to 88%		Up to 91%	Up to 90.5%	Up to 86%	Up to 88%
Input Voltage Range	60 to 160VDC				43 to 160VDC		14.4 to 36VDC (40V transient for 3 sec.)	
Size (W×H×D mm)	36.8×12.7×57.9			61.0×12.7×57.9			36.8×12.7×57.9	
Weight (g)	70			100			70	

** Specific output voltage

HQA series

Heavy Duty 9V~40V Wide Input Isolated DC-DC Converters



Features

- Standard quarter brick footprint
- High efficiency up to 91.5%
- Baseplate temperature up to 115°C
- 2.25kVDC input-output isolation
- Designed to meet MIL-STD-461; MIL-STD-1275
- HQA120 optional: M-Grade (Enhanced Screening), clock synchronization

Specification

Model	HQA85					HQA120					
Input Voltage Range	9 to 40VDC										18 to 40VDC
Rated Output Voltage	5V	12V	15V	24V	28V	5V	12V	15V	24V	28V	48V
Max. Output Current	17A	7.1A	5.7A	3.5A	3A	24A	10A	8A	5A	4.2A	2.5A
Max. Output Power	85W					120W					
Efficiency	91%	90%	92%	87%	88.5%	90%		89%	87%	89%	91.5%
Size (WxHxD mm)	60.6×55.9×12.7 (Flanged baseplate), 60.6 x 39 x 12.7 (Non-flanged baseplate)										
Weight (g)	100 (Flanged version)										

GQA series

120W Industrial Isolated DC-DC Converters



Features

- Standard quarter brick footprint
- 1.5kVDC input-output isolation
- High efficiency up to 91.5%
- Baseplate temperature up to 105°C
- Optional: Non-flanged base plate, clock synchronization, case and potting, 2.25kVDC or 3kVDC input-output isolation

Specification

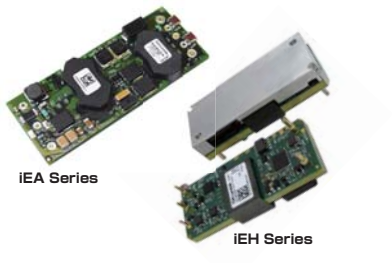
Model	GQA					
Input Voltage Range	9 to 36VDC					18 to 36VDC
Rated Output Voltage	5V	12V	15V	24V	28V	48V
Max. Output Current	24A	10A	8A	5A	4.28A	2.5A
Max. Output Power	120W					
Efficiency	90%	89%		87%	89%	91.5%
Size (WxHxD mm)	60.6×49.5×12.7 (Flanged baseplate), 60.6×39.5×12.7 (Non-flanged baseplate)					
Weight (g)	85 (Flanged baseplate, open frame)					

iEA/iEH series

48W~300W Isolated DC-DC Eighth Brick Converters

iEA

iEH



iEA Series

iEH Series

Features

- Standard eighth brick footprint
- Through hole mounting
- High efficiency up to 94.6%
- 1500VDC basic isolation
- Constant switching frequency
- With digital adaptive control (iEH series)

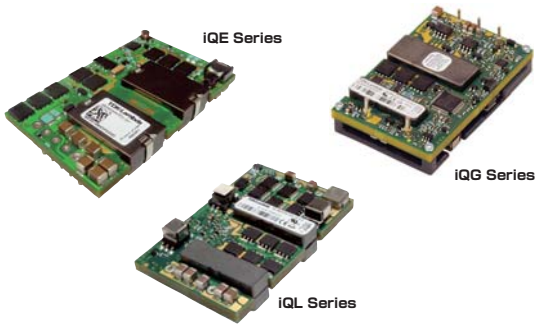
Specification

Model	IEA480				
Input Voltage Range	48V (36 to 75VDC)				
Rated Output Voltage	5V	12V	15V	18V	28V
Max. Output Current	15A	6.5A	4.5A	3.75A	2.67A
Max. Output Power	75W	78W	67.5W		75W
Efficiency	90%	91%	90%	90.5%	90%
Size (WxHxD mm)	58.4×22.9×8.8				
Weight (g)	30.4				

Model	iEA4W	iEH480	
Input Voltage Range	48V (36 to 75VDC)		
Rated Output Voltage	12V	10.8V	12V
Max. Output Current	4A	28A	25A
Max. Output Power	48W	300W	
Efficiency	91%	94%	94.6%
Size (WxHxD mm)	58.4×22.9×8.8	50.42×22.86×12.70 (Baseplate)	
Weight (g)	30.4	50	

iQE/iQG/iQL series

72W～504W Isolated DC-DC Quarter Brick Converters



Features

- Standard quater brick footprint
- Through hole mounting (iQG/L with baseplate)
- High efficiency up to 94.5%
- 1500VDC basic isolation
- Constant switching frequency

iQE iQG iQL

Specification

Model	iQG 480				iQL 480		iQL 240	iQL 480	iQL 240	iQL 480	iQL 240	iQL 480		iQE 480	iQE 4W	iQE 480	iQE 480
Input Voltage Range	48V (36 to 75VDC)			48V (39 to 75VDC)	48V (36 to 75VDC)		24V (18 to 36VDC)	48V (36 to 75VDC)	24V (18 to 36VDC)	48V (36 to 75VDC)	24V (20 to 36VDC)	48V (36 to 75VDC)		48V (36 to 75VDC)	18 to 60VDC	48V (36 to 75VDC)	
Rated Output Voltage	12V		9.6V	12V	1.2V	2.5V	3.3V		5V		12V		28V	5V	12V		15V
Max. Output Current	25A	33A	47A	42A	60A		50A		40A	45A	21A	25A	11A	30A	11A	17A	10A
Max. Output Power	300W	Up to 400W	450W	504W	72W	150W	165W	198W	200W	225W	252W	300W	308W	150W	132W	204W	150W
Efficiency	94.5%		95.2%	94.5%	83.5%	89.0%	90.5%	91.0%			92.0%	94%	92.5%	91.0%	90.0%	93.0%	91.0%
Size (W×H×D mm)	57.91×36.83×13.21 (Baseplate)				57.91×36.83×13.21 (Baseplate)									57.91×36.83×10.41			
Weight (g)	70				70									50			

CC-E series

1.5W～10W Single and Dual Output Isolated Onboard DC-DC Converters



Features

- High efficiency up to 88%
- DIP insertion, SMD mounting and SIP vertical insertion type
- Highly reliable design (Not use E-cap)
- Coating option also available (SIP excluded)

Specification

Single output type	DIP SMD SIP	CC1R5-****SF-E CC1R5-****SR-E -	CC3-****SF-E CC3-****SR-E CC3-****SS-E	CC6-****SF-E CC6-****SR-E -	CC10-****SF-E CC10-****SR-E -
Dual output type	DIP SMD SIP	CC1R5-****DF-E CC1R5-****DR-E -	CC3-****DF-E CC3-****DR-E CC3-****DS-E	CC6-****DF-E CC6-****DR-E -	CC10-****DF-E CC10-****DR-E -
Input Voltage Range		5VDC (4.5 to 9V), 12VDC (9 to 18V), 24VDC (18 to 36V), 48VDC (36 to 76V)			
Nominal Output Voltage	Single Output Type	3.3V/5V/12V (15V)#			
	Dual Output Type	±12V (±15V)#			
Nominal Output Power	Single Output Type	1.5W	3W	6W	12W
	Dual Output Type	1.5W	3W	6W	10.8W
Efficiency (Typ)		Up to 82%		Up to 87%	Up to 88%
Size (W×H×D mm)		DIP: 16.51×8.5×16.6/ SMD: 16.51×8.8×16.6	DIP: 22.86×8.5×16.6/ SMD: 22.86×8.8×16.6/ SIP: 27.8×17.9×9.2	DIP: 22.86×8.5×21.1/ SMD: 22.86×8.8×21.1	DIP: 35.56×8.5×22.6/ SMD: 35.56×8.8×22.6
Weight (g)		3.2	DIP/SMD: 4.5, SIP: 7.0	5.8	10

Note: **** is input and output voltage
For 12V/±12V models, output voltage can be set to 15V/±15V by connecting the output adjustment terminal TRM to -Vout

CCG series

15W~30W Single and Dual Output Isolated Onboard DC-DC Converters



Features

- Compact size 1"×1" footprint
- Wide input voltage 9~36V, 18~76V
- High efficiency up to 92%
- Six sided shielding
- Optional: Positive logic remote ON/OFF

Specification

Model		CCG15-**-**S / CCG15-**-**D		CCG30-**-**S / CCG30-**-**D	
Input Voltage Range		24VDC (9 to 36V)	48VDC (18 to 76V)	24VDC (9 to 36V)	48VDC (18 to 76V)
Nominal Output Voltage	Single Output Type	3.3V/5V/12V/15V			
	Dual Output Type	±12V/±15V			
Nominal Output Power	Single Output Type	15.6W		30W	
	Dual Output Type	15.6W		30W	
Efficiency (Typ)		Up to 90%		Up to 91%	Up to 92%
Size (W×H×D mm)		25.4×9.9×25.4			
Weight (g)		20			

Note: **-** is input and output voltage

iAx/iBx/iCx series

11W~150W Non-Isolated 2nd DOSA DC-DC Converters



Features

- DOSA compatible footprint, surface mountable
- Edge plated castellations (EPC) - inspectable solder joints (exclude iAH/iBH/iCH)
- Constant switching frequency
- No external loop tuning components needed
- Excellent transient response

iAF iAH iBF iBH iCF iCG iCH

Specification

Model	iAF		iAH	iBF		iBH	iCF			iCG		iCH
Input Voltage Range	2.4 to 5.5VDC	4.5 to 14VDC	3 to 17VDC	2.4 to 5.5VDC	4.5 to 14VDC	3 to 14VDC	2.4 to 5.5VDC	4.5 to 14VDC		2.4 to 5.5VDC	4.5 to 14VDC	
Rated Output Voltage	0.6 to 3.63V	0.7 to 5.5V		0.6 to 3.63V	0.7 to 5.5V		0.6 to 3.63V	0.7 to 5.5V		0.6 to 3.63V	0.7 to 5.5V	0.7 to 8.5V
Max. Output Current	20A		40A	12A		20A	3A		5A	6A		12A
Max. Output Power	72.6W	110W	150W	43.5W	66W	80W	10.89W	16.5W	24.75W	21.78W	33W	85W
Efficiency	93.5%		96.0%	93.5%	94.0%	96.0%	92.0%	93.5%	94.0%	93.0%	94.0%	97.0%
Size (W×H×D mm)	33×13.5×7.75		33×13.5 ×10.2	20.32×11.43×8.5		20.3×11.4 ×9.9	12.2×12.2×4.45			12.2×12.2×8.5		
Weight (g)	5.5		12	5.5		6	1.5			3		2.5

PXC-M series

3W~10W Single and Dual Output Medical DC-DC Onboard High Isolation Converters



Features

- Industry standard DIP-24 footprint
- Wide input voltage 9~36V, 18~75V
- Medical safety certification (2×MOPPs)
- Built-in EMI Class A filter
- 5kVAC input-output isolation
- Low leakage current as low as 2.5μA

Specification

Model		PXC-M03		PXC-M06		PXC-M10	
Input Voltage Range		24VDC (9 to 36V)	48VDC (18 to 75V)	24VDC (9 to 36V)	48VDC (18 to 75V)	24VDC (9 to 36V)	48VDC (18 to 75V)
Output Voltage	Single Output Type	3.3V/5V/12V/15V/24V					
	Dual Output Type	±5V/±12V/±15V					
Max. Output Power	Single Output Type	3.3W		6W		10.1W	
	Dual Output Type	3W		6W		10W	
Efficiency		87%		89%			
Size (W×H×D mm)		31.8×10.2×20.3					
Weight (g)		14					

For option models requirement, please contact with TDK-Lambda sales

PXG-M series

New

15W~20W Single and Dual Output Medical DC-DC Onboard High Isolation Converters



Features

- Industry standard 1.6"×1" footprint
- Wide input voltage 9~36V, 18~75V
- Medical safety certification (2×MOPPs)
- 5kVAC input-output isolation
- Touch current less than 2.5μA
- Low no load power consumption

Specification

Model		PXG-M15		PXC-M20	
Input Voltage Range		24VDC (9 to 36V)	48VDC (18 to 75V)	24VDC (9 to 36V)	48VDC (18 to 75V)
Output Voltage	Single Output Type	5V/12V/15V/24V			
	Dual Output Type	±5V/±12V/±15V			
Max. Output Power	Single Output Type	15W		20W	
	Dual Output Type	15W		20W	
Efficiency		89.5%			
Size (W×H×D mm)		40.6×25.4×10.2			
Weight (g)		24			

PXD-M series

New

30W Single and Dual Output Medical DC-DC Onboard High Isolation Converters



Features

- Industry standard 2"×1" footprint
- Wide input voltage 9~36V, 18~75V
- Medical safety certification (2×MOPPs)
- 5kVAC input-output isolation
- Touch current less than 2.5μA
- Low no load power consumption

Specification

Model		PXD-M30	
Input Voltage Range		24VDC (9 to 36V)	48VDC (18 to 75V)
Output Voltage	Single Output Type	5V/12V/15V/24V	
	Dual Output Type	±5V/±12V/±15V	
Max. Output Power	Single Output Type	30W	
	Dual Output Type	30W	
Efficiency		90.5%	
Size (W×H×D mm)		50.8×25.4×10.2	
Weight (g)		32	

i3A/i6A series

75W~250W, 9V~40V/53V Wide Input Non-Isolated DC-DC Converters


i3A


i6A

i3A i6A

Features

- Standard 16th or 32nd brick footprint
- Wide input voltage 9~40/53
- High efficiency up to 98%
- Wide output voltage adjustment
- Constant switching frequency

Specification

Model	i3A		i6AN	i6A	i6A4W	
Input Voltage Range	9 to 53VDC		9 to 40VDC		9 to 53VDC	
Rated Output Voltage	3.3 to 16.5VDC	5 to 30VDC	-3.3 to -30VDC	3.3 to 24VDC	3.3 to 40VDC	3.3 to 15VDC
Max. Output Current	8A	4.5A	8A	14A	10A	20A
Max. Output Power	100W		75W	250W		
Efficiency	89% to 96.5%	95.5% to 98%	90% to 94%	92.5% to 98%	90% to 97%	
Size (W×H×D mm)	23.4×9.6×19.1		22.9×12.1 ×33	22.9×12.7×33		
Weight (g)	8		15			

For option models requirement, please contact with TDK-Lambda sales

i7C series

New

300W, 9V~53V Wide Input Non-Isolated DC-DC Converters



Features

- Standard 1/16 brick footprint
- High efficiency up to 97%
- Wide output voltage adjustment

Specification

Model	i7C	
Input Voltage Range	9 to 53VDC	
Rated Output Voltage	5 to 28VDC	9.6 to 48VDC
Max. Output Current	12.5A	8A
Max. Output Power	300W	
Efficiency	91% to 96%	93% to 97%
Size (W×H×D mm)	34×36.84×12.2	
Weight (g)	25	

iSA series

36W~82.5W Isolated DC-DC Sixteenth Brick Converters



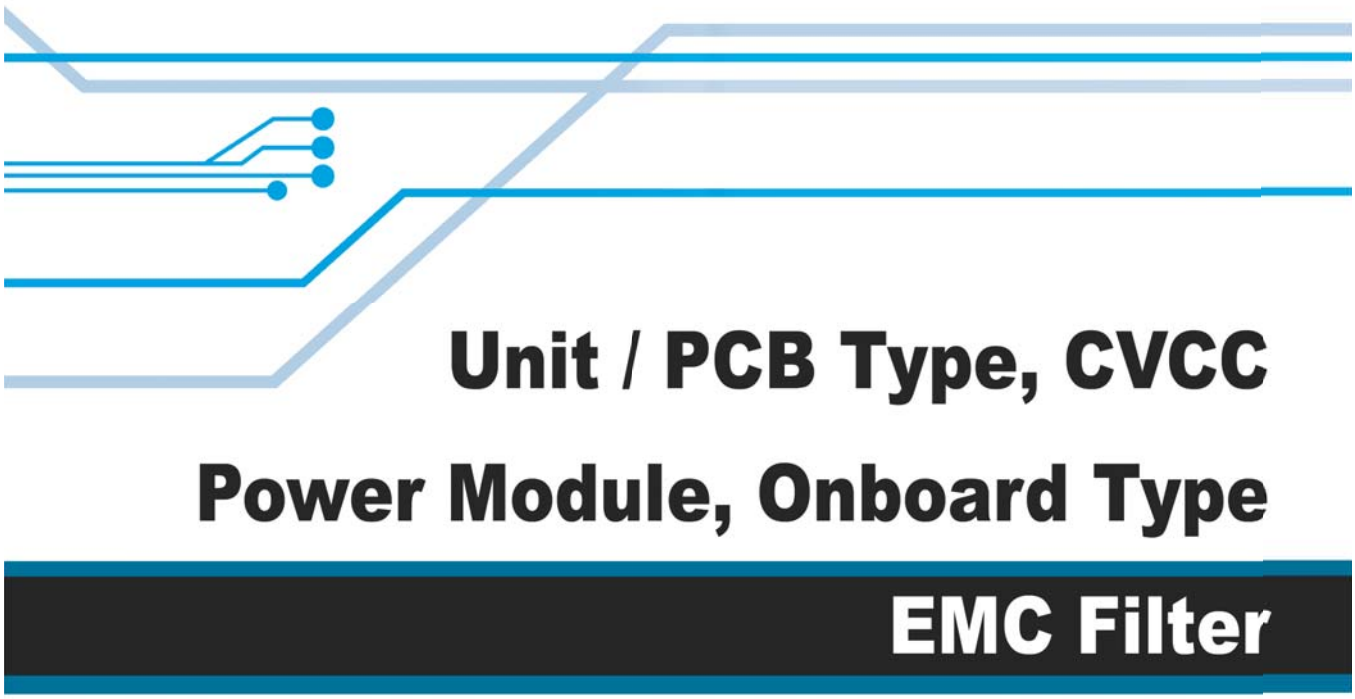
Features

- Standard sixteenth brick footprint (DOSA)
- Through hole mounting
- Low 12.7mm profile
- High efficiency (up to 90%)
- 1500VDC basic isolation

Specification

Model	iSA480						
Rated Output Voltage	1.2V	1.5V	1.8V	2.5V	3.3V	5V	12V
Input Voltage Range	48V (36 to 75VDC)						
Max. Output Power	36W	45W	54W	62.5W	82.5W	75W	78W
Efficiency	75%	79%	82%	85%	88%	90%	
Size (W×H×D mm)	22.9×12.7×33						
Weight (g)	30.4						

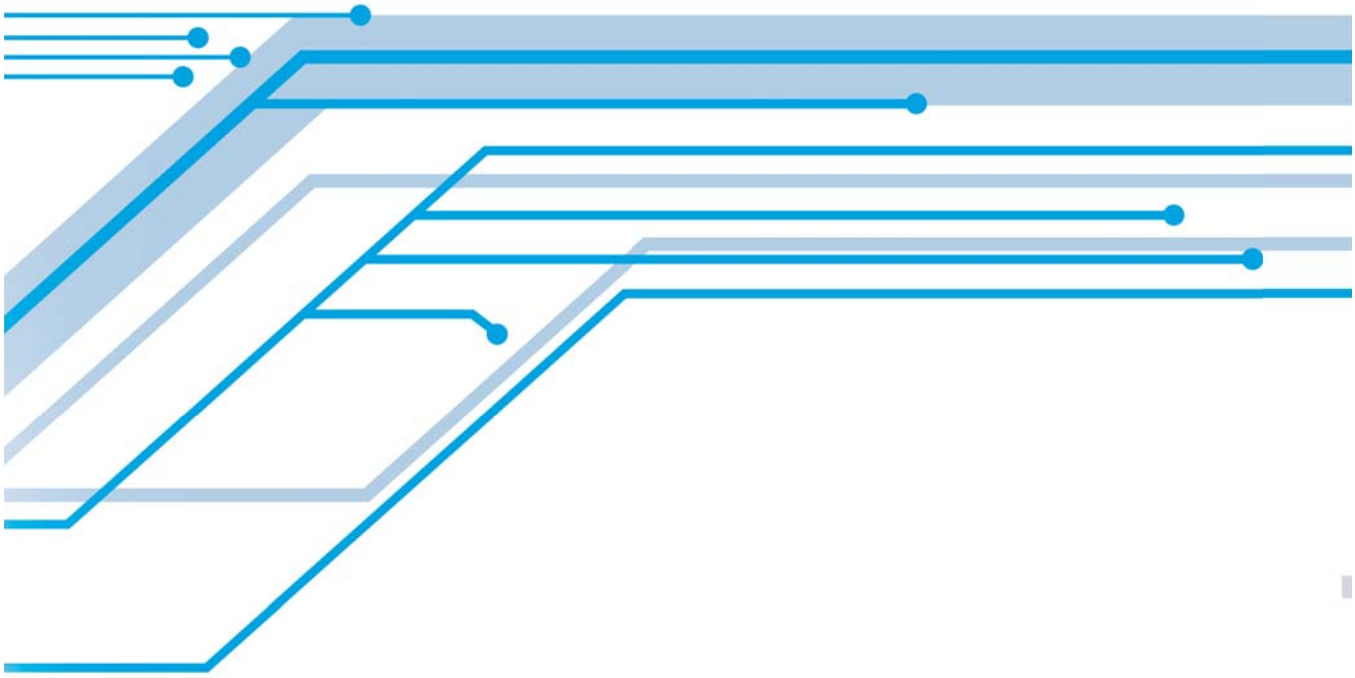
Preferred model - 1.5V/3.3V/12V



Unit / PCB Type, CVCC

Power Module, Onboard Type

EMC Filter



RPE/RPA/RPE-F series

1-Phase Inlet-socket Type EMC Filters


RPE, RPA


RPE-F

RPE RPA RPE-F

Features

- Operating temperature: −25°C to 85°C (start derate 55°C)
- RPE/RPA options: With discharge resistor (R), Low leakage current (L), With discharge resistor & low leakage current (RL)
- RPE-F options: 1 fuse with low leakage (F01L), 2 fuses with low leakage (F02L)
- Leakage current (250V/60Hz): 0.5mA max. (-2***/R/F01/F02) or 0.01mA max. (-2***L/RL/F01L/F02L)

Specification

Model	RPE-2003/RPA-2003/ RPE-2003F01/RPE-2003F02	RPE-2006/RPA-2006/ RPE-2006F01/RPE-2006F02	RPE-2010
Rated Input Voltage	250V		
Rated Current	3A	6A	10A
DC Resistance (mΩ)	150 max.	100 max.	30 max.
Size (W×H×D mm)	RPA/RPE: 50.0×22.4×58.8 ; RPE-F: 44.0×32.1×58.7		
Weight (g)	RPA/RPE: 40g ; RPE-F: 70g		

RSEG/RSAG/RSEC/RSEL/RSAL series

1-Phase Small-size Box Cased EMC Filters


RSEG/RSAG


RSEC


RSEL-M

RSEG RSAG RSEC RSEL RSAL RSEL-M

Features

- Operating temperature: −25°C to 85°C (start derate 55°C)
- RSEL/RSAL options: Lug terminal (A), Wire terminal (W), Metal case & wire terminal (M), Lug terminal & low leakage current (AL), Wire terminal & low leakage current (WL)
- Leakage current (250V/60Hz): 1.0mA (RSEC, RSEL-M, RSEL/RSAL-2***A/W), 0.75mA max. (RSEG/RSAG) or 0.01mA max. (RSEL/RESN-2***AL/WL)

Specification

Rated Input Voltage	250V						
Rated Current	0.5A	1A	2A	3A	4A	5A	6A
Model	RSEG-20R5/ RSAG-20R5	RSEG-2001/ RSAG-2001	RSEG-2002/ RSAG-2002	RSEG-2003/ RSAG-2003	RSEG-2004/ RSAG-2004	–	RSEG-2006/ RSAG-2006
DC Resistance (mΩ)	400 max.	350 max.	310 max.	150 max.	130 max.	–	100 max.
Size (W×H×D mm)	20×21×32						
Weight (g)	14			25		–	25

Model	RSEL-20R5/ RSAL-20R5	RSEL-2001/ RSAL-2001	RSEL-2002/ RSAL-2002	RSEL-2003/ RSAL-2003	–	–	RSEL-2006/ RSAL-2006
DC Resistance (mΩ)	700 max.	600 max.	250 max.	150 max.	–	–	80 max.
Size (W×H×D mm)	45×20×50						
Weight (g)	41~61						

Model	RSEL-20R5M	RSEL-2001M	RSEL-2002M	RSEL-2003M	–	RSEL-2005M	RSEC-2006
DC Resistance (mΩ)	5000 max.	1500 max.	600 max.	300 max.	–	200 max.	60 max.
Size (W×H×D mm)	68×23×32			74×30×38	–	74×30×38	45×20×50
Weight (g)	95			160	–	160	45

RSEN/RSEV/RSAN/RSHN/RSMN/RSKN series

1-Phase Block Terminal Low Profile Type EMC Filters


RSKN


RSEV


RSEN-D

Features

Optional (up to 30A) for RSEN/RSAN/RSHN/RSMN/RSKN: DIN-Rail mount (D), Low leakage current (L), Low leakage current & DIN-Rail mount (LD)

Accessory for RSEV: DIN-Rail mount accessory kit (RSEV-DIN)

RSEN RSAN RSHN RSMN RSKN

Specification

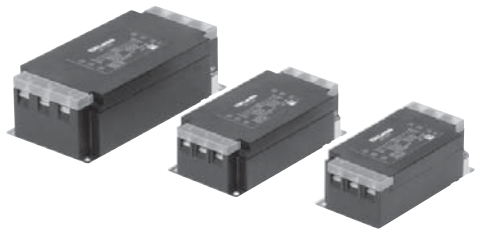
Rated Voltage	250V													
Rated Current	3A	6A	10A	16A	20A	30A	40A	50A	60A	80A	100A	150A	200A	250A	300A
Model	RSEN-2003/ RSAN-2003	RSEN-2006/ RSAN-2006/ RSEV-2006	RSEN-2010/ RSAN-2010/ RSEV-2010	RSEN-2016/ RSAN-2016/ RSEV-2016	RSEN-2020/ RSAN-2020/ RSEV-2020	RSEN-2030/ RSAN-2030/ RSEV-2030	RSEN-2040/ RSAN-2040	RSEN-2050/ RSAN-2050	RSEN-2060/ RSAN-2060	RSEN-2080	RSEN-2100	RSEN-2150	RSEN-2200	RSEN-2250	RSEN-2300
DC Resistance (mΩ)	250 max.	110 max.	40 max.	20 max.	10 max.	6 max.	6 max.	4 max.	3 max.	3.4 max.	2.7 max.	2 max.	1.4 max.	1 max.	0.7 max.
Size (W×H×D mm)	RSEN/RSAN: 87×35×52, RSEV: 85×39×30						170×54×90			267×85×161		290×88×190	390×103×195		
Weight (g)	170	RSEN/RSAN: 230, RSEV: 190					870			3600	3800	5800	8400	8100	7800

Model	RSHN-2003/ RSMN-2003	RSHN-2006/ RSMN-2006	RSHN-2010/ RSMN-2010	RSHN-2016/ RSMN-2016	RSHN-2020/ RSMN-2020	RSHN-2030/ RSMN-2030	RSHN-2040/ RSMN-2040	RSHN-2050/ RSMN-2050	RSHN-2060/ RSMN-2060	RSHN-2080	RSHN-2100	RSHN-2150	RSHN-2200	RSHN-2250	RSHN-2300
DC Resistance (mΩ)	350 max.	140 max.	60 max.	35 max.	22 max.	12 max.	10 max.	8 max.	6 max.	7 max.	6 max.	4 max.	3 max.	2 max.	1.5 max.
Size (W×H×D mm)	98×35×52			127×35×52			272×60×100			430×85×161		473×88×190	593×103×195		
Weight (g)	190	240		350			1500	1400		5500	6000	9000	1300		

Model		RSKN-2006	RSKN-2010		RSKN-2020	RSKN-2030
DC Resistance (mΩ)	-	300 max.	100 max.	-	20 max.	10 max.
Size (W×H×D mm)	-	107×26×47	117×30×47	-	115×35×52	115×35×67
Weight (g)	-	220	310	-	530	660

RTEN/RTAN/RTCN series

3-Phase Block Terminal Type EMC Filters



Features

Low profile type compact, lightweight L1 stage

Conform to UL and EN safety agency certifications

Optional: D (DIN-Rail mount)

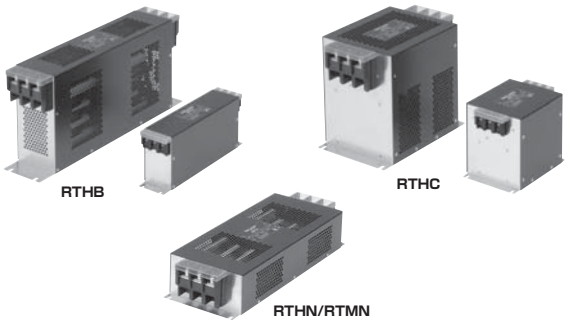
RTEN RTAN RTCN

Specification

Model	RTEN-5006/ RTAN-5006/ RTCN-5006	RTEN-5010/ RTAN-5010/ RTCN-5010	RTEN-5020/ RTAN-5020/ RTCN-5020	RTEN-5030/ RTAN-5030/ RTCN-5030	RTEN-5040/ RTAN-5040/ RTCN-5040	RTEN-5050/ RTAN-5050/ RTCN-5050	RTEN-5060/ RTAN-5060/ RTCN-5060	RTEN-5080/ RTCN-5080	RTEN-5100/ RTCN-5100	RTEN-5150/ RTCN-5150	RTEN-5200/ RTCN-5200	RTEN-5250/ RTCN-5250	RTEN-5300/ RTCN-5300
Rated Voltage	500V (250V available for RTEN-2)												
Rated Current	6A	10A	20A	30A	40A	50A	60A	80A	100A	150A	200A	250A	300A
DC Resistance (mΩ)	145 max.	60 max.	25 max.	13 max.	10 max.	7 max.	5 max.	5 max.	4 max.	3 max.	2 max.	1.5 max.	1 max.
Size (W×H×D mm)	120×42×63		140×42×70		170×54×90			267×85×61		290×88×190	390×103×195		
Weight (g)	360		560		1100			3900	4200	6500	9200	8700	8300

RTHB/RTHC/RTHN/RTMN series

3-Phase High Performance Block Terminal Type EMC Filters



Features

- High damping cube type using L2 stage to reduce cross-direction shape
- Conform to UL and EN safety agency certifications
- Wiring pullout direction is short in small floor spaces (RTHC series)

RTHB RTHC RTHN RTMN

Specification

Rated Voltage	500V (250V available for RTHN-2)											
Rated Current	6A	10A	20A	30A	40A	50A	60A	80A	100A	150A	200A	250A	300A
DC Resistance (mΩ)	290 max.	120 max.	50 max.	26 max.	20 max.	14 max.	10 max.	10 max.	8 max.	6 max.	4 max.	3 max.	2 max.

Model	RTHN-5006/ RTMN-5006	RTHN-5010/ RTMN-5010	RTHN-5020/ RTMN-5020	RTHN-5030/ RTMN-5030	RTHN-5040/ RTMN-5040	RTHN-5050/ RTMN-5050	RTHN-5060/ RTMN-5060	RTHN-5080	RTHN-5100	RTHN-5150	RTHN-5200	RTHN-5250	RTHN-5300
Size (W×H×D mm)	210×50×65		240×55×105		300×68×128			430×85×181		473×88 ×190	593×103×195		
Weight (g)	700		1000		2100			7000	7500	11600	15800	15000	14300

Model	RTHB-5006	RTHB-5010	RTHB-5020	RTHB-5030	RTHB-5040	RTHB-5050	RTHB-5060	RTHB-5080	RTHB-5100	RTHB-5150
Size (W×H×D mm)	210×100×64		240×115×64		300×140×80			472×205×100		534×234 ×100
Weight (g)	750	780	1100		2240			7700	8200	12500

Model	RTHC-5006	RTHC-5010	RTHC-5020	RTHC-5030	RTHC-5040	RTHC-5050	RTHC-5060	RTHC-5080	RTHC-5100	RTHC-5150	RTHC-5200	RTHC-5250	RTHC-5300
Size (W×H×D mm)	145×120×95		160×135×105		190×160×128			240×210×161		255×232 ×190	340×262×195		
Weight (g)	800	820	1200		2260			7400	7800	1200	1630	1560	14800

RDEN series

DC48V (75V max.) Line Filter



Features

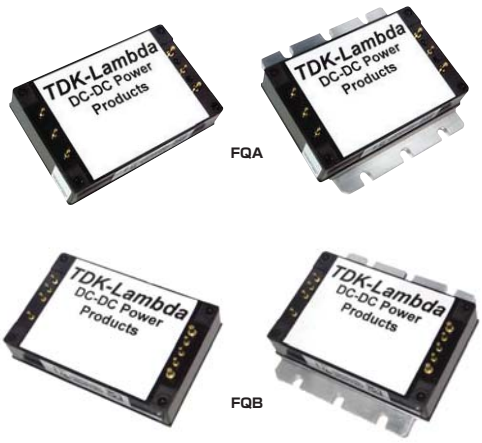
- RDEN series noise filters are for DC48V input only. (Use for AC power line is not available.)
- Large stud type terminals for easy connection
- High attenuation for noise from low frequency to high frequency

Specification

Model	RDEN-048050
Rated Voltage	48VDC (75VDC max.)
Rated Current	50A
DC Resistance (mΩ)	3 max.
Size (W×H×D mm)	90×30×60
Weight (g)	310

FQXseries

DC40V Line Filter/Transient Filter



Features

- FQA - EMI filter module, FQB - Transient filter module
- Ruggedized packaging for harsh environments
- High Differential and Common Mode Noise Attenuation compliance to MIL-STD-461
- Spike and surge suppression compliance to MIL-STD-1275 and RTCA/DO-160
- Qualification methods consistent with MIL-STD-883 and MIL-STD-202
- Options: M-Grade (enhanced screening with −55°C operating)

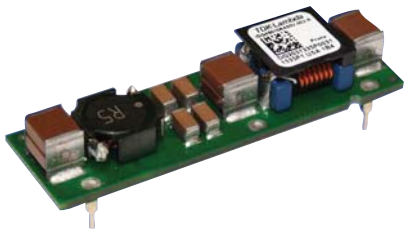
FQA FQB

Specification

Model	FQA020AC	FQB020AC
Rated Voltage	40VDC	-40 to 40VDC
Rated Current	20A	
DC Resistance (mΩ)	20 max.	Postive leg: 25, Negative leg: 5
Size (W×H×D mm)	60.6×55.9×12.7 (Flanged baseplate); 60.6×39×12.7 (Non-flanged baseplate)	
Weight (g)	100 (Flanged version)	

iDQseries

DC75V Line Filter



Features

- Very compact size
- Through hole or surface mount (option)
- Exceptional differential mode performance
- Suitable for use with Lambda's PAF Series

Specification

Model	iDQ48010A480V
Rated Voltage	75VDC (100VDC for 100ms)
Rated Current	10A
DC Resistance (mΩ)	Postive leg: 11.5, Negative leg: 6.5
Size (W×H×D mm)	15×10.8×50
Weight (g)	11.3