https://product.tdk.com/en/power/cus-m
www.emea.lambda.tdk.com/cus1500m

1500W Medical and Industrial Power Supplies



Medical Industrial Test LED COMM Broadcast Semi-Fab

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

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

Model Selector

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

CUS1500M-	12	/	RF

Output voltage 12, 15, 24, 36, 48

blank	Dual fuses, air enters over input/output terminals
/CO2	Pcb coating
/SF	Single input fuse (Line)
/RF	Reverse fan, air exits over input/output terminals

Option combinations are available, please contact your local sales office

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Specifications

Model		CUS1500M
Input		
Input Voltage Range	Vac	85 - 265[2]
Nominal Input Voltage Range	Vac	100 - 240 (Note: Safety certified for 90-264Vac)
Input Frequency	Hz	47 - 63 (Note: Safety certified for 50-60Hz)
DC Input Voltage Range	Vdc	120 - 340 (Note: Safety certified for AC input only)
Input Current (110/230VAC)	A	16 / 8
Inrush Current at 100/200VAC (Cold Start)	A	60
Leakage Current	uA	<300
Power Factor (10/200VAC)	-	0.98 / 0.95
Harmonic Compliance	-	Meets IEC61000-3-2
Hold Up Time	ms	20 typical
Efficiency	-	See model selector
Conducted & Radiated EMI	-	EN55011 / EN55032-B, FCC Class B, VCCI-B
Immunity	-	See immunity section
Insulation Class	-	Class I
Safety Certifications and Markings	-	IEC/ES/CSA/EN60601-1, IEC/UL/CSA/EN62368-1, 60950-1, EN62477-1 (OVC III), CE Mark and UKCA Mark

Immunity

Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	3	B	-
Radiated Susceptibility	EN61000-4-3	3	A	-
Electrical Fast Transient Burst	EN61000-4-4	3	B	-
Surge	EN61000-4-5	3 (4)	B	Level 4 common mode only
Conducted Susceptibility	EN61000-4-6	3	A	-
Magnetic fields	EN61000-4-8	4	A	-
ESD	IEC60601-1-2 Ed.4	4	A	-
Radiated Susceptibility		3	A	-
Electrical Fast Transient Burst		3	A	-
Voltage Dips and Input Interruptions	EN61000-4-11	0% for 1 cycle	A	
		40% for 10/12 cycles	B	
		70% for 25/30 cycles	B	-
		0% for 250/300 cycles	B	-
	IEC60601-1-2 Ed.4	0% for 1/2 cycle	A	-
		0% for 1 cycle	A	-
		70% for 25/30 cycles	B	Customer to consider essential performance of end equipment
		0% for 250/300 cycles	B	-
SEMI F47 Line Dip	SEMI F47	-	-	At input voltages > 200Vac

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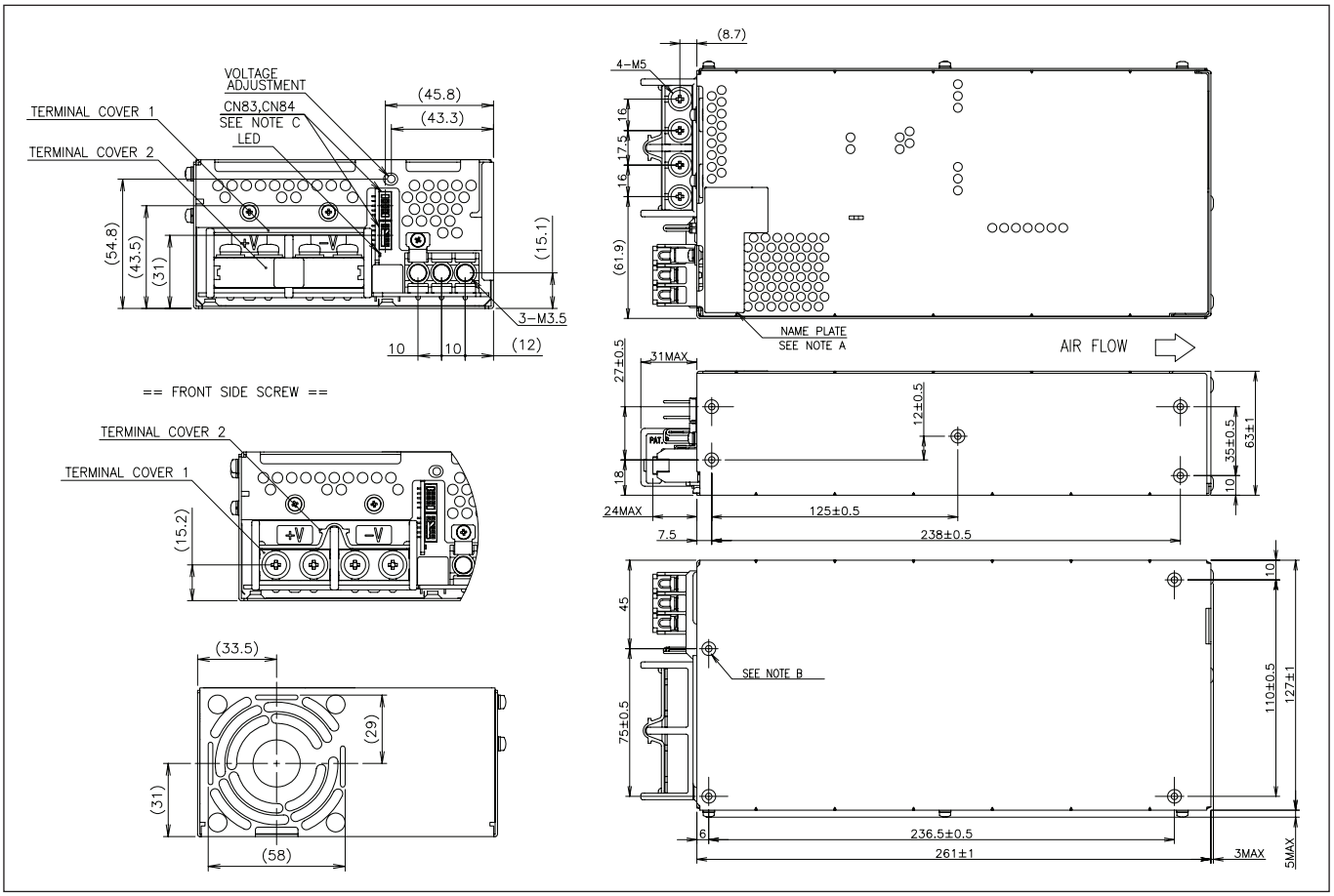
Specifications

Model		CUS1500M
Output		
Switching Frequency (Converter)	kHz	83
Line Regulation	mV	See model selector
Load Regulation	mV	See model selector
External Load Capacitance	uF	100,000 maximum
Ripple & Noise	mV	See model selector
Temperature Coefficient	%/°C	<0.02
Minimum Load	-	No minimum load required
Overcurrent Protection	%	>105, constant current style. After 5 seconds the unit will shutdown
Overvoltage Protection	%	125 - 150 (115 - 125 for 48V model), cycle AC line to reset
Overtemperature Protection	-	Yes, cycle the AC to reset
Remote Sense	-	Yes
Remote On/Off	-	Apply external or Standby voltage to enable output voltage
DC Good / Fan Alarm	-	Isolated open collector signal, high on fail
Standby Voltage	-	5V 1A isolated (always on)
Indicators	-	Green LED indicates DC is OK
Parallel Operation	-	Up to five units, see installation manual
Environmental		
Operating Temperature (-25°C start-up)	°C	-20 to +60, derate linearly to 60% load from 50 to 60 Reverse air (/RF): -20 to +70, derate linearly to 50% load from 50 to 70
Storage Temperature	°C	-30 to +75
Humidity (non condensing)	%RH	Operating: 20 - 90, Storage: 10 - 90
Cooling	-	Internal variable speed fan <45dBA noise
Altitude	m	5,000
Withstand Voltage (For 1 minute)	Vac	Input to Ground 2,000 (1xMoPP), Input to Output 4,000 (2xMoPP), Output to Ground 1,500 (1xMoPP) for 1 min.
Isolation Resistance	MΩ	>100 at 25°C, 70%RH & 500VDC
Vibration (Non-operating)	-	10 - 55Hz: 19.6m/s^2 (sweep 1 min) X, Y, Z for 1 hour
Shock	-	< 196.1 m/s^2
Other		
Weight (Typ)	g	3,000
Size (LxWxH)	mm	261 x 127 x 63
Size (LxWxH)	Inches	10.28 x 5 x 2.48
Connectors	-	Screw terminal input and output. Signal connectors JST S10B-PHDSS
MTBF - Telcordia SR-332 issue 3*	Hours	769,670
Warranty	yrs	7(1)

Notes
See website for detailed specifications, test methods and installation manual
(1) The Americas and EMEA regions: 7 years. Other regions: 5 years. See applicable regional terms of sale.
(2) Derate linearly to 80% load from 90 to 85Vac input. Safety certified for AC input only
*24V output model, 25°C ambient, full load, 230Vac input

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Outline Drawing (/RF version has airflow direction reversed)



To view the complete outline drawing please visit https://product.tdk.com/info/en/documents/2doutline_pdf/cus1500m_out.pdf

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TDK-Lambda France SAS
Tel: +33 1 60 12 71 65
tlf.fr-powersolutions@tdk.com
www.emea.lambda.tdk.com/fr

Italy Sales Office
Tel +39 02 61 29 38 63
tlf.it-powersolutions@tdk.com
www.emea.lambda.tdk.com/it

Netherlands
tlf.nl-powersolutions@tdk.com
www.emea.lambda.tdk.com/nl

TDK-Lambda Europe GmbH
Tel: +49 7841 666 0
tlg.powersolutions@tdk.com
www.emea.lambda.tdk.com/de

Austria Sales Office
Tel: +43 2256 655 84
tlg.at-powersolutions@tdk.com
www.emea.lambda.tdk.com/at

Switzerland Sales Office
Tel: +41 44 850 53 53
tlg.ch-powersolutions@tdk.com
www.emea.lambda.tdk.com/ch

TDK-Lambda Europe GmbH
Tel: Tel. +45 3222 8086
tlg.dk-powersolutions@tdk.com
www.emea.lambda.tdk.com/dk

TDK-Lambda UK Ltd.
Tel: +44 (0) 12 71 85 66 66
tlu.powersolutions@tdk.com
www.emea.lambda.tdk.com/uk

TDK-Lambda Ltd.
Tel: +9 723 902 4333
tli.powersolutions@tdk.com
www.emea.lambda.tdk.com/il-en

TDK-Lambda Americas
Tel: +1 800-LAMBDA-4 or 1-800-526-2324
tla.powersolutions@tdk.com
www.us.lambda.tdk.com

TDK Electronics do Brasil Ltda
Tel: +55 11 3289-9599
sales.br@tdk-electronics.tdk.com
www.tdk-electronics.tdk.com/en

TDK-Lambda Corporation
Tel: +81-3-6778-1113
www.jp.lambda.tdk.com

TDK-Lambda (China) Electronics Co. Ltd.
Tel: +86 21 6485-0777
tlc.powersolutions@tdk.com
www.lambda.tdk.com.cn

TDK-Lambda Singapore Pte Ltd.
Tel: +65 6251 7211
tls.marketing@tdk.com
www.sg.lambda.tdk.com

TDK India Private Limited, Power Supply Division
Tel: +91 80 4039-0660
mathew.philip@tdk.com
www.sg.lambda.tdk.com

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