

1500W Medical and Industrial Power Supplies

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



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), IEC62368-1 and IEC60950-1 with compliance to the EN60601-1-2:2015 Edition 4 immunity requirements. The series is also certified to EN62477-1 (OVC III). These 7-year warranty products feature low acoustic noise (<45dBA) and meet both class B radiated and conduction EMI standards. Features include an isolated 5V 1A standby voltage, remote on/off and an output-low/fan-fail isolated signal. Up to five units can be connected in parallel for additional power.

Features	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	• Low Cost of Ownership

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

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

Option combinations are available, please contact your local sales office

Specifications		
Model		CUS1500M
Input		
Input Voltage range	Vac / Vdc	85 - 265Vac, 120 - 340Vdc (1)
Input Frequency	Hz	47 - 63
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 Agency Certifications	-	IEC/ES/EN60601-1, IEC/UL/EN60950-1, IEC/UL/EN62368-1, EN62477-1 (OVC III), CE Mark

Immunity				
Test	Standard	Test Level	Criteria	
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

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
Series Operation	-	Possible, 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)	-	Input to Ground 2kVac (1xMoPP), Input to Output 4kVac (2xMoPP), Output to Ground 1.5kVac (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
Isolation Resistance	MΩ	>100MΩ at 25°C, 70%RH Output - FG 500VDC
Vibration (Non Operating)	-	10-55Hz (1 min sweep). Maximum 19.6m/s ² ; x, y, z for 1 hour each
Shock	-	<196m/s ²
Other		
Weight (Typ)	g	3,000
Size (LxWxH)	mm	127 x 261 x 63
Size (LxWxH)	Inches	5 x 10.28 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

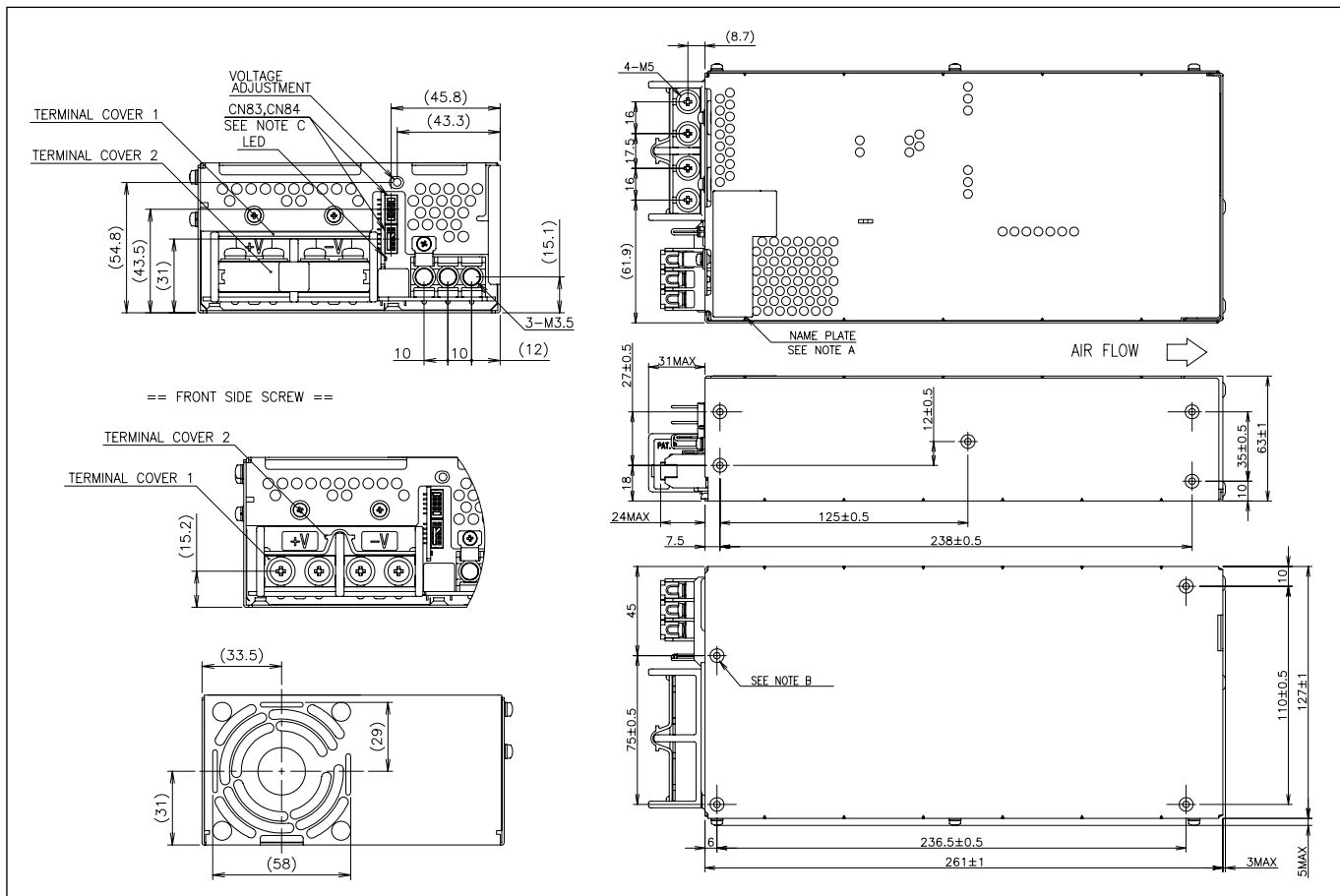
Notes

See website for detailed specifications, test methods and installation manual

(1) 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

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



TDK-Lambda France SAS

Tel: +33 1 60 12 71 65
france@fr.tdk-lambda.com
www.emea.lambda.tdk.com/fr



Italy Sales Office

Tel: +39 02 61 29 38 63
info.italia@it.tdk-lambda.com
www.emea.lambda.tdk.com/it



Netherlands

info@nl.tdk-lambda.com
www.emea.lambda.tdk.com/nl



TDK-Lambda Germany GmbH

Tel: +49 7841 666 0
info.germany@de.tdk-lambda.com
www.emea.lambda.tdk.com/de



Austria Sales Office

Tel: +43 2256 655 84
info@at.tdk-lambda.com
www.emea.lambda.tdk.com/at



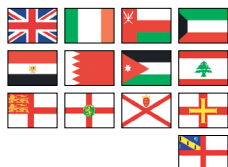
Switzerland Sales Office

Tel: +41 44 850 53 53
info@ch.tdk-lambda.com
www.emea.lambda.tdk.com/ch



Nordic Sales Office

Tel: +45 8853 8086
info@dk.tdk-lambda.com
www.emea.lambda.tdk.com/dk



TDK-Lambda UK Ltd.

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



TDK-Lambda Ltd.

Tel: +9 723 902 4333
info@tdk-lambda.co.il
www.emea.lambda.tdk.com/il



C.I.S.

Commercial Support:

Tel: +7 (495) 665 2627

Technical Support:

Tel: +7 (812) 658 0463
info@tdk-lambda.ru
www.emea.lambda.tdk.com/ru



TDK-Lambda Americas

Tel: +1 800-LAMBDA-4 or 1-800-526-2324
powersolutions@us.tdk-lambda.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
powersolutions@cn.tdk-lambda.com
www.lambda.tdk.com.cn



TDK-Lambda Singapore Pte Ltd.

Tel: +65 6251 7211
tls.mkt@sg.tdk-lambda.com
www.sg.lambda.tdk.com



TDK India Private Limited, Power Supply Division

Tel: +91 80 4039-0660
mathew.philip@in.tdk-lambda.com
www.sg.lambda.tdk.com

