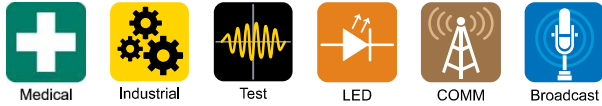


3 x 5" 400W AC-DC Power Supplies

<https://product.tdk.com/en/power/cus-m>
www.emea.lambda.tdk.com/cus400m



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

Features	Benefits
• 250W Convection / Conduction Cooled with 400W Peak for Extended Time Periods	• Quiet Operation
• 400W with Forced Air	• Can Utilise System Airflow or Integrated Fan
• Medical Certifications (2 x MOPP)	• Suitable for B and BF Type Medical Equipment
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• Suitable for Class I and Class II installations (1)	• Flexible Utilisation
• Compact 3 x 5 x 1.55" Size	• Space Saving in End Equipment
• Enclosure & Signal Options	• Versatile Application

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

Contact sales for release dates

CUS400M-	12	/	U	M	E	X5	-						
Output voltage 12, 15, 19, 24, 28, 36, 48				Blank JST Connectors M Molex type input connector	blank dual fuses E single input fuse in line (AC input only)		blank Standard leakage current (<250uA) R Reduced leakage current <150uA						
blank open frame with plastic baseplate C open frame with plastic baseplate and M3 threaded inserts for under side mounting U U channel chassis B open frame with metal baseplate A U channel chassis with cover F U channel chassis, cover and top fan (1)													
				blank No options X2 5V 2.0A standby supply, remote on/off (enable), DC-OK, AC Fail X3 12V 0.83A standby supply, remote on/off (enable), DC-OK, AC Fail X5 5V 2.0A standby supply, remote on/off (inhibit), DC-OK, AC Fail X6 12V 0.83A standby supply, remote on/off (inhibit), DC-OK, AC Fail									

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

Specifications

Model		CUS400M
Input		
Input Voltage range	Vac	85 - 264 (See derating curves)
Input Frequency	Hz	47 - 63
Input Current (100Vac)	A	< 5.0
Inrush Current at 264Vac, 63Hz (Cold Start)	A	<40
Leakage Current (2)	uA	<250
Touch Current (Enclosure Leakage) (2)	uA	<100
Power Factor (100Vac)	-	> 0.97 (>20% load)
Harmonic Compliance	-	IEC61000-3-2 Class A
No Load Power Consumption	W	<1.3 when output is inhibited (230Vac input). <10 without output inhibited
Hold Up Time at 115Vac Input	ms	>16 (400W load) (CUS400M-15 >12ms)
Efficiency	%	Up to 94
Average Efficiency		>87%. Measured at 25%, 50%, 75% and 100% load conditions
Conducted & Radiated EMI	-	EN55032/EN55011-B (See application notes for conditions)
Immunity	-	Compliant with EN60601-1-2:2015 (Edition 4), see immunity table
Insulation Class	-	Construction suitable for Class I or Class II installation (1)
Safety Agency Certifications	-	IEC/EN/UL60950-1 and 60601-1. ES60601-1. IEC/EN/UL62368-1, CE Mark (LVD, EMC and RoHS)

Immunity

Test	Standard	Test Level	Criteria	Notes (the power stated below is total power (main power + fan output))
ESD	IEC61000-4-2	3	A	-
Radiated Susceptibility	IEC61000-4-3	3	A	Includes proximity field requirements of IEC60601-1-2:2015
Electrical Fast Transient Burst	IEC61000-4-4	4	A	(AC Port, 5kHz and 100kHz)
Surge	IEC61000-4-5	3	A	-
Conducted Susceptibility	IEC61000-4-6	3	A	-
Magnetic fields	IEC61000-4-8	4	A	-
Voltage Dips and Input Interruptions	IEC61000-4-11 Class 3 Industrial, incl EN55024	0% for 1/2 cycle	A	-
		0% for 1 cycle	A	-
		40% for 10/12 cycles	A/B	A up to 100W, B above 100W
		70% for 25/30 cycles	A/B	A up to 270W, B above 270W
		80% for 250/300 cycles	A/B	A up to 300W, B above 300W
		0% for 250/300 cycles	B	-
	IEC60601-1-2:2015	0% for 1/2 cycle	A	Customer to consider essential performance of end equipment
		0% for 1 cycle	A	-
		70% for 25/30 cycles	A/B	A up to 270W, B above 270W
		0% for 250/300 cycles	B	-
	IEC61000-6-2	0% for 1 cycle	B	-
		40% for 10/12 cycles	C	-
		70% for 25/30 cycles	C	-
		0% for 250/300 cycles	C	-
	IEC61204-3	0% for 1/2 cycle	B	-
		0% for 1 cycle	B	-
		70% for 25/30 cycles	C	-
		0% for 250/300 cycles	C	-
Ringwave Test	IEC61000-4-12	3	A	-
Voltage Fluctuations	IEC61000-4-14	Class 3	A	-

Notes:

(1) Class II construction and /F safety files - Contact sales for release dates

See website for detailed specifications, test methods and installation manual

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