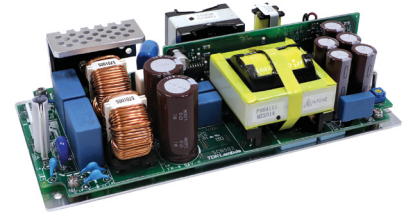


## 350 / 500W Medical Power Supplies with a 1,000W Peak Capability

<https://product.tdk.com/en/power/cus350mp>  
[www.emea.lambda.tdk.com/cus350mp](http://www.emea.lambda.tdk.com/cus350mp)



The CUS350MP AC-DC power supplies are rated at 350W and 1,000W peak with convection cooling for applications requiring low audible noise or 500W continuous, 1,000W peak with forced air. The series is certified to IEC60601-1 3rd edition (medical), IEC62368-1 and IEC62477-1 (OVCIII) with compliance to the EN60601-1-2:2015 Edition 4 immunity requirements. With efficiencies of up to 94%, waste heat is reduced allowing the power supply to operate reliably in a compact 88 x 183 x 44mm package size. A 5V 0.3A standby voltage and remote on/off are fitted as standard. The high peak power rating makes the CUS350MP suitable for use in printers and equipment utilizing DC motors.

Features	Benefits
• Convection Cooled	• Quiet Operation
• Medical Certification (2 x MoPP)	• Suitable for B and BF Rated Equipment
• Class B Conducted and Radiated EMI	• Easier System Compliance
• Compact 88 x 183 x 44mm (3.46 x 7.2 x 1.73") Package	• Space Saving in End Equipment
• Five Year Warranty	• Low Cost of Ownership

Model Selector								
Model	Output Voltage (V)	Adjustment Range (V)	Max Current Convection (A)	Max Power Convection (W)	Max Current Forced Air (A)	Max Power Forced Air (W)	Max Peak Current (A)	Max Peak Power (W)
CUS350MP-1000-24	24	24 - 26.4	14.6	350.4	20.8	499.2	41.7	1000.8
CUS350MP-1000-30	30	27 - 30	11.65	349.5	16.6	498.0	33.3	999.0
CUS350MP-1000-36	36	36 - 42	9.7	349.2	13.8	496.8	27.7	997.2
CUS350MP-1000-48	48	45 - 48	7.3	350.4	10.4	499.2	20.9	1003.2

<b>CUS350MP-1000-</b>	<b>24</b>	<b>/</b>	<b>TA</b>												
	Output voltage 24, 30, 36, 48		<table border="1"> <tr> <td>blank</td> <td>Dual fuses, baseplate mounted</td> </tr> <tr> <td>/A</td> <td>With cover</td> </tr> <tr> <td>/T</td> <td>Screw terminals</td> </tr> <tr> <td>TA</td> <td>With cover and screw terminals</td> </tr> <tr> <td>/CO2</td> <td>Pcb coating</td> </tr> <tr> <td>/SF</td> <td>Single input fuse (Line)</td> </tr> </table>	blank	Dual fuses, baseplate mounted	/A	With cover	/T	Screw terminals	TA	With cover and screw terminals	/CO2	Pcb coating	/SF	Single input fuse (Line)
blank	Dual fuses, baseplate mounted														
/A	With cover														
/T	Screw terminals														
TA	With cover and screw terminals														
/CO2	Pcb coating														
/SF	Single input fuse (Line)														

Consult factory for status

Specifications		
Model		CUS350MP-1000
<b>Input</b>		
Input Voltage range	Vac / Vdc	85 - 265Vac, 120 - 370Vdc (1)(2)
Input Frequency	Hz	47 - 63
Input Current (115/230Vac)	A	Convection cooled: 3.6 / 1.7. Forced air: 4.9 / 1.5
Inrush Current at 100/200Vac (Cold Start)	A	15 / 30 first inrush, 30 / 30 second inrush
Leakage Current	uA	<300 (60Hz)
Power Factor (10/200Vac)	-	0.98 / 0.93
Harmonic Compliance	-	Meets IEC61000-3-2
Hold Up Time	ms	Convection cooled: 20. Forced air: 15. (Typical)
Efficiency at 115/230Vac (Typ)	%	91 / 94
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/EN62368-1, EN62477-1 (OVC III), CE Mark

Immunity				
Test	Standard	Test Level	Criteria	
ESD	EN61000-4-2	3	A	-
Radiated Susceptibility	EN61000-4-3	3	A	-
Electrical Fast Transient Burst	EN61000-4-4	3	A	-
Surge	EN61000-4-5	3 (4)	A	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	30% dip 500ms	A	-
		60% dip 200ms	B / A	100Vac / 230Vac
		100% dip 20ms	A	-
		100% dip 500ms	B	-
	IEC60601-1-2 Ed.4	30% dip 500ms	A	Customer to consider essential performance of end equipment
		60% dip 200ms	A	
		100% dip 20ms	A	
		100% dip 500ms	B	
SEMI F47 Line Dip	SEMI F47	-	-	At input voltages > 200Vac

Specifications		
Model		CUS350MP-1000
<b>Output</b>		
Output Voltage Tolerance	%	±1
Switching Frequency (Converter)	kHz	75 to 120. At light or no load the CUS350MP-1000 will operate in intermittent burst mode
Line Regulation	%	4
Load Regulation	%	8
External Load Capacitance	uF	24V: 10,000, 30V: 8,750, 36V: 7,500, 48V: 5,000
Ripple & Noise	mV	1% (0 to 50°C), 2% (-20 to 0°C)
Temperature Coefficient	%/°C	<0.02
Minimum Load	-	No minimum load required
Overcurrent Protection	%	> 101
Overvoltage Protection	V	24V: >28.1, 30V: >31.1, 36V: 44.1, 48V: >50.1
Overtemperature Protection	-	Yes, latching. Cycle AC or use remote on/off to reset
Remote Sense	-	No
Remote On/Off	-	Apply short to enable output voltage
DC Good / Fan Alarm	-	-
Standby Voltage	-	5V 0.3A isolated (always on)
Indicators	-	-
Parallel Operation	-	Not possible
Series Operation	-	Possible, see installation manual
<b>Environmental</b>		
Operating Temperature	°C	-20 to +70, derate linearly to 30% load from 50 to 70. See Note (2) for links to the specification and instruction manual.
Storage Temperature	°C	-30 to +75
Humidity (non condensing)	%RH	Operating: 30 - 90, Storage: 30 - 90
Cooling	-	Convection or ≥2.2m/s forced air directed at components C8, C9 and T1 (2)
Altitude	m	5000 (IEC62368-1), 4000 (IEC60601-1), 2000 (IEC62477-1)
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 <sup>2</sup> (sweep 1 min) X, Y, Z for 1 hour
Shock	-	< 196.1 m/s <sup>2</sup>
<b>Other</b>		
Weight (Typ)	g	Open frame: 770
Size (LxWxH)	mm	Open frame: 183 x 88 x 44
Size (LxWxH)	Inches	Open frame: 7.2 x 3.46 x 1.73
Connectors	-	Input and output connectors JST VHR5N Signal JST PHDR-8VS
MTBF - Telcordia SR-332 issue 3*	Hours	1,066,036
Warranty	yrs	5

#### Notes

See website for detailed specifications, test methods and installation manual

(1) Safety certified for AC input only

(2) Consult [specification](#) and [instruction manual](#) for derating and peak power characteristics

\*24V output model, 25°C ambient, full load, 200Vac input

## Outline Drawing (open frame)

