

MRS-150-U series

150W Constant Voltage Enclosed Switching Power Supply



■ Features:

- Universal AC input / Full range
- Low no-load power consumption < 0.5W
- Protections: Over current / Short circuit / Over Voltage / Over temperature
- Compact size with a low 1U profile
- LED indicator for power on
- Wide range of operating temperature range: -30°C to +70°C
- Operating altitude up to 5000m



MODEL NUMBERING

MRS	-	150	-	X	-	U	-	Y
SERIES		RATED OUTPUT POWER		RATED OUTPUT VOLTAGE		INPUT VOLTAGE RANGE		OPTIONS
		150 means 150W		X = 12	12V	U means 85~264VAC / 120~373VDC		Y = C Terminal block with cover
				X = 15	15V			
				X = 24	24V			
				X = 36	36V			Y = Q Conformal coating
				X = 48	48V			

ELECTRICAL SPECIFICATION

MODEL	MRS-150-12-U	MRS-150-15-U	MRS-150-24-U	MRS-150-36-U	MRS-150-48-U
OUTPUT					
<i>RATED VOLTAGE</i>	12V	15V	24V	36V	48V
<i>RATED CURRENT</i>	12.5A	10A	6.5A	4.3A	3.3A
<i>RATED POWER</i>	150W	150W	156W	154.8W	158.4W
<i>LINE REGULATION</i>	± 0.5%				
<i>LOAD REGULATION</i>	± 0.5%				
<i>RIPPLE & NOISE (MAX.) [2]</i>	150mV _{p-p}	150mV _{p-p}	200mV _{p-p}	200mV _{p-p}	200mV _{p-p}
<i>HOLD UP TIME (TYP.)</i>	16ms / 230VAC at full load; 8ms / 115VAC at full load				
INPUT					
<i>VOLTAGE RANGE</i>	85 ÷ 264VAC; 120 ÷ 373VDC				
<i>FREQUENCY RANGE</i>	47 ÷ 63Hz				
<i>EFFICIENCY (TYP.)</i>	86%	87%	88%	88%	89%
<i>AC CURRENT (TYP.)</i>	4A / 230VAC; 2A / 115VAC				
<i>INRUSH CURRENT (TYP.)</i>	60A / 230VAC; 30A / 115VAC				
<i>LEAKAGE CURRENT (MAX.)</i>	0.75mA / 240VAC				

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PROTECTIONS

OVER CURRENT	Range: 110% ÷ 150% rated current				
	Type: hiccup mode, auto-recovery.				
SHORT CIRCUIT	Type: hiccup mode, auto-recovery.				
OVER VOLTAGE	≤ 16.2VDC	≤ 21.75VDC	≤ 33.6VDC	≤ 48.6VDC	≤ 60VDC
	Type: shut down output voltage. Re-power on to recovery.				
OVER TEMPERATURE	Type: shut down output voltage. Auto-recovery.				

WORKING ENVIRONMENT

WORKING TEMPERATURE	-30°C ÷ 70°C (Refer to Temperature Derating Curve)				
WORKING HUMIDITY	20 ÷ 90% RH non-condensing				
STORAGE TEMPERATURE AND HUMIDITY	-40°C ÷ 85°C, 10 ÷ 95% RH non-condensing				
TEMPERATURE COEFFICIENT	± 0.03% / °C				
OPERATION ALTITUDE (MAX.)	[5]	5000m			

SAFETY AND EMC REGULATIONS

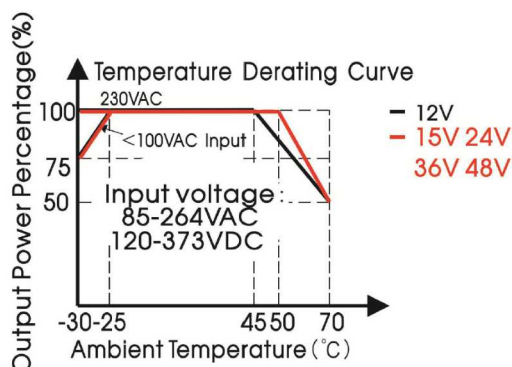
SAFETY STANDARDS	Compliance to EN62368-1, EN60335-1, EN61558-1, EN61558-2-16				
WITHSTAND VOLTAGE	IN/OUT: 400VAC (< 10mA); IN/GND: 2000VAC (< 10mA) ; OUT/GND: 1250VAC (< 10mA)				
ISOLATION RESISTANCE	IN/OUT, IN/GND, OUT/GND: 50MΩ/500VDC				
EMC EMISSION	Compliance to EN55032				
EMC IMMUNITY	Compliance to EN55035; EN61000-4-2, -3, -4, -5, -6, -11				
HARMONIC CURRENT	Compliance to EN61000-3-3, EN61000-3-2				

OTHERS

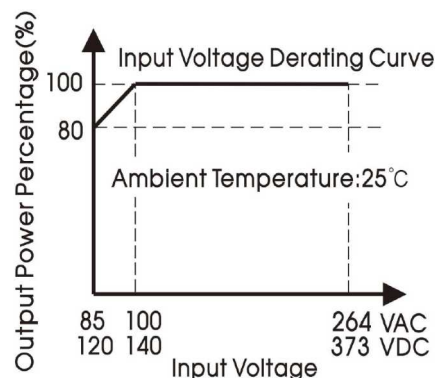
MTBF (MIN.)	300 000h / 25°C per MIL-HDBK-217F				
DIMENSIONS AND CASE MATERIAL	159 x 97 x 30mm (L x W x H); Metal (AL1100, SGCC)				
NET WEIGHT	0.41kg				

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load, 25°C of ambient temperature and humidity <75% RH.
2. Ripple & noise is measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF i 47μF parallel capacitor.
3. In order to improve the efficiency at high input voltage, there will be audible noise generated, but it does not affect product performance and reliability.
4. Case needs to be connected to the earth (⊕) of the system when the terminal equipment in operating.
5. The room temperature derating of 5°C / 1000m is needed for operating altitude greater than 2000m.
6. Power supply is considered as component not indented to apply by end-user. Power supply meets safety and EMC standards however the final equipment with power supply must be re-quality to comply with EMC Directives.

DERATING CURVE



STATIC CHARACTERISTIC

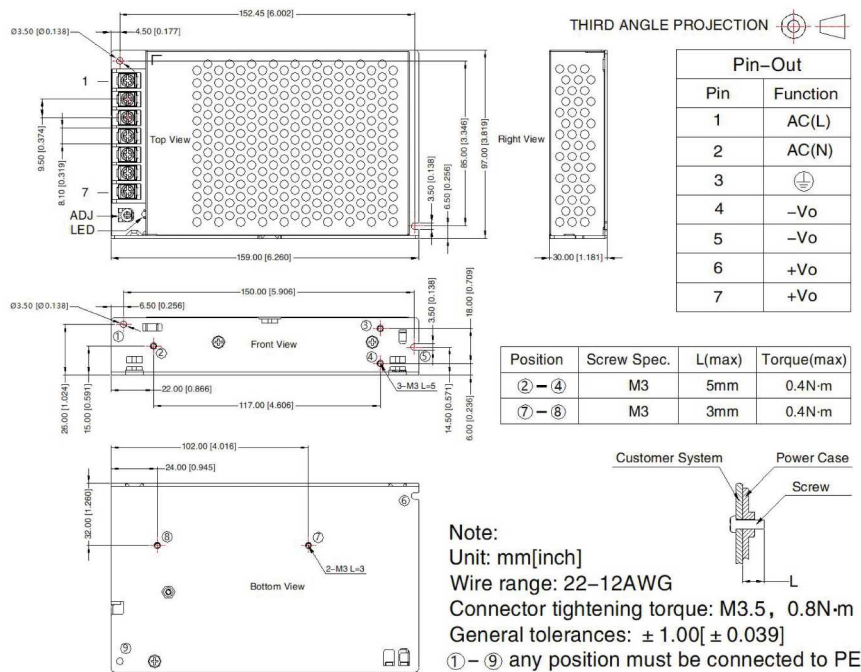


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MECHANICAL SPECIFICATION of MRS-150-U and MRS-150-U-Q



MECHANICAL SPECIFICATION of MRS-150-U-C

