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DRP-240-48 & SDR-240-48 Series

240W, 48Vdc Single Output Industrial DIN Rail Power Supply

Product Description

The DRP-240-48 & SDR-240-48 series are power supply units for use with the KBC PoE series industrial Ethernet edge switches. They are designed for use in a wide range of operating temperatures in non-environmentally conditioned, industrial applications. Both the DRP-240-48 and SDR-240-48 units provide 240W at 48Vdc.

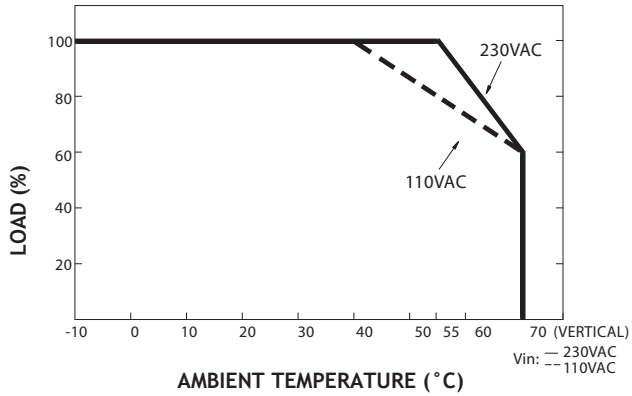
The series is available in DIN rail configurations.

Product Features

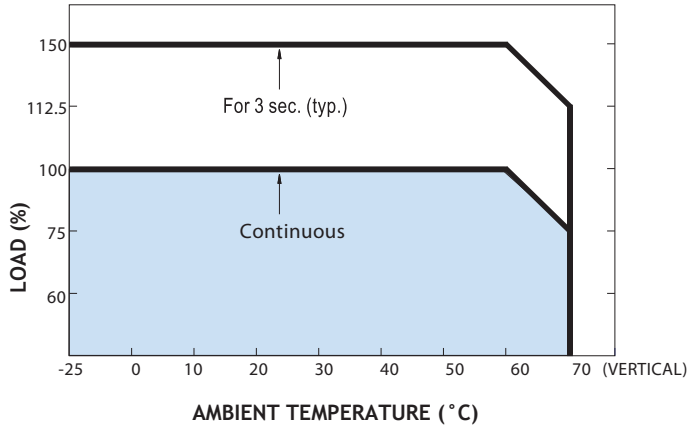
- Protections: short circuit, overload, overvoltage & over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- 100% full load burn-in test
- 3 year warranty

De-rating Curve

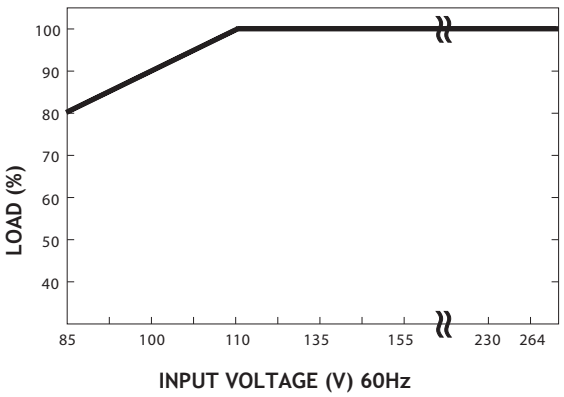
DRP-240-48

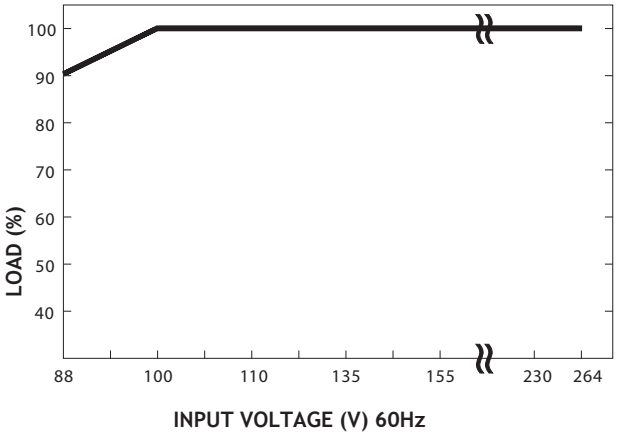


SDR-240-48



Output De-rating vs Input Voltage





Specifications

Output	DRP-240-48	SDR-240-48
DC Voltage	48Vdc	48Vdc
Rated Current	5A	5A
Current Range	0~5A	0~5A
Rated Power	240W	240W
Peak Current		7.5A
Peak Power		360W (3 secs max)
Ripple & Noise (max)[1]	150mVp-p	120mVp-p
Voltage Adj. Range	48~53Vdc	48~55Vdc
Voltage Tolerance[2]	±1.0%	±1.0%
Line Regulation	±0.5%	±0.5%
Load Regulation	±1.0%	±1.0%
Setup, Rise Time	800ms, 40ms/230Vac 800ms, 40ms/115Vac at full load	1500ms, 60ms/230Vac 3000ms, 60ms/115Vac at full load
Hold Up Time	24ms/230Vac 24ms/115Vac at full load	20ms/230Vac 20ms/115Vac at full load
Input		
Voltage Range[3]	88 ~ 264Vac 120 ~ 370Vdc	88 ~ 264Vac 124 ~ 370Vdc
Frequency Range	47 ~ 63Hz	47 ~ 63 Hz
Efficiency (typ)[4]	85%	94%
AC Current (typ)	2.8A/115Vac 1.4A/230Vac	2.6A/115Vac 1.3A/230Vac
Inrush Current (typ)	cold start 27A/115Vac 45A/230Vac	33A/115Vac 65A/230Vac
Leakage Current	<3.5mA/240Vac	<1mA/240Vac
Protection		
Overload	105 ~ 150% rated output power Protection type: constant current limiting, auto-recovery after fault condition removed	Normally works within 110 ~ 150% rated output power for more than 3 secs & then shut down output voltage with auto-recovery. >150% rated power, constant current limiting with auto-recovery within 2 secs & may shut down after 2 secs.
Over Voltage	54 ~ 60V Protection type: shut down output voltage, repower on to recover	56 ~ 65V Protection type: shut down output voltage, with auto-recovery
Over Temperature	100°C±5°C (TSW1) detect on power transistor heat-sink. Protection type: shut down output voltage, auto-recovery after temp goes down.	95°C ±5°C (TSW: detect on power switch heatsink). Protection type: shut down output voltage, auto-recovery after temp goes down.
Mechanical		
Dimensions	126mm x 126mm x 100mm (4.96" x 4.96" x 3.94")	63mm x 126mm x 114mm 2.48" x 4.96" x 4.49"
Weight	1.2kg (2lb 11oz)	1.03kg (2lb 5oz)
Environmental		
Operating Temperature[5]	-10°~ +70°C /14°~ 158°F	-25°~ +70°C /-13°~ 158°F
Operating Humidity	20 to 90% RH non-condensing	20 to 95% RH non-condensing
Storage Temperature	-20°~ +85°C / 4°~ 185°F	-40°~ +85°C / -40°~ 185°F
Temp Coefficient	±0.03%/°C(0 - 50°C)	±0.03%/°C(0 ~ 50°C)
	10 ~ 500Hz, 2G 10 min/1 cycle 60 min each along X, Y, Z axis Mounting: IEC60068-2-6	Component: 10 ~ 500Hz, 2G 10min/1cycle 60 min each along X, Y Z axes Mounting: IEC60068-2-6
Mean Time Between Failure (MBTF)	289.9khrs min MIL-HDBK-217F (25°C)	169.3khrs min MIL-HDBK-217F (25°C)
Approvals		
	UL508 UL60950-1 TUV EN60950-1 EN55011 EN55022 (CISPR22) Class B EN61000-3-2,3 EN61000-4-2,3,4,5,6,8,11 EN55024 EN61000-6-2	UL508 TUV EN60950-1 EN55022 (CISPR22) Class B EN61000-3-2,3 EN61000-4-2,3,4,5,6,8,11 EN55024 EN61000-6-2 EN61204-3 SEMI F47, GL

Part Numbers

DRP-240-48	Standard power supply unit
SDR-240-48	Extended temperature range power supply unit

For use with the ESUL8P-PC2, ESML8P-PC2 & ESUG4P-PG2 PoE switches - see separate specification sheets for further information

All parameters not specifically mentioned are measured at 230Vac input rated load and 25°C ambient temperature.
The power supply is considered a component which will be installed with the final equipment. The final equipment must be re-confirmed so that it still meets the EMC directives.

1. Ripple & noise are measured at 20MHz of bandwidth by using 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor
2. Tolerance: includes set up tolerance, line regulation and load regulation
3. De-rating may be needed under low input voltages. Please check the de-rating curve for more details
4. SDR-240-48: after 30 mins of burn-in
5. SDR-240-48: installation clearances: 40mm above, 20mm below, 5mm either side are recommended when loaded permanently with full power. If the adjacent device is a heat source then 15mm clearance is recommended.