

## Product Description

The DR-120-48 & SDR-120-48 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 DR-120 and SDR-120 units provide 120W at 48Vdc.

The series is available in DIN rail configurations

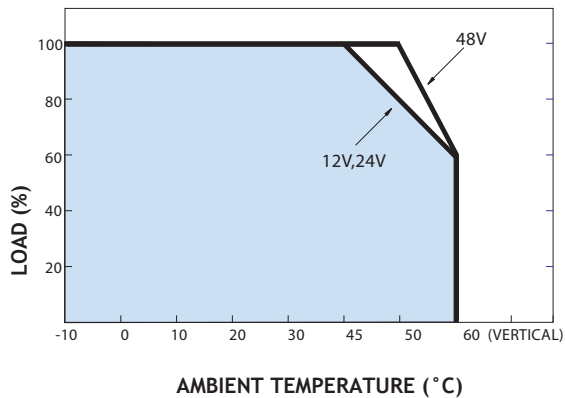


## Product Features

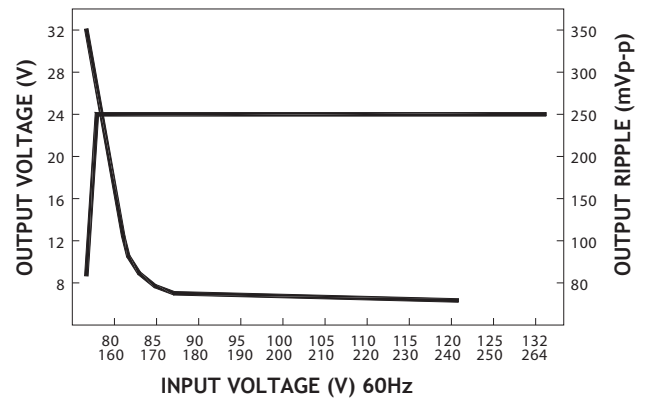
- Protections: short circuit, overload, overvoltage & over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- 100% full load burn-in test
- 3 year warranty

## De-rating Curve

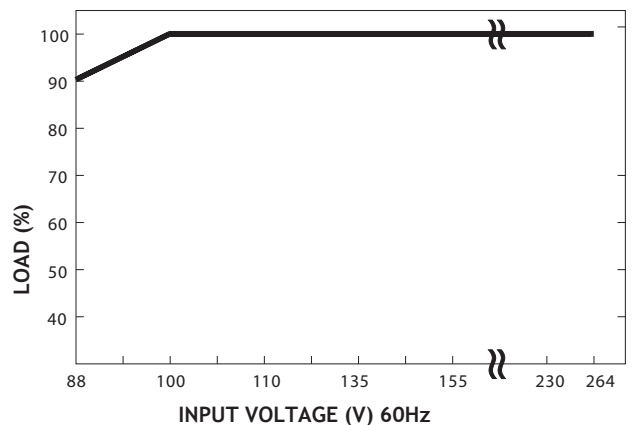
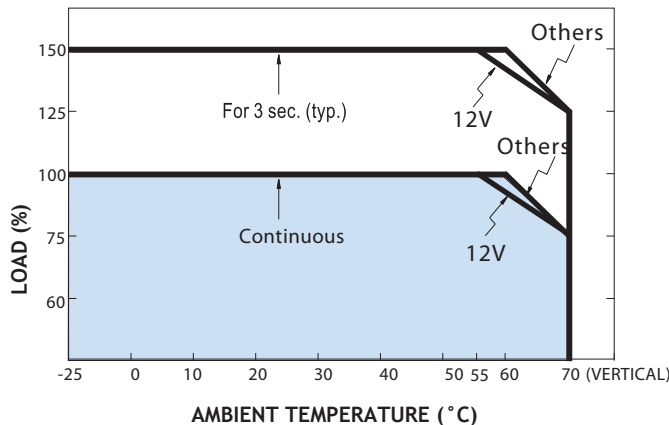
DR-120-48



## Output De-rating vs Input Voltage



SDR-120-48



# Specifications

## Output

	DR-120-48	SDR-120-48
DC Voltage	48Vdc	48Vdc
Rated Current	2.5A	2.5A
Current Range	0-2.5A	0-2.5A
Rated Power	120W	120W
Peak Current		3.75A
Peak Power		189W (3 secs max)
Ripple & Noise (max) <sup>(1)</sup>	100mVp-p	120mVp-p
Voltage Adj. Range	48-53Vdc	48-55Vdc
Voltage Tolerance <sup>(2)</sup>	±1.0%	±1.0%
Line Regulation	±0.5%	±0.5%
Load Regulation	±1.0%	±1.0%
Setup, Rise Time	500ms, 70ms/230Vac	1500ms, 60ms/230Vac
	500ms, 70ms/115Vac at full load	3000ms, 60ms/115Vac at full load
Hold Up Time	36ms/230Vac	20ms/230Vac
	32ms/115Vac at full load	20ms/115Vac at full load

## Input

	DR-120-48	SDR-120-48
Voltage Range <sup>(3)</sup>	88 - 132Vac/176 - 264Vac (by switch) 248 - 370Vdc	88 - 264Vac 124 - 370Vdc
Frequency Range	47 - 63Hz	47 - 63 Hz
Efficiency (typ)	85%	90.5%
AC Current (typ)	2.6A/115Vac 1.6A/230Vac	1.4A/115Vac 0.7A/230Vac
Inrush Current (typ)	cold start 20A/115Vac 40A/230Vac	35A/115Vac 70A/230Vac
Leakage Current	<3.5mA/240Vac	<1mA/240Vac

## Protection

	DR-120-48	SDR-120-48
Overload	105 - 150% rated output power	Normally works within 110 - 150% rated output power for more than 3 secs & then shut down output voltage. >150% rated power, constant current limiting with auto-recovery within 3 secs & shut down output voltage after 3 secs.
Over Voltage	58 - 65V Protection type: shut down output voltage, repower on to recover	56 - 65V Protection type: shut down output voltage, repower on to recover
Over Temperature	90°C ±5°C (TSW1)	95°C ±5°C (TSW: detect on power switch heatsink). Protection type: shut down output voltage, auto-recovery after temperature goes down.

## Mechanical

	DR-120-48	SDR-120-48
Dimensions	66mm x 126mm x 100mm (2.26" x 4.96" x 3.94")	40mm x 126mm x 114mm 1.57" x 4.96" x 4.49"
Weight	790g (1lb 11oz)	670g (1lb 8oz)

## Environmental

	DR-120-48	SDR-120-48
Operating Temperature <sup>(4)</sup>	-10° - +60°C / 14° - 140° 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) 10 - 500Hz, 2G 10 min/1 cycle 60 min each along X, Y, Z axis Mounting: IEC60068-2-6	±0.03%/°C(0 - 50°C) Component: 10 - 500Hz, 2G 10min/1cycle 60 min each along X, Y, Z axes Mounting: IEC60068-2-6
Mean Time Between Failure (MTBF)	136.8khrs min MIL-HDBK-217F (25°C)	289.9khrs min MIL-HDBK-217F (25°C)

## Approvals

DR-120-48	SDR-120-48
UL508	UL508
UL60950-1	TUV EN60950-1
TUV EN60950-1	EN55022 (CISPR22) Class B
EN55011	EN61000-3-2
EN55022 (CISPR22) Class B	EN61000-3-3
EN61000-3-2	EN61000-4-2,3,4,5,6,8,11
EN61000-3-3	EN55024
EN61000-4-2,3,4,5,6,8,11	EN61000-6-2
EN55024	EN61204-3
EN61000-6-2	SEMI F47, GL

# Part Numbers

DR-120-48	Standard power supply unit
SDR-120-48	Extended temperature range power supply unit

For use with the ESUL5P PoE switch - see separate specification sheet 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 to ensure 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. SDR-120-48: range de-rating may be needed under low input voltage  
 4. SDR-120-48: 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.

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