

## POWER SUPPLY 1-PHASE, 48 V DC DIMENSION Q SERIES

QS10.481  
POWER SUPPLY 48VDC 240W 5A

- Output current of 5 A or 10 A
- From 60 mm wide
- Up to 94.3% efficiency
- 50% bonus power
- Maximum performance



### PRODUCT DESCRIPTION

The most outstanding features of this Dimension Q Series DIN-rail power supply are the high efficiency and the small size, which are achieved by a synchronous rectification and further novel design details.

With short-term peak power capability of 150% and built-in large sized output capacitors, these features help start motors, charge capacitors and absorb reverse energy and often allow a unit of a lower wattage class to be used.

High immunity to transients and power surges as well as low electromagnetic emission makes usage in nearly every environment possible.

The integrated output power manager, a wide range input voltage design and virtually no input inrush current make installation and usage simple. Diagnostics are easy due to the dry DC-ok contact, a green DC-ok LED and red overload LED.

Unique quick-connect spring-clamp terminals allow a safe and fast installation and a large international approval package for a variety of applications makes this unit suitable for nearly every situation.

### SPECIFICATIONS

Input voltage range	Wide-range
Number of phases	1
Input voltage AC	100-240 V
Input voltage ac min	90 V AC
Input voltage ac max	276 V AC
Input voltage DC	110-150 V
Input voltage dc min	88 V DC
Input voltage dc max	187 V DC
Inrush current at 120 V ac typical	4 A
Inrush current at 230 V ac typical	7 A

<b>Power Factor at 120 V AC, full load. Typical</b>	0.98
<b>Power Factor at 230 V AC, full load. Typical</b>	0.92
<b>Supply Frequency</b>	50-60 ±6 %
<b>Power Consumption At 120 V AC</b>	2.22 A
<b>Power Consumption At 230 V AC</b>	1.22 A
<b>Type Power Supply</b>	AC-DC

<b>Output voltage</b>	48 V DC
<b>Output voltage min</b>	48 V DC
<b>Output voltage max</b>	56 V DC
<b>Output Current</b>	5 A
<b>Effect</b>	240 W
<b>Power Reduction Of 60 To 70 ° C</b>	6 W/°C
<b>Ripple. max</b>	100 mV pp
<b>Temperature Range Without Derating From</b>	-25 °C
<b>Temperature Range Without Derating To</b>	60 °C

<b>Efficiency At 120 V AC, full load. Typical</b>	91.2 %
<b>Efficiency At 230 V AC. Typical</b>	90.3 %
<b>Efficiency At 230 V AC, full load. Typical</b>	92 %
<b>Lifetime at 120 V ac, full load and +40 ° C</b>	67000 h
<b>Lifetime at 230 V ac, full load and +40 ° C</b>	81000 h
<b>MTBF (IEC 61709) 230 V AC, Maximum Load, 40 ° C</b>	606000 h

<b>Width</b>	60 mm
<b>Height</b>	124 mm
<b>Depth</b>	117 mm
<b>Weight</b>	0.9 kg

<b>Clamp type</b>	Spring-clamp
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<b>Series</b>	Dimension Q
<b>Approvals</b>	ABS, CB, CE, CSA, GL, UL
<b>DC relay output</b>	Yes
<b>Material Protection</b>	Aluminium
<b>Hold-up time at 120 V AC, full load. Typical.</b>	27 ms

Hold-up time at 230 V AC, full load. Typical.	28 ms
IP Class	IP20
Active Transient	Yes

Fig. 6-1 Output voltage vs. output current, typ.

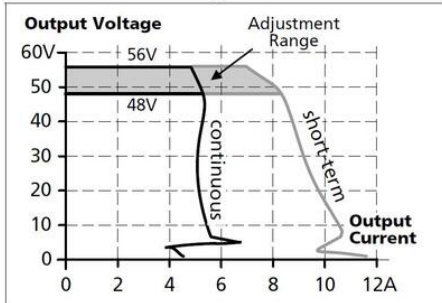


Fig. 15-1 Output current vs. ambient temp.

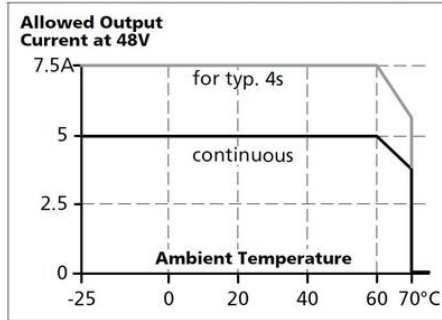


Fig. 9-1 Efficiency vs. output current at 48V, typ.

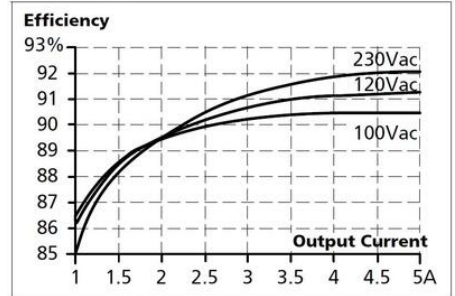


Fig. 9-2 Losses vs. output current at 48V, typ.

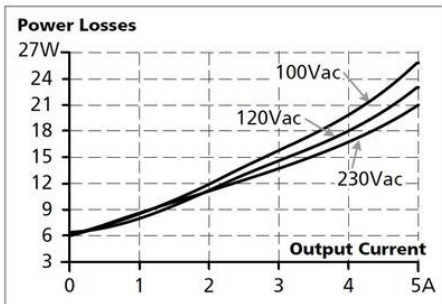
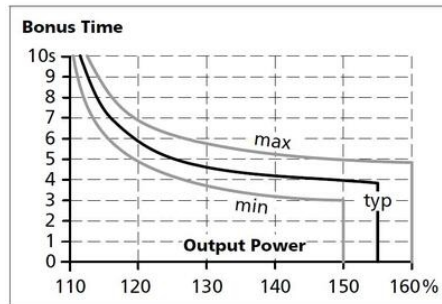


Fig. 6-2 Bonus time vs. output power



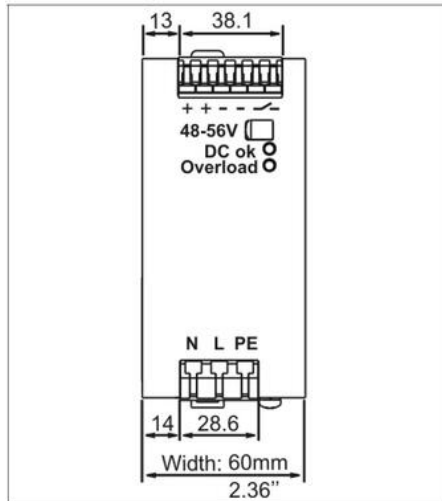
Maximal wire length\*) for a fast (magnetic) tripping:

	0.75mm <sup>2</sup>	1.0mm <sup>2</sup>	1.5mm <sup>2</sup>	2.5mm <sup>2</sup>
C-2A	58m	64m	104m	143m
C-3A	41m	53m	73m	124m
C-4A	18m	31m	54m	94m
C-6A	10m	14m	21m	33m
C-8A	4m	6m	8m	13m
C-10A	3m	4m	7m	10m
B-6A	19m	28m	39m	75m
B-10A	8m	12m	16m	29m
B-13A	7m	9m	13m	23m

Fig. 13-1 Front side



Fig. 20-1 Front view



Side view

