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

QS10.481
PSU 100-240V ac I/P 48V dc 5A 240W O/P



- 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.

TECHNICAL DATA

INPUT DATA

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
Input voltage range	Wide-range

Power factor at 120 V ac, full load. Typical	0.98
Power factor at 230 V ac, full load. Typical	0.92
Number of phases	1

OUTPUT DATA

Output voltage	48 V DC
Output voltage min	48 V DC
Output voltage max	56 V DC
Output current	5 A
Power	240 W

EFFICIENCY / LIFETIME / MTBF

Efficiency at 120 V ac, full load, typical	91.2 %
Efficiency at 230 V ac, typical	90.3 %
Efficiency at 230 V ac, full load, typical	92 %
Lifetime at 120 V ac, full load and +40 ° C	67000 h
Lifetime at 230 V ac, full load and +40 ° C	81000 h
MTBF (IEC 61709) 230 V ac, max load, 40 ° C	606000 h

DIMENSIONS

Width	60 mm
Height	124 mm
Depth	117 mm
Weight	0.9 kg

OTHER

Approvals	ABS, CB, CE, CSA, GL, UL
Hold time at 120 V ac, typical full load	27 ms
Hold time at 230 V ac, typical full load	28 ms
IP class	IP20
Clamp type	Spring-clamp
Material protection	Aluminium
Supply frequency	50-60 ±6 %
Ripple max	100 mV pp
Series	Dimension Q
Power consumption 120 V ac	2.22 A
Power consumption 230 V ac	1.22 A

Power drop from +60 °C to + 70 °C	6 W/°C
Temperature min without derating	-25 °C
Temperature max without derating	60 °C

Type Power Supply	AC-DC
Active Transient	Yes
DC relay output	Yes

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

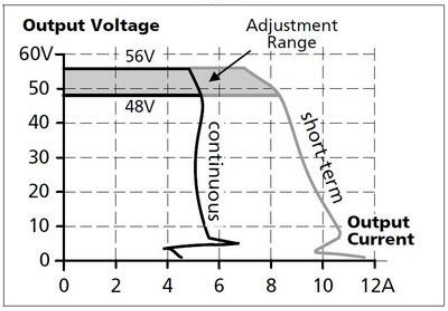


Fig. 15-1 **Output current vs. ambient temp.**

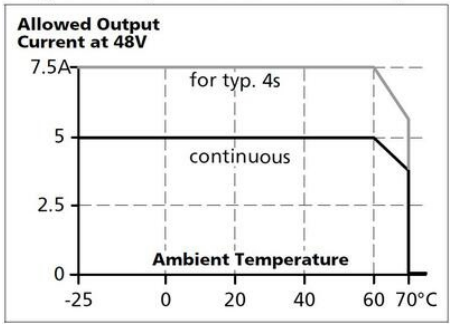


Fig. 9-1 **Efficiency vs. output current at 48V, typ.**

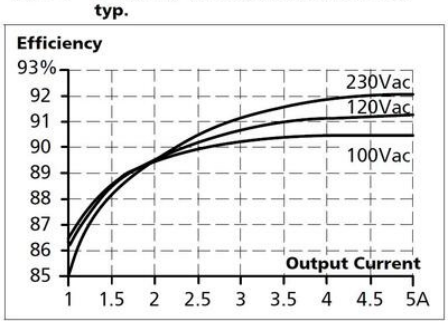


Fig. 9-2 **Losses vs. output current at 48V, typ.**

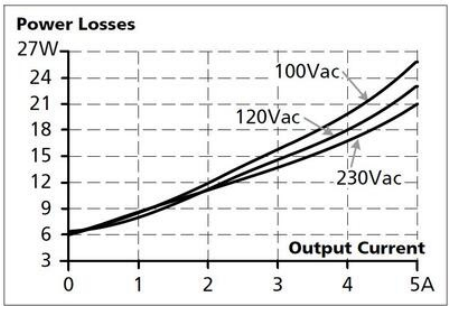
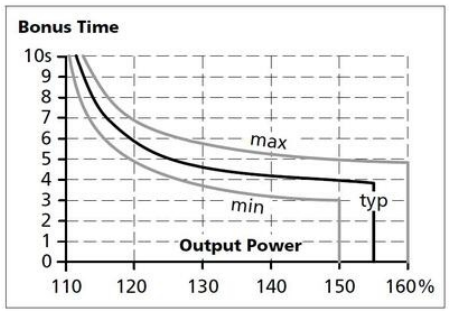


Fig. 6-2 **Bonus time vs. output power**



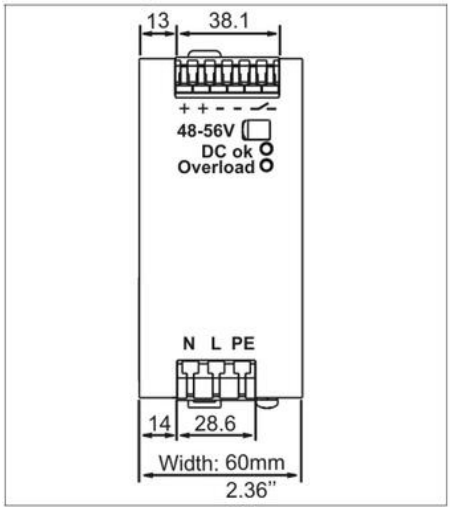
Maximal wire length*) for a fast (magnetic) tripping:

	0.75mm²	1.0mm²	1.5mm²	2.5mm²
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

