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POWER SUPPLY 1-PHASE, 24 V DC DIMENSION Q SERIES, 3.4 AND 5A

QS3.241
PSU 100-240V ac I/P 24V dc 3.4A 80W O/P

- Output currents of 3.4 and 5 A
- Up to 90% efficiency
- 50% bonus power up to 4 seconds
- Spring clamp terminals

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. The Q-Series is part of the Dimension family, existing alongside the lower featured C-Series.
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.
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.

- AC 100-240V Wide-range Input
- Width only 40mm
- Efficiency up to 92.7%
- 150% Peak Load Capability
- Easy Fuse Tripping due to High Overload Current
- Active Power Factor Correction (PFC)
- DC Input from 88 to 360Vdc
- Negligible low Inrush Current Surge
- Short-term Operation down to 60Vac and up to 300Vac
- Full Power Between -25°C and +60°C
- DC-OK Relay Contact
- Quick-connect Spring-clamp Terminals
- 3 Year Warranty

TECHNICAL DATA

INPUT DATA

Input voltage ac	100-240 V
Input voltage ac min	85 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	150 V DC
Inrush current at 120 V ac typical	5 A
Inrush current at 230 V ac typical	10 A
Input voltage range	Wide-range
Power factor at 120 V ac, full load. Typical	0.53
Power factor at 230 V ac, full load. Typical	0.47
Number of phases	1

OUTPUT DATA

Output voltage	24 V DC
Output voltage min	24 V DC
Output voltage max	28 V DC
Output current	3.4 A
Power	80 W

EFFICIENCY / LIFETIME / MTBF

Efficiency at 120 V ac, full load, typical	88.7 %
Efficiency at 230 V ac, typical	88.3 %
Efficiency at 230 V ac, full load, typical	90 %
Lifetime at 120 V ac, full load and +40 ° C	62000 h
Lifetime at 230 V ac, full load and +40 ° C	79000 h
MTBF (IEC 61709) 230 V ac, max load, 40 ° C	1451000 h

DIMENSIONS

Width	32 mm
Height	124 mm
Depth	102 mm
Weight	0.44 kg

OTHER

Approvals	ABS, CB, CE, CSA, GL, UL
Hold time at 120 V ac, typical full load	41 ms
Hold time at 230 V ac, typical full load	174 ms
IP class	IP20
Clamp type	Spring-clamp
Material protection	Aluminium
Supply frequency	50-60 ±6 %

Ripple max	50 mV pp
Series	Dimension Q
Power consumption 120 V ac	1.42 A
Power consumption 230 V ac	0.82 A
Power drop from +60 °C to + 70 °C	2 W/°C
Temperature min without derating	-25 °C
Temperature max without derating	60 °C

Type Power Supply	AC-DC

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

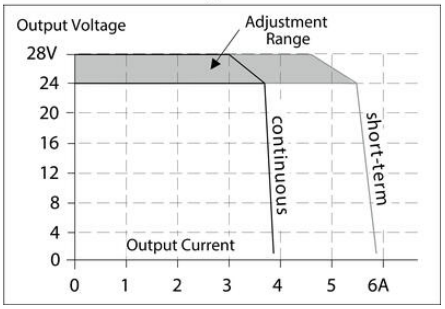

Fig. 14-1 Output current vs. ambient temp.

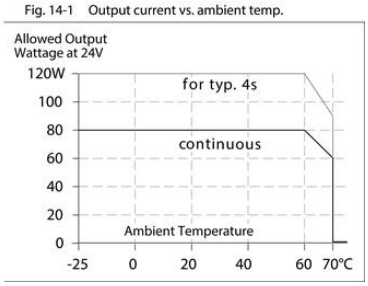

Fig. 8-2 Losses vs. output current at 24V, typ.

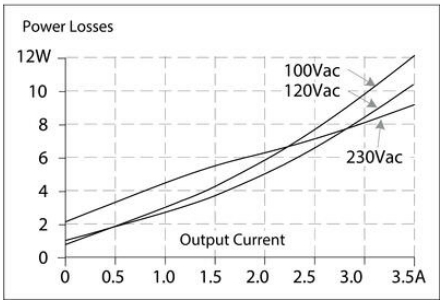

Fig. 8-1 Efficiency vs. output current at 24V, typ

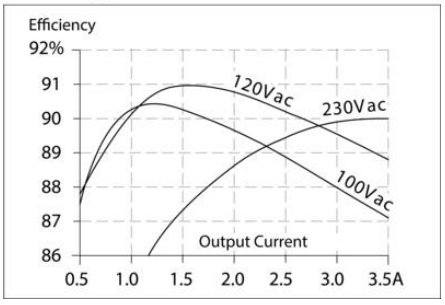

Fig. 6-2 Bonus time vs. output power

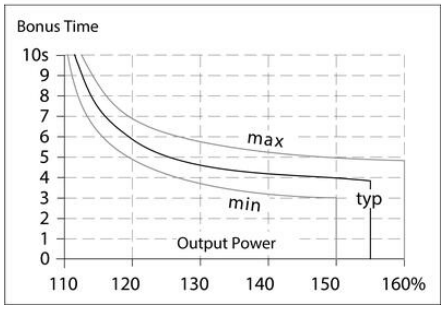

Fig. 21-1 Front view

Fig. 21-2 Side view