

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

QS3.241
 POWER SUPPLY 24VDC 3A

- 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 range	Wide-range
Input voltage ac	100-240 V
Input voltage ac min	85 V AC
Input voltage dc max	150 V DC
Input voltage dc	110-150 V

Input voltage ac max	276 V AC
Number of phases	1
Inrush current at 230 V ac typical	10 A
Inrush current at 120 V ac typical	5 A
Power factor at 120 V ac, full load. Typical	0,53
Power factor at 230 V ac, full load. Typical	0,47
Input voltage dc min	88 V DC

OUTPUT DATA

Output voltage min	24 V DC
Output voltage	24 V DC
Output voltage max	28 V DC
Power	80 W
Output current	3,4 A

EFFICIENCY / LIFETIME / MTBF

Lifetime at 120 V ac, full load and +40 ° C	62000 h
MTBF (IEC 61709) 230 V ac, max load, 40 ° C	1451000 h
Efficiency at 230 V ac, full load, typical	90 %
Efficiency at 230 V ac, typical	88,3 %
Lifetime at 230 V ac, full load and +40 ° C	79000 h
Efficiency at 120 V ac, full load, typical	88,7 %

DIMENSIONS

Weight	0,44 kg
Depth	102 mm
Width	32 mm
Height	124 mm

OTHER

IP class	IP20
Power consumption 120 V ac	1,42 A
Ripple max	50 mV pp
Power drop from +60 °C to + 70 °C	2 W/°C
Clamp type	Spring-clamp
Temperature min without derating	-25 °C
Hold time at 120 V ac, typical full load	41 ms

Series	Dimension Q
Hold time at 230 V ac, typical full load	174 ms
Power consumption 230 V ac	0,82 A
Supply frequency	50-60 ±6 %
Approvals	ABS, CB, CE, CSA, GL, UL
Temperature max without derating	60 °C
Material protection	Aluminium
Type Power Supply	AC-DC

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

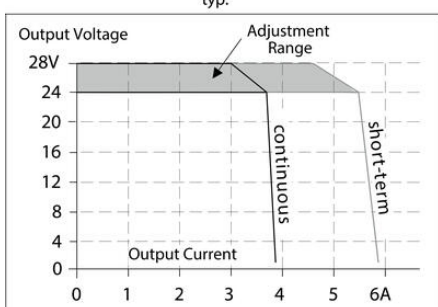


Fig. 14-1 Output current vs. ambient temp.

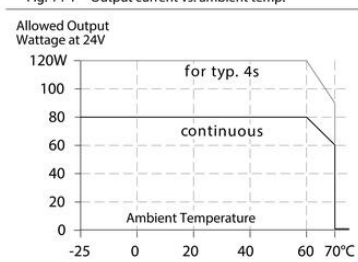


Fig. 8-2 Losses vs. output current at 24V, typ.

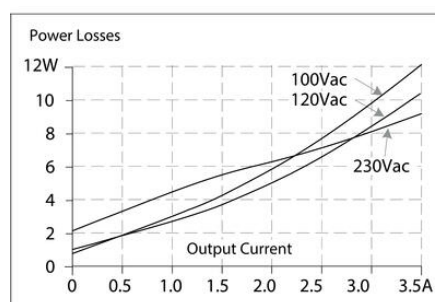


Fig. 8-1 Efficiency vs. output current at 24V, typ

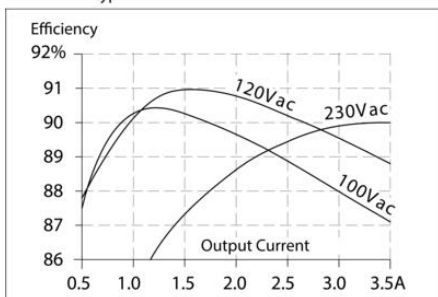


Fig. 6-2 Bonus time vs. output power

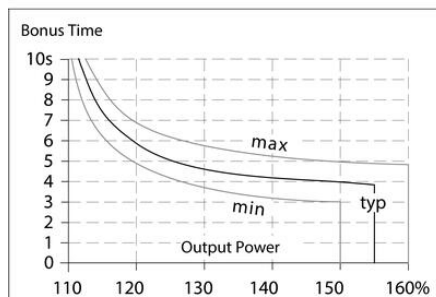


Fig. 21-1 Front view



Fig. 21-2 Side view

