

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 *f*
- Width only 40mm *f*
- Efficiency up to 92.7% *f*
- 150% Peak Load Capability
- *f*Easy Fuse Tripping due to High Overload Current
- *f*Active Power Factor Correction (PFC) *f*
- DC Input from 88 to 360Vdc *f*
- Negligible low Inrush Current Surge *f*
- Short-term Operation down to 60Vac and up to 300Vac
- *f*Full Power Between -25°C and +60°C *f*
- DC-OK Relay Contact
- *f*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.

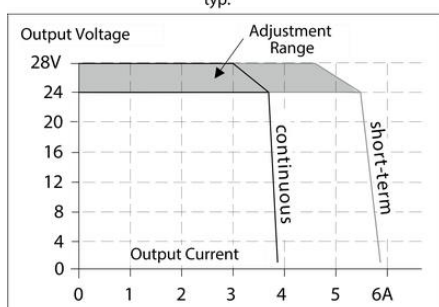


Fig. 14-1 Output current vs. ambient temp.

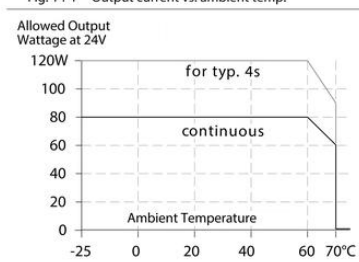


Fig. 8-2 Losses vs. output current at 24V, typ.

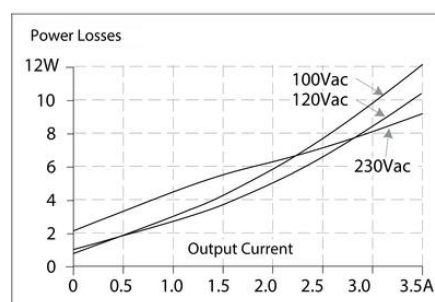


Fig. 8-1 Efficiency vs. output current at 24V, typ

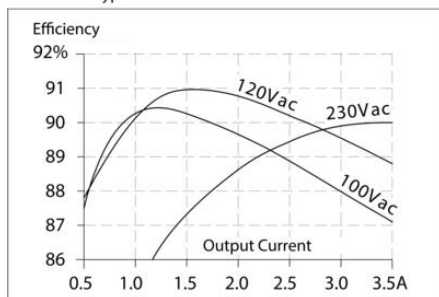


Fig. 6-2 Bonus time vs. output power

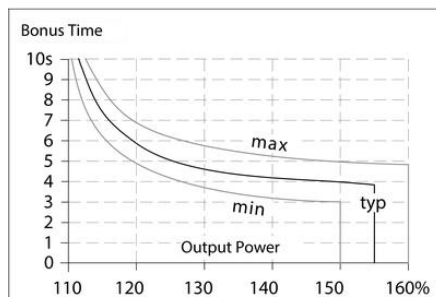


Fig. 21-1 Front view

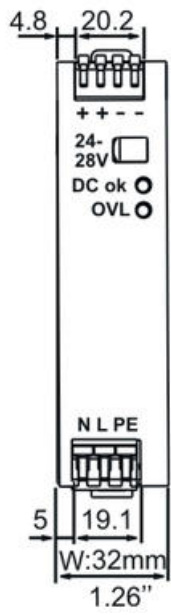


Fig. 21-2 Side view

