

POWER SUPPLY 1-PHASE, 30 V DC DIMENSION Q SERIES

QS10.301

POWER SUPPLY 30VDC 240W 8A

- Output current of 8 A
- 60 mm wide
- 93 % efficiency
- 100-240 V AC/88-370 V DC
- 50 % bonus power



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.

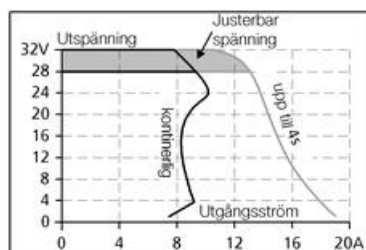
High immunity to transients and power surges as well as low electromagnetic emission makes usage in nearly every environment possible.

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.

Output characteristics



SPECIFICATIONS

| | |
|----------------------|------------|
| Input voltage range | Wide-range |
| Number of phases | 1 |
| 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 | 187 V DC |
| Inrush current at 120 V ac typical | 4 A |
| Inrush current at 230 V ac typical | 7 A |
| Power Factor at 120 V AC, full load. Typical | 0.98 |
| Power Factor at 230 V AC, full load. Typical | 0.92 |
| Supply Frequency | 50-60 ±6 % |
| Power Consumption At 120 V AC | 2.22 A |
| Power Consumption At 230 V AC | 1.22 A |
| Type Power Supply | AC-DC |
| | |
| Output voltage | 30 V DC |
| Output voltage min | 28 V DC |
| Output voltage max | 32 V DC |
| Output Current | 8 A |
| Effect | 240 W |
| Power Reduction Of 60 To 70 ° C | 6 W/°C |
| Ripple. max | 50 mV pp |
| Temperature Range Without Derating From | -25 °C |
| Temperature Range Without Derating To | 60 °C |
| | |
| Efficiency At 120 V AC, full load. Typical | 92.6 % |
| Efficiency At 230 V AC. Typical | 92.4 % |
| Efficiency At 230 V AC, full load. Typical | 93.5 % |
| Lifetime at 120 V ac, full load and +40 ° C | 68000 h |
| Lifetime at 230 V ac, full load and +40 ° C | 71000 h |
| MTBF (IEC 61709) 230 V AC, Maximum Load, 40 ° C | 581000 h |
| | |
| Width | 60 mm |
| Height | 124 mm |
| Depth | 117 mm |
| Weight | 0.9 kg |
| | |
| | |

| | |
|---|--------------------------|
| Clamp type | Spring-clamp |
| Series | Dimension Q |
| Approvals | ABS, CB, CE, CSA, GL, UL |
| DC relay output | Yes |
| Material Protection | Aluminium |
| Hold-up time at 120 V AC, full load. Typical. | 22 ms |
| Hold-up time at 230 V AC, full load. Typical. | 23 ms |
| IP Class | IP20 |
| Active Transient | Yes |

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

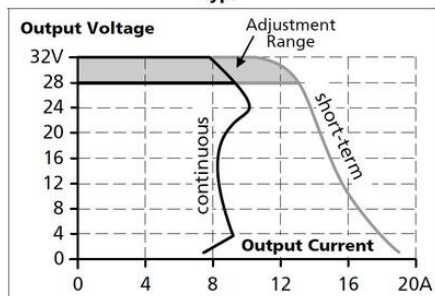


Fig. 6-2 Bonus time vs. output power

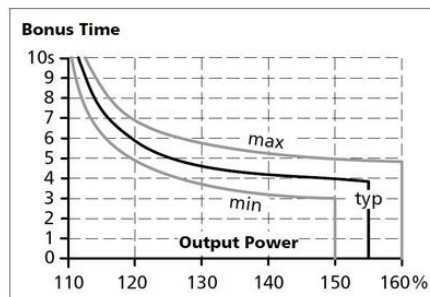


Fig. 15-1 Output current vs. ambient temp.

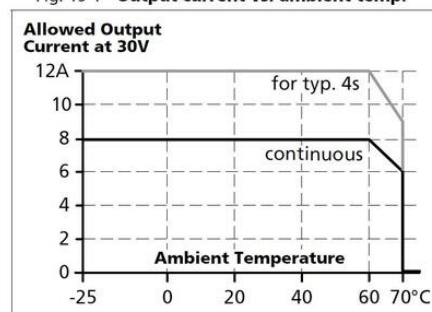


Fig. 9-1 Efficiency vs. output current at 30V, typ.

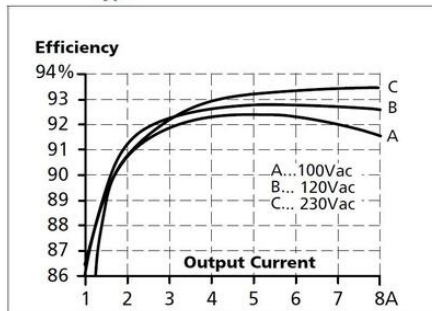
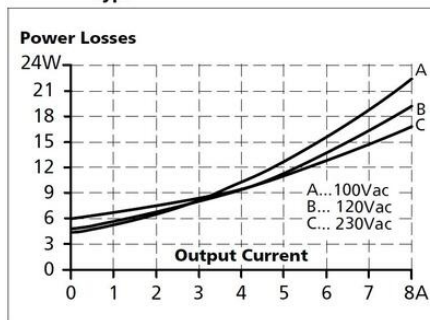


Fig. 9-2 Losses vs. output current at 30V, typ.



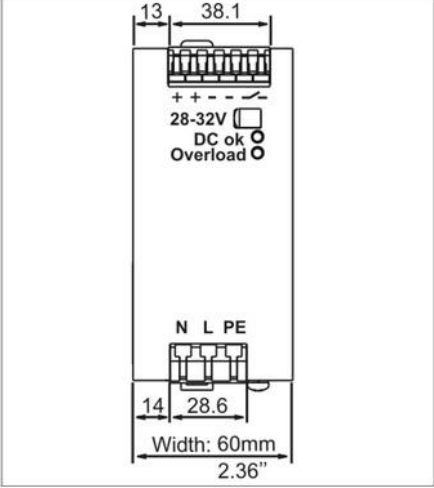
Maximal wire length*) for a fast (magnetic) tripping:

| | 0.75mm ² | 1.0mm ² | 1.5mm ² | 2.5mm ² |
|-------|---------------------|--------------------|--------------------|--------------------|
| C-2A | 34m | 43m | 59m | 93m |
| C-3A | 27m | 31m | 53m | 81m |
| C-4A | 18m | 24m | 43m | 54m |
| C-6A | 9m | 11m | 16m | 29m |
| C-8A | 5m | 7m | 10m | 15m |
| C-10A | 4m | 6m | 8m | 13m |
| C-13A | 2m | 3m | 5m | 8m |
| B-6A | 14m | 20m | 29m | 44m |
| B-10A | 9m | 11m | 15m | 33m |
| B-13A | 7m | 9m | 14m | 21m |
| B-16A | 3m | 4m | 6m | 8m |

Fig. 13-1 Front side



Fig. 20-1 Front view



Side view

