POWER SUPPLY 1-PHASE, 24 V DC DIMENSION Q SERIES

QS5.241-A1
POWER SUPPLY 24VDC 5A ATEX

- 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

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	264 V AC

Input voltage DC	110-300 V
Input voltage dc min	88 V DC
Input voltage dc max	360 V DC
Inrush current at 120 V ac typical	9 A
Inrush current at 230 V ac typical	11 A
Power Factor at 120 V AC, full load. Typical	0.99
Power Factor at 230 V AC, full load. Typical	0.91
Supply Frequency	50-60 ±6 %
Power Consumption At 120 V AC	1.1 A
Power Consumption At 230 V AC	0.62 A
Type Power Supply	AC-DC
Output voltage	24 V DC
Output voltage min	24 V DC
Output voltage max	28 V DC
Output Current	5 A
Effect	120 W
Power Reduction Of 60 To 70 ° C	3 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	91.6 %
Efficiency At 230 V AC. Typical	90.3 %
Efficiency At 230 V AC, full load. Typical	92.7 %
Lifetime at 120 V ac, full load and +40 ° C	70000 h
Lifetime at 230 V ac, full load and +40 ° C	89000 h
MTBF (IEC 61709) 230 V AC, Maximum Load, 40 ° C	831000 h
Width	40 mm
Height	124 mm
Depth	117 mm
Weight	0.62 kg
Clamp type	Spring-clamp

Series	Dimension Q
Approvals	ABS, ATEX, CB, CE, CSA, GL, IECEx, UL
DC relay output	Yes
Material Protection	Aluminium
Hold-up time at 120 V AC, full load. Typical.	34 ms
Hold-up time at 230 V AC, full load. Typical.	65 ms
IP Class	IP20
Active Transient	Yes
Conformal coated	Yes

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

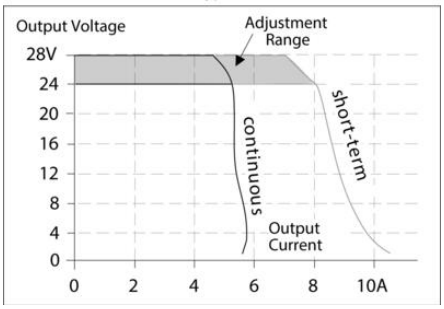


Fig. 15-1 Output current vs. ambient temp.

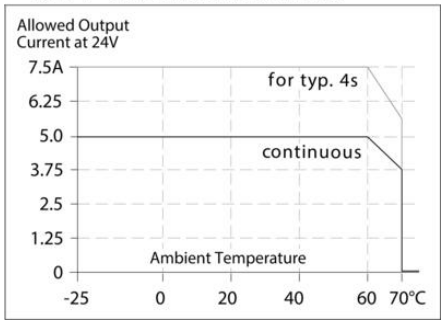


Fig. 9-2 Losses vs. output current at 24V, typ.

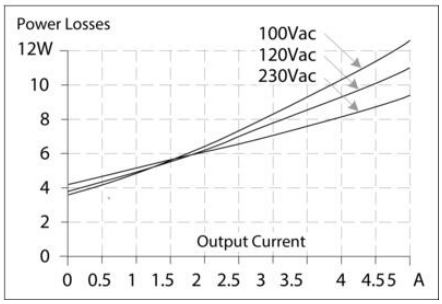


Fig. 9-1 Efficiency vs. output current at 24V, typ

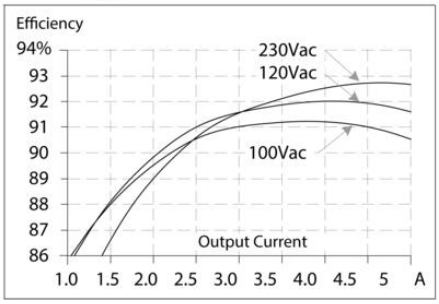
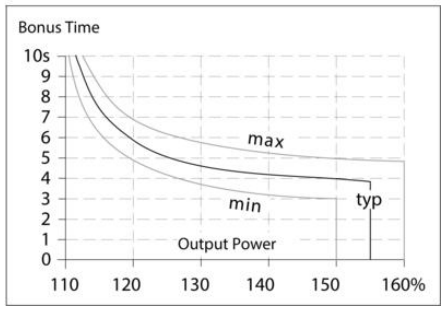


Fig. 6-2 Bonus time vs. output power



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

	0.75mm²	1.0mm²	1.5mm²	2.5mm²
C-2A	15m	20m	26m	48m
C-3A	9m	14m	22m	33m
C-4A	4m	5m	7m	10m
C-6A	-	1m	1m	1m
B-6A	4m	7m	9m	11m

Fig. 22-1 Front view

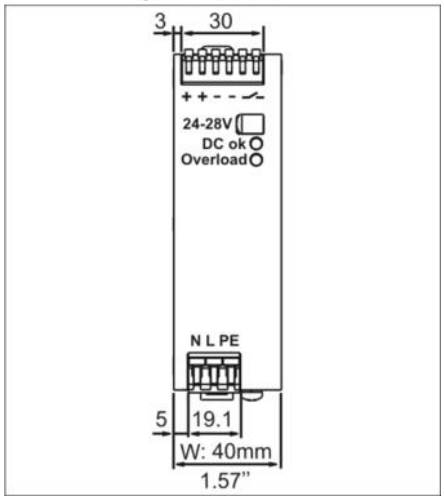


Fig. 22-2 Side view