

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

QS5.241

POWER SUPPLY 24VDC 5A

- 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

### 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

<b>Input voltage DC</b>	110-300 V
<b>Input voltage dc min</b>	88 V DC
<b>Input voltage dc max</b>	360 V DC
<b>Inrush current at 120 V ac typical</b>	9 A
<b>Inrush current at 230 V ac typical</b>	11 A
<b>Power Factor at 120 V AC, full load. Typical</b>	0,99
<b>Power Factor at 230 V AC, full load. Typical</b>	0,91
<b>Supply Frequency</b>	50-60 ±6 %
<b>Power Consumption At 120 V AC</b>	1,1 A
<b>Power Consumption At 230 V AC</b>	0,62 A
<b>Type Power Supply</b>	AC-DC
<b>Output voltage</b>	24 V DC
<b>Output voltage min</b>	24 V DC
<b>Output voltage max</b>	28 V DC
<b>Output Current</b>	5 A
<b>Effect</b>	120 W
<b>Power Reduction Of 60 To 70 ° C</b>	3 W/°C
<b>Ripple. max</b>	50 mV pp
<b>Temperature Range Without Derating From</b>	-25 °C
<b>Temperature Range Without Derating To</b>	60 °C
<b>Efficiency At 120 V AC, full load. Typical</b>	91,6 %
<b>Efficiency At 230 V AC. Typical</b>	90,3 %
<b>Efficiency At 230 V AC, full load. Typical</b>	92,7 %
<b>Lifetime at 120 V ac, full load and +40 ° C</b>	70000 h
<b>Lifetime at 230 V ac, full load and +40 ° C</b>	89000 h
<b>MTBF (IEC 61709) 230 V AC, Maximum Load, 40 ° C</b>	831000 h
<b>Width</b>	40 mm
<b>Height</b>	124 mm
<b>Depth</b>	117 mm
<b>Weight</b>	0,62 kg
<b>Clamp type</b>	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.	34 ms
Hold-up time at 230 V AC, full load. Typical.	65 ms
IP Class	IP20
Active Transient	Yes

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

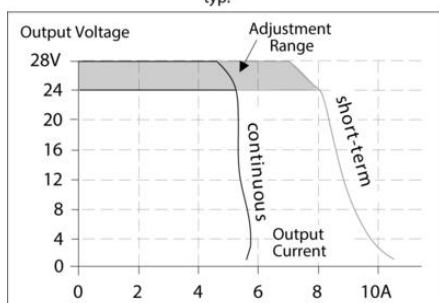


Fig. 15-1 Output current vs. ambient temp.

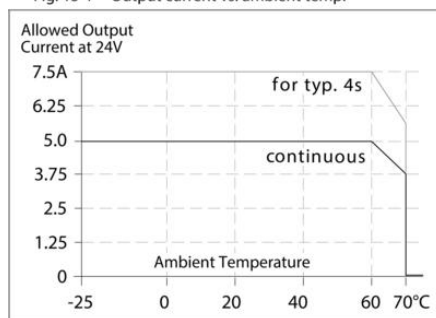


Fig. 9-2 Losses vs. output current at 24V, typ.

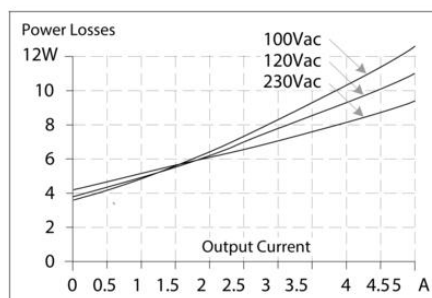


Fig. 9-1 Efficiency vs. output current at 24V, typ.

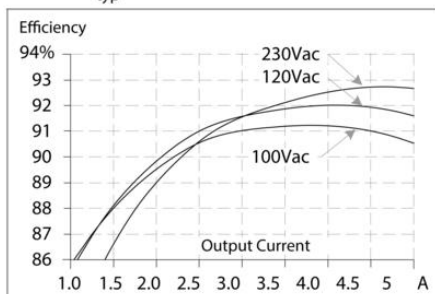
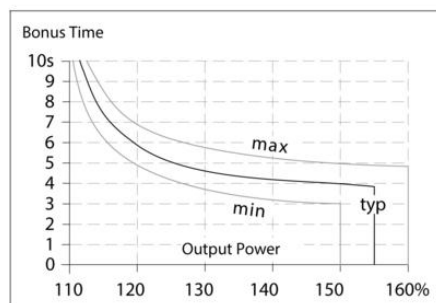


Fig. 6-2 Bonus time vs. output power



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

	0.75mm <sup>2</sup>	1.0mm <sup>2</sup>	1.5mm <sup>2</sup>	2.5mm <sup>2</sup>
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

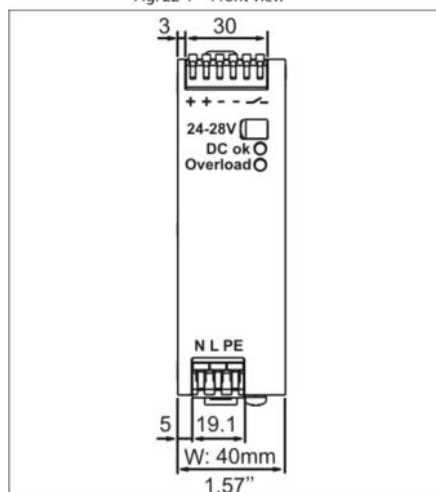


Fig. 22-2 Side view

