

Q.PS-AD3-2405F



Power supplies with 24 VDC output

- Input rated voltage 230 / 400...500 VAC
- Output: 24 VDC $\pm 3\%$ / 5 A
- Power Boost: 7.5 A for at least 3 minutes, up to 60 °C
- 3 different modes for the short-circuit protection are selectable
- Overload protected
- Strong overload without switch-off
- „Power Good“-Relais
- IP 20
- Mounting on DIN rail
- Extremely small size

Figure	Input	Output	Protection	Features
<p>Q.PS-AD1</p>	Single phase 24 VAC / 40 VDC	24 VDC, 3 A 24 VDC, 5 A	Short circuit Overload	
<p>Q.PS-AD2-24xxF</p>	Single phase 115...240 VAC	24 VDC, 1.5...3 A 24 VDC, 5...7.5 A 24 VDC, 10...14 A	Short circuit Overload Overvoltage	Adjustable output voltage 22...27 VDC
<p>Q.PS-AD3</p>	Double-phase 400...480 VAC	24 VDC, 5...7.5 A	Short circuit Overload Overvoltage	Adjustable output voltage 22...26 VDC
<p>Q.PS-ADB</p>	Single phase 110...230 VAC / 24 VDC battery	24 VDC, 5 A	Short circuit Overload Overvoltage	Adjustable charging current 1...5 A, battery diagnostic and different charging modes

Applications

Control panels, where 24 VDC is required to supply PLC's, actors, sensors etc. But also power demanding loads such as solenoid valves, motors, lamps, etc. Can be used in applications for:

- Building automation
- Industrial automation
- Infrastructure plants, such as water or sewage treatment
- Machineries
- Material handling
- etc.

Certifications

- The CE mark according to 2004/108/EC Electromagnetic Compatibility and low voltage directive 2006/95/EC
- cULus LISTED 508 Industrial Control Equipment

Electrical safety standards

- According to IEC/EN60950 (VDE0805) and EN50178 (VDE0160) for assembling devices. The unit must be installed according to IEC/EN60950.

EMC Generic standards

- Immunity according to EN61000-6-2
Emission according to EN61000-6-4

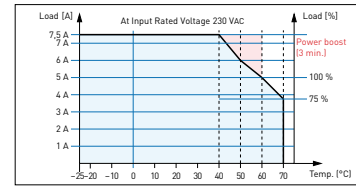
Functions

Q.PS-AD3-2405F

Input data	
Input voltage	230 / 400...500 VAC
Input Voltage Range	187...264 / 330...550 VAC
Inrush Current (at U_n and I_n)	$\leq 17 \text{ A} \leq 5 \text{ ms}$
Frequency	47...63 Hz $\pm 6\%$
Input Current (Input Rated Voltage)	1.5...0.8 A
Internal Fuse	4 A
External Fuse	Fast 10 A
Output data	
Output Voltage (U_n) / Nominal Current (I_n)	24 VDC $\pm 3\%$ / 2.5 A
Adjustment range (U_{adj})	22...27 VDC
Turn-On delay after applying mains voltage	1 s (max.)
Start up with capacitive load	$\leq 50.000 \mu\text{F}$
Continuous running current	
Max. continuous current at $\leq 40^\circ\text{C}$	7.5 A
Max. continuous current at $\leq 50^\circ\text{C}$	6.0 A
Max. continuous current at $\leq 60^\circ\text{C}$	5.0 A
Power reserve (power boost) (within 3 min. $\leq 60^\circ\text{C}$)	7.5 A
Short-circuit current (I_{cc})	16 A
Hold-up Time (at 100...240 VAC)	in general 20 ms
Residual Ripple	$\leq 80 \text{ mVpp}$
Minimum load	No
Efficiency (at 50% I_n)	$\geq 91\%$
Short-circuit protection	Yes + 3 modes
Overload protection	Yes
Over Voltage Output protection	Yes (max 35 VDC)
Parallel connection	Yes
Climatic data	
Ambient Temperature (operation)	$-25...+70^\circ\text{C}$ (Derating $>60^\circ\text{C}$, 2.5%/°C)
Ambient Temperature (storage)	$-40...+85^\circ\text{C}$
Humidity; no moisture condensation	95% at $+25^\circ\text{C}$
General data	
Isolation Voltage (Input/Output)	3000 VAC
Input / Ground isolation PE	1605 VAC
Output / Ground isolation PE	500 VAC
Degree of protection	IP 20
Pollution Degree Environment	2
Protection class	I, with PE connected
Dimension (w x h x d)	55 x 110 x 105 mm
Weight	approx 0.60 kg

Output characteristics

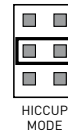
Output Derating Curve



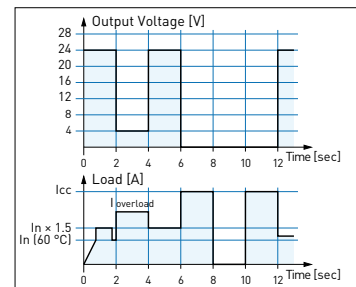
Mode

Hiccup-Mode

Automatic restart (default setting). The device tries to re-establish output voltage about every 2 seconds.

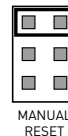


HICCUP MODE

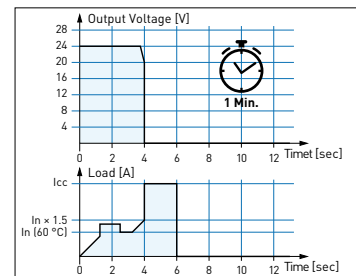


Manual Reset-Mode

In order to restart the output it is necessary to switch-off the input circuit for about 1 minute.

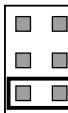


MANUAL RESET

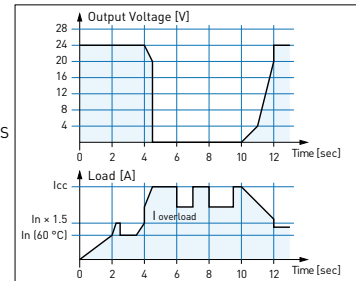


Continuous Out Mode

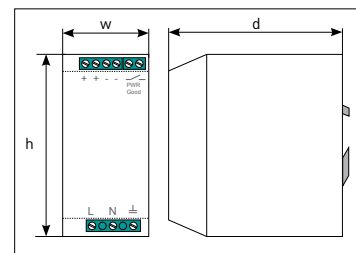
The output current is kept at high values with near zero voltage.



CONTINUOUS OUT MODE



Dimensions



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