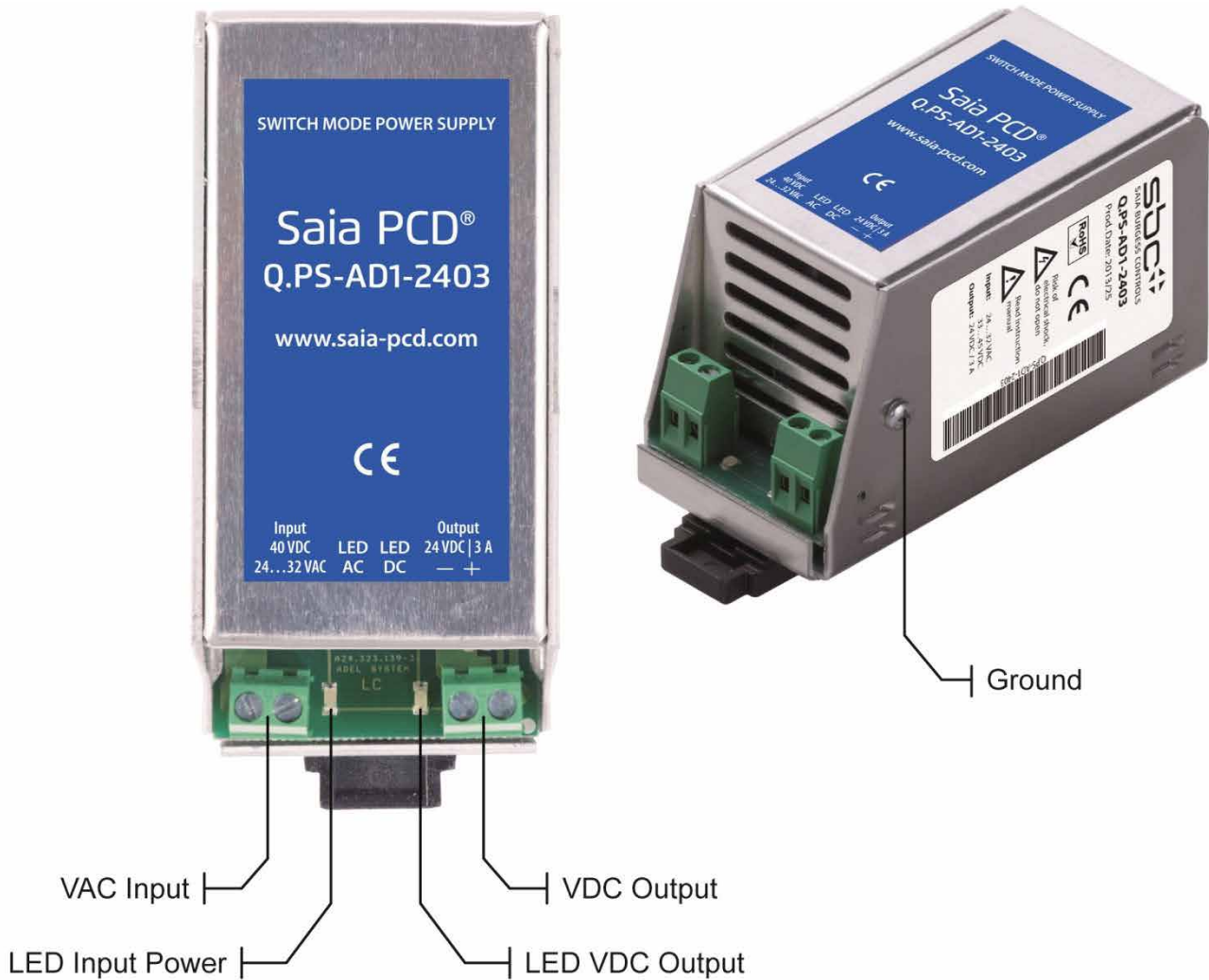# Q.PS-AD1-2403

Switch-mode power supply with low voltage input

Thank you for having chosen one of our products for your work. We are certain that it will give the utmost satisfaction and be a notable help on the job.

General Description:

Application

The power supply Q.PS-AD1-2403 can be used in areas from extreme industrial environment, and complies with the latest technical standard.

Before begin the operations of installation consult the manual.

Mains Characteristic

- ■ Protected against short circuit and overload.
- ■ Input range: 33…45 VDC / 24…32 VAC.
- ■ In compliance with low voltage directive: 2006/95/EC
- ■ Single Output 24 VDC / 3 A
- ■ DIN-rail mounted

Rail Mounting

Mounting <u>on</u> the Rail

A   B

Dismounting <u>from</u> the Rail

C

B

A

With **PLASTIC** Hook

⚠ **Other modules must have a minimum vertical distance of 10 cm to this power supply in order to guarantee sufficient auto convection. Depending on the ambient temperature and load of the device, the temperature of the housing can become very high!**

Use and Connections

Caution: Switch off the system before connecting the module. Never work on the machine when it is live.

Connection

The following cable cross-sections may be used:

	Solid (mm²)	Stranded (mm²)	AWG	Torque (Nm)	Stripping Length
Input	0.2÷2.5	0.2÷2.5	24 …14	0.5…0.6 Nm	7 mm
Output	0.2÷2.5	0.2÷2.5	24 …14	0.5…0.6 Nm	7 mm
Signal	0.2÷2.5	0.2÷2.5	24 …14	0.5…0.6 Nm	7 mm

Input: The input connection is made by the screw connections. The green LED input AC signalises that the device is functioning ON. When this LED is off, then the power supply has been interrupted.

System connections:

24 VAC
0 VAC
Vin

or

24 VAC
0 VAC
Vin
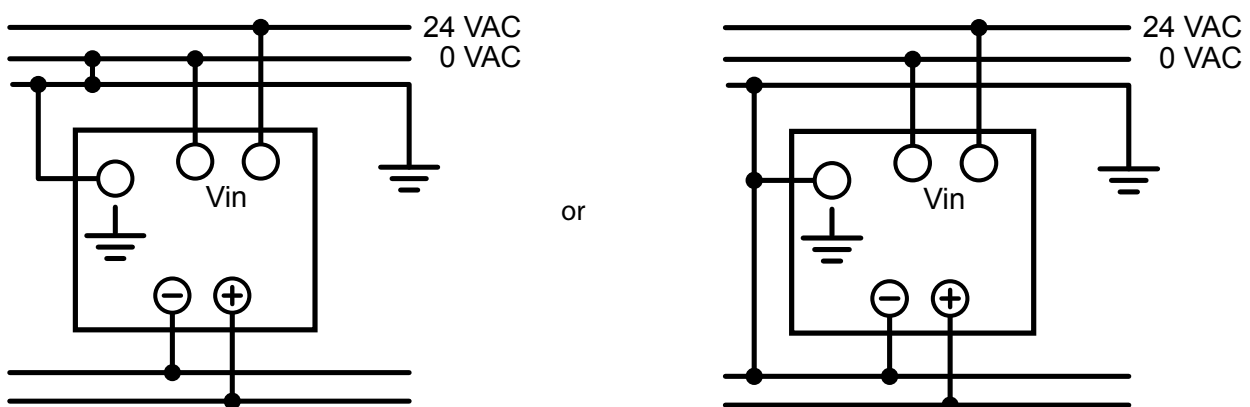
Output: Output voltage 24 VDC is made via the positive (+) and negative (-) terminals. The red LED DC signalises the correct output power. When the red LED is blinking, the device is in overload range or in short circuit protection.

Protection

On the primary side: The device must be protected with an external fuse 4 A.
**On the secondary side:** The device is electrically protected against short circuits and overload.

⚠️ **When the output negative pole (-) is connected to the ground, on the input-side no connection to ground shall be done.**

Characteristic Curves

Short circuit and overload

The output of the device is electrically protected against overload and short circuit. At nominal voltage the device can supply 1.05 times of the nominal Current, without switch off. In the case of higher overload, the operating point traces the curve illustrated in figure. As the overload increases, the output voltage is reduced until zero.
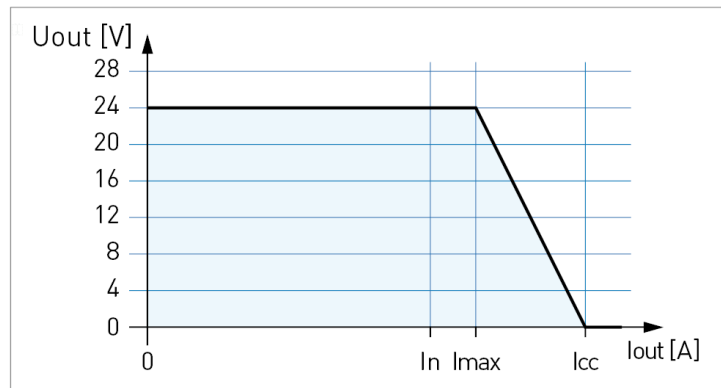
Standards and Certification

Electrical safety

Electrical safety is ensured by assembling the devices in according with 2006/95/EC.

Electromagnetic compatibility: emission in according with the directive EN 61000-6-4.

Electromagnetic compatibility: immunity in according with the directive EN 61000-6-2.

The device must be installed in according with 2006/95/EC. The device must have a suitable isolating facility outside the power supply unit, via which can be switched to idle.

Features

Input Data

Input voltage range	24…32 VAC / 33…45 VDC
Frequency	47…63 Hz
Internal fuse	Not present
External fuse (recommended)	Fast 4 A

Output Data

Output voltage / nominal current	24 VDC / 3 A ± 2 %
Adjustment range (V adj)	Fixed
Switching on after applying mains voltage	≤ 100 msec
Start up with capacitive load	30'000 µF – 1.5 A max
Nominal current	3 A
Current continuos running	3 A
Current max.	$1.05 \times IN \pm 7\%$
Residual ripple	≤ 60 mVpp
Minimum load	No
Efficiency	≥ 88 %
Short-circuit protection	Yes
Over load protection	Yes
Over voltage output protection	No
Parallel connection	No

Climatic Data

Ambient temperature (operation)	−25…+50 ℃
Ambient temperature (storage)	−25…+85 ℃
Humidity; no moisture condensation	95 % at 25 ℃

General Data

Degree of protection	IP 20
Protection class	I with PE connected
Dimension (w × h × d)	50 × 95 × 61 mm
Weight	0.20 kg

General Data

In according to 2004/108/EC and low voltage directive 2006/95/EC	CE
EAC Mark of Conformity for Machinery Exports to Russia, Kazakhstan or Belarus	EAC