

POWERBOX

INSTALLATION AND OPERATING MANUAL MODEL PT578 DIN-rail



Features

- DNV-GL Approved for bridge use (pending)
- EN60945 compliant
- Universal input (90 – 265Vac)
- Efficiency 93% typical
- Active Power Factor Correction
- Adjustable output
- Overload and overvoltage protection
- Thermal overload protection
- Conformal coating
- DC OK signal and potential free contact
- Cooling by free air convection
- DIN-Rail mounting on back or side
- RoHS compliant
- Internal redundancy diode
- Single or parallel mode user selectable

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Installation and Safety

- This Power Supply Unit is to be installed and put into operation by qualified personnel only, while observing national and local regulations.
- Read this manual thoroughly to guarantee safe operation and to utilise all features.
- This Power Supply Unit is meant for installation as built-in equipment. It must be mounted within an enclosure that is designed to prevent personal injury resulting from accessibility to live parts.



Caution

To prevent the risk of electrical shock, never carry out work on live parts..



Warning

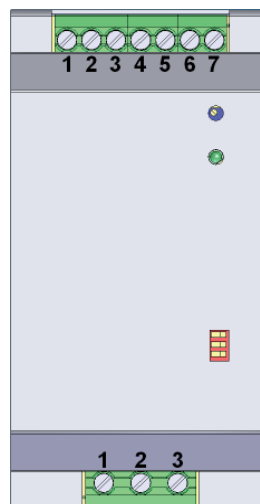
Explosion Hazard - Do not disconnect while circuit is alive unless area is known to be non-hazardous.

Warning

During operation the temperature of the housing can be very high.

To guarantee sufficient convection a minimum distance of 50 mm below and above the device has to be observed.

Connections



Output connections

Pin	Function
1	DC OK; Open Collector
2	DC OK; Potential Free Contact
3	DC OK; Potential Free Contact
4	Output DC +
5	Output DC +
6	Output DC -
7	Output DC -

Input and Output Wire Gauge

AWG	mm ²
24 -12	
Solid	0,2 – 4 mm ²
Flexible	0,2 – 2,5 mm ²

Input Connections

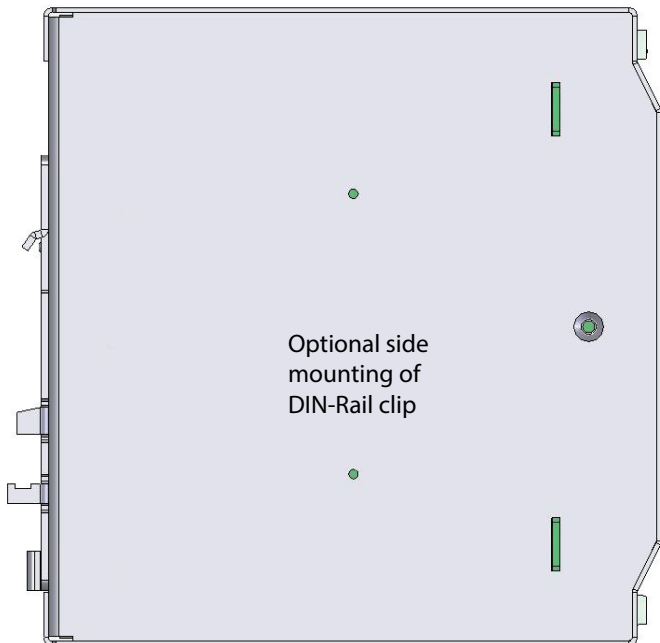
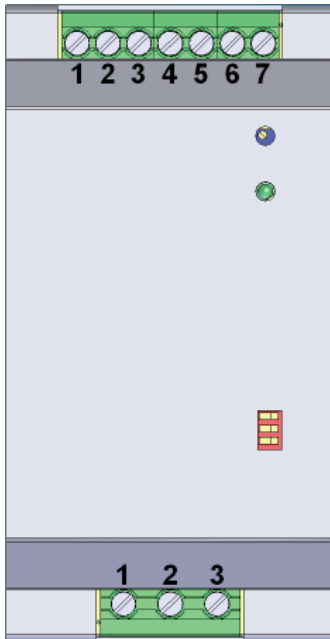
Pin	Function
1	Line
2	Neutral
3	Safety Ground

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Mechanical Data

Housing	Alu housing with DIN-rail mounting, Class IP20.
Height	132 mm.
Width	67 mm.
Dept	128 mm Excluding DIN-Rail clip.
Weight	< 1.8 kg.
Input connector	Screw connector.
Output connector	Screw connector.

The power supply unit can be snapped onto all mounting DIN-Rails in accordance with EN50022-35. Disconnecting can be carried out by lifting the release clip with a screwdriver.



Technical Data

Input	
Input range	90-265VAC, 125 - 375 VDC.
Inrush current	30 A; cold start @ 230VAC / 25°C.
Input current	<32 A @ 24VDC.
Input fuse	4 AT; internal, not user serviceable.
Efficiency	>92%.

Output	
Output voltage	24 V, adjustable 23 - 29 V. 48 V, adjustable 47 - 56V.
Output power	500 W.
Minimum load	0 A.
Load regulation	± 1 %.
Temperature coefficient	± 0.02 %/°C.
Overvoltage protection	< 35 V.
Overload protection	110 - 130 % of output constant current mode.
Peak short circuit current	30 A (< 100 ms).
Overtemp protection	± 90 °C internal temp.
Redundancy	Internal diode.
DC OK signalling	Green = DC OK on front Red = Error Open collector; active low; < 25mA < 30V when not active Potential free contact; active closed; I < 1 A open voltage < 30V



Manufacturers declaration of conformity

In conformance with EMC guideline 2014/30/EU and Low Voltage Directive 2014/35/EU.

DIP Switch Settings

Table 1

SW1	SW2	SW3	
OFF	OFF	X	OPTION 1
OFF	ON	X	OPTION 2
ON	OFF	X	OPTION 3
ON	ON	X	OPTION 4



Table 2

SW1	SW2	SW3	
X	X	OFF	SINGLE OPERATION
X	X	ON	PARALLEL OPERATION

OPTION 1: overload results in latched switch off

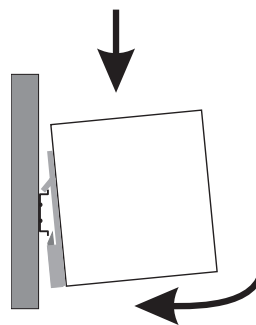
OPTION 2: overload results in hiccup mode

OPTION 3: overload results in current limit, with latched switch off short circuit protection

OPTION 4: overload results in current limit, with latched switch off short circuit protection

Mounting and disconnecting of power supply on/from the DIN-rail:

Snap-on:



Disconnect:

