MINI MCR-SL-PTB

Power terminal block



Data sheet
112455_en_00

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1 Description

The MINI MCR-SL-PTB power terminal is used to feed in the supply voltage to the DIN rail connector.

Two separate voltage inputs enable a redundant voltage supply of 24 V DC and a maximum current of 2 A.

A green LED on the front panel lights up when supply voltage is applied to the DIN rail connector. Red LEDs light up when supply voltages are connected to the wrong poles. In the case of a correctly connected supply voltage, the red LED goes out.

Features

- Power terminal
- LED status and diagnostic indicators
- Screw connection available

Make sure you always use the latest documentation.
It can be downloaded from the product at phoenixcontact.com/products.

This document is valid for the products listed in the “Ordering data” chapter.

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3 Ordering data

Description	Type	Item no.	Pcs./Pkt.
MCR power terminal block for supplying several MINI Analog modules via the DIN rail connector, with screw connection, maximum current consumption of up to 2 A	MINI MCR-SL-PTB	2864134	1

Accessories	Type	Item no.	Pcs./Pkt.
DIN rail bus connector (TBUS), 5-pos., for bridging the supply voltage, can be snapped onto NS 35/... DIN rail in accordance with EN 60715	ME 6,2 TBUS-2 1,5/5-ST-3,81 GY	2695439	10
DIN rail bus connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.	ME 6,2 TBUS-2 1,5/5-ST-3,81 GN	2869728	10
The partition plate is used to maintain Ex i isolating distances when Ex i and non-Ex i devices are mounted side by side on a DIN rail.	MCR-DP	1430594	1
Universal termination carrier for connecting 16 MINI Analog signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection), with HART multiplexer connection	TC-D37SUB-AIO16-M-PS-UNI	2902934	1
Universal termination carrier for connecting 16 MINI Analog signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection)	TC-D37SUB-ADIO16-M-P-UNI	2902933	1
Fold up transparent cover for MINI MCR modules with additional labeling option using insert strips and flat Zack marker strip 6.2 mm	MINI MCR DKL	2308111	10
Label for extended marking of MINI MCR modules in connection with the MINI MCR-DKL	MINI MCR-DKL-LABEL	2810272	10
Primary-switched power supply, QUINT POWER, screw connection, DIN rail mounting, supply of devices possible via the TBUS DIN rail connector, protective coating, input: single-phase, output: 24 V DC/2.5 A	QUINT4-SYS-PS/1AC/24DC/2.5/SC	2904614	1
Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip	SZS 0,6X3,5	1205053	10

4 Technical data

Input	
Input voltage	20 V DC ... 30 V DC
Max. input current	2 A
Output	
Output voltage	Input voltage - 0.8 V
Output current	≤ 2 A
Status and diagnostics indicators	
Status display	Green LED (supply)
Error indication	Red LED
General data	
Degree of protection	IP20
Mounting position	any
Type of housing	PBT
Ambient conditions	
Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Maximum altitude for use above sea level	≤ 2000 m
Conformance with EMC directive	
Immunity in accordance with EN 61000-6-2 When being exposed to interference, there may be minimal deviations.	
Noise emission in accordance with EN 61000-6-4	
Conformance/approvals	
CE CE-compliant	
UL, USA/Canada	UL 508 Listed

5 Safety regulations and installation notes

5.1 Installation notes

- Installation, operation, and maintenance may only be carried out by qualified electricians. Follow the installation instructions as described.
- When installing and operating the device, observe the applicable regulations and safety directives (including national safety directives), as well as the generally recognized technical regulations.
- Observe the safety information, conditions, and limits of use specified in the product documentation. Comply with them.
- The device must not be opened or modified. Do not repair the device yourself, replace it with an equivalent device. Repairs may only be carried out by the manufacturer. The manufacturer is not liable for damage resulting from violation.
- The IP20 degree of protection (IEC/EN 60529) specifies that the device is intended for use in a clean and dry environment. Do not subject the device to mechanical and/or thermal stress that exceeds the specified limits.
- The device is not designed for use in atmospheres with a danger of dust explosions.

5.2 UL notes

PROCESS CONTROL EQUIPMENT FOR HAZARDOUS LOCATIONS 31ZN

1 This equipment is suitable for use in class I, Division 2, Groups A, B, C, and D or non-hazardous locations only.

2 WARNING - EXPLOSION HAZARD - Substitution of components may impair suitability for Class I, Zone 2/Division 2.

3 WARNING - Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

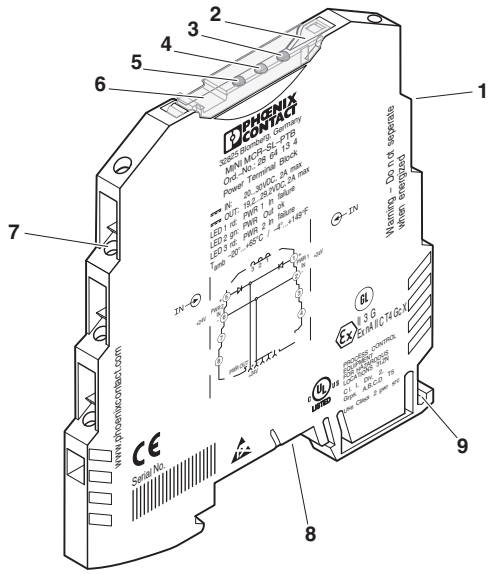
6 Installation

6.1 Connection notes

NOTE: Electrostatic discharge!
The device contains components that can be damaged or destroyed by electrostatic discharge. When handling the device, observe the necessary safety precautions against electrostatic discharge (ESD) according to EN 61340-5-1 and IEC 61340-5-1.

6.2 Structure

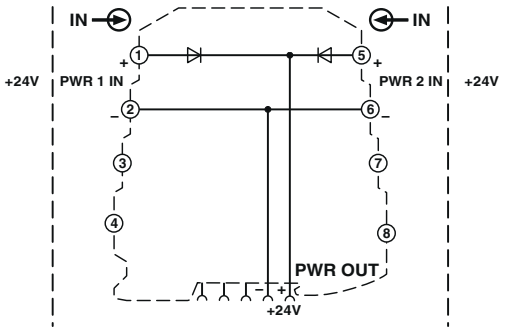
Figure 1 Structure



1 Input: Supply voltage 1
2 Cover
3 LED: Reverse polarity display power in 1
4 LED: Bus voltage status
5 LED: Reverse polarity display power in 2
6 Groove for ZBF 6 Zack marker strip
7 Input: Supply voltage 2
8 Connection for DIN rail connector
9 Universal snap-on foot for EN DIN rails

6.3 Block diagram

Figure 2 Block diagram



6.4 Power supply

NOTE

Insert a 2.5 A fuse.

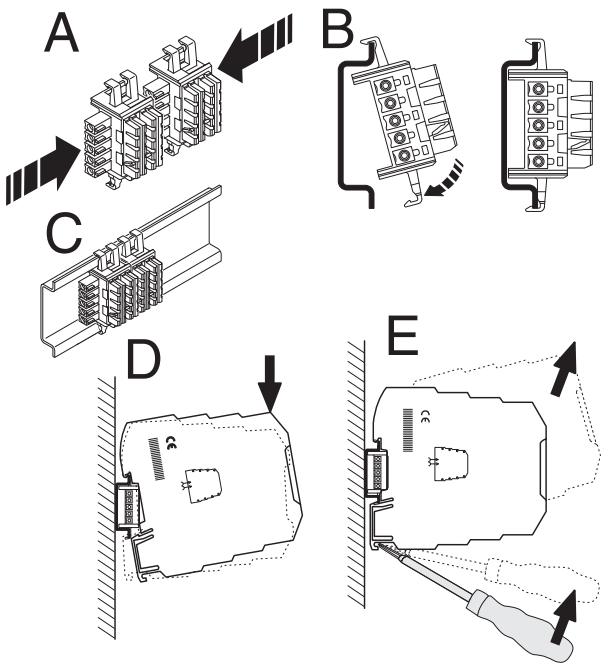
Never connect the supply voltage directly to the DIN rail connector. Drawing power from the DIN rail connector or from individual devices is not permitted.

Recommended fuse for power terminal block:
Fuse in acc. with IEC 60127-2/V
Nominal current: 2.5 A
Characteristics: Slow-blow
(e.g. Wickmann 5 x 20 mm/No. 195 - glass fuse)

You must refer to the “MACX and MINI Analog power manual“ for the design of the power supply; it is available to download at www.phoenixcontact.com/products under the item listing.

6.5 Mounting

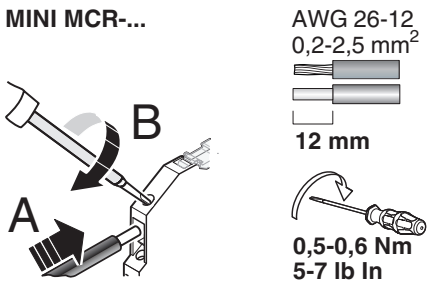
Figure 3 Mounting and removing



– Mount the module on a 35 mm DIN rail in accordance with EN 60715.
– When using the DIN rail connector, first place it into the DIN rail (see A – C). It is used to bridge the power supply. It is also absolutely vital that you snap the module and the DIN rail connector into position in the correct direction: the snap-on foot should be at the bottom and the connector on the left.

6.6 Connection of the cables

Figure 4 Screw connection



- Insert the wire into the corresponding connection terminal block.
- Use a screwdriver to tighten the screw in the opening above the connection terminal block.

6.7 Partition plate

If you want to mount Ex i and non-Ex i devices next to each other on a DIN rail, you will require the MCR-DP partition plate (item no. 1430594). The partition plate ensures that Ex i isolating distances are maintained.

The partition plate is tailored to the MINI Analog, MINI Analog Pro, and MACX Analog device series and the QUINT4 system power supply (item no. 2904614).

The partition plate is compatible with the ME … TBUS DIN rail connectors (e.g., item no. 1090049, 2695439).

7 Diagnostic indicator

The LEDs indicate the following error states:

Color	State	Description
Green	Lit	Supply voltage present
Red	Lit	Supply voltage connected with reverse polarity
	Off	Supply voltage connected correctly