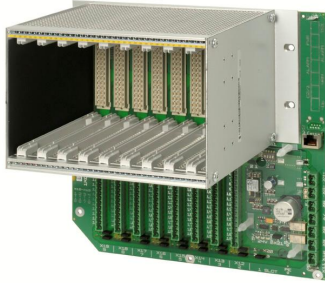


Mounting Plate Rack 560MPR01



Application

The Mounting Plate Rack 560MPR01 accommodates one communication unit 560CMU02 or 560CMU05 and up to 8 peripheral modules in a RTU560 substation. One more (extension) mounting plate rack can be connected to the 560MPR01 via the serial RTU560 system bus.

Characteristics

A subrack, 3U high, to take single Europe format boards according to DIN 41494, is mounted on a printed circuit board with a height of 6U. The subrack has 9 slots for mounting one communication unit and up to 8 I/O modules. The power supply and power supervision, the watchdog and the input for the minute interrupt of a real time clock 560RTC0x are integrated and supported on the device. If a 560CMU05 is used, only power supervision is supported. To realize other functions a 560BCU02 is needed.

It is possible to direct connecting the process voltage of the input/output devices by using the integrated jumper field. Additionally the output supervision board 23BA22 can be directly connected to the command output devices 23BA20.

Another set of jumper is used to connect the minute interrupt of a real time clock 560RTC0x to the communication unit 560CMU02, if the clock is mounted in slot 2 (DIN 29).

A monitoring circuit on the mounting plate rack 560MPR01 checks the supply voltage of the boards (24 V DC, 5 V DC).

Allocation of the slots:

- Slot 1 (DIN 34) for 560CMU02 (or empty)
- Slot 2 to 9 for max. 8 peripheral boards (DIN 29 to DIN 01)
- Slot 1/2 for one 560CMU05
- Slot 3/4 for two 560CMU05

Connections

The process signal cables are connected to plug-in sockets with screw terminals or to connection pins for Standard Termi Point. The process signals can therefore be disconnected from the plug-in socket block at any time. The connection point #17 (PE) is not connected any more.

In addition to the process signal connections, the following interface possibilities are located on the rear side of the printed circuit board:

- Interface to the serial peripheral bus (SPB)
- External input for minute interrupt
- Power source connection
- Relay contact for monitoring the internal voltages (24 V DC and 5 V DC)
- Relay contact for 'Warnings' (Set by software)
- Inputs for process voltages, for direct distribution to the input/output devices

Power Supply

The power supply unit 560PSU40 / 41 is used to supply the mounting plate rack 560MPR01 with 24 V DC. If another power supply is used, the device has to fulfil the following conditions:

- Over-voltage category II
- Safe separation to a SELV circuit, according to EN 60950

RTU560

Data Sheet Mounting Plate Rack 560MPR01

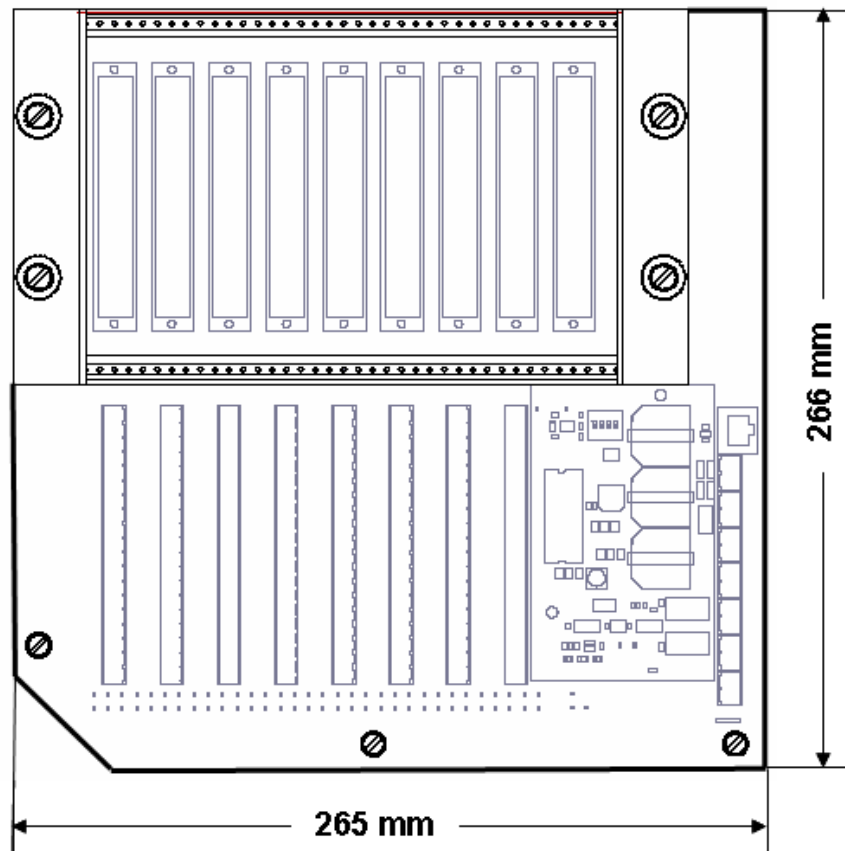


Figure 1: Mounting Plate Rack, Front View

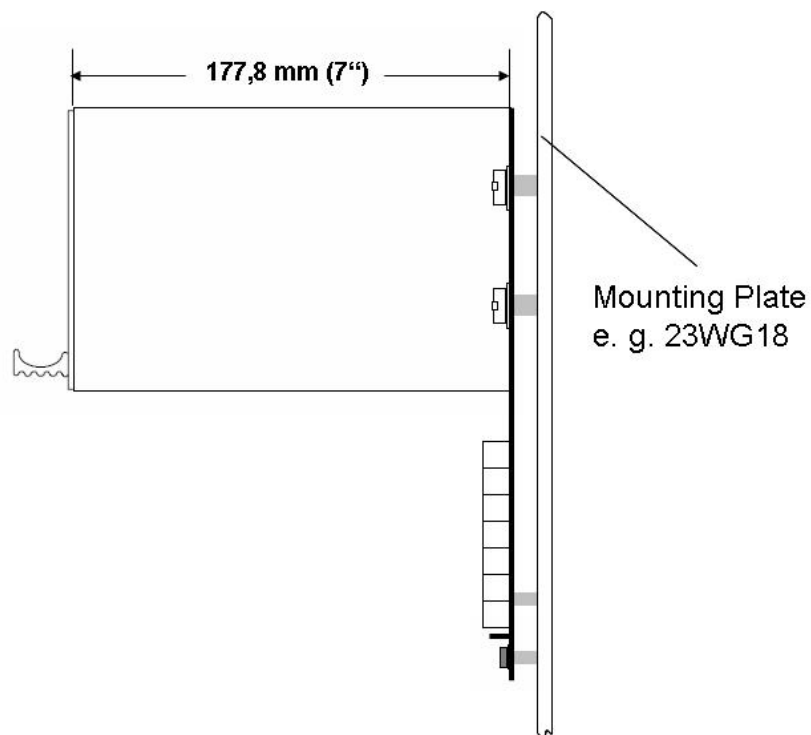


Figure 2: Mounting Plate Rack, Side View

RTU560

Data Sheet Mounting Plate Rack 560MPR01

Technical Data

In addition to the RTU560 general technical data, the following applies:

Rack

Height 3 U, 9 slots according to DIN 41494 1 slot = 4 raster = 20,32 mm 132,8 x 192 x 178 mm (H x W x D)	
Mounting depth with boards	198 mm
... with boards and front plugs	248 mm

Mounting Panel

Dimensions	266 x 265 mm (H x W) Height = 6 U: 265,6 mm
Weight	1,4 kg

Connection Type

CMU, I/O boards	Indirect, 48 pole, Type F DIN 41612
Process signals	Plug-in terminal strip, 19 pole, 18 signals, shield not connected

Serial Interface

Peripheral Bus	RJ45 socket connector
----------------	-----------------------

Connectors

Minute interrupt (TSI)	Plug-in terminal strip, 2 pole, 24 V DC
Power supply	Plug-in terminal strip, 2 pole, 24 V DC, 20.4 ... 28.8 V DC, Output (internally): 5 V DC, max. 5 A 24 VDC direct connect from 24 VDC input
Relay 'Alarm'	Plug-in terminal strips, 2 * 2 pole, relay contact: 1 A / 60 V DC, 30 W
Relay 'Warning'	Plug-in terminal strip, 2 pole, relay contact: 1 A / 60 V DC, 30 W

Process volt-ages: C1, C2 and -Up	Plug-in terminal strips, 2 * 2 pole, 60 V DC, max. 5 A
Protection earth	2 * Fasten 6,3 mm

Protection

Fuse, SMD type F1	SMT FUSET 154 3820 125 V 4A (delayed), ex- changeable Manufacture: Little FUSE Order code: 154004TDR
----------------------	----------------------------------------------------------------------------------------------------------------------

Insulation

Transient voltage according to EN60255-5, 12/2001, chapter 6.1.3, respectively EN60870-2-1, 07/1997, chapter 6, class VW3	5 kV DC, 1.2µs/50µs
Withstand voltage according to EN60255-5, 12/2001, chapter 6.1.4, respectively EN60870-2-1, 07/1997, chapter 6, class VW3	2,5 kV AC 50 Hz
Insulation resistance according to EN60255-5, 12/2001, chapter 6.2.2	>100 MΩ at 500 V DC

Electromagnetic Compatibility

Electrostatic discharge immunity test according EN61000-4-2, 12/2001, (level 3)	6 kV Conducted 8 kV Air Performance criteria A
Radiated radio-frequency electromagnetic field immunity test according to EN61000-4-3, 11/2003, (level 3)	10 V/m Performance criteria A

RTU560

Data Sheet Mounting Plate Rack 560MPR01

Electrical fast transient/burst immunity test according to EN61000-4-4, 07/2005 (level 3)	4 kV Performance criteria A
Surge immunity test according to EN61000-4-5, 12/2001, (level 3)	2 kV (line to line) 4 kV (line to earth) Performance criteria A
Immunity to conducted disturbances, induced by radio-frequency fields according to EN61000-4-6, 12/2001 (level 3)	10 V Performance criteria A
Oscillatory wave immunity test according to EN61000-4-12, 12/2001 (level 3)	2,5 kV (Common Mode) 1 kV (Differential Mode) Performance criteria A
Test for immunity to conducted, common mode disturbances according to EN61000-4-16, 04/2005 (level 4)	0 Hz to 150 kHz 30 / 300 V Performance criteria A
Test for immunity to voltage dips/short interruptions according to EN61000-4-29, 10/2001	-100 %: 50 ms Performance criteria A

Interference

Electromagnetic disturbance characteristics according to EN55011, 08/2003 0.01 to 30 MHz	$\leq 66 \mu\text{V}$ Class A
Electromagnetic disturbance characteristics according to EN55011, 08/2003 30 MHz to 1 GHz	$\leq 50 \mu\text{V/m}$ Class A

Safety

Information Technology Equipment according to EN60950-1, 03/2003	Over voltage category II, pollution degree II, reinforced insulation
------------------------------------------------------------------	----------------------------------------------------------------------

RTU560

Data Sheet Mounting Plate Rack 560MPR01

Mechanical Stress

Vibration tests (sinusoidal) according to IEC60255-21-1, 05/1996, chapter 4.2, class 1	0.0350 mm 0.5 g at 10 ... 150 Hz
Mechanical influences (sinusoidal) according to IEC60870-2-2, 06/1998, chapter 4.2, class B	10 m/s ² at 9 ... 200 Hz 15 m/s ² at 200..500 Hz
Vibration, shock, bump and seismic tests according to IEC60255-21-2, 05/1996, chapter 4.2, class 1	15 g, 25 g / 11 ms 6 impulse / ordinate 10 g / 16 ms 1000 impulse / ordinate
Seismic test	3.5 mm / 1 g / 1...9 Hz 9...35 Hz

Environmental Conditions

Temperature:	0 ... 70 °C
Relative humidity:	5 ... 95 % (non condensing)

Ordering Information

560MPR01 R0001	1KGT 012 500 R0001
560BCU02 R0001	1KGT 012 700 R0001

RTU560

Data Sheet Mounting Plate Rack 560MPR01

Note:

We reserve the right to make technical changes or modify the contents of this document without prior notice.

With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts - is forbidden without prior written consent of ABB AG.

Copyright© 2011 ABB
All rights reserved

Power and productivity
for a better world™

