Remote Terminal Units - Data sheet

Rack 560MPR03
RTU560 product line

Mounting panel rack for optional redundant power supply and flexible configuration for I/O, CMU and power supply.

Application
The 560MPR03 rack is designed to be used with or without redundant power supply. Therefore, it has 2 slots for redundant power supply units (PSU). Up to 18 slots can be used for I/O boards, communication units (CMU) or a mixture of both. It is interfaced to other racks via the RTU560 serial peripheral bus. Up to 7 560MPR03 racks can be connected to an I/O bus segment. By using the bus connection unit 560BCU04, the 560MPR03 becomes a rack with up to 8 communication units (560CMR01/560CMR02).

Also for some functions the usage of 560BCU04 is required, even if only one communication unit is inserted. The rack 560MPR03 is mounted on a mounting plate in a cubicle. Only in slot 19 the second PSU can be inserted and will be operated. It is not allowed to put in other modules. Slot 18 is available when the option of the second PSU is not used.

Characteristics
On the mounting plate with height of 6 HE is mounted a 19” rack height 3 HE for single Euro-card format boards (DIN 41494). There are 20 slots available for the installation of boards.

Each power supply unit has a predefined slot allocated to it (slot 21 and slot 19). A second redundant PSU must be operated in slots 18 and 19. These slots can be used only with PSU modules.

Slot 1 to 17 can be used for I/O boards and/or CMU modules. If no redundant power supply is used, slot 18 can be used for an additional I/O board.

Allocation of the slots:
Two slots for:
• 1 or 2 power supply units (each 2 slots wide)
17 slots for:
• Up to 8 communication units
• Up to 17 I/O boards (with redundant power supply)
• Up to 18 I/O boards (if only one PSU is used)

For the physical interfacing of boards edge connectors of type F (DIN 41612) are used. Rows 2 to 20 of the edge connectors connect the RTU560 system bus and are soldered directly to printed circuit board. The 18 connection points of an F female connector for the connection of the process signals are located on a plug-in socket block on the mounting panel. 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.

A monitoring circuit on the rack 560MPR03 checks the supply voltages of the board (24 V DC, 5 V DC). Supply voltage failure is indicated by a status relay contact.

An additional circuit shows the status of the power supplies. Power supply failure is also indicated by a status relay contact.

Besides 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
• Status relay contact for monitoring the internal voltages (24 V DC and 5 V DC) and status of PSU’s
• Interface and supply power for the 560BCU04
Figure 1: Front view (only one 560PSU02 shown)

Figure 2: Configuration example (redundant power supply, four 560CMU05, three I/Os)
Figure 3: Rear view

Mounting plate

190.5 mm (7.5")
Technical data
In addition to the RTU500 series general technical data, the following applies:

Rack
- 19", 3 U, 21 s according DIN 41494; 1 s = 20.2 mm.
- Dimensions: 132.8 x 482.6 x 190.5 mm (H x W x D)
- Mounting depth with boards: 212 mm (D)
- Mounting depth with boards and front plugs: 260 mm (D)
- Weight: 3.7 kg

Printed circuit board
- Dimensions: 6 HE, 265.6 x 482.6 mm (H x W)

Type of Connection
- Peripheral boards: Indirect, 48-pole, Type F DIN 41612
- Process signal connections: Plug-in terminal strips, 19-pole, 18 signals

Serial Interfaces
- SPB I/O bus (X1, X2): 2x RJ45 jack

Compliances
- EMC: EN550011, EN61000
- Environmental: EN60255, IEC60870
- Safety: EN60950

Redundant power supply monitoring
- X13, X14, X15: Plug-in terminal strip, 2-pole each
- Relay contact: Normal closed contact 1 A / 60 V DC / 30 W

Power supply 5V, 24V monitoring
- X11, X12: Plug-in terminal strip, 2-pole each
- Relay contact: Normal closed contact 1 A / 60 V DC / 30 W

Protection Earth
- PE: 2 * Fasten 6,3 mm

Environmental conditions - climatic
- Nominal operating temperature range: -25 °C... 70 °C
- Start up: -40 °C
- Max. operating temperature, max. 96h: +85 °C
- Relative humidity: 5... 95 % (non condensing)

Ordering information
- 560MPR03 R0001: 1KGT022100R0001

Accessories ordering information
- 560BCU04 Bus connection unit
  - 560BCU04 R0001: 1KGT022300R0001
- Basic module
  - 560BCU04 R0002: 1KGT022300R0002
- Extension module
  - 560BCU04 R0003: 1KGT022300R0003
- Termination module

Accessories ordering information
- 23XS20 Process connector for 560MPR01/03
  - 23XS20 R2019: 1KGN00556R2019
    - 19 pole, 100 pcs
  - 23XS20 R2017: 1KGN00556R2017
    - 17 pole, 100 pcs
  - 23XS20 R2002: 1KGN00556R2002
    - 2 pole, 100 pcs

Accessories ordering information
- 560FPR01 Blanking front plate
  - 560FPR01 R1002: 1KGT007700R1002
    - 100 pcs