Remote Terminal Units - Data sheet

Bus connection unit for 560SFR02 560BCU05
RTU560 product line

560BCU05 R0001 (Basic)
- Alarm and warning contacts
- Minute pulse in- and output

For 2 units 560CMR0x, one basic unit and one extension unit 560BCU05 R1002 is required
- Extension kit for 10 additional 560CMR0x, 10 pcs per package

Application
The Bus Connection Unit 560BCU05 R0001 is designed to make the RTU560s TSI, TSO, Alarm and Warning signals accessible to the outside.

By using the bus connection unit 560BCU05 R0001, up to 8 communication units can be used in a rack configuration.

To expand the RTU560 system bus to another rack (23ET24, 560SFR02), an 8 pole RJ45 connector is available. For cabling, a shielded 8 pole RJ45 patch cable can be used.

Characteristics
The Bus Connection Unit 560BCU05 R0001 is used in the racks 23ET24 or 560SFR02. It is mounted on the back-side of the rack, and fixed by four snap-in bolts.

The connection to the RTU560 communication units is made with up to eight connectors to slots occupied by CMUxx Modules. Two connector cables are delivered with the 560BCU05 R0001. Additional connector cables are available as 560BCU05 R1002.

All supply voltages and control signals are interfaced by a direct Board-to-Board connection (X14). To enable operation using a 23ET24 rack, a 24V positive supply cable needs to be connected to a screw terminal connector X21.

The system signals ALARM and WARNING can be accessed via relay contacts and are supervised with a watchdog function. If the trigger from the communication unit is missing for more than 30 seconds, both relay contacts are activated and the contacts are closed.

The external minute interrupt of a real time clock 560RTCxx is connected to the system via an internal isolated optical-coupler (TSI) and routed to the time master of the RTU560 system. The minute pulse output (TSO) is available for other applications.

Also the signals for supervising redundant power supply units are distributed.

If it is intended to use a single CMU inside a standalone rack only a unit 560BCU05 R0003 is required for correct bus termination (without usage of ALR, WRN, TSI, TSO and supervision of redundant power supply units).
Figure 1: Function Block Diagram 560BCU05 R0001 Basic board

Figure 2: Front view 560BCU05 R0001
**Technical Data**

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

### Minute Pulse Input (TSI)

| X11          | Plug-in terminal strip 2-pole, 24 VDC input, isolated |

### Minute Pulse Output (TSO)

| X10          | Plug-in terminal strips 2-pole, 24 V DC output |

### Rack-to-Rack Interface

| X17          | RJ45 connector 180° |

### Signal Outputs

| X12 (ALARM)  | Plug-in terminal strips 2-pole each |
| X13 (WARNING)|                          |

Relay contact: Active closed, WARNING is set also in case of ALARM, ≤ 1 A / ≤ 60 V DC / ≤ 30 W

### Watchdog

Supervision time: Ca. 30 seconds

### Compliances

| EMC          | EN55011, EN61000 |
| Environmental| EN60255, IEC60870 |
| Safety       | EN60950          |

### Voltage Supply

Supply: 5 V DC / approx. 80 mA
24 V DC / approx. 60 mA

### Supply (external)

+24V: Screw terminal connection only in case of 23ET24 subrack

### Mechanics

| PCB          | 126 x 78 mm |
| Weight       | Approx. 0.1 kg |

### Connection Type

Connectors: 2 - 8 sub-connectors with flat cable, 18-pole each

### Environmental Conditions

| Nominal operating temperature range | -25°C +70°C |
| Startup                              | -40°C      |
| Storage temperature range            | -40°C … +85°C |
| Relative Humidity (EN60061 2-30)     | 5 … 95 % (non condensing) |

### Ordering Information

| 560BCU05 R0001 | 1KGT022400R0001 |
| 560BCU05 R0003 | 1KGT022400R0003 |
| 560BCU05 R1002 | 1KGT022400R1002 |

- Basic module and 2 connector cables
- Additional connector cable, 10 pcs per package

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