

# RTU513 Remote Terminal Unit DataSheet

## Bus Connection Module 513BCM04

### Application

The Bus Connection Module 513BCM04 R0001 is designed to make the RTU513s TSI, TSO, Alarm and Warning signals accessible to the outside.

By using the bus connection module 513BCM04 R0001, up to 8 CMUxx communication units can be used in a rack configuration (WMS10,WMS12).

To expand the RTU513 system bus to another rack (WMS10, WMS12), an 8 pole RJ45 connector is available.

For cabling, a shielded 8 pole RJ45 patch cable can be used.



### Characteristic

The Bus Connection Module 513BCM04 R0001 is used in the racks WMS10 or WMS12. It is available in two versions: The 513BCM04 R0001, containing a basic board and a termination board, and the 513BCM04 R0002, containing the extension boards for the connection of additional CMUs.

The 513BCM04 R0001 basic board is mounted on the 19 pole process interface connector of the rightmost used CMU slot in the rack. The 2nd or next CMUs are connected by using the 513BCM04 R0002 extension board. Via ribbon cables, the 513BCM04 connects the RTU513 communications bus to all CMU slots.

The leftmost CMU needs a bus termination realized by means of the 513BCM04 R0001 termination board. It is essential to always place the termination board as last board in the rack (see Fig.3).

All supply voltages and control signals are interfaced by a ribbon cable connection from the rack to the 513BCM04 R0001. To enable operation using a WMS10 rack, +24 VDC needs to be connected to a screw terminal connector.

Characteristic

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 RTCxx is connected to the system via an internal isolated optical-coupler (TSI) and routed to the time master of the RTU513 system. The minute pulse output (TSO) is available for other applications.

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

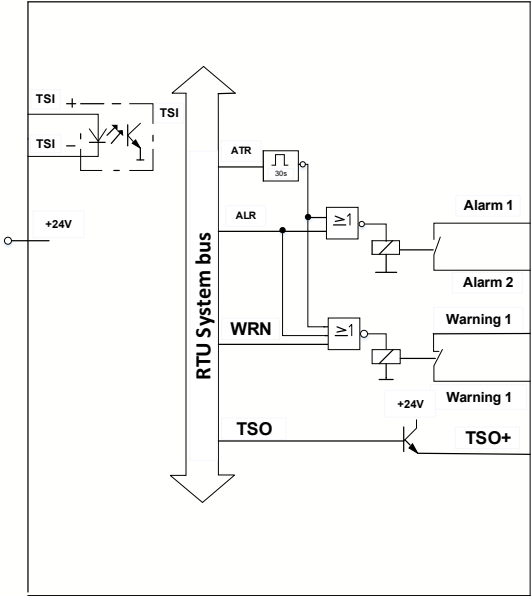


Fig. 1: Function Block Diagram 513BCM04 R0001 Base board

If it is intended to use a single CMU inside a standalone rack only a unit 513BCM04 R0003 is required for correct bus termination (see Fig. 4). Thus without usage of ALR, WRN, TSI, TSO and supervision of redundant power supply units.

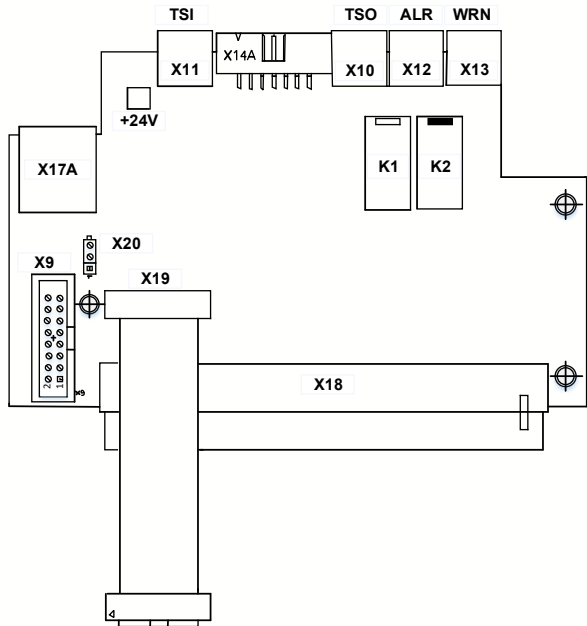


Fig.2: Basic board, part 1 of 513BCM04 R0001

## Setting

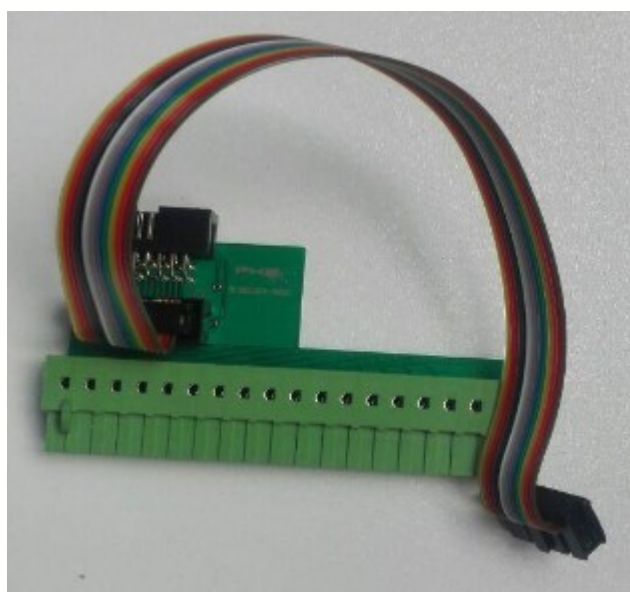


Figure 3: Extension board, 513BCM04 R0002

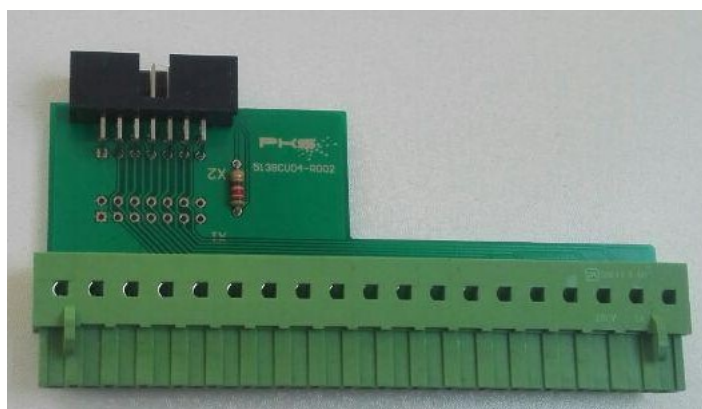


Figure 4: Termination board, part 2 of 513BCM04 R0001

Setting

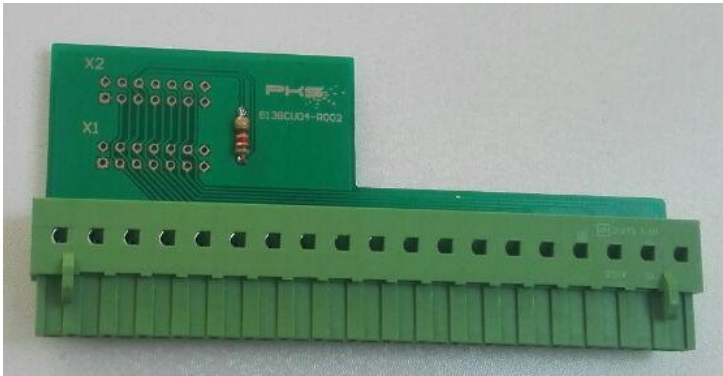
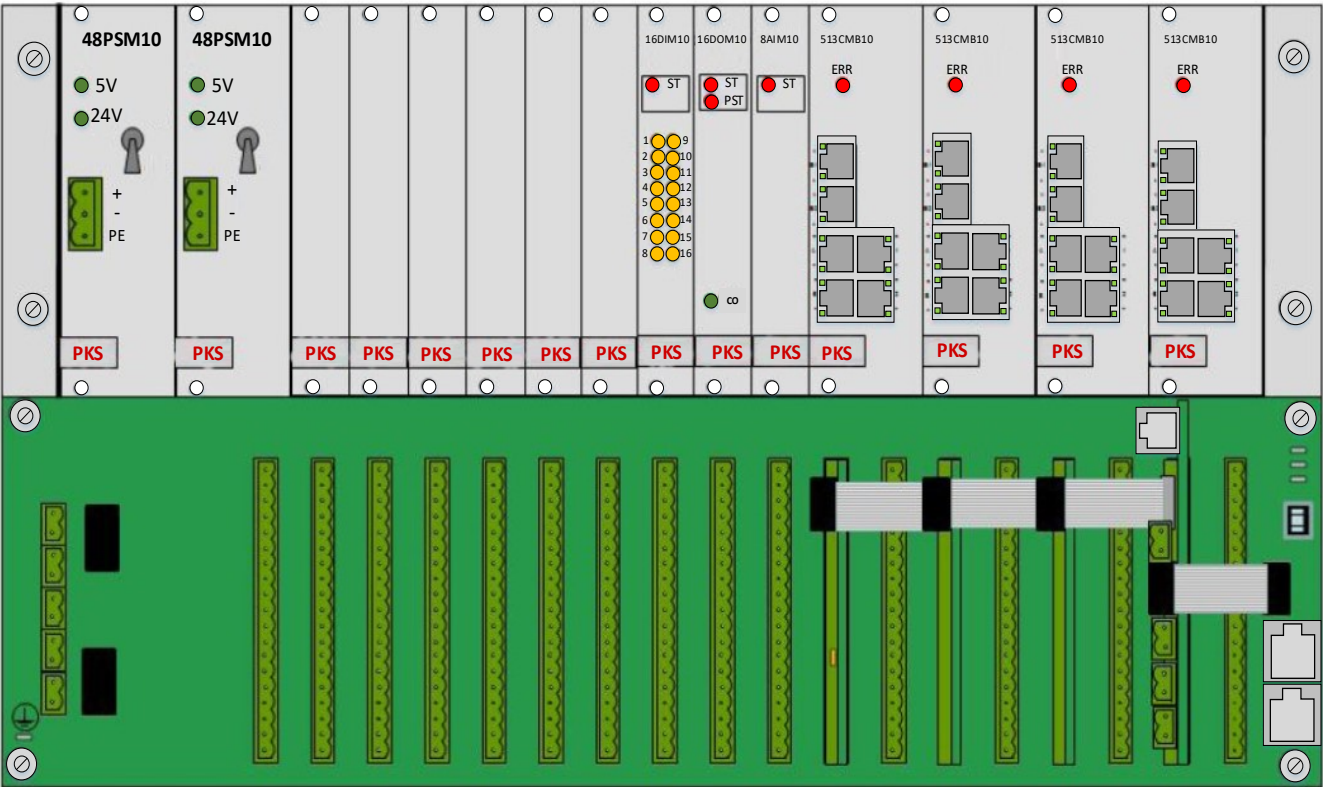


Figure 5: Termination board 513BCM04 R0003 for single CPU usage



513BCM04 R0001 Part2: Termination board      513BCM04 R0002 Extension board      513BCM04 R0001 Part1: Basic board

Figure 6: Assembly WMS12, 513BCM04 R0001 and R0002

Setting

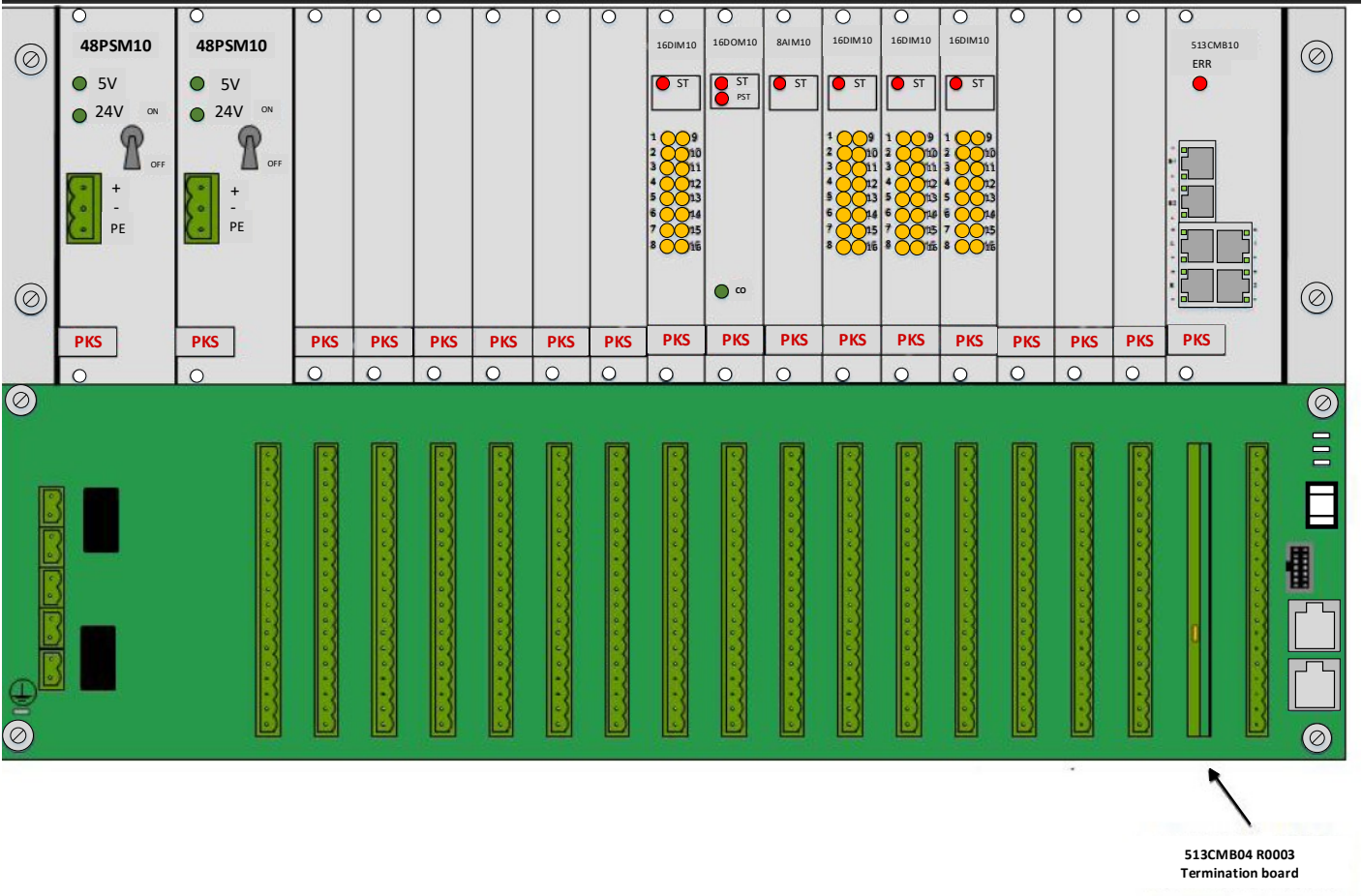


Figure 7: Assembly WMS12 and 513BCM04 R0003



## Technical Data

In addition to the PKS RTU 513 general technical data, the following applies:

### Environmental conditions

Nominal operating temperature range	-25°C +70°C
Startup	-40°C
Storage temperature range	-40°C ....+85°C
Relative humidity	5 ... 95 % (non condensing)

### Power Supply

Supply	5 V / app. 80 mA 24 V / app. 60 mA
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### Power Supply (external)

+24V	Screw terminal connection only in case of WMS10 rack
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### Connection types

X19	19 pol. Process interface connector
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### Minute pulse input (TS)

X11	plug-in terminal strip 2-pole isolated, 24 V input
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### Minute pulse output (TSO)

X10	plug-in terminal strip 2-pole 24 V output.
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### Watchdog

Supervision time	Approx. 30 sec.
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### Rack-to-Rack Interface

X17	RJ45 connector 90°
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### Mechanical Layout

PCB	126x 78 mm 96 x 35 mm
Weight	App. 0.1 kg

In addition to the PKS RTU 513 general technical data, the following applies:

## Signal outputs

513BCM04 R0001 (part 1: Basic board part 2: Termination board)
513BCM04 R0002 (Extension board)
513BCM04 R0003 (Termination board)

Alarm Warning	plug-in terminal strip 2-pole each
Relay contact:	active closed Warning set also with Alarm $\leq 1A / \leq 60 \text{ V DC} / \leq 30 \text{ W}$

EMC	EN550011, EN61000
Environmental	EN60255, IEC60870
Safety	EN60950