Qbus

Qbus Modbus interface (SER485/Modbus)

1. Product description

Module to integrate Qbus with devices that contain a Modbus (SER485) interface. The specific Modbus strings of several devices are standard integrated in the Qbus Modbus interface (e.g. Daikin RTD, Toshiba, Mitsubishi, Fujitsu, Priva, Robur,…). Additional Modbus strings are continuously integrated by Qbus and will be displayed in the dropdown selection box of the SER485/Modbus. Modbus strings that are not yet available can be integrated by Qbus upon request.

Each SER485/Modbus module has a unique serial number enabling programming anywhere and anytime. All programming remains internally stored in a nonvolatile memory.

2. Safety rules

Read the entire manual before installing the module and activating the system.

NOTE
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- The devices must be mounted, commissioned and serviced by an authorized electrician in accordance with the country-specific regulations.
- The SER485/Modbus device is exclusively suitable for DIN-rail mounting EN50022. It must be mounted in a fire-enclosure with ventilation holes.
- The devices must not be opened. The guarantee provisions will be void when the module has been opened.
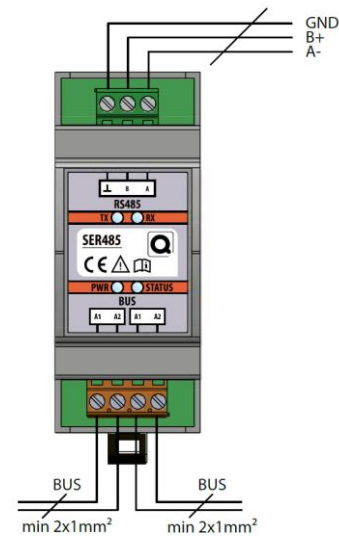- Electrical shock when live parts are touched.
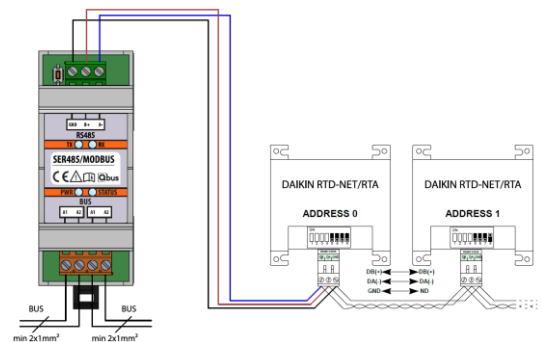_____

3. Installation and wiring

FITTING:
Snap device onto DIN rail to DIN EN50022.

BUS WIRING:
It is recommended to use the Qbus cable or any other cable with minimum 2 x 1mm² conductors as a bus lead. The green protected EIB wire is also allowed when the conductors are guided per 2 in order to obtain a section of minimum 2 x 1mm2.

IMPORTANT : THE BUS CABLE SHOULD BE SHIELDED AND GROUNDED! THE GROUNDING SHOULD BE CONNECTED TO THE OVERALL GROUNDING OF THE BUILDING.

RS485/MODBUS:
The wiring between the Modbus port on the external device and the RS485 connector on the Qbus Modbus interface needs to be done with massive conductors of up to 0,8mm2 (use typical telephone cable J-Y(ST)Y 2x2x0,8 or CAT5-cable). The green EIB wire could also be used (use conductors separately).

General example wiring

Specific example wiring with Daikin RTD units

POWER SUPPLY:
The SER485/Modbus is powered by the bus.

LED INDICATION SER485/Modbus:
Green lights:
PWR: ON = power is being supplied from bus.
TX: ON = data is being transmitted to RS485 system
RX: ON = data is being received from RS485 system

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Red light: Status LED = ON for 2 seconds during start-up. Also, ON during programming and when translation between Qbus and RS485 is ongoing.

4. Technical data

General specifications:
*   Power supply: bus connection
*   Ambient temperature:
    Operating temperature: 10℃ to 50℃ Temperature in storage room: -10℃ to 70℃
*   Maximum humidity: 93%, no condensation
*   Bus load: 30mA (peak) at nominal voltage 13.8V.
*   Maximum installation height: 2,000 metres.

SER485/Modbus Connections
*   Maximum 64 Modbus-registers can be managed via one SER485/Modbus module. Check how many Modbus registers are being used to control the specific external device (usually betwen 5 and 8), in order to calculate the number of SER485/Modbus modules needed.
*   The maximum distance between the SER485/Modbus and the external module is 1000m.
*   The connection between the SER485/Modbus and the external module can be cabled in both loop and star wiring.
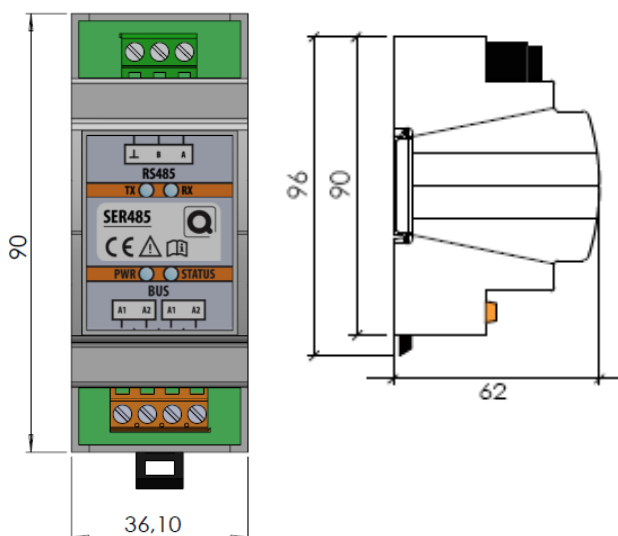
Physical specifications:
*   Housing: Plastic, self-extinguishing according to UL94-V0
*   Protection Degree: IP20, EN60529
*   Installation: rapid mounting on DIN-RAIL, width 2 modules
*   Dimensions (HxWxL) : 62mm x 90mm x 36mm
*   Weight : approx. 0,072 kg

Electrical security:
*   Bus: 13.8 VDC low voltage.
*   Non-toxic, in accordance with WEEE/RoHS
*   The product complies with EN 60730-1:2000-11 +A11 2002

5. Dimension diagram

6. Guarantee provisions

Period of guarantee: 4 years from date of delivery. Warranty is void when the module has been opened! Any faulty devices should be send postage-free with a description of the defect to our central customer service office:

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