

COMTRAXX® COM462RTU

BMS-Modbus/RTU-Gateway



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BMS-Modbus/RTU-Gateway for the connection of Bender devices with BMS support using Modbus/RTU



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Device features

- Setting of address data for the BMS bus and Modbus/RTU and date and time setting using the internal operating menu.
- Time synchronisation for all BMS bus devices
- Can be operated on the internal BMS bus
- Modbus/RTU data access to the internal BMS bus, max. 150 BMS devices
- Commands can be sent from an external application (e.g. visualisation software) to BMS devices and measured values read.

Approvals



Product description

The BMS-Modbus/RTU-Gateway COM462RTU contains a Modbus/RTU slave that converts BMS data for a Modbus master.

A setting menu makes it possible to configure the COM462RTU.

Application

- Usage of professional visualisation programs by converting BMS data to Modbus/RTU protocols.
- Observing and analysing Bender products that support communication, such as RCMS, EDS and MEDICS® systems.

About the Modbus RTU

The Modbus RTU (Remote Terminal Unit) field bus has been specified by Modicon, a company under the Schneider Automation brand and made available to the market license-free.

Modbus uses the serial hardware interface RS-485 and communicates via a two-wire, twisted copper wire. A transmission rate of 19200 baud is standard. Key data:

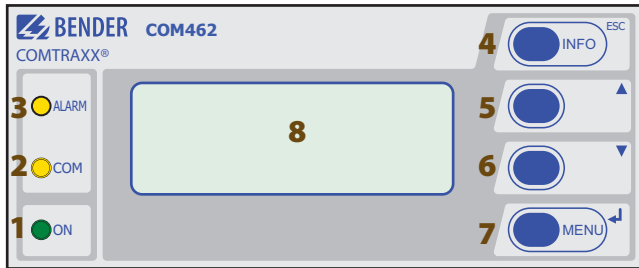
- Master-slave communication
- Up to 32 bus devices per network, or up to 247 bus devices (with repeater)
- Baud rate between 1200 and 57600 bit/s
- Diagnostics mechanisms

Ordering information

| Supply voltage/ frequency range U_s | Supply voltage/frequency range U_s for UL applications | | Power consumption | Type | Art. No. |
|--|---|------------------------------|-----------------------|-----------|-------------|
| | AC | DC | | | |
| AC/DC 76...276 V ¹⁾ , 42...460 Hz | AC 76...250 V, 40...150 mA, 42...460 Hz | DC 76...250 V, 10...35 mA | 3.5...40 VA, 2.4 W | COM462RTU | B 9506 1022 |

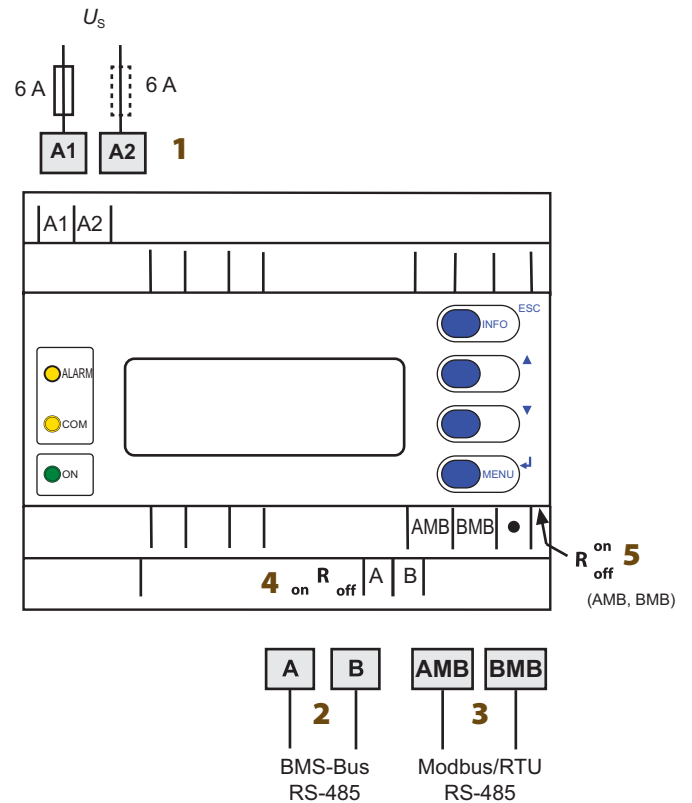
¹⁾ Absolute values

Operating elements



- 1 - "ON" LED, lights when supply voltage is applied
- 2 - "COM" LED, lights when the gateway is responding to BMS requests
- 3 - "ALARM" LED, lights when an internal device error occurs
- 4 - "INFO" button, to query the COM462RTU for device-specific information
ESC Exits the menu function without changing parameters
- 5 - "▲" button: to move up in the menu, to increase values
- 6 - "▼" button: to move down in the menu, to decrease values
- 7 - "MENU" button for starting and exiting the menu
"↵" button to confirm parameter change
- 8 - LC display for standard and menu mode

Wiring diagram



- 1 - Connection to the supply voltage, 6 A fuse recommended, two-pole fuses should be used on IT systems.
For UL and CSA applications, it is mandatory to use 5 A fuses.
- 2 - Connection to the BMS bus (internal) with shielded cable (e.g. J-Y(St)Y 2x0.8)
- 3 - Connection Modbus/RTU with shielded cable (e.g. J-Y(St)2x0.8)
- 4 - Switch for BMS bus termination. When the device is installed at the end of the bus, set the terminating switch to "on".
- 5 - Switch for Modbus/RTU termination. When the device is installed at the end of the bus, set the terminating switch to "on"

Technical data

Insulation coordination acc. to IEC 60664-1

| | |
|--|----------|
| Rated insulation voltage | AC 250 V |
| Rated impulse voltage/pollution degree | 4 kV/3 |

Supply voltage

| | |
|-----------------------|--------------------------|
| Supply voltage U_s | see ordering information |
| Frequency range U_s | see ordering information |
| Power consumption | see ordering information |

LED indicators

| | |
|-------|-----------------------|
| ALARM | internal device error |
| COM | data traffic BMS bus |
| ON | operation indicator |

Interfaces

BMS bus, internal:

| | |
|--|-----------------------------|
| Interface/protocol | RS-485/BMS bus, internal |
| Operating mode | master/slave (slave)* |
| Baud rate BMS internal | 9.6 kbit/s |
| Cable length | ≤ 1200 m |
| Cable (twisted pair, shielded, shield connected to PE on one side) | recommended: J-Y(St)Y 2x0.8 |
| Connection, BMS internal | terminals A, B |
| Terminating resistor | 120 Ω (0.25 W) |
| Device address, BMS bus internal | 1...99 (2)* |

Modbus/RTU:

| | |
|--|-----------------------------|
| Interface/protocol | RS-485/Modbus/RTU |
| Operating mode | slave |
| Baud rate Modbus/RTU | 9.6...57.6 kbit/s |
| Cable length | ≤ 1200 m |
| Cable (twisted pair, shielded, shield connected to PE on one side) | recommended: J-Y(St)Y 2x0.8 |
| Connection, Modbus/RTU | terminals D+, D |
| Terminating resistor | 120 Ω (0.25 W) |
| Device address, Modbus/RTU | 2...247 (2)* |

Environment/EMC

| | |
|--|--------------|
| EMC | EN 61326-1 |
| Classification of climatic conditions acc. to IEC 60721: | |
| Stationary use | 3K5 |
| Transport | 2K3 |
| Long-term storage | 1K4 |
| Operating temperature | -10...+55 °C |
| Classification of mechanical conditions acc. to IEC 60721: | |
| Stationary use | 3M4 |
| Transport | 2M2 |
| Long-term storage | 1M3 |

Connection

| | |
|--|---|
| Connection | screw-type terminals |
| Connection properties: | |
| rigid/flexible | 0.2...4/0.2...2.5 mm ² (AWG 24...12) |
| Multi-conductor connection (2 conductors with the same cross section): | |
| rigid/flexible | 0.2...1.5 0.2...1.5 mm ² |
| Stripping length | 8...9 mm |
| Tightening torque | 0.5...0.6 Nm |

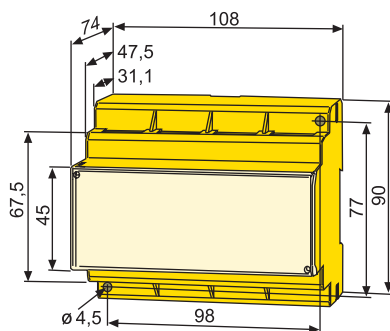
Other

| | |
|---|----------------------|
| Operating mode | continuous operation |
| Mounting | display oriented |
| Degree of protection, internal components (IEC 60529) | IP30 |
| Degree of protection, terminals (IEC 60529) | IP20 |
| Type of enclosure | X460 |
| Screw mounting | 2 x M4 |
| DIN rail mounting acc. to | IEC 60715 |
| Flammability class | UL94V-0 |
| Software version | D402 V1.0x |
| Weight | ≤ 310 g |

()* = factory setting

Dimension diagram XM460

Dimensions in mm



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