

# 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:

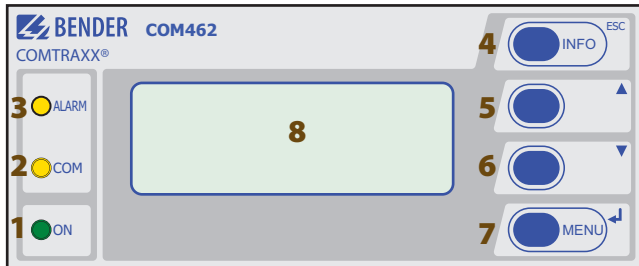
- Master-slave communication
- Up to 32 bus devices per network, or up to 247 bus devices (with repeater)
- Baud rate between 1200 and 57600 bit/s
- Diagnostics mechanisms

## 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 <sup>1)</sup> , 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

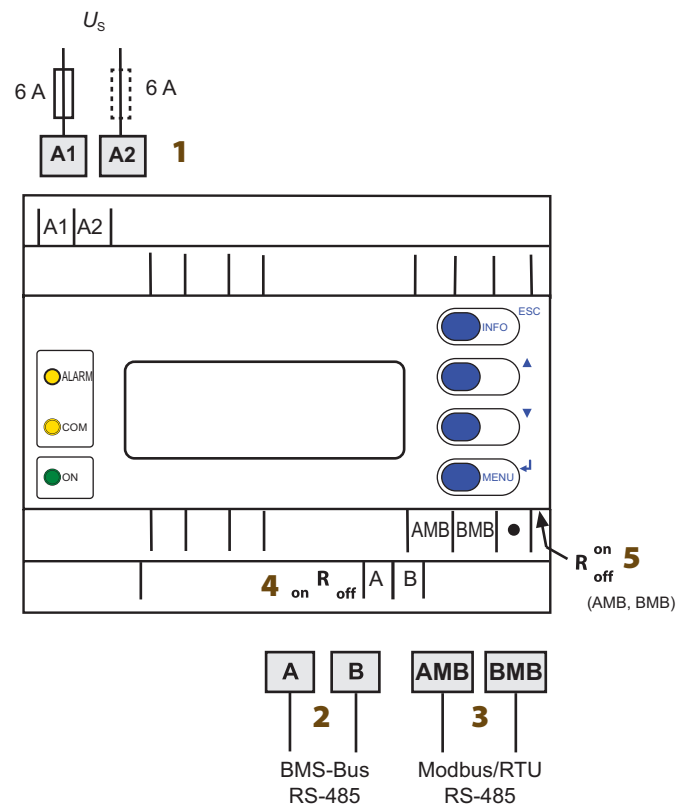
<sup>1)</sup> Absolute values

**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 <sup>2</sup> (AWG 24...12)
Multi-conductor connection (2 conductors with the same cross section):	
rigid/flexible	0.2...1.5 0.2...1.5 mm <sup>2</sup>
Stripping length	8...9 mm
Tightening torque	0.5...0.6 Nm

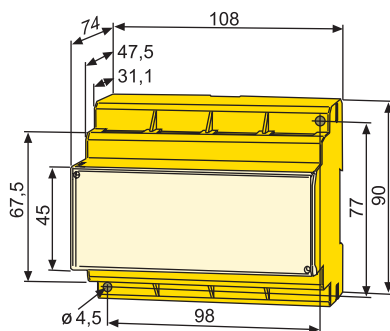
### Other

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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