

# COMTRAXX® COM465ID

Condition Monitor with an integrated gateway  
for the connection of Bender isoData devices  
to Ethernet TCP/IP networks




**Device features**

- Condition Monitor for Bender systems
- Integrated modular gateway between Bender systems and TCP/IP enables remote access via LAN, WAN or the Internet
- Range of functions adjustable through function modules
- Ethernet (10/100 Mbit/s) for remote access via LAN, WAN or the Internet
- Integration of devices that are connected via IsoData or BCOM
- OPC UA interface for data transmission

**Approvals and certifications**

**Range of functions**
**Basic device (without function modules)**

- Condition Monitor with a web interface for use with Bender isoData and BCOM as well as universal measuring devices.
- Support for devices that are connected
  - via IsoData (1 device per interface),
  - via the BCOM interface (see the BCOM operating manual),
  - via Modbus TCP (max. 247 devices).
- Remote display of present measured values, operating status and alarm messages.
- Gateway to Modbus TCP: Reading the latest subsystem measured values, operating status and alarm messages from addresses 1...10 via Modbus TCP.
- Ethernet interface with 10/100 Mbit/s for remote access via LAN, WAN or the Internet.
- Setting for internal parameters and for configuration of Bender universal measuring devices and energy meters.\*
- Time synchronisation for all assigned devices.
- History memory (1,000 entries).
- Data loggers, freely configurable (30 \* 10,000 entries).
- 50 data points from third-party devices (via Modbus TCP) can be integrated into the system.
- A virtual device with 16 channels can be created.

\*) Individual parameters can be set via a web-based application and externally (via BCOM), but not via Modbus. The parameters of assigned devices can only be read; in order to change settings, function module C is required!

*No reports can be generated – also not for your own device.*

**Function module A**

- Assigning individual texts for devices, channels (measuring points) and alarms
- Device failure monitoring
- E-mail notification in the event of alarms or system faults to different users
- Configuration of e-mail notifications
- Device documentation can be created by any device in the system. Present measured values, settings and software statuses are stored.
- System documentation can be created. It documents all devices in the system at once.

**Function module B**

- Supports external applications (e.g. visualisation programs or PLCs) by means of the Modbus TCP protocol.
- Reading the latest measured values, operating status and alarms messages from all assigned devices. Uniform access to all assigned devices by means of Modbus TCP via an integrated server.
- Control commands: From an external application (e.g. visualisation software or PLC), commands can be sent to devices by means of Modbus TCP.
- Access to alarms and measurement values via SNMP protocol (V1, V2c or V3).

**Function module C**

- Quick and easy parameterisation of all devices\* assigned to the gateway via web browser.
- Backups can be generated and restored from all devices in the system.

\*) Only BCOM devices can be parameterised. IsoData devices cannot be parameterised.

**Function module D\***

Fast, simple visualisation without programming. Device statuses, alarms or readings can be arranged and displayed (e.g. a spatial plan) in front of a background image.

- Display of an overview covering several pages. Jump to another view page and return to the overview page.
- Graphical display of the data loggers with scaling of the time axis.

\*) Currently, the Silverlight web interface is still necessary for this function.

**Function module E**

- 100 virtual devices with 16 channels each can be created.

**Function module F**

- 1,600 data points from third-party devices (via Modbus TCP) can be integrated into the system.

**Examples:**

- To write parameters via Modbus, the function modules B and C are required.
- To read parameters via Modbus, the function module B is required.

**Application**

- Optimum display and visualisation of device and plant statuses in the web browser
- Collecting information from the Bender system and making it available via Modbus TCP and OPC UA
- Specific system overview through individual installation description
- Selective notification to various users in case of alarms
- Information from the Bender system can be transmitted to POWERSCOUT® for analysis and archiving.
- Commissioning and diagnosis of Bender systems
- Remote diagnosis, remote maintenance

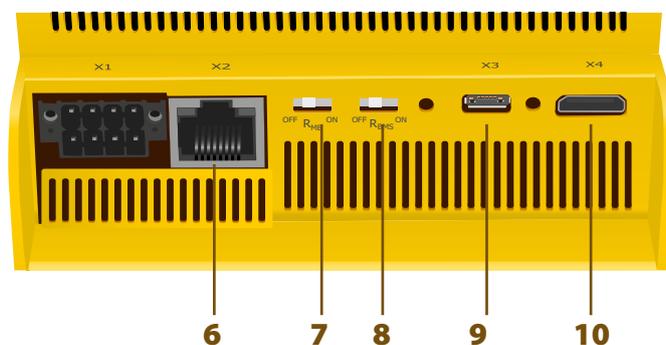
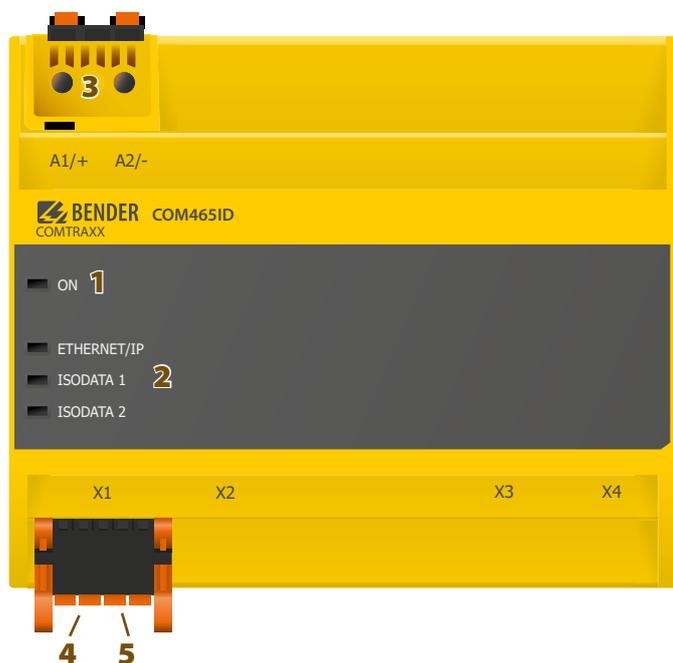
**Function**

The COM465ID gateway is an extension based on the Bender COM465IP serial device. It allows to record data using IsoData and BCOM and to make them available via OPC UA and POWERSCOUT®.

An IRDH265 and isoDB685 can be connected to the IsoData interface. One device can be connected to each IsoData interface.

To limit the amount of data on the interface, only new insulation values that have changed by at least 10 % to the present insulation value are stored in the memory. This factor can be adjusted if required.

## Operating controls and connections



- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>1 - "ON" LED: Flashes during start-up.<br/>The LED lights permanently as soon as the device is ready for operation.</li> <li>2 - LEDs show activities on the different interfaces</li> <li>3 - Voltage supply: see nameplate and ordering details</li> <li>4 - IsoData 1 interface (X1 plug)</li> <li>5 - IsoData 2 interface (X1 plug)</li> </ul> | <ul style="list-style-type: none"> <li>6 - Ethernet port (RJ45) for connection to the PC network as well as BCOM (X2 plug)</li> <li>7 - IsoData 1 terminating resistor switch</li> <li>8 - IsoData 2 terminating resistor switch</li> <li>9 - Micro-USB interface (without function) (X3 plug)</li> <li>10 - Mini-HDMI interface (without function) (X4 plug)</li> </ul> |
|---|--|

**Technical data**
**Insulation coordination acc. to IEC 60664-1/IEC 60664-3  
(For 230 V variants B95061070)**

Rated voltage	AC 250 V
Rated impulse voltage/Overtoltage category	4 kV/III
Pollution degree	3
Protective separation (reinforced insulation) between (A1/+, A2/-) - [(AMB, BMB), (ABMS, BBMS), (X2)]	

**Supply voltage**

Supply voltage $U_s$	see ordering details
Frequency range $U_s$	see ordering details
Power consumption	see ordering details

**Indication**
**LEDs:**

ON	operation indicator
ETHERNET IP	data traffic Ethernet
ISODATA1	data traffic ISODATA1
ISODATA2	data traffic ISODATA2
Ethernet (X2 terminal)	lights during network connection, flashes during data transmission

**Internal memory**

E-mail configuration (function module A only) and device failure monitoring	max. 250 entries
Individual texts (function module A only)	unlimited number of texts with 100 characters each
Number of data points for "third-party devices" on Modbus TCP and Modbus RTU	50
Data loggers	30
Number of data points per data logger	10,000
Number of history memory entries	1,000

**Visualisation**

Number of pages	20
Size of the background image	50 kByte (scaled down if larger)
Data points (per page)	50 devices or channels, 150 text elements

**Interfaces**
**Ethernet**

Port	RJ45
Data rate	10/100 Mbit/s, autodetect
DHCP	on/off (on)*
$t_{\text{off}}$ (DHCP)	5...60 s (30 s)*
IP address	nnn.nnn.nnn.nnn, can always be reached over: 192.168.0.254, (169.254.0.1)*
Netmask	nnn.nnn.nnn.nnn (255.255.0.0)*
Protocols (depending on function module selected)	TCP/IP, Modbus TCP, Modbus RTU, DHCP, SMTP, NTP, OPC UA

**SNMP**

Versions	1, 2c, 3
Devices supported	Queries to all devices (channels) possible (no trap functionality)

**ISODATA**

Interface/protocol	RS-485/ISODATA
Operating mode	master
Baud rate ISODATA	9.6 kbit/s
Cable length	≤ 1200 m
Cable: twisted pair, shielded, one end of shield connected to PE	recommended: J-Y(St)Y min. 2x0.8
Connection	X1 (A-ID1, B-ID1, A-ID2, B-ID2)
Connection type	refer to connection "push-wire terminal X1"
Terminating resistor	120 Ω (0.25 W), can be connected internally
Device address	ISODATA1 (2); ISODATA2 (3)

**BCOM**

Interface/protocol	Ethernet/BCOM
BCOM subsystem address	1...99 (1)*
BCOM device address	1...99 (2)*

**Modbus TCP**

Interface/protocol	Ethernet/Modbus TCP
Operating mode	client for associated PEM and "third-party devices"
Operating mode	server for access to the process image and for Modbus control commands
Parallel data access by different clients	max. 8

**Environment/EMC**

EMC	EN 61326-1
Ambient temperatures:	
Operating temperature	-25...+55 °C
Transport	-40...+85 °C
Long-term storage	-25...+70 °C
Classification of climatic conditions acc. to IEC 60721:	
Stationary use (IEC 60721-3-3)	3K5 (except condensation and formation of ice)
Transport (IEC 60721-3-2)	2K3
Long-term storage (IEC 60721-3-1)	1K4
Classification of mechanical conditions acc. to IEC 60721:	
Stationary use (IEC 60721-3-3)	3M4
Transport (IEC 60721-3-2)	2M2
Long-term storage (IEC 60721-3-1)	1M3

**Connection**

Connection type	pluggable push-wire terminals
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**Push-wire terminals**

Conductor sizes	AWG 24-12
Stripping length	10 mm
rigid/flexible	0.2...2.5 mm <sup>2</sup>
flexible with ferrule, with/without plastic sleeve	0.25...2.5 mm <sup>2</sup>
Multiple conductor, flexible with TWIN ferrule with plastic sleeve	0.5...1.5 mm <sup>2</sup>

**Push-wire terminal X1**

Conductor sizes	AWG 24-16
Stripping length	10 mm
rigid/flexible	0.2...1.5 mm <sup>2</sup>
flexible with ferrule without plastic sleeve	0.25...1.5 mm <sup>2</sup>
flexible with ferrule with plastic sleeve	0.25...0.75 mm <sup>2</sup>

**Other**

Operating mode	continuous operation
Mounting	front-oriented, cooling slots must be ventilated vertically
Degree of protection, internal components (IEC 60529)	IP30
Degree of protection, terminals (IEC 60529)	IP20
DIN rail mounting acc. to	IEC 60715
Screw fixing	2 x M4
Enclosure type	J460
Enclosure material	polycarbonate
Flammability class	UL94V-0
Dimensions (W x H x D)	107.5 x 93 x 62.9 mm
Weight	≤ 240 g

(\*) = Factory settings

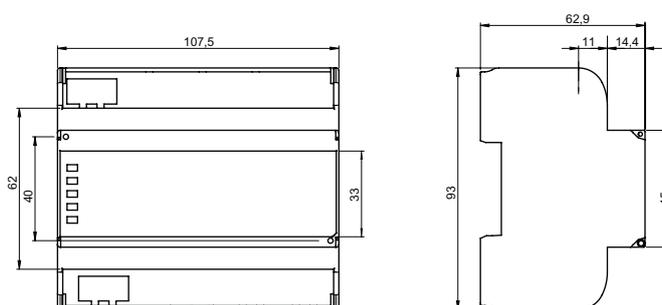
## Ordering details

Supply voltage/Frequency range $U_s$		Power consumption	Application	Type	Art. No.
AC/DC	DC				
24...240 V, 50...60 Hz	–	$\leq 6.5 \text{ VA}/\leq 4 \text{ W}$	Condition Monitor with an integrated gateway: Bender system/Ethernet	COM465ID-230 V	B95061070

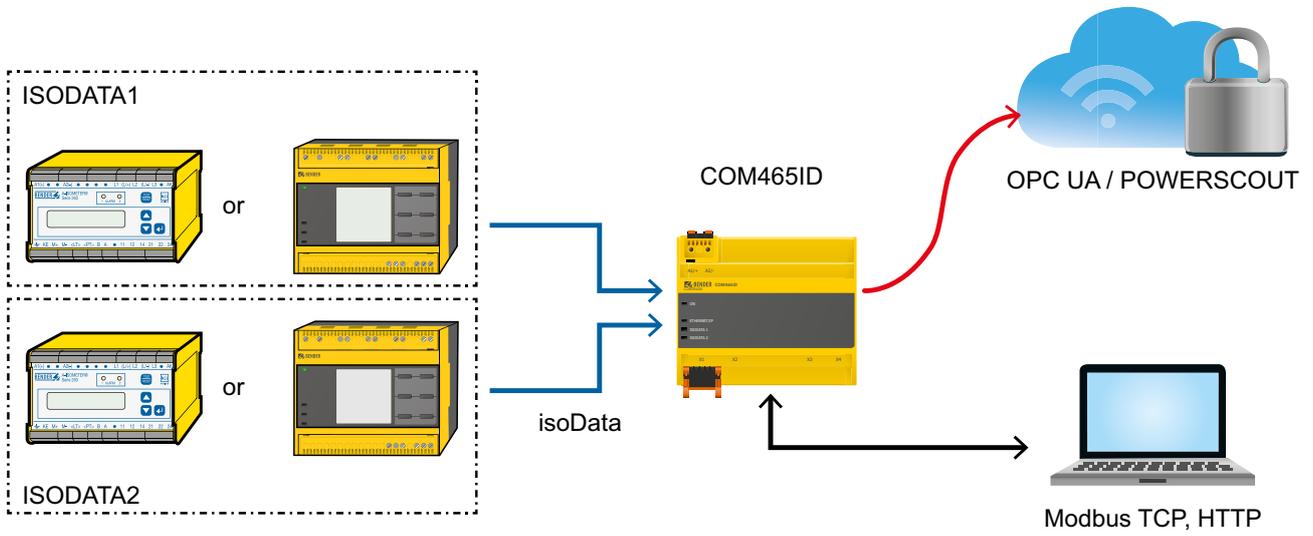
## Function modules

Application	Function module (software licence)	Art. No.
Individual texts for devices/channels, device failure monitoring, e-mail in case of an alarm	Function module A	B75061011
Modbus TCP server for max. 98 * 139 BMS nodes as well as BCOM and universal measuring devices, SNMP server	Function module B	B75061012
Parameter setting of BMS devices as well as BCOM and universal measuring devices	Function module C	B75061013
Visualisation of Bender systems, System visualisation	Function module D	B75061014
Virtual devices	Function module E	B75061015
Integrating third-party devices	Function module F	B75061016

## Dimension diagram



**Application example**





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