



COMTRAXX® COM465ID

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

Software version V4.7.x



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1 General information

1.1 How to use the manual



ADVICE

This manual is intended for qualified personnel working in electrical engineering and electronics! Part of the device documentation in addition to this manual is the enclosed supplement "Safety instructions for Bender products".



ADVICE

Read the operating manual before mounting, connecting and commissioning the device. Keep the manual within easy reach for future reference.

1.2 Indication of important instructions and information



DANGER

Indicates a high risk of danger that will result in death or serious injury if not avoided.



WARNING

Indicates a medium risk of danger that can lead to death or serious injury if not avoided.



CAUTION

Indicates a low-level risk that can result in minor or moderate injury or damage to property if not avoided.



ADVICE

Indicates important facts that do not result in immediate injuries. They can lead to malfunctions if the device is handled incorrectly.



Information can help to optimise the use of the product.

1.3 Signs and symbols



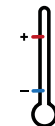
Disposal



Protect from moisture



Protect from dust



Temperature range



Recycling



RoHS directives

1.4 Service and Support

Information and contact details about customer service, repair service or field service for Bender devices are available on the following website: [Fast assistance | Bender GmbH & Co. KG.](#)

1.5 Training courses and seminars

Regular face-to-face or online seminars for customers and other interested parties:

www.bender.de > know-how > seminars.

1.6 Delivery conditions

The conditions of sale and delivery set out by Bender GmbH & Co. KG apply. These can be obtained in printed or electronic format.

The following applies to software products:

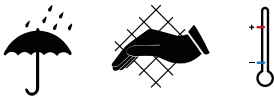


'Software clause in respect of the licensing of standard software as part of deliveries, modifications and changes to general delivery conditions for products and services in the electrical industry'

1.7 Inspection, transport and storage

Check the shipping and device packaging for transport damage and scope of delivery. In the event of complaints, the company must be notified immediately, see "www.bender.de > service & support".

The following must be observed when storing the devices:



1.8 Warranty and liability

Warranty and liability claims for personal injury and property damage are excluded in the case of:

- Improper use of the device.
- Incorrect mounting, commissioning, operation and maintenance of the device.
- Failure to observe the instructions in this operating manual regarding transport, commissioning, operation and maintenance of the device.
- Unauthorised changes to the device made by parties other than the manufacturer.
- Non-observance of technical data.
- Repairs carried out incorrectly.
- The use of accessories or spare parts that are not provided, approved or recommended by the manufacturer.
- Catastrophes caused by external influences and force majeure.
- Mounting and installation with device combinations not approved or recommended by the manufacturer.

This operating manual and the enclosed safety instructions must be observed by all persons working with the device. Furthermore, the rules and regulations that apply for accident prevention at the place of use must be observed.

1.9 Disposal of Bender devices

Abide by the national regulations and laws governing the disposal of this device.



For more information on the disposal of Bender devices, refer to www.bender.de > service & support.

1.10 Safety

If the device is used outside the Federal Republic of Germany, the applicable local standards and regulations must be complied with. In Europe, the European standard EN 50110 applies.



DANGER *Risk of fatal injury due to electric shock!*

Touching live parts of the system carries the risk of:

- Risk of electrocution due to electric shock
- Damage to the electrical installation
- Destruction of the device

Before installing the device and before working on its connections, make sure that the installation has been de-energised. The rules for working on electrical systems must be observed.

2 Intended use

The gateway connects the following devices to Ethernet TCP/IP networks:

- Bender devices with isoData or BCOM interface
- Bender PEM... universal measuring devices which feature a Modbus TCP interface

The COM465ID converts alarms, measured values and states of the devices to the protocols Modbus TCP as well as HTTP and OPC-UA. This conversion allows coupling to Modbus TCP networks, data visualisation and evaluation using standard web browsers and analysis via OPC UA-capable software solutions.

Operation and settings are made via the COMTRAXX® user interface integrated in the device.

3 Product description

This manual describes

- The condition monitor with integrated gateway COMTRAXX® **COM465ID**.

3.1 Scope of delivery

Included within the scope of delivery

- A gateway COM465ID
- A printed quick-start guide
- Safety instructions for Bender products
- The manuals 'COMTRAXX® COM465ID' and 'BCOM' are available as PDF files for download at <https://www.bender.de/en/service-support/download-area/>

3.2 Device features

- Condition monitor for Bender systems
- An integrated modular gateway between the Bender system and TCP/IP allows remote access via LAN, WAN or Internet
- Features adaptable by means of the function modules
- Ethernet (10/100 MBit/s) for remote access via LAN, WAN or Internet
- Support of devices that are connected via isoData, BCOM or Modbus TCP

3.3 Scope of functions

Basic device (without function modules)

- Condition monitor with a web interface for use with Bender isoData and BCOM devices as well as universal measuring devices
- Support of devices
 - via isoData (one device per interface)
 - via BCOM interface (max. 139 devices with one gateway / max. 98 x 139 devices in an interconnection with other gateways)
 - via Modbus TCP (max. 247 devices)
- Remote display of present measured values, operating/alarm messages
- Gateway to Modbus TCP: Reading the latest subsystem measured values, operating status and alarm messages from addresses 1...10 via Modbus TCP ¹⁾
- Ethernet interface with 10/100 MBit/s for remote access via LAN, WAN or the Internet
- Time synchronisation for all assigned devices
- History memory (1,000 entries)
- Data loggers, freely configurable (30 x 10,000 entries)
- 50 data points from third-party devices can be integrated into the system.
- A virtual device with 16 channels can be created.


¹⁾ Individual parameters can be set via a web-based application and externally (BCOM), but not via Modbus. The parameters of assigned devices can only be read. In order to change settings, function module C is required.

Subsequent installation of function modules

Download the licence files from the Bender homepage.

<https://www.bender.de/en/service-support/licences/>

Then activate the function modules in the COMTRAXX® web view.

 Tools > Service > Function modules

Below the overview you will find the button for importing the licence files (.blf).

3.3.1 Function module A

- Assignment of individual texts for devices, channels (measuring points) and alarms
- Device failure monitoring
- E-mail notification to different users in case of alarms or system errors.
- Device documentation of any device in the system can be generated.
It contains all parameters and measured values belonging to the device, as well as device information such as serial number and software version.
- System documentation can be generated. It documents all devices in the system at once.

3.3.2 Function module B

- Reading the latest measured values, status and alarms messages from all assigned devices. Uniform access to all assigned devices via Modbus TCP over integrated server.
- Control commands: From an external application (e.g. visualisation software or PLC), commands can be sent to BMS devices via Modbus TCP.
- Access to alarms and measured values via SNMP (V1, V2c or V3). SNMP traps are supported.
- Access via PROFINET to alarms and measured values.

3.3.3 Function module C

- Fast and easy parameter setting of all devices assigned to the gateway via a web browser.
- A backup file containing the settings of all devices in the system can be generated and imported.

3.3.4 Function module D

- Quick and easy-to-create visualisation of the system. Integrated editor provides access to a variety of widgets and functions.
- Display on up to 50 overview pages on which, for example, room plans can be stored. Navigation within these overview pages is possible.
- Access to all measured values available in the system.
- Buttons and sliders can be used to control external devices via Modbus TCP.

3.3.5 Function module E

100 virtual devices with 16 channels each can be created.

3.3.6 Function module F

1600 data points from third-party devices can be integrated into the system via Modbus TCP.

3.4 Applications

- Optimum display and visualisation of device and plant states in the web browser
- Recorded data can be made available via Modbus TCP and OPC-UA.
- Specific system overview according to 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

The COM465ID communicates with the assigned devices and systems via various interfaces

- 2 isoData interfaces RS-485
- BCOM (RJ45) for new and future Bender systems, such as ISOMETER® isoDB685-D-x
- Modbus TCP (RJ45)
- OPC-UA (RJ45)

3.5 Function

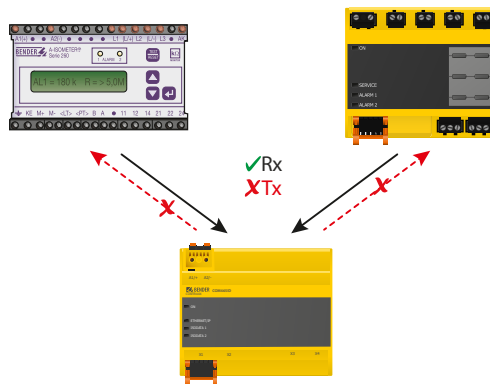
The COM465ID gateways are integrated into the existing EDP structure like PCs. After connecting to the network and compatible Bender products, all system devices can be accessed from any PC using a web browser. In this way, all important system information is directly available.

Verified web browsers: Microsoft Edge, Mozilla Firefox, Google Chrome.

The COM465ID is an extension based on the Bender COM465IP serial device. Among other things, it enables the integration of 2 isoData devices into the system. **Only one isoData device can be connected to each physical interface.**

Absence of interaction

The absence of interaction between isoData device and COM465ID is ensured by the hardware. The transmission line of the isoData interface has been interrupted for this reason. This way, data can only be received via isoData, but none can be sent.



The Tx connection is interrupted.

4 Mounting, connection and commissioning

The COM465ID is normally integrated into existing LAN structures, but can also be operated via a single PC on the Ethernet side.



CAUTION

*If you are familiar with the configuration of computer networks, you can carry out the connection of the COM465ID yourself. **Otherwise please contact your EDP administrator!***

4.1 Preparation

1. Does the computer network have a DHCP server? Otherwise, the IP address and subnet mask must be set manually.
2. Determine the IP address of the NTP server for automatic time setting.
3. Are suitable PC hardware and software available for commissioning?
 - System requirements (minimum): 1.6 GHz processor/512 MB RAM
 - Verified web browsers: Microsoft Edge, Mozilla Firefox, Google Chrome



For initial connection, the basic configuration of the COM465ID is to be undertaken outside the installation.

4.2 Installation and connection



Only skilled persons are permitted to carry out the work necessary to install, put into service and run a device or system.



DANGER **Risk of fatal injury due to electric shock!**

Touching live parts of the system carries the risk of:

- Risk of electrocution due to electric shock
- Damage to the electrical installation
- Destruction of the device

Before installing and connecting the device, make sure that the installation has been de-energised. The rules for working on electrical systems must be observed.



DANGER **Mortal danger and risk of irreparable damage due to moisture!**

Install device such that it is protected against moisture.



CAUTION

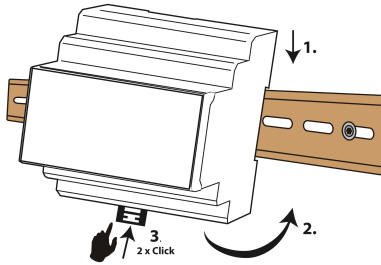
Pay attention to installation location

*Operation of the device is only permitted in operating locations with **restricted access!** This can be installation in a switch cabinet, for example.*

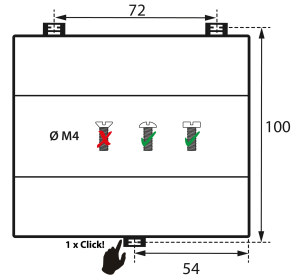
4.2.1 Mounting the device

The device is suitable for the following types of installation:

- Snap-on mounting on a DIN rail according to IEC 60715 or
- Screw mounting using 3 x M4

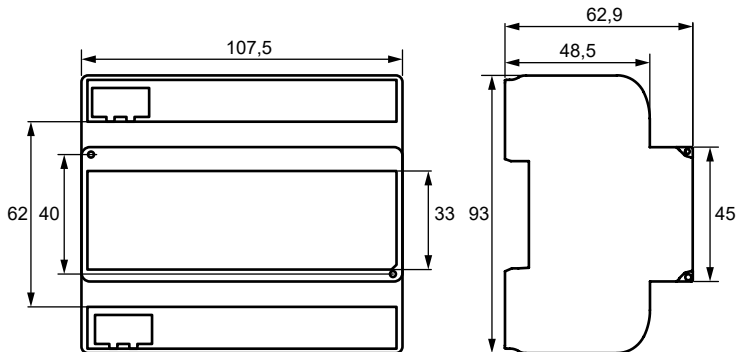


Snap-on mounting on a DIN rail according to IEC 60715

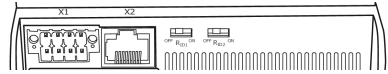
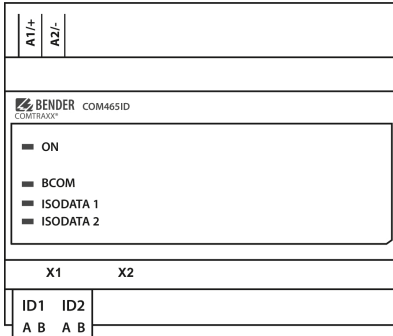


Screw mounting using 3 x M4

Dimension diagram (mm)



4.2.2 Connecting the device



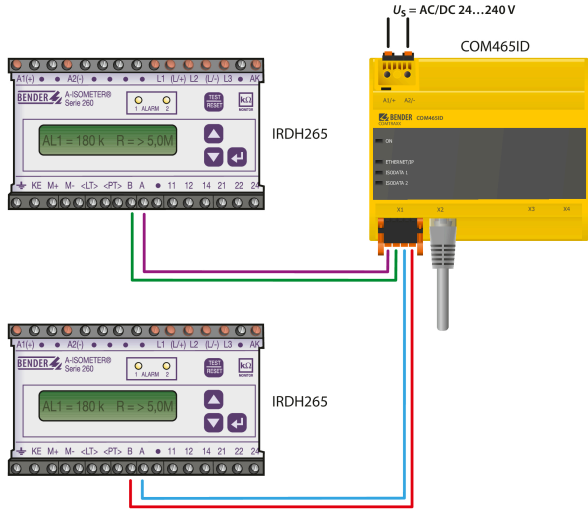
Element	Explanation
A1/+; A2/-	Power supply
Plug X1	1st isoData interface: Terminals AID1 und BID1 2nd isoData interface: Terminals AID2 und BID2
Plug X2	Ethernet connection (RJ45) for the connection to the PC network as well as to BCOM
R_{ID1}	isoData channel 1 terminating resistor switch
R_{ID2}	isoData channel 2 terminating resistor switch

Make the connection as follows:

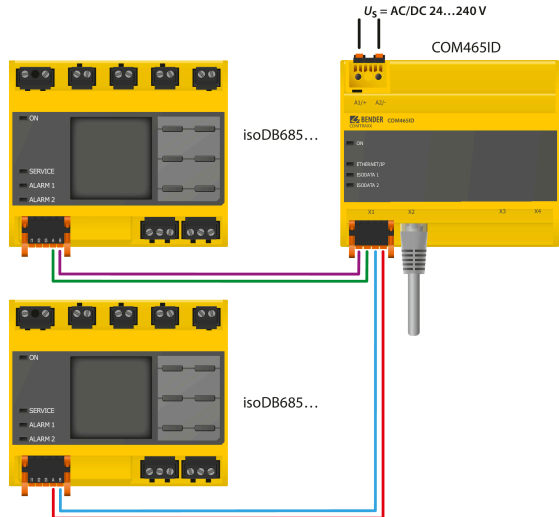
1. Remove terminal covers of the device.
2. Connect terminals **AID1** and **BID1** of the X1 plug of the COM465ID to the isoData device.
3. Connect terminals **AID2** and **BID2** of the X1 plug of the COM465ID to another isoData device.
4. The terminating resistor of both interfaces should be set to "ON".
5. Establish connection with PC and BCOM:
Connect Ethernet cable (RJ45/min. CAT5) to the COM465ID (X2) and to the PC network.
6. Connect voltage supply: Connect terminals A1/+ and A2/- to a supply voltage. The power supply must be protected using a 6 A fuse.
7. Position the terminal covers and click them into place.

4.2.3 Wiring diagram

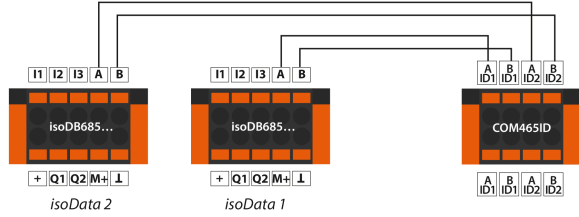
COM465ID with IRDH265



COM465ID with isoDB685...



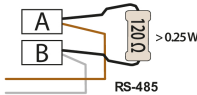
X1 connector pin assignment COM465ID and isoDB685...



Termination of the isoData interface

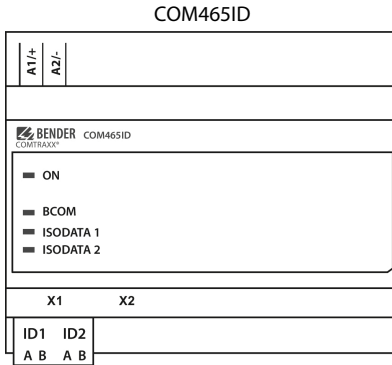
For an error-free data transmission from the isoData device to the COM465ID, a terminating resistor of 120 Ω is to be connected to both ends of the bus cable for each channel. This terminating resistor is either **switched on** or **connected externally**.

In the case of the COM465ID, the required 120-Ω resistor per channel is switched on via the micro switches on the device side



For devices without an integrated bus terminating resistor, an external resistor of 120 Ω must be installed at the terminals of the connecting cable.

4.3 Display and control elements



LED	Function
ON	'ON' LED: Flashes during the start process. The LED lights continuously as soon as the device is ready for operation.
ISODATA 1 ISODATA 2	LEDs indicate activity on the various interfaces.

4.4 Commissioning the device

Determine the address space of the system network before commissioning the COM465ID. Contact your network administrator for the following required information:

- IP address of the COM465ID
- Subnet mask of the network system
- Gateway address
- DNS server address
- Is there a DHCP server in the network system?

Connect a PC/laptop directly to the COM465ID.



1. Switch on the supply voltage: When the device is supplied with power, all LEDs light up briefly. During the start process the 'ON' LED flashes. After a successful start, the 'ON' LED then illuminates continuously. The device is now ready for operation.
2. Start web user interface:
 - Open an internet browser.
 - Type the following IP address to open the web interface of the COM46...:
169.254.0.1.
 - In the web user interface, the IP address of the COM46... can be set as required.
3. Configure: As a minimum, configure all address data for the COM46.... Always configure the BCOM interface (system name, subsystem, device address).



Risk of duplicate addresses if BCOM system name is not changed.

The factory setting for the system name on all Bender BCOM devices is "SYSTEM". If several systems are established in the same network, there is a risk that addresses will be assigned more than once.

Therefore, always give each system a new BCOM system name during commissioning.

4. Integrate devices into the system:
 - BCOM devices are detected automatically
 - isoData devices need to be configured. This is done in the web interface at
 **> Device management> isoData devices > Manage devices**
 - Select the device type.
 - Set the timeout parameter.
 - Confirm your inputs by pressing "Ok".
 - If applicable, connect the second device.
 - Confirm by pressing "Save changes".
 - OPC-UA needs to be configured. This is done in the web interface at
 **> Menu > Settings> Interface**
 - Activate OPC UA transfer
 - Set the port number of the address
 - Select whether the communication of the devices should be encrypted via OPC-UA.
 - Specify whether the communication should take place with a separate authentication. If this option is enabled, user name and password must be entered.
 - Confirm your changes by pressing 'Save changes' or discard them by pressing "Discard changes".

5. Check connection

Connect the COM46... to the network again. Start the web user interface. All other settings (individual texts, e-mail notifications, ...) can now be made.

4.5 Factory settings for addresses

Parameter	Factory setting
IP address	192.168.0.254
Connection can always be made using the pre-defined IP address (e.g. for commissioning)	169.254.0.1
Net mask	255.255.0.0
Standard gateway	192.168.0.1
DNS	194.25.2.129
DHCP	off
t_{off} (Timeout for DHCP address assignment)	30 s
BMS address	1
BCOM system name	SYSTEM
Subsystem address	1
BCOM device address	0 (= off)

The settings can be changed using the web user interface.

5 Web user interface

The web user interface of the device enables access via LAN, WLAN or the Internet. It provides a uniform display of Bender devices that are connected to:

- isoData
- BCOM
- Modbus TCP

Each interface has its own address range. Each device is given its own individual address by which it can be identified.

5.1 Functions of the web user interface

- Bus overview of the associated devices
 - Indicating alarms and measured values
 - Display by interface or subsystem
 - Setting, displaying and evaluating the history memory and data loggers
 - Graphical display of measured values (bar graph, phasor diagram, power triangle) and waveform recorders; in case of universal measuring devices, additional display of the harmonics as table or bar graph
 - Setting device parameters
 - Device failure monitoring
 - Saving settings as 'backup' and restoring values again
 - Documenting settings and measured values
 - Assigning individual texts for devices, measuring points (channels) and alarms
 - E-mail notifications to different user groups according to a time-controlled schedule in the event of alarms and system errors. The sender's e-mail address can be entered.
 - Display of virtual devices. A virtual 'measuring point' is obtained by logically or numerically evaluating measured values of 'real' devices connected to the gateway.
- Management of Modbus devices
 - Adding/deleting devices to/from the bus overview
 - Creating a template with selected measured values
- Visualisation
 - Fast, simple visualisation can be configured in its own editor without programming knowledge
 - Measured values, alarms, buttons, etc. can be arranged and displayed in front of a graphic (system diagram, room plan) using various widgets
 - Displaying an overview page; jumping to another view page and back to the overview page is possible
- Graphical display with scaling of the time axis for the data loggers of the gateway and compatible Bender devices.

5.2 Software products used

Select  **Tools > Information > Copyright** to display the used software products.

5.3 Browser configuration

As browser, the latest version of Google Chrome, Microsoft Edge and Mozilla Firefox are recommended. To use the functions of the web user interface, JavaScript has to be activated. The pop-up blocker should be deactivated for the IP address of the COMTRAXX® device.

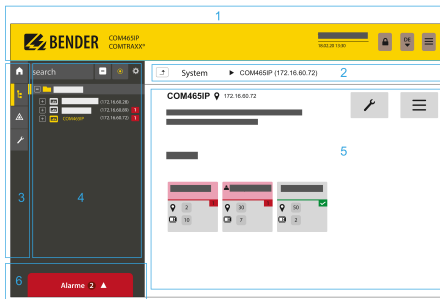


For Windows® Internet Explorer, the compatibility view has to be disabled.

Select **Extras > Configuration of compatibility view**. Deactivate the button **Display Intranet sites in compatibility view**.

5.4 Home page COMTRAXX® user interface

1. Open an Internet browser.
2. Enter the IP address of the gateway in the address line (example: http://172.16.60.72).



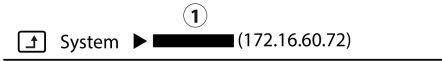
1. Headline
2. Path display
3. Navigation
4. Subnavigation
5. Content area
6. Alarm overview

5.4.1 Headline



1. Clicking the logo: Return to home page
2. Used device: Device type
3. Used device: **System name > Subsystem > Device address**
Date and time of the device
4. The symbol indicates that the web user interface is protected by a password. Click the symbol and then click **Login** to enter the user name and password.
5. Language selection
6. Open/close navigation (button only available in small browser window)

5.4.2 Path display (breadcrumb navigation)



1= Device

The path display shows at any time on which device and in which bus you are currently located in the content window.

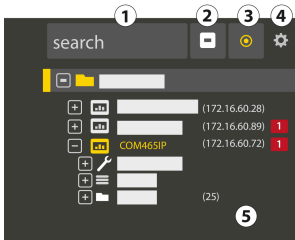
5.4.3 Navigation

	Menu	Description
	Start	Display of information about the device and the software. Please have this information to hand if you need to contact us for assistance by telephone.
	System overview	The system overview shows all devices in the system either by subsystem or by interface. Pending alarms and operating messages are displayed and the respective devices can also be configured.
	Alarms	Display of all pending alarms and data of the devices sending an alarm
	Tools	Functions that affect the entire system

The navigation symbols are permanently visible on the left side. Even if a random submenu of the web user interface is open, you can navigate to one of the four areas by clicking the respective symbol.

5.4.4 Subnavigation

The system overview is displayed in the subnavigation.




Legend

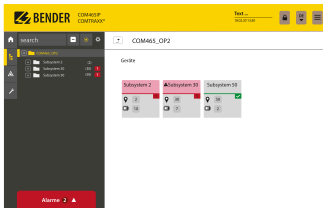
1. Full text search in the system for device names or menu entries. Matches are highlighted in yellow.
2. Close unfolded tree in the subnavigation
3. Fold out automatically: When enabled (= yellow), the displayed contents of the content area are shown in the subnavigation with automatically unfolding device tree in addition to the path display. Path display and content area are always synchronous. When disabled (= white), the subnavigation is not adapted to the path display or the current content area.

4. - Select **display** by subsystems or by interfaces. The interface display is only available for COMTRAXX® V4.xx and higher.
 - Configure the **line height** of the entries.
5. The number in brackets (here: 25) indicates the set bus address.

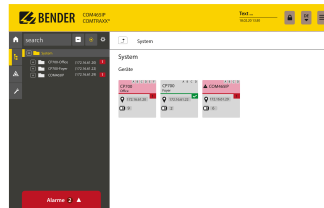
i *The display by subsystem or interface is possible independently of the configured Modbus image V1 or V2.*

5.4.5 Content area

Display of the system, alarms and entries for the tools .



Content area of the system display by **subsystem**



Content area of the system display by **interface**

5.4.6 Overview of pending alarms



i **Clicking the alarm overview:** List of pending alarms
Clicking on the list: Details about the alarms in the content area

5.5 Setting up password protection for COM465...

Password protection can be configured for the roles User and Administrator. This allows regulating the access to the web user interface.



CAUTION *Risk of damage to equipment due to unauthorised access*

The password protection for the gateway protects against unauthorised access to a limited extent only. Attackers from the Internet may still be able to read data and change settings. It is absolutely necessary that:

- The network is separated from the Internet .
- Common security mechanisms are applied (firewall, VPN access).

The password protection is configured in the device menu of the respective COMTRAXX® device. Select **Menu > Settings > Password**.

Password for	Protection	User	Password	Note
	Ex factory			
User	off	user	default	Access via web browser
Administrator	off	admin	default	Access via web browser

6 Troubleshooting

6.1 Malfunctions

If the device causes malfunctions in the connected networks, please refer to this manual.

6.1.1 What should be checked?

Check whether

- the device is supplied with the correct supply voltage U_S .
- the isoData cable is correctly connected and terminated (120 Ω).

6.1.2 Frequently asked questions

How do I access the device if the address data are unknown?

1. Connect the device directly to a Windows PC using a patch cable
2. Activate the DHCP function on the PC.
3. Wait around one minute.
4. Access is now possible using the following pre-defined IP address: 169.254.0.1.
5. Now set the new address data.

i Document the new settings as a PDF file. Use the backup function to save all settings of the device (see Chapter: "Device features", Page 9).

Frequently asked questions on the Internet

FAQs on many Bender devices can be found at:

Fast assistance | Bender GmbH & Co. KG

6.2 Device operation, maintenance, cleaning

Maintenance

The device does not contain any parts that require maintenance.

Cleaning

The device may only be cleaned using a clean, dry, soft, antistatic cloth.

7 Technical data

7.1 Tabular data

(*) = Factory setting

Insulation coordination in acc. with IEC 60664-1/IEC 60664-3

Rated voltage	AC 250 V
Rated impulse withstand voltage/overvoltage category	4 kV / III
Pollution degree	3
Protective separation (reinforced insulation) between	(A1/+, A2/-) - [(AID1, BID1), (AID2, BID2), (X2)]

Supply voltage

Supply voltage U_s	AC/DC 24...240 V
Frequency range U_s	50...60 Hz
Power consumption	$\leq 6.5 \text{ VA} / \leq 4 \text{ W}$

Indications

LEDs	
ON	operation indicator
BCOM	data traffic BCOM
ISODATA 1	data traffic isoData 1
ISODATA 2	data traffic isoData 2
Ethernet (terminal X2)	lights during network connection flashes during data transfer

Memory

Individual texts (function module A only)	unlimited number of texts each with 100 characters
E-mail configurations (function module A only) and device failure monitoring	max. 250 entries
Individual texts (function module A only)	unlimited number of texts each with 100 characters
Number of data points for 'third-party devices' on the Modbus TCP	50
Number of data loggers	30
Number of data points per data logger	10,000
Number of entries in the history memory	20,000

Visualisation

Number of pages	50
Background image size	3 MB
Data points (per page)	50 devices or channels, 150 text elements

Interfaces

Ethernet

Connection	RJ45
Cable length	< 100 m
Data rate	10/100 MBit/s, autodetect
HTTP mode	HTTP/HTTPS (HTTP)*
DHCP	on/off (on)*
t_{off} (DHCP)	5...60 s (30 s)*
IP address	
nnn.nnn.nnn.nnn	(192.168.0.254)*
can always be reached via	169.254.0.1
Netmask	nnn.nnn.nnn.nnn (255.255.0.0)*
Protocols (depending on function module selected)	TCP/ IP, Modbus TCP, DHCP, SMTP, NTP, OPC-UA

BCOM

Interface/protocol	Ethernet/BCOM
BCOM system name	(SYSTEM)*
BCOM subsystem address	1...255 (1)*
BCOM device address	0...255 (0)*

Modbus TCP

Interface/protocol	Ethernet/Modbus TCP
Operating mode	client for Bender devices and 'third-party devices' assigned
Operating mode	server for access to process image and for Modbus control commands
Parallel data access from different clients	max. 25

isoData

Interface/protocol	RS-485/isoData
Operating mode	Master
Baud rate	9.6...115.2 kBit/s
Cable length	≤ 1200 m
Cable	shielded, one end of shield connected to PE
Cable recommended	CAT6/CAT7 min. AWG23
Cable alternatively	twisted pair, J-Y (St) Y min. 2x0.8
Connection	X1 (AID1, BID1, AID2, BID2)
Connection type	see connection 'Push-wire terminal X1'
Terminating resistor	120 Ω (0.25 W), can be switched on internally
Device address	isoData1 (2); isoData2 (3)

SNMP

Interface/protocol	Ethernet/SNMP
Versions	1, 2c, 3
Supported devices	queries to all devices (channels) possible
Trap support	no

Environment / EMC

EMC	EN 61326-1
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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)	3K22
Transport (IEC 60721-3-2)	2K11
Long-term storage (IEC 60721-3-1)	1K22

Mechanical conditions acc. to IEC 60721

Stationary use (IEC 60721-3-3)	3M11
Transport (IEC 60721-3-2)	2M4
Long-term storage (IEC 60721-3-1)	1M12

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 ²
flexible with ferrule with/without plastic sleeve	0.25...2.5 mm ²
Multiple conductor, flexible with TWIN ferrule with plastic sleeve	0.5...1.5 mm ²

Push-wire terminal X1

Conductor sizes	AWG 24-16
Stripping length	10 mm
rigid/flexible	0,2...1.5 mm ²
flexible with ferrule without plastic sleeve	0.25...1.5 mm ²
flexible with ferrule with plastic sleeve	0.25...0.75 mm ²

Other

Operating mode	continuous operation
Mounting position	front-orientated, air must pass through cooling slots vertically
Degree of protection, internal components (IEC 60529)	IP30
Degree of protection, terminals (IEC 60529)	IP20
Snap-on mounting on a DIN rail	IEC 60715
Screw mounting	3 x M4
Type of enclosure	J460
Enclosure material	polycarbonate
Flammability class	UL94V-0
Dimensions (W x H x D)	107.5 x 93 x 62.9 mm

Software

D0472

Weight

≤ 240 g

(*) = Factory setting

7.2 Standards, approvals and certifications



7.3 Ordering information

Device

Type	Application	Supply voltage/ frequency range U_S	Power consumption	Art. No.
COM465ID	Condition Monitor an integrated gateway	AC/DC 24...240 V 50...60 Hz	≤ 6,5 VA / ≤ 4 W	B95061070

Function modules

Function module (Software licence)	Function	Art. No.
Function module A	Individual texts for devices/channels, device failure monitoring, e-mail in the event of an alarm, device documentation	B75061011
Function module B	Provision of data via Modbus TCP and Modbus RTU, SNMP server with trap function, PROFINET	B75061012
Function module C	Parameterisation of all integrated devices, device backups	B75061013
Function module D	Visualisation application	B75061014
Function module E	Virtual devices	B75061015
Function module F	Integrating third-party devices	B75061016

7.4 Document revision history

Date	Document version	Valid from software version	State/Changes
09.2023	02	4.7.x	<i>Editorial revision</i> Layout overall document <i>Added</i> Logo UKCA



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