

# COMTRAXX® CP700

Condition monitor with display and an integrated gateway




**CP700**

### Device features

- Condition monitor for Bender systems
- 7" TFT WVGA Color Display
- Analogue resistive touch screen
- Small mounting depth
- Fanless operation
- Integrated modular gateway between Bender systems and TCP/IP
- Remote access via LAN, WAN or Internet
- Support of devices that are connected to the internal BMS bus, via BCOM, Modbus RTU or Modbus TCP

### Product description

The COMTRAXX CP700 features a condition monitor with web interface and a 7" display. Like any Ethernet-capable device, it is integrated into the existing EDP structure. All Bender devices can be connected via the integrated interfaces. In addition, third-party devices can also be integrated into the system. The measured values, parameters and all other data can be checked and parameterised via the web interface or the display. It is possible to indicate and visualise alarms.

### Application

- Clear information about device and system states via 7" touch screen
- Specific system overview according to individual system description
- Display and visualisation of device and system states via web browser
- Selective e-mail notification to different users in case of alarms
- Support of professional visualisation programs
- Monitoring and analysis of compatible Bender products and third-party devices
- Clear parameter setting of devices as well as storing, documenting and restoring parameters
- Remote diagnosis, remote maintenance

### Scope of functions (V4.00 and higher)

#### Basic device (without function modules)

- Condition monitor with web interface and display
- Interfaces for the integration of devices
  - Internal BMS bus (max. 150 devices)
  - BCOM (max. 255 devices)
  - Modbus RTU and Modbus TCP (max. 247 devices each)
- Ethernet interface with 10/100 Mbit/s for remote access via LAN, WAN or Internet
- Fast, simple parameter setting of all devices assigned to the gateway via web browser or display
- Time synchronisation for all assigned devices
- History memory (20,000 entries)
- Data logger, freely configurable (30 \* 10,000 entries)
- Assignment of individual texts for devices, channels (measuring points) and alarms
- Device failure monitoring
- E-mail notification to different users in case of alarms and system errors
- Device documentation\* can be created for any device in the system
- System documentation can be created. It documents all devices in the system at once
- Support of external applications (e.g. visualisation programs or PLCs) through the Modbus TCP protocol
- Reading of current measured values, operating and alarm messages from all assigned devices via Modbus TCP using an integrated server
- Control commands: An external application (e.g. a visualisation software or PLC) can send TCP commands to devices via Modbus
- Access via SNMP protocol (V1, V2c or V3) to alarms and measured values SNMP traps are supported
- Device backups can be created and restored for all devices in the system
- User administration for access to web interface and display
- Quick and easy-to-create visualisation of the system. Integrated editor provides access to a variety of widgets and functions. Display via web browser.
- Display on up to 50 overview pages, where e.g. room plans can be stored. It is possible to navigate within these pages.

- Access to all measured values that are available in the system.
  - Buttons and sliders can be used to send BMS test and reset commands, as well as to control external devices via Modbus TCP.
- \* It contains all parameters and measured values belonging to the device, as well as device information such as serial number and software version

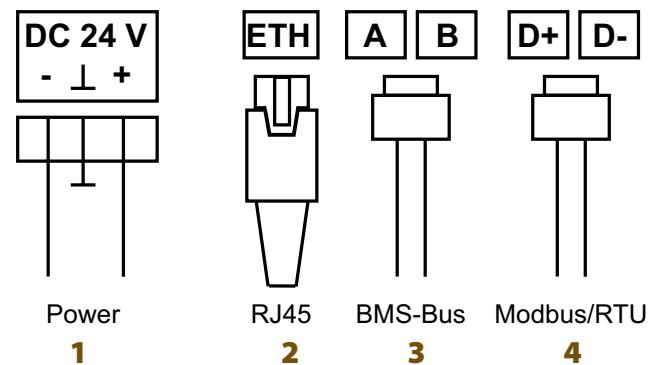
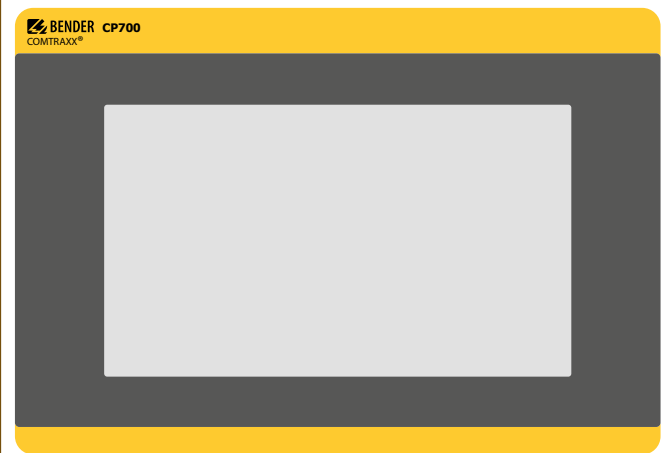
**Function module E**

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

**Function module F**

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

**Wiring diagram**



- 1 - Connection to supply voltage, DC 24 V
- 2 - RJ45 port for connection to PC or local network
- 3 - Connection BMS bus (cable included in the scope of delivery)
- 4 - Connection Modbus RTU (cable included in the scope of delivery)

**Ordering information**

Supply voltage/ frequency range $U_s$	Power consumption	Type	Art. No.
DC			
24 V/±25 %	typ. 11 W/max. 26 W	CP700	B 9506 1030

**Function modules**

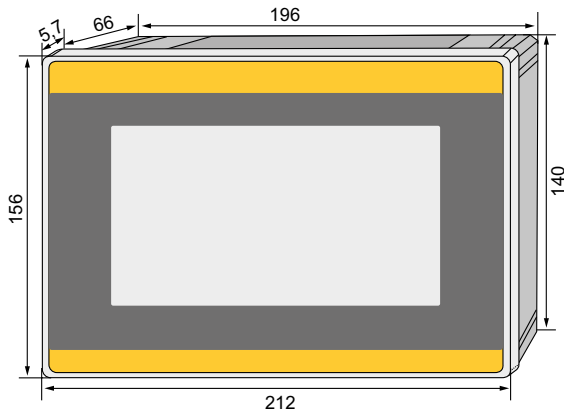
Application	Function module (software licence)	Art. No.
Virtual devices	Function module E	B 7506 1015
Integration of third-party devices	Function module F	B 7506 1016

**Recommended power supply units**

Material number/type	Manufacturer	Description
OPS1025.2	B&R	DC 24 V switched-mode power supply unit, 2,5 A, input AC 100...240 V, DIN rail mounting/wall mounting, WxHxD: 72 x 90 x 61 mm
OPS1020.0	B&R	DC 24 V switched-mode power supply unit, 2 A, input AC 100...240 V, DIN rail mounting, WxHxD: 45 x 99 x 107 mm
1SVR427044R0200/CP-D 24/2.5 EAN: 4016779661188	ABB	Switched-mode power supply unit In: AC 100...240 V Out: DC 24 V/2.5 A, DIN rail mounting, WxHxD: 71 x 91 x 57.5 mm

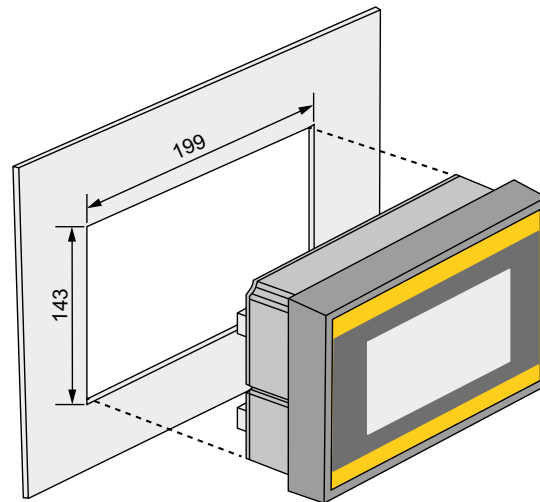
### Dimension diagram

Dimensions in mm

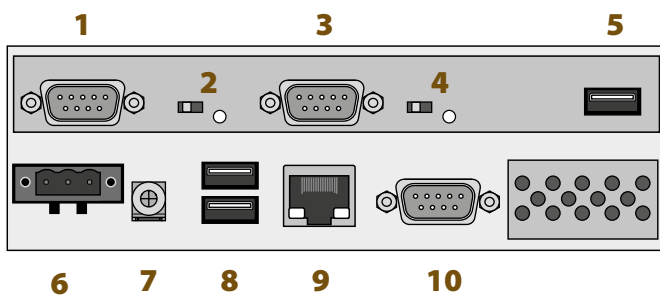


### Control panel cut-out

Dimensions in mm

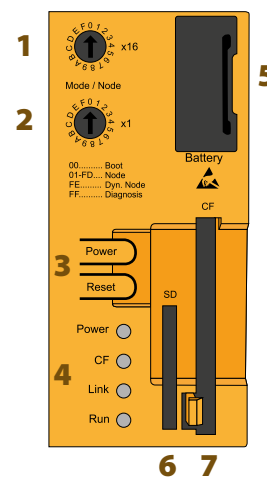


### Interfaces



- 1 - Modbus RTU interface
- 2 - Switch and master/slave LED for Modbus RTU interface
- 3 - BMS bus (Bender measuring device interface)
- 4 - Switch and master/slave LED for BMS bus.
- 5 - USB interface, without function
- 6 - Connection of supply voltage, DC 24 V
- 7 - Functional earth
- 8 - USB interfaces, without function
- 9 - Ethernet 10/100/1000, port for connection to PC or local network (hub, switch, router)
- 10 - RS-232 interface, without function

### Rear cover



- 1 - Mode/node switch x16
- 2 - Mode/node switch x1
- 3 - Buttons: Power, Reset
- 4 - LEDs: Power, CF, Link, Run
- 5 - Battery
- 6 - SD memory card slot
- 7 - Compact flash card slot

**Technical data**
**Insulation coordination acc. to IEC 60664-1**

Rated 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

**Displays**

Display	7" TFT WVGA Color
LEDs	Power, CF, Link, Run, master/slave
Buttons	Power, Reset
Buzzer	no

**Memory**

Memory card for special device functions (CF card)	4 GB
E-mail configuration and device failure monitoring	max. 250 entries
Individual texts	unlimited number of texts with 100 characters each
Number of data points for "third-party devices" to Modbus TCP and Modbus RTU	50
Number of data loggers	30
Number of data points per data logger	10,000
Number of history memory entries	20,000

**Visualisation**

Number of pages	50
Background image size	3 MB

**Interfaces**
**Ethernet**

Connection	RJ45
Data rate	10/100 MBit/s, autodetect
DHCP	on/off (on)*
$t_{off}$ (DHCP)	5...60 s (30 s)*
IP address	nnn.nnn.nnn.nnn, can always be accessed via: 192.168.0.254, (169.254.0.1)*
Net mask	nnn.nnn.nnn.nnn (255.255.0.0)*
Protocols (depending on selected function module)	TCP/IP, Modbus TCP, Modbus RTU, DHCP, SMTP, NTP

**BMS bus (internal/external)**

Interface/protocol	RS-485/internal BMS or external BMS (internal BMS)*
Operating mode	master/slave (master)*
Baud rate BMS	internal 9.6 kBit/s external 19.2; 38.4; 57.6 kBit/s
Cable length	≤ 1200 m
Cable: twisted pair, shielded, shield connected to PE on one side recommended: J-Y(St)Y min. 2x0.8	
Connection	X1 (ABMS, BBMS)
Connection type	refer to connection "push-wire terminal X1"
Terminating resistor	120 Ω (0.25 W), can be connected internally
Device address, internal/external BMS bus	1...150 (2)*/2...99

**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 assigned PEM and "third-party devices"
Operating mode	server for access to process image and for Modbus control commands
Parallel data access for different clients	max. 8

**Modbus RTU**

Interface/protocol	RS-485/Modbus RTU
Operating mode	master
Baud rate	9.6...57.6 kBit/s
Cable length	≤ 1200 m
Connection	X1 (AMB, BMB)
Connection type	refer to connection "push-wire terminal X1"
Terminating resistor	120 Ω (0.25 W), can be connected internally
Supported Modbus RTU slaves addresses	2...247

**SNMP**

Versions	1, 2c, 3
Supported devices	query of all devices (channels) possible
Trap support	yes

**Environment/EMC**

EMC	EN 61326-1
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**Classification of climatic conditions acc. to IEC 60721:**

Stationary use	3K5
Transport	2K3
Long-term storage	1K4
Operating temperature	0...+55 °C
Ventilation	fanless

**Classification of mechanical conditions acc. to IEC 60721:**

Stationary use	3M4
Transport	2M2
Long-term storage	1M3

**Connection**

Connection type	plug connectors
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**Other**

Operating mode	continuous operation
Mounting position	display-oriented
Degree of protection, on the front (IEC 60529)	IP65
Degree of protection, on the rear (IEC 60529)	IP20
Enclosure type	control panel mounting
Control panel cut-out	199x143 mm
Screw mounting	with mounting brackets
Flammability class	UL94V-0
Weight	≤ 1200 g

(\*) = factory settings



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