BENDER
The Power in Electrical Safety©

# COMTRAXX® CP700

## Condition Monitor for Bender BMS devices and universal measuring devices


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**Condition Monitor for Bender BMS devices and universal measuring devices**


CP700

## Device features

- Condition Monitor for Bender BMS devices and universal measuring devices
- 7“ TFT WVGA Color Display
- Analogue resistive touch screen
- Small mounting depth
- Fanless operation
- Integrated gateway to Ethernet (TCP/IP), 10/100/1000 Mbit/s
- Remote access via LAN, WAN or Internet
- Support for devices connected to the internal BMS bus via Modbus/RTU or Modbus/TCP.

## Typical applications

- Clear information about device and system statuses via 7-inch touch screen
- Specific system overview according to individual system description
- Display und visualisation of device and system statuses via web browser
- Selective e-mail notification to various user groups in the event of alarms
- Support of professional visualisation programs
- Observing and analysing of Bender products with communication capabilities (universal measuring devices, RCMS, Isometer, EDS systems)
- Parameter setting for devices, storing, documentation and restoring of parameters in a clear and practice-oriented manner
- Remote diagnosis, remote maintenance

## Device characteristics

### Scope of functions

- Display of currently measured values, operating and alarm messages from Bender BMS devices and Bender universal measuring devices on the touch screen
- Remote indication of data from Bender BMS devices and Bender universal measuring devices using a standard web browser with Silverlight plug-in
- Time synchronisation for all BMS bus devices and Bender univeral measuring devices
- Easy address setting via touch screen
- Fast, simple parameter setting of BMS devices using the PC’s web browser.
- Report function saves measured values and settings. Saved settings can be compared with the current settings and can be reloaded.
- Password-protected device menu
- Assignment of individual texts for devices and 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 faults
- Monitoring for device failure

### Access via Modbus/TCP

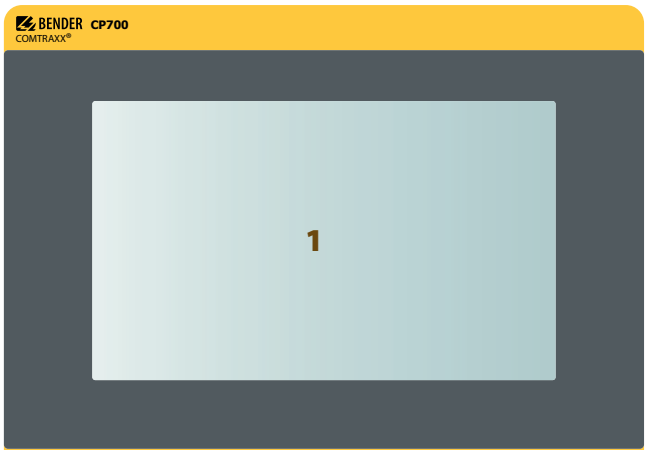
- Uniform access to all Bender devices assigned to the CP700 via the integrated Modbus/TCP server (max. 247 devices)
- Bender BMS devices can be controlled by an external application (e.g. visualisation or SPS) via Modbus/TCP
- Support of professional visualisation programs by the Modbus/TCP protocol

### Visualisation

- Fast and easy visualisation on a personal computer without previous knowledge of computer programming. Measured values or alarms can be arranged in front of a graphic (system diagram, room plan) and displayed
- Multipage documents supported

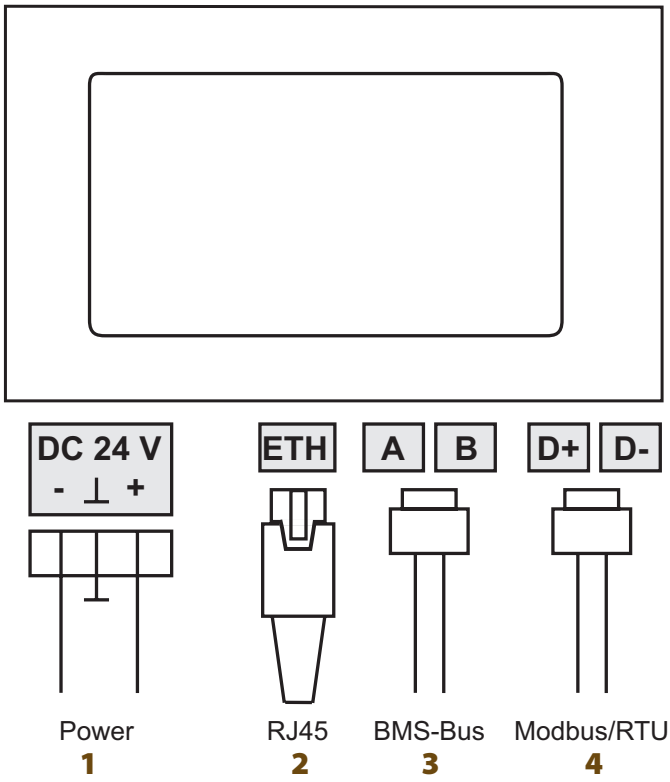
**Note:** The five year guarantee "5forU" does not include parts subject to wear.

## Operating elements




1 - LC display with touch screen for standard and menu mode

## Wiring diagram




1 - Connection to supply voltage, DC 24 V
2 - RJ45 connection for connection to personal computer resp. to the 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 |

## Recommended power supply units

| Material number/type | Manufacturer | Description |
|---|---|---|
| 0PS1025.2 | B&R | DC 24 V power supply unit, 2.5 A, input AC 100…240 V, DIN-rail mounting/wall mounting WxHxD: 72 x 90 x 61 mm |
| 0PS1020.0 | B&R | DC 24 V 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 | 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 |

## 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 |

### Displays, memory

| | |
|---|---|
| Display | 7″ TFT WVGA Color |
| LEDs | Power, CF, Link, Run, Master/Slave |
| Button | Power, Reset |
| Buzzer | no |
| Memory card for special device functions (CF card) | 4 GB |
| E-mail configuration and device failure monitoring | max. 250 entries |
| Individual texts | max. 1200 texts with 100 characters each |
| Devices that can be displayed | max. 247 |

### Interfaces

**BMS bus:**

| | |
|---|---|
| Interface/protocol | RS-485/BMS internal |
| Operating mode (max. one CP700 per bus) | master/slave (slave)* |
| Device address, BMS bus | 1…99 (2)* |
| Baud rate BMS | 9.6 kbit/s |

**Modbus/RTU:**

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

**Ethernet:**

| | |
|---|---|
| Connection | RJ45 |
| Data rate | 10/100/1000 Mbit/s, autodetect |
| DHCP | on/off (on)* |
| $t_{off}$ (DHCP) | 5…60 s (30 s)* |
| IP address | nnn.nnn.nnn.nnn (192.168.0.254)* |
| Netmask | nnn.nnn.nnn.nnn (255.255.0.0)* |
| Protocols | TCP/IP, Modbus/TCP, DHCP, SMTP, NTP |
| Additional interface protocols | connection to SCADA systems and/or PLC via OPC, BACnet or other protocols on request |

### 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 | 0…+55 °C |
| Ventilation | fanless |
| Classification of mechanical conditions acc. to IEC 60721: | |
| Stationary use | 3M4 |
| Transport | 2M2 |
| Long-term storage | 1M3 |

### Connection

| | |
|---|---|
| Connection | plug connectors |

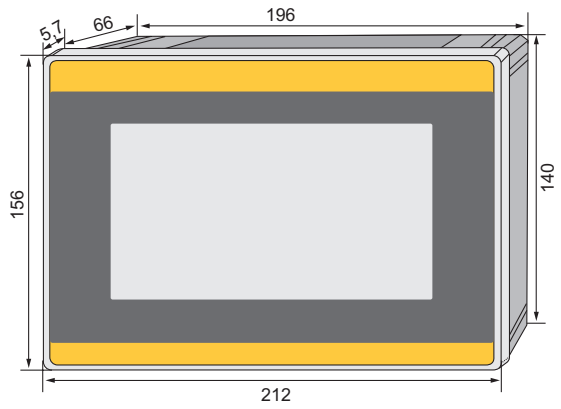
### General data

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

( )* = factory setting

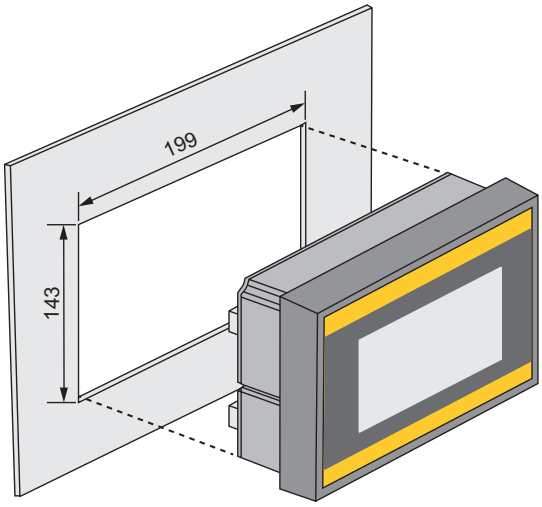
## Dimension diagram

Dimensions in mm

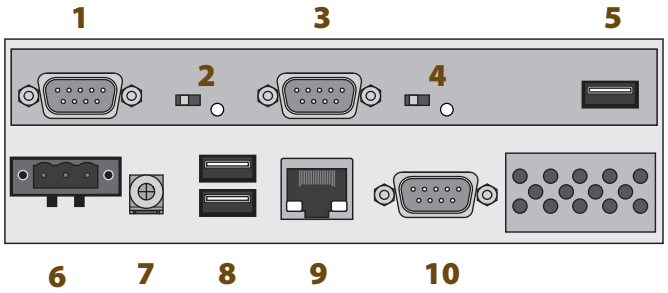



## Control panel cut-out

Dimensions in mm

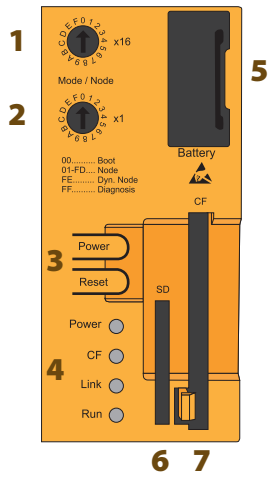



## Interfaces




1 - Interface Modbus/RTU
2 - Switch and LED master/slave for interface Modbus/RTU
3 - BMS bus (Bender measuring device interface)
4 - Switch and LED master/slave 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 the personal computer resp. to the 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

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