

COMTRAXX® CP9...-I series

Condition monitor with display and an integrated gateway



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Control Panel

Device features

- Display size 7" and 15.6" with tempered and anti-reflective glass
- Easy to clean and disinfect, degree of protection IP54
- Screwless mounted front plate
- Condition monitor for Bender systems
- 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
- Individual visualisation can be generated, which can be viewed via the web browser or on the display
- Silent due to operation without fan
- High-quality representation with excellent contrast, high resolution and a wide viewing angle
- Possibility of graphical integration of building plans or status display in photo quality
- Visual and acoustic notification in the event of an alarm

Data transfer interfaces



Certifications



CP907 only

Product description

The COMTRAXX® CP9...-I series features a condition monitor with web interface and a display, which is available in different sizes. 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. There is a wide range of options for indicating and visualising alarms. Due to the robust surface and design, there are no limits to the application scenarios.

Application

- Monitoring and parameter setting of all Bender products that support communication
- Mounting in the control cabinet door so that all information is immediately visible
- Commissioning and diagnosis of Bender systems
- Remote diagnosis and remote maintenance
- Control stations in all areas
- Monitoring and analysis of data centres

Scope of functions (V4.5.0 and higher)

- 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)
- Selectable display content
 - System overview with all devices, measured values, parameters and alarms
 - Individually configurable visualisation
- Ethernet interface with 10/100 Mbit/s for remote access via LAN, WAN or Internet
- Time synchronisation for all assigned devices
- History memory (20,000 entries)
- Data loggers, freely configurable (30 x 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
- 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.
- Reading the latest measured values, status and alarm messages from all assigned devices via internal BMS. Uniform access to all assigned devices via Modbus RTU.
- Control commands: From an external application (e.g. visualisation software or PLC), commands can be sent to BMS devices via Modbus TCP or Modbus RTU
- Access to alarms and measured values via SNMP (V1, V2c or V3). SNMP traps are supported.
- Access via PROFINET to alarms and measured values
- Fast and easy parameter setting of all devices assigned to the gateway via web browser or display
- Device backups can be created and restored for all devices in the system

- 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, 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
 - 100 virtual devices with 16 channels each can be created. There, for example, calculations of several measured values can be carried out and the result can be used in the system as a new measured value
 - 1,600 data points from third-party devices (via Modbus RTU or Modbus TCP) can be integrated into the system
- * Contains all parameters and measured values belonging to the device, as well as device information such as serial number and software version.

Ordering information

Complete devices

Type	Display size	Supply	Device dimensions (W x H x D)	Weight	Enclosure	Display unit glass, tempered	Art. No.
CP907-I	7" (17.6 cm)	DC 24 V, < 15 W	226 x 144 x 78 mm	1.1 kg	Flush-mounting enclosure	white	B95061031
			226 x 144 x 65 mm	1.0 kg	Control cabinet door mounting	white	B95061032
CP915-I	15.6" (38.6 cm)	AC 100...240 V, < 30 W	505 x 350 x 92 mm	6.1 kg	Flush-mounting enclosure	white	B95061033
						grey	B95061034

Scope of delivery: Display unit, control cabinet door mounting or flush-mounting enclosure incl. mounting plate with electronics, CP9...-I connecting cable and plug kit.

Individual components

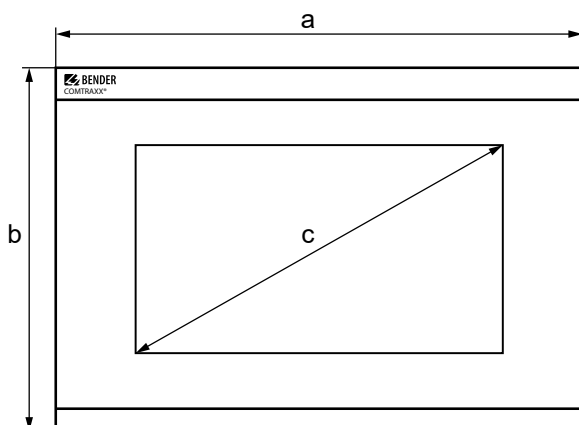
Device series	Type	Art. No.
CP907-I	Flush-mounting enclosure	B95100140
CP915-I	Display unit white	B95061090
	Display unit grey	B95061110
	Flush-mounting enclosure incl. mounting plate with electronics	B95061092

Accessories

Description	Art. No.
CP9...-I replacement plug kit	B95061910
CP9...-I suction lifter ¹⁾	B95061911
CP907-I surface-mounting enclosure	B95061915

¹⁾ The suction lifter is required to remove the display of the CP915-I.

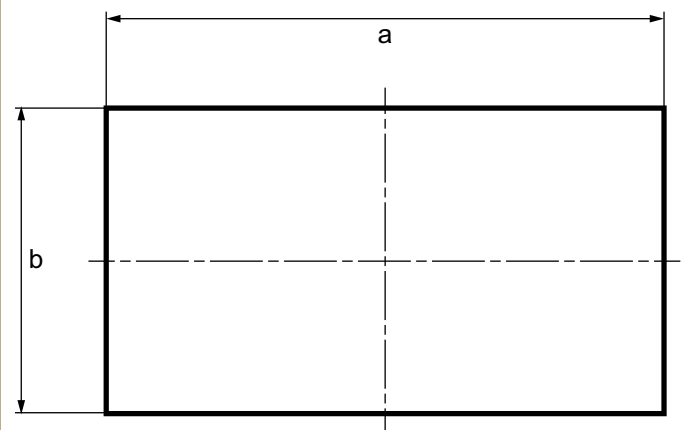
External dimensions



Type	Dimensions (mm)		
	a	b	c
CP907-I	226	144	176 (7")
CP915-I	505	350	386 (15.6")

Glass thickness 3 mm

Installation dimensions – wall cut-out



Type	Enclosure	Dimensions (mm)		Required installation depth
		a	b	
CP907-I	Flush-mounting enclosure	212	124	75
	Door	215	124	65
	Surface-mounting	299	173	–
CP915-I	Flush-mounting enclosure	461	306	92

Technical data

Insulation coordination acc. to IEC 60664-1

CP907-I

Rated voltage	50 V
Overvoltage category	III
Pollution degree	2
Rated impulse voltage	800 V

CP915-I

Rated voltage	AC 250 V
Overvoltage category	III
Pollution degree	2
Rated impulse voltage	4 kV

Supply

CP907-I via plug-in terminal (A1/+;A2/-)

Nominal voltage	DC 24 V SELV/PELV
Nominal voltage tolerance	±20 %
Typical power consumption at DC 24 V	< 15 W
Connection	plug-in terminal (A1/+;A2/-)

Maximum cable length when supplied via B95061210 (24-V DC power supply unit 1.75 A):

0.28 mm ²	75 m
0.5 mm ²	130 m
0.75 mm ²	200 m
1.5 mm ²	400 m
2.5 mm ²	650 m

CP907-I via Power-over-Ethernet (PoE)

Nominal voltage	DC 48 V SELV/PELV
Nominal voltage tolerance	-25...+15 %
Typical power consumption for PoE	< 15 W
Maximum cable length when supplied via AWG 26/7; 0.14 mm ²	100 m

CP915-I via terminal block (L1; N)

Nominal voltage CP915-I via external power supply unit	AC 100... 240 V
Nominal voltage tolerance	-15...+10 %
Frequency range U_s	50...60 Hz
Typical power consumption at AC 230 V	< 30 W
Connection	terminal block (L1; N)

Stored energy time in the event of voltage failure

Time, date	min. 3 days
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Displays, memory

Display	
CP907-I	7" TFT touch display
CP915-I	15.6" TFT touch display
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	1 600
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	max. 3 MB

Interfaces

Ethernet

Connection	RJ45
Cable	shielded, both ends of shield connected to PE
Cable length	< 100 m
Data rate	10/100 Mbit/s, autodetect
HTTP mode	HTTP/HTTPS (HTTP)*
DHCP	on/off (off)*
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
Net mask	nnn.nnn.nnn.nnn (255.255.0.0)*
Protocols	TCP/IP, Modbus TCP, Modbus RTU, DHCP, SNMP, SMTP, NTP

BMS bus

Interface/protocol	RS-485/BMS internal
Operating mode	master/slave (master)*
Baud rate	9.6 kBit/s
Cable length	< 1200 m
Cable	shielded, one end of shield connected to PE
recommended:	CAT6/CAT7 min. AWG23
alternative:	twisted pair, J-Y(St)Y min. 2x0,8
Connection	"ABMS", "BBMS" (see plug-in terminal)
Terminating resistor	120 Ω (0.25 W), can be connected internally (see plug-in terminal)
Device address	1...150 (1)*

BCOM

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

Modbus

Bender Modbus image	V1, V2 (V2)*
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Modbus TCP

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

Modbus RTU

Interface/protocol	RS-485/Modbus RTU
Operating mode	master/slave (master)*
Baud rate	9.6...57.6 kBit/s
Cable length	< 1200 m
Cable	shielded, one end of shield connected to PE
recommended:	CAT6/CAT7 min. AWG23
alternative:	twisted pair, J-Y(St)Y min. 2x0,8
Connection	"AMB", "BMB" (see plug-in terminal)
Terminating resistor	120 Ω (0.25 W), can be connected internally (see plug-in terminal)
Supported Modbus RTU slaves addresses	2...247

PROFINET

Interface/protocol	Ethernet/PROFINET
Operating mode	slave (IO device)

SNMP

Interface/protocol	Ethernet/SNMP
Versions	1, 2c, 3
Supported devices	query of all devices (channels) possible
Trap support	yes

USB

Number	2
Operating mode	USB 2.0 host (5 V, 500 mA)
Data rate	480 Mbit/s
Cable length	< 3 m
Connection type	USB 2 Standard-A

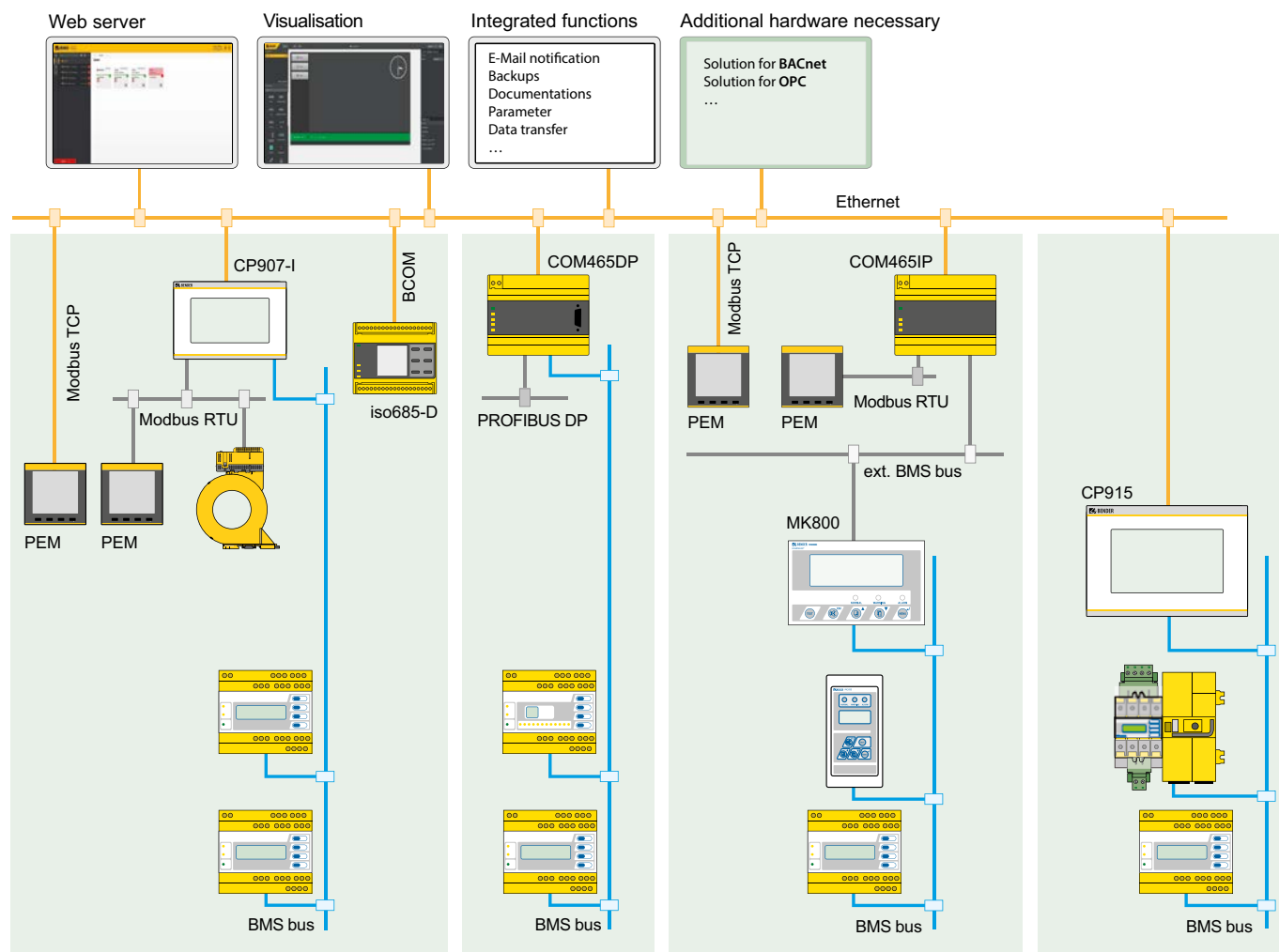
Technical data (continuation)

Used ports			
53	DNS (UDP/TCP)		
67, 68	DHCP (UDP)		
80	HTTP (TCP)		
123	NTP (UDP)		
161	SNMP (UDP)		
162	SNMP TRAPS (UDP)		
443	HTTPS (TCP)		
502	MODBUS (TCP)		
4840	OPCUA (TCP)		
5353	MDNS (UDP)		
48862	BCOM (UDP)		
Digital inputs (1-12)			
Number	12		
Galvanic separation	yes		
Operating mode	selectable for each input: active-high or active-low		
Factory setting	active-high		
Voltage range (high)	AC/DC 10...30 V		
Voltage range (low)	AC/DC 0...2 V		
Max. current per channel (at AC/DC 30 V)	8 mA		
Connection push-in terminal	(1-1) (2-2) (3-3) ... (12-12)		
Maximum cable length	< 1000 m		
Switching elements			
Number	1 relay		
Operating mode	N/C operation or N/O operation		
Function	programmable		
Electrical endurance under rated operating conditions, number of cycles	10,000		
Contact data acc. to IEC 60947-5-1:			
Utilisation category	AC-13	AC-14	DC-12
Rated operational voltage	24 V	24 V	24 V
Rated operational current	2 A	2 A	2 A
Minimum contact load (relay manufacturer's reference)	10 µA / 10 mV DC		
Connection	plug-in terminal (11;12;14)		
Buzzer			
Buzzer message	can be acknowledged, adoption of characteristics of new value		
Buzzer interval	configurable		
Buzzer frequency	configurable		
Buzzer repetition	configurable		
Audio			
Line IN	not used		
Line OUT	Output to a STEREO playback device via 3.5 mm jack plug		
Cable length	< 3 m		

Device connections	
Terminal block (L1; N; PE) (for CP915-I only)	
Conductor sizes	AWG 20...12
Stripping length	10...11 mm
rigid/flexible	0.5...4 mm²
flexible with ferrule with/without plastic sleeve	0.5...4 mm²
Multiple conductor, flexible with TWIN ferrule with plastic sleeve	0.5...4 mm²
Plug-in terminal (A1/+;A2/) (11;12;14)	
Conductor sizes	AWG 24...12
Stripping length	10 mm
rigid/flexible	0.2...2.5 mm²
flexible with ferrule, with/without plastic sleeve	0.25...2.5 mm²
Multiple conductor, flexible, with TWIN ferrule with plastic sleeve	0.5...1.5 mm²
Plug-in terminal (I1...12), (k1...k12), (...MB), (...BMS)	
Conductor sizes	AWG 24...16
Stripping length	10 mm
rigid/flexible	0.2...1.5 mm²
flexible with ferrule without plastic sleeve	0.25...1.5 mm²
flexible with ferrule with plastic sleeve	0.25...0.75 mm²
Environment/EMC	
EMC	IEC 61326-1
Operating temperature CP907-I	-10...+55 °C
Operating temperature CP915-I	-5...+40 °C
Operating altitude	≤ 2000 m AMSL
Rel. humidity	≤ 98 %
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
Classification of mechanical conditions acc. to IEC 60721:	
Stationary use (IEC 60721-3-3) CP907-I only	3M11
Stationary use (IEC 60721-3-3) CP915-I only	3M10
Transport (IEC 60721-3-2)	2M4
Long-term storage (IEC 60721-3-1)	1M12
Other	
Operating mode	continuous operation
Mounting	display-oriented
Degree of protection, front	IP54
Degree of protection, enclosure	IP20
Flammability class	UL 94V-0
Device dimensions	
CP907-I (W x H x D)	226 x 144 x 78 mm
CP915-I (W x H x D)	505 x 350 x 95 mm
Documentation number	D00418
Weight	
CP907-I	approx. 1.1 kg
CP915-I	approx. 6.1 kg

() * = factory settings

Application example



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BENDER Group