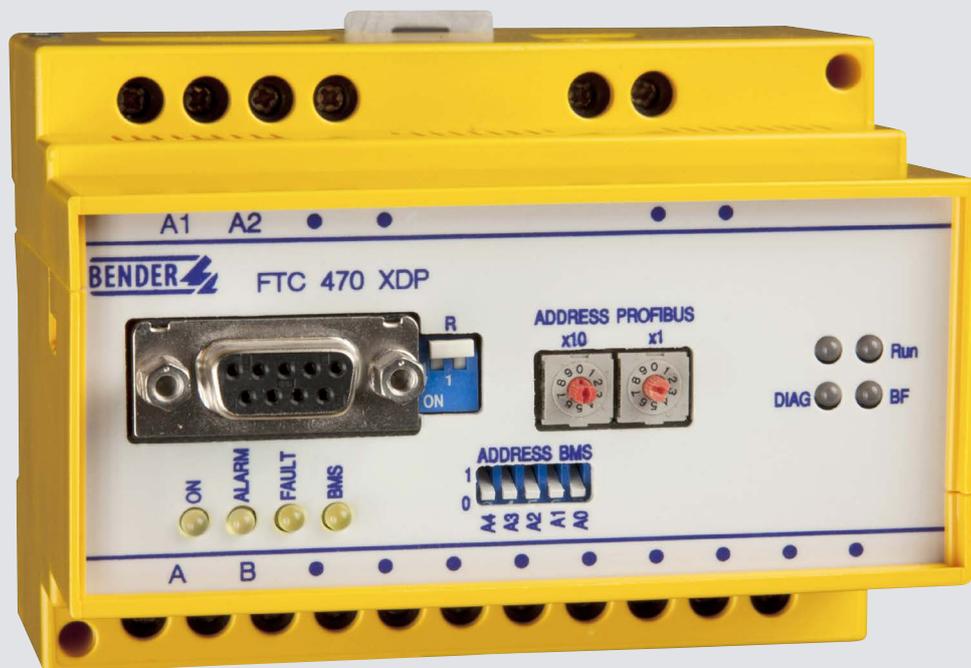


# Protocol converter FTC470XDP

Protocol converter to interface the BMS bus to the PROFIBUS DP



# Protocol converter FTC470XDP

Protocol converter to interface the BMS bus to the PROFIBUS DP



FTC470XDP

## Device features

- PROFIBUS DP interface for communication with higher-level systems (building management systems or visualisation software)

## Product description

The protocol converter FTC470XDP is designed to transmit data from the BMS bus to the PROFIBUS DP and vice versa. In this way, information from communication-capable Bender products, such as EDS, RCMS or MEDICS® systems can be integrated into a PROFIBUS DP system. Programming or adaptations on the PROFIBUS DP side have to be carried out by the user.

## Application

- Conversion of BMS data into PROFIBUS DP data
- Querying and setting communication-capable Bender devices, such as RCMS, EDS and MEDICS® systems
- Transmitting all BMS data to PROFIBUS DP
- Displaying Bender data on PROFIBUS-capable software
- Reactions on the PROFIBUS side to BMS events
- Connection to PROFIBUS-capable building services management systems
- Reactions on the BMS side to events on the PROFIBUS DP side

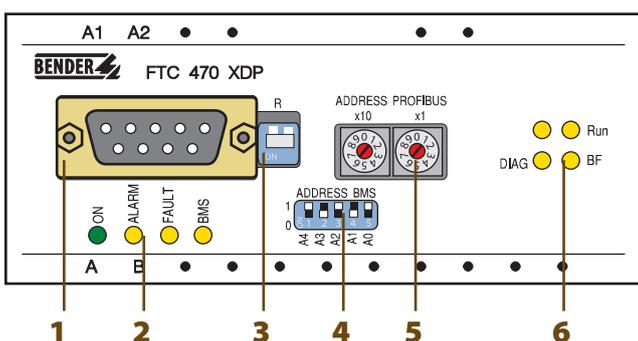
## Function

The protocol converter FTC470XDP is incorporated into the PROFIBUS DP system as a slave and into a BMS system either as a master or a slave. The PROFIBUS DP master, e.g. a personal computer utilising a PROFIBUS card or a PLC must be programmed in a way that the protocol converter is capable of triggering the respective requests and getting replies. For appropriate programming, the user is required to have a thorough PROFIBUS DP knowledge. The necessary documentation together with the entire command syntax is a component of the FTC470XDP manual.

## Approvals

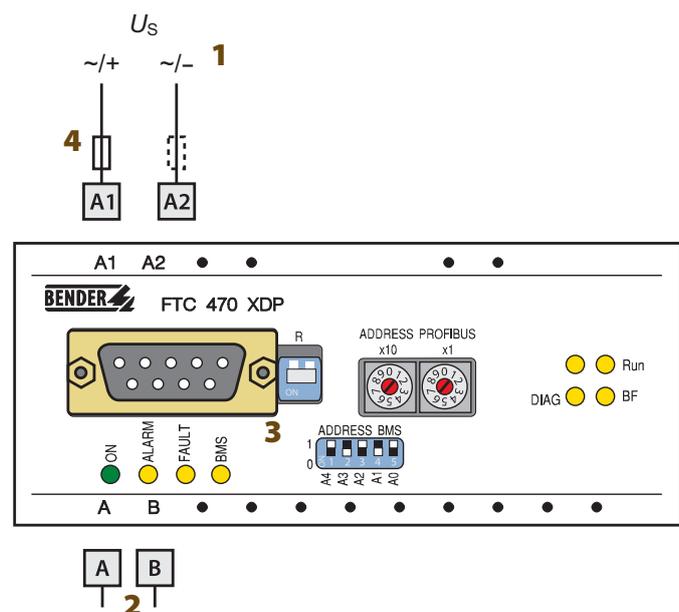


## Operating elements



- 1 - Socket for PROFIBUS cable: 9-pin SUB-D
- 2 - BMS bus status indication
- 3 - Micro switch for PROFIBUS DP termination: "ON" = terminating resistor activated
- 4 - Switch for BMS bus address setting: 1...30
- 5 - Rotary switch for PROFIBUS DP address setting: 1...99
- 6 - PROFIBUS DP status indication

## Wiring diagram



- 1 - Supply voltage  $U_S = AC/DC 85...276 V$
- 2 - Connection BMS bus
- 3 - Modbus/RTU 9-pin SUB-D
- 4 -  $U_S$  see ordering information, 6 A fuse recommended

**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 $U_S$	AC 50...400 Hz, DC
Power consumption	≤ 12 VA

**Interfaces**

**BMS**

Interface/protocol	RS-485/BMS (internal)
Baud rate	9.6 kbit/s
Cable length	≤ 1200 m
Cable (twisted in pairs, one end of shield connected to PE)	recommended: J-Y(St)Y min. 2 x 0.8
Mode	master/slave
Connection	terminals A/B
Terminating resistor	120 Ω (0.25 W)
Device address, BMS bus	DIP switch 1...30
Alarm LEDs	ON/ALARM/FAULT/BMS

**PROFIBUS DP**

Interface/protocol	RS-485/PROFIBUS DP
Mode	PROFIBUS DP slave
Connection	9-pin SUB-D
Alarm LEDs	Run/DIAG/BF (bus error)
Baud rate	9.6 kbit/s...12 Mbit/s automatic recognition
Terminating resistor	DIP switch
Address assignment PROFIBUS DP	rotary switch, 1...99

**Environment/EMC**

EMC immunity	EN 61000-6-2
EMC emission	EN 61000-6-4
Classification of climatic conditions acc. to IEC 60721	
Stationary use	3K5
Transport	2K3
Long-time storage	1K4
Operating temperature	-10...+55 °C
Classification of mechanical conditions acc. to IEC 60721	
Stationary use	3M4
Transport	2M2
Long-time storage	1M3

**Connection**

Connection	screw-type terminals
Connection properties	
rigid/flexible/conductor sizes	0.2...4/0.2...2.5 mm <sup>2</sup> (AWG 22...12)
flexible with ferrule, without/with plastic sleeve	0.25...2 mm <sup>2</sup>
Stripping length	8 mm
Tightening torque	0.5 Nm

**Other**

Operating mode	continuous operation
Mounting	any position
Degree of protection, internal components (IEC 60529)	IP30
Degree of protection, terminals (IEC 60529)	IP30
Type of enclosure	X470
Screw mounting	2 x M4
DIN rail mounting acc. to	IEC 60715
Flammability class	UL94 V-0
Documentation number	D00111
Weight	≤ 360 g

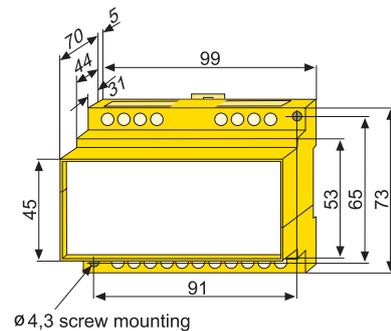
**Ordering information**

Supply voltage <sup>1)</sup> $U_S$	Type	Art. No.
AC/DC	FTC470XDP	B 9506 1000
85...276 V		

<sup>1)</sup> Absolute value

**Dimension diagram X470**

Dimensions in mm





**Bender GmbH & Co. KG**

P.O. Box 1161 • 35301 Gruenberg • Germany  
Londorfer Strasse 65 • 35305 Gruenberg • Germany  
Tel.: +49 6401 807-0 • Fax: +49 6401 807-259  
E-Mail: [info@bender.de](mailto:info@bender.de) • [www.bender.de](http://www.bender.de)



**BENDER Group**