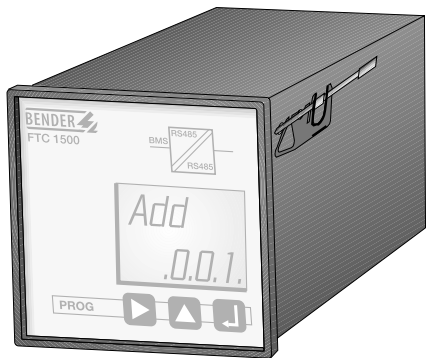


Accessories

Device type	FTC1500	FTC470XDP	DI-1	RK170
Insulation coordination acc. to IEC 60664-1:				
Rated insulation voltage	AC 400 V	AC 250 V	-	-
Rated impulse withstand voltage/contamination level	4 kV/3	2.5 kV/3	3 kV/3	-
Voltage ranges				
Nominal voltage range U_n	-	-	-	-
Supply voltage U_s	see TGH1309	AC 85...275 V	DC 10 ... 30 V	DC 20...297 V / AC 20...120 Hz 19 ... 264 V
Operating range of U_s	0.85 ... 1.15 U_s	-	-	-
Max. power consumption	10 VA	8 VA	1 W	3 VA
Inputs				
Current input	-	-	-	DC 0 ... 400 μ A
Max. admissible current	-	-	-	DC 50 mA
Rated input resistance	-	-	-	approx. 2.5 k Ω
Interface	RS485	RS485	RS485	-
Outputs				
Interface	RS485	RS485	RS485	-
Baudrate (bps)	1200 ... 9600 adjustable	9.6 kbit/s ... 12 Mbit/s	1200 ... 115,200 adjustable	-
Outputs	-	-	-	2 outputs with common connection
			to earth	
Voltage output	-	-	-	DC 0 ... 10 V
Max. open circuit voltage	-	-	-	DC 12 V
Min. Load	-	-	-	1 k Ω
Current output	-	-	-	DC 0/4 ... 20 mA
Max. short circuit current	-	-	-	DC 30 mA short-circuit proof
Max. load	-	-	-	500 Ω
Accuracy at $T_u = 23^\circ\text{C}$	-	-	-	Class 0.2
Temperature coefficient	-	-	-	0.025% / $^\circ\text{C}$
Rated rise time T 0.9	-	-	-	50 ms
Test of the Electromagnetic Compatibility -EMC- acc. to EC directives, test data see "Annex"	yes	yes	yes	yes
General data				
Ambient temperature, during operation	-10 $^\circ\text{C}$... +55 $^\circ\text{C}$	-10 $^\circ\text{C}$... +55 $^\circ\text{C}$	-0 $^\circ\text{C}$... +70 $^\circ\text{C}$	-0 $^\circ\text{C}$... +50 $^\circ\text{C}$
Storage temperature range	-20 $^\circ\text{C}$... +55 $^\circ\text{C}$	-20 $^\circ\text{C}$... +55 $^\circ\text{C}$	-25 $^\circ\text{C}$... +85 $^\circ\text{C}$	-20 $^\circ\text{C}$... +70 $^\circ\text{C}$
Climatic class acc. to IEC 60721 (except condensation and formation of ice)	3K5	3K5	3K5	3K5
Operating mode	continuous operation	continuous operation	continuous operation	continuous operation
Mounting	any position	any position	any position	any position
Connection	modular terminals	modular terminals	modular terminals	modular terminals
Cross sectional area of connecting cable, single wire	0.2...2.5 mm ²	0.2...4 mm ²	0.5...2.5 mm ²	0.5...2.5 mm ²
Cross sectional area of connecting cable, flexible	0.2...2.5 mm ²	0.2...2.5 mm ²	0.5...2.5 mm ²	0.14...1.5 mm ²
Protection class acc. to DIN EN 60529				
Built-in components	IP 54	IP 30	IP 30	IP 40
Terminals/with terminal covers	IP 20	IP 20	IP 20	IP 20
Type of casing/dimension diagram	flush-type enclosure	X470	DI-1	RK170
Screw fixing	-	M4	-	-
DIN rail mounting	-	DIN EN 50022	DIN EN 50022	DIN EN 50022
Flammability class	UL94V-1	UL94V-0	UL94V-0	UL94V-0
Data sheet/technical manual	TGH1309	TGH1358	109007	109006
Weight max.	900 g	350 g	150 g	200 g

Device type	SM0480-12		
Insulation coordination acc. to IEC 60664-1:			
Rated insulation voltage	AC 250 V		
Rated impulse withstand voltage/contamination level	4 kV/3		
Voltage ranges			
Supply voltage U_s	see nameplate		
Operating range of U_s (AC 230 V)	0.85 ... 1.15 U_s		
Max. power consumption	3 VA		
Inputs			
Input	RS485		
Outputs			
Outputs	12 relays		
Switching components per relay	1 NO contact		
Rated contact voltage	AC 250 V / DC 300 V		
Limited making capacity	AC/DC 5 A		
Limited breaking capacity	2 / 0.2 A		
Minimum current	5 mA		
Protective separation up to 230 V in accordance with	prEN 50 178		
Test of the Electromagnetic Compatibility-EMC- acc. to EC directives, test data see "Annex"	yes		
General data			
Ambient temperature, during operation	-10°C ... +55°C		
Storage temperature range	-40°C ... +70°C		
Climatic class acc. to IEC 60721			
(except condensation and formation of ice)	3K5		
Operating mode	continuous operation		
Mounting	any position		
connection	modular terminals		
Cross sectional area of connecting cable, single wire	0.2...4 mm ²		
Cross sectional area of connecting cable, flexible	0,2...2,5 mm ²		
Protection class acc. to DIN EN 60529			
Built-in components	IP 30		
Terminals/with terminal covers	IP 20		
Type of enclosure/dimension diagram	X480		
Screw fixing	M4		
DIN rail mounting	DIN EN 50022		
Flammability class	UL94V-0		
Data sheet/technical manual	108005		
Weight max.	350 g		



Product description

The RCMS470 and EDS470 system (residual current location system) communicates via the RS485 bus using the BENDER BMS protocol. If such a system is to be connected with the JBUS/MODBUS, the protocol converter FTC1500 is necessary.

The protocol converter FTC1500 is a communication bridge between an RS485 bus using the JBUS/MODBUS protocol and a RS485 bus using the BENDER BMS protocol. That allows the RCMS470 system to be integrated into the JBUS/MODBUS environment.

Insulation fault location systems (EDS470/473 and A-ISOMETER® IRDH265/365, catalogue part 1) can also be connected to the JBUS/MODBUS by means of the FTC1500.

Used in combination with an RCMS470 system via the JBUS/MODBUS provides the following functions:

- scanning for the number of subcircuits with alarm of each RCMS470-12;
- status interrogation of each channel of each RCMS470-12;
- scanning and parameterization of the RCMS470-12.

Application

- Communication between RCMS470 systems and JBUS/MODBUS nodes.
- Can also be connected to EDS470 and EDS473 systems as well as to A-ISOMETER IRDH265/365.
- Connection of RCMS systems to JBUS/MODBUS compatible software.
- Bidirectional communication between both protocols.
- Scanning and parameterization of the RCMS470 system.
- Recording of the measuring results of the RCMS470 system.

Ordering details

Type	Supply voltage Us	Art. No.
FTC1500	DC 24...60 V/ AC 110/230/400 V	B 9501 2012

For detailed technical information refer to the technical manual TGH1309.

Wiring diagram

