3516 240 013 b

1. Safety Information

Comply with ESD protection measures.ESD.

Avoid short-circuits on the PCB.

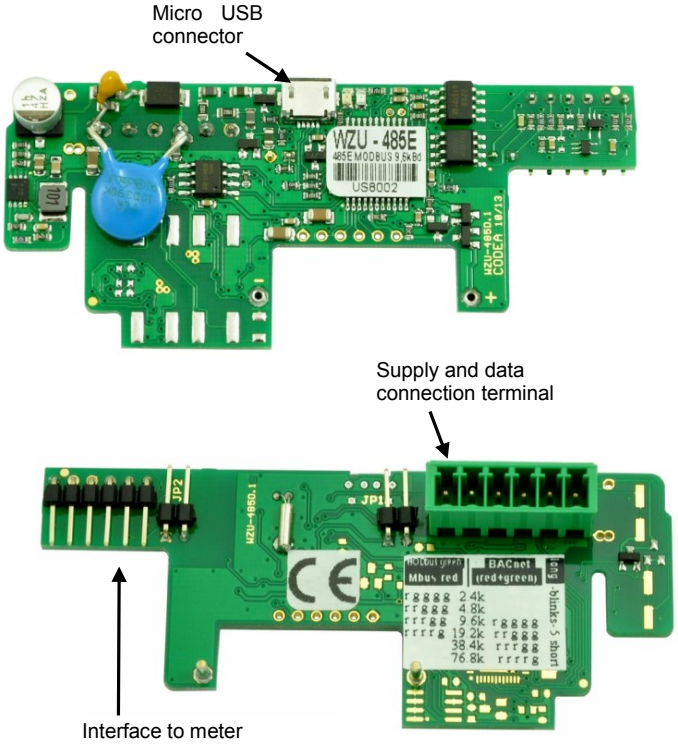
When connecting, turn off the mains supply.

Route connecting cables only through the bush sleeves of the meter.

Do not cut the bush sleeves shorter than necessary because this may lower the degree of protection.

2. Description of function

WZU-485E-BAC is an add-on communication module for the following types of meters: T550 (UH50…) (firmware 5.15 and higher) and T550 (UC50…).
The module is intended and preconfigured for data transmission using the BACnet MS/TP (RS485) protocol.



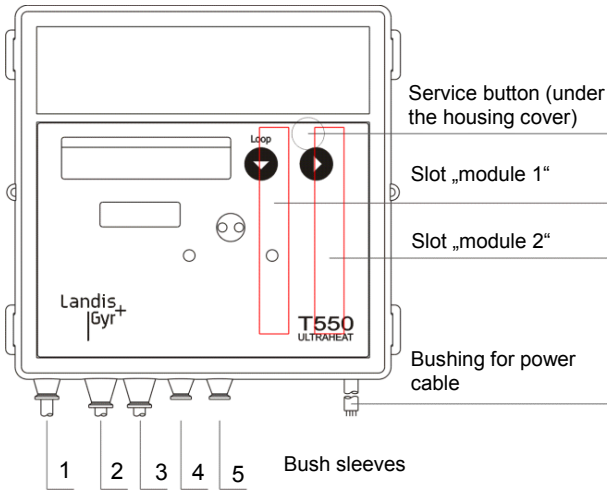
Note: An external power pack must power the module (not included in the module's scope of delivery).

3. Items delivered

1. Communication module WZU-485E-BAC
2. Screw connector for RS485 interface and power supply
3. Jumper bridge (red)

4. Installation and assembly

Up to 2 communication modules can be installed.



Note: WZU-485E-BAC may only be combined with an M-Bus module in slot "module 2". Only one of them may be operated in fast read-out mode with an update interval shorter than 15 min.

Installing the communication module

The communication modules are connected via a 6-pole reaction-free connector so that installation or replacement is possible at any time.
To install a communication module proceed as follows:

- Press the 4 side lugs of the housing cover inwards and remove the cover.
- Put the communication module into the correct position.

Note: The module WZU-485E-BAC may only be fitted at slot "module 1".

- Place the communication module carefully in both guide slots and push it in.
- Wait for the module indication on the meter display (Loop 4: "*Modul1 MI / G4*").
- To connect the power supply and the communication cable of WZU-485E-BAC, open two sleeves matching the cross section of the respective cables.

Note: Open the cable sleeves in such a way that they enclose the cable tightly.

- Guide cables through the bush sleeves from the outside.
- Connect the the power supply to terminals 24V and GND, and the communication cable to terminals A+ and B-.

Note: For the connection to the screw terminal, a slot screwdriver with 2.5 mm tip is needed.

Attention: Connecting the power supply to terminals A and B can cause permanent damage to the module.

- Insert the screw connector into its counterpart on the communication module.
- Secure the cables with the metal strain relief.

Note: The cables used should be as short as possible and their length must not exceed 10 m.

Note: The jumper bridge must not be inserted during operation.

5. LCD display

Note: Both display range and data displayed can differ from this description depending on the meter parameterization. Certain button functions can also be blocked.

Service loop „LOOP 4“

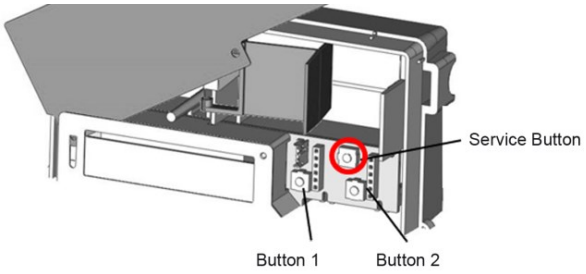
LOOP 4	Head of the loop
…	…
Modul 1 MI	Type “MI / G4“ in slot “module 1“
Modul 1 G4	
AP 1 0	M-Bus Primary address for slot “module 1”

6. Parameterization

6.1 BACnet MS/TP addressing

The communication module can be addressed with MAC addresses from 1 – 127. The MAC address corresponds to the meter’s M-Bus primary address for module slot 1 (AP1).

6.2 Setting the primary M-Bus address on the meter display



Call up parameterization mode

Proceed as follows to call up the parameterization operation:

- Hold the service button for about 3 s, until PRUEF---- is displayed.
- Press button 1 to switch the display until PArA----- is displayed.
- Press button 2 to switch the display until Ma is displayed.

Entering the primary M-Bus address

Proceed as follows to enter the primary M-Bus address:

- Press button 1 to switch the display until AP 1 0 (primary address for module slot 1) is displayed.
- Press button 2 to activate the parameter to be changed.
- Press button 2 to change the flashing value.
- Press button 1 to enter the set value.

The next point to the right flashes. Repeat the steps above for all points.

- Enter an address in the range from 1 – 127.

The LCD shows a star symbol briefly to confirm.
If the inputs are incorrect, parameterization can be repeated.

Completing address parameterization

Proceed as follows to leave the parameterization operation:

- Press button 1 until No------- is displayed.
- Press button 2.

Note: The primary M-Bus address can also be set with the Service Software UltraAssist.

6.3 Parameter setting via USB interface

Requirements:

- Micro-USB to USB cable
- Computer with Windows OS
- Software “WZU-485 Configuration Tool”; can be downloaded from www.landisgyr.eu

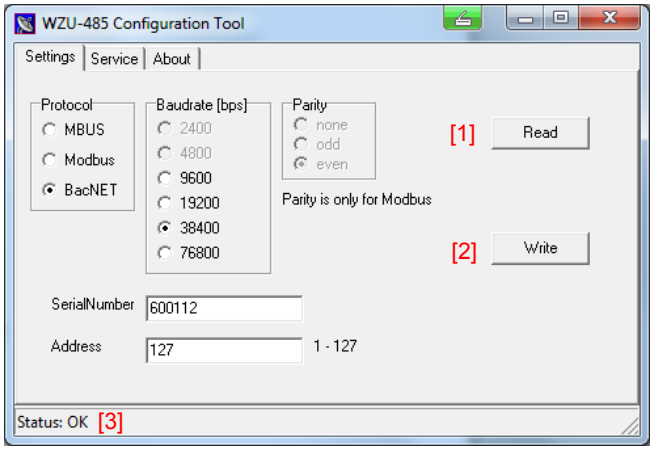
Attention: The module’s power supply must be switched off before the module is connected to a PC via USB cable.

Note: The micro-USB interface is used for setting communication protocol and communication speed only.

In case the default parameters are suitable for the BACnet system, no parameterisation is needed.

In other cases, proceed as follows:

- Disconnect the screw connector.
- Connect the module to a PC via micro-USB to USB cable
- Start the software “WZU-485 Configuration Tool”.



- Press the “Read” button [1].

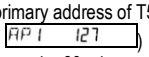
The software reads and displays the current parameter settings of the module.

- Make the necessary settings
- Press the “Write” button [2].
- After successful parameterisation, “Status OK” is displayed [3].
- Close the software.
- Disconnect the USB cable from the module.
- Insert the screw connector.
- Close the meter’s cover and affix the seals.

Note: For battery-powered meters: Operating the communication module with a read-out interval of less than 10 minutes requires a D-cell battery for 6 years.

7. Technical data

General information

Communication protocol	BACnet MS/TP (RS485) acc. to ASHRAE 135 and ISO 16484-5
Supported BACnet Services	BACnet Application Specific Controller (B-ASC) BACnet Master Mode
BACnet address range	1 – 127
Transmission rate	9600 to 76800 bps
Communication address	M-Bus primary address of T550 (Loop 4: )
Data refreshing	Stand-by mode: 60 min In operation: After every data request, up to 10s

Default settings

Transmission rate	38400 bps
Communication address (T550)	0

RS485 information

HW network connection	RS485: A+, B-, GND communication signal inputs (A, B) are protected against short-term (pulse) overload
Bus termination	use external resistor (120 Ohm)

Power supply

Alternating current	permissible range AC 16...28 V
Direct current	permissible range DC 10...32 V
Consumption	<50mA (typically <20 mA / 24 V)
Recommended fuse	fuse T 100 mA
Galvanic Isolation	
From the meter	yes
From the RS485 network	no

8. Supported BACnet objects

ID	Name	Note	Units	Discription
last 6 digits of customer number	UH50-RS485		dimensionless	Device Instance Number
AI-0	Serial number		dimensionless	Analog Input
AI-1	Heat Energy	Accumulated energy (Standard register)	kWh / MWh; MJ / GJ corresponding to meter LCD	Analog Input
AI-2	Cold Energy	Accumulated energy (Tariff register 1) (Cooling register for combined heat and cooling meters)	kWh / MWh corresponding to meter LCD	Analog Input
AI-3	Volume	Accumulated volume	m³	Analog Input
AI-4	Flow	Actual flow	m³/h	Analog Input
AI-5	Power	Actual power	kW	Analog Input
AI-6	Pulse input 1 accumulated	(not used)	m³	Analog Input
AI-7	Pulse input 2 accumulated	(not used)	m³	Analog Input
AI-8	Info code	0=No error 3=Internal errors (F3, F4, F7, F8, F9) 5=Flow rate error (F0, F9, F4) 6=Interruption temperature sensor hot side (F1) 7=Short Circuit temperature sensor hot side (F5) 8=Interruption temperature sensor cold side (F2) 9=Short Circuit temperature sensor cold side (F6)	dimensionless	Analog Input
AI-9	Flow Temperature	Temperature hot side	°C	Analog Input
AI-10	Return Temperature	Temperature cold side	°C	Analog Input
AI-11	Differential temperature		K	Analog Input

9. Supported BACnet Interoperability Building Blocks (BIBBs)

9.1 Data Sharing

BIBB	BACnet service
DS-RP-B	Read Property-B
DS-RPM-B	Read Property Multiple-B
DS-WP-B	Write Property-B

9.2 Device Management

BIBB	BACnet service
DM-DDB-B	Dynamic Device Binding-B
DM-DOB-B	Dynamic Object Binding-B
DM-DCC-B	Device Communication Control-B
DS-RPM-B	Reinitialize Device-B

Landis+Gyr GmbH
Humboldtstr. 64
90459 Nürnberg
Germany