

TBR-P1-MBUS

User's manual



UM_714063_b_TBR-P1-MBUS-AM550.odt





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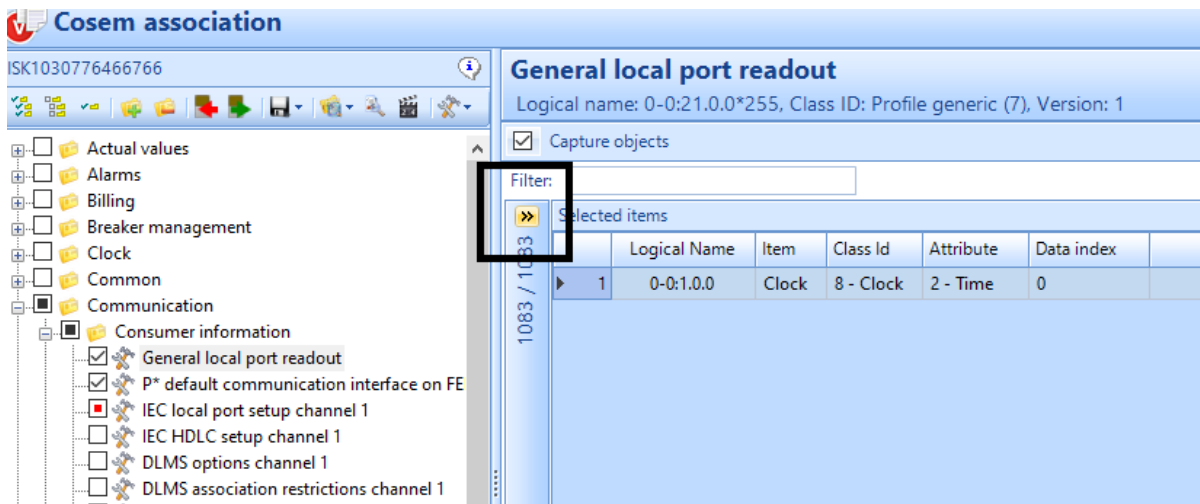
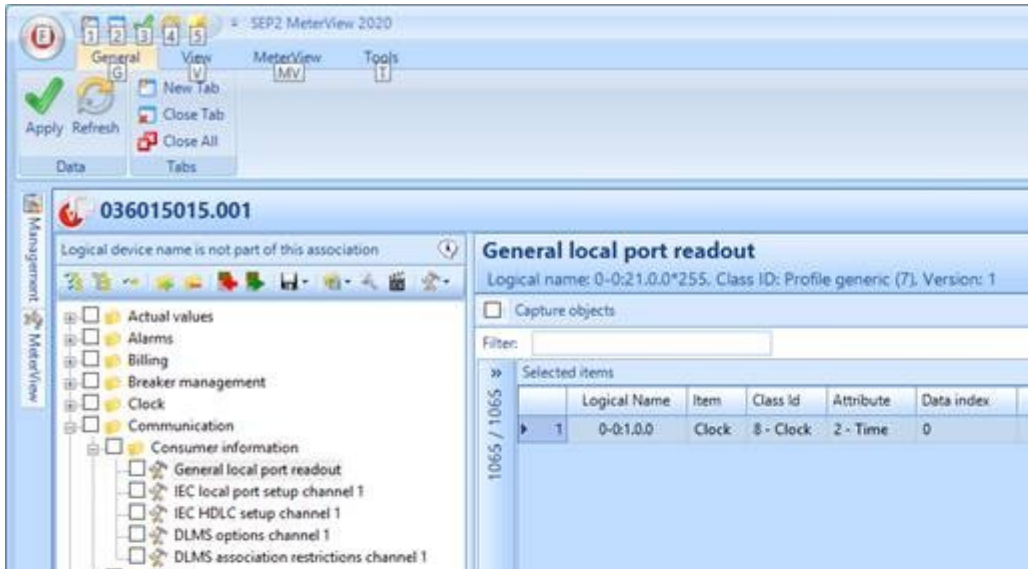
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1. Electricity meter setup

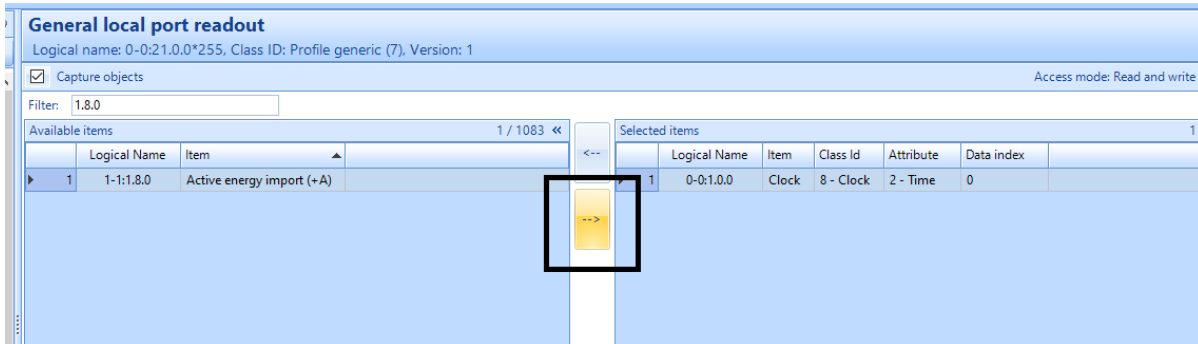
1. Register configuration

Go to the node called "Communication" => "consumer information" => "General local port readout" :





Search the register's code and clic on the arrow :



The meter must be configured with those 11 registers :

Selected items						11
	Logical Name	Item	Class Id	Attribute	Data index	
1	0-0:1.0.0	Clock	8 - Clock	2 - Time	0	
2	1-1:1.8.0	Active energy import (+A)	3 - Register	2 - Value	0	
3	1-1:1.8.1	Active energy import (+A) Rate 1	3 - Register	2 - Value	0	
4	1-1:1.8.2	Active energy import (+A) Rate 2	3 - Register	2 - Value	0	
5	1-0:32.7.0	Instantaneous voltage L1	3 - Register	2 - Value	0	
6	1-0:52.7.0	Instantaneous voltage L2	3 - Register	2 - Value	0	
7	1-0:72.7.0	Instantaneous voltage L3	3 - Register	2 - Value	0	
8	1-0:31.7.0	Instantaneous current L1	3 - Register	2 - Value	0	
9	1-0:51.7.0	Instantaneous current L2	3 - Register	2 - Value	0	
10	1-0:71.7.0	Instantaneous current L3	3 - Register	2 - Value	0	
▶ 11	0-0:96.1.0	Device ID 1, manufacturing number	1 - Data	2 - Value	0	



2. Speed configuration

Under "IEC local port setup channel 1", configure the device with :

The screenshot shows the 'Cosem association' configuration window for device ISK1030774400587. The left pane displays a tree view of configuration categories, with 'IEC local port setup channel 1' selected under 'Consumer information'. The right pane shows the configuration for 'IEC local port setup channel 1' with the following settings:

- Logical name: 0-1:20.0.0*255, Class ID: IEC local port
- Communication mode
- 0 - Protocol according to IEC 62056-21 (1107, modes A...E)
- Default baud rate
- 9600
- Proposed baud rate
- 9600
- Response time
- 0 - 20ms
- Device address
- 00000000
- Settings password

Apply the changes.



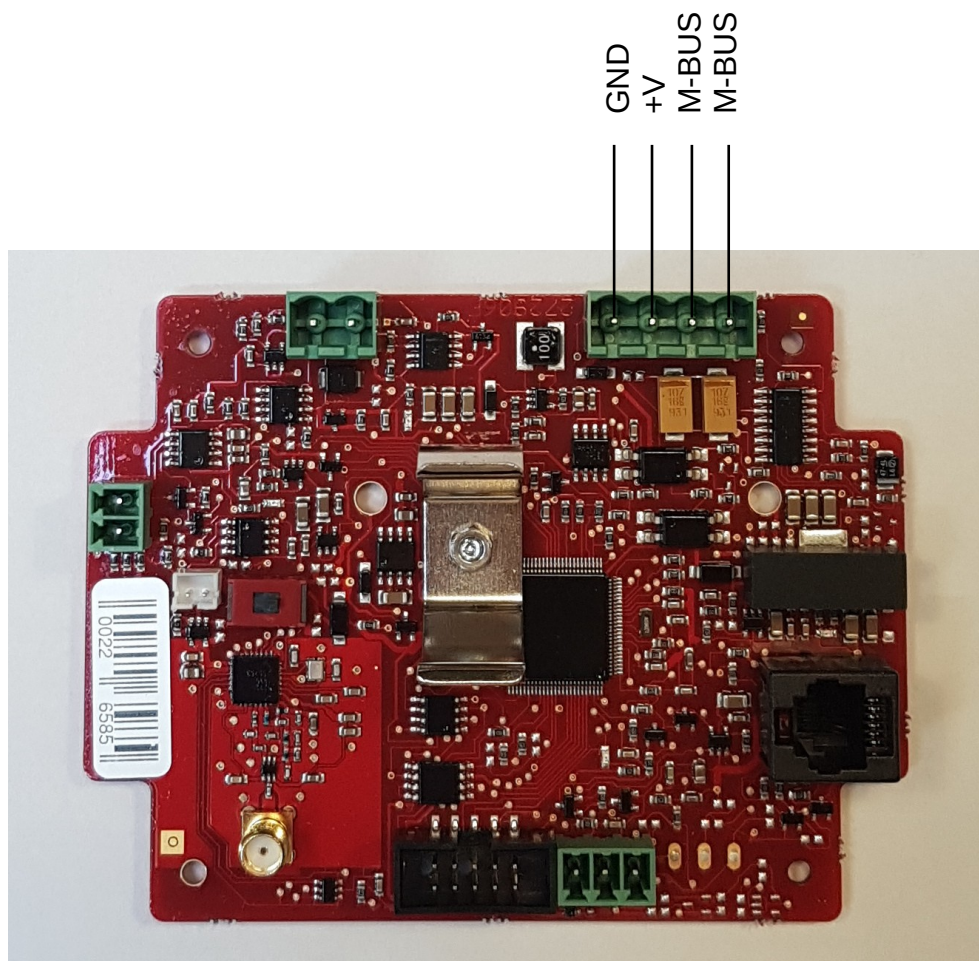
2. TBR setup

1. P1 port

Connect the RJ12 connector into the electricity meter's P1 port.

2. M-BUS and power supply

Connect the M-BUS master (polarity independent) and the +24VDC power supply :





3. Axiome Basic

Connect the INF-USB-RJ12 cable to the TBR and to the PC. This should automatically install the drivers. If it's not the case, go to www.tetraedre.com => download => USB drivers and install them manually.

3. Test

1. P1 port

In Axiome Basic, select the corresponding port COM and clic on "connect".
Clic on "Get Status", the fields must automatically filled themselves.

Under the "Acquisitions" tab, clic on "start Acquisition now". This will take some time before displaying a message like this:

```
START : ACQnow start
INFO : BASICIO stringout="..\ISK5\2M550T-2006...0-1.0.0(200516144925"
      <a203 s="246" channel_id="48" mode_id="3" timestamp="1606136309" txt="..\ISK5\2M550T-2006...0-
0:1.0.0(200516144925)..1-1:1.8.0(000004.482*kWh)..1-1:1.8.1(000004.482*kWh)..1-1:1.8.2(000000.000*kWh)..1-
0:32.7.0(232.8*v)..1-0:52.7.0(000.0*v)..1-0:72.7.0(000.0*v)..1-0:31.7.0(000*A)..1-0:51.7.0(000*A)..1-0:71."
hexa="0D0A2F49534B355C324D353530542D323030360D0A0D0A302D303A312E302E3028323030353136313434393235290D0A312D313A312E
382E30283030303030342E3438322A6B5768290D0A312D313A312E382E31283030303030342E3438322A6B5768290D0A312D313A312E382E32
283030303030302E3030302A6B5768290D0A312D303A33322E372E30283233322E382A56290D0A312D303A35322E372E30283030302E302A56
290D0A312D303A37322E372E30283030302E302A56290D0A312D303A33312E372E30283030302A41290D0A312D303A35312E372E3028303030
2A41290D0A312D303A37312E" crc="302E" crc_calculated="52EF" error="1"/>
      <a166 v="76466766" crc="ok"/>
      <a144 v="4.482" crc="ok"/>
      <a154 v="4.48" crc="ok"/>
      <a149 v="0.00" crc="ok"/>
      <a150 v="232.80" crc="ok"/>
SUCCESS : Tmaster : terminated SEQUENCE_SUCCESS
```

If the message looks like this, the meter might be misconfigured, please double check the settings :

```
START : ACQnow start
      <a166 v="4294967295" crc="ok"/>
      <a144 v="-NAN" crc="ok"/>
      <a154 v="-NAN" crc="ok"/>
      <a149 v="-NAN" crc="ok"/>
      <a150 v="-NAN" crc="ok"/>
SUCCESS : Tmaster : terminated SEQUENCE_SUCCESS
```



2. M-BUS slave

For example using MBsheet, read address 1:

Read-out info

1 of 1 slaves read successfully.

OK

Location	Addr.	ID	Baud	Man	Version	Medium	Data sets	COM port
	1	00000000	2400					COM7

Slaves: 1 COM-port: COM7
 Search baud rate(s): 2400
 GSM-modem (8N1)

SND_NKE Search_addr.
 Multi Tel. Search_id
 App. Res. Read M-Bus Stop
 Time interval [s]: 15 Poll M-Bus
 Status: idle Log M-Bus Modem
 Write log to file IDS+
 MDK

Location	Date	Time	Addr.	ID-no.	Man	No.	Value	Unit	Description	Type	Module	S
	23.11.20	16:19:53	1	76466766	TTR	1	76466766		fabrication #	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	2	4.482	kWh	energy	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	3	4.482	kWh	energy	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	4	0.000	kWh	energy	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	5	235.400	bar	pressure	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	6	\$00		M-Bus state			

Print slavelist Save slavelist Load slavelist Delete doubles CSV separator

Location	Date	Time	Addr.	ID-no.	Man	No.	Value	Unit	Description	Type	Module	S
	23.11.20	16:19:53	1	76466766	TTR	1	76466766		fabrication #	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	2	4.482	kWh	energy	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	3	4.482	kWh	energy	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	4	0.000	kWh	energy	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	5	235.400	bar	pressure	instant.	0	0
	23.11.20	16:19:53	1	76466766	TTR	6	\$00		M-Bus state			

Print data Save data Load data Clear data Import Register Zoom data

```

10 7B 01 7C 16
RX-buffer:
68 2D 2D 68 08 01 72 66 67 46 76 92 52 99 02 02 00 00 00 0C 78 66 67 46 76 05 06 8B 6C 8F 40 05 06
8B 6C 8F 40 05 06 00 00 00 00 05 68 66 66 6B 43 29 16
    
```

Clear log Exit

Read all slaves on M-Bus