

# Serial+Ethernet gateways between MBUS and MODBUS/ASCII

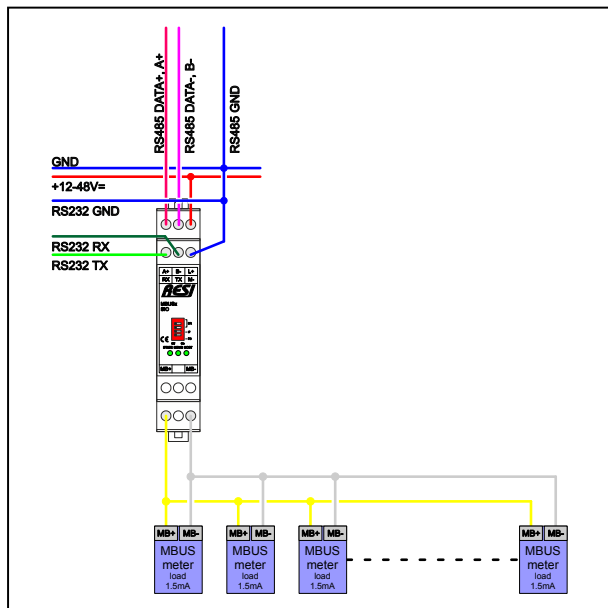
## RESI-MBUSx-SIO, RESI-MBUSx-ETH

Powerful gateways to read-out data from smart meter with MBUS interface via MODBUS or ASCII protocol

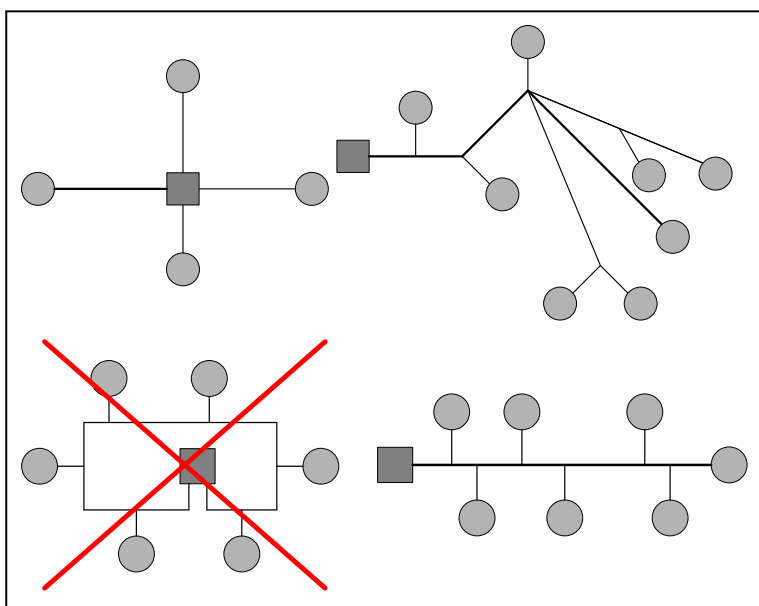
Our MBUS gateways are designed to read-out smart meter data like volume, power or energy via MBUS protocol from the field. The gateways communicate with your host via standard MODBUS protocol (RTU or TCP) or via simple ASCII text protocol. The communication is handled via serial interface (RS232 or RS485) or via Ethernet. For easy configuration we offer a free software MODBUSConfigurator to configure the mapping between smart meters and MODBUS/ASCII. On the MBUS side, the MBUS interface is galvanic-ally insulated from the serial or Ethernet interface. The smart meters can be connected in line, tree or star topology with a maximum cable length of 10km.



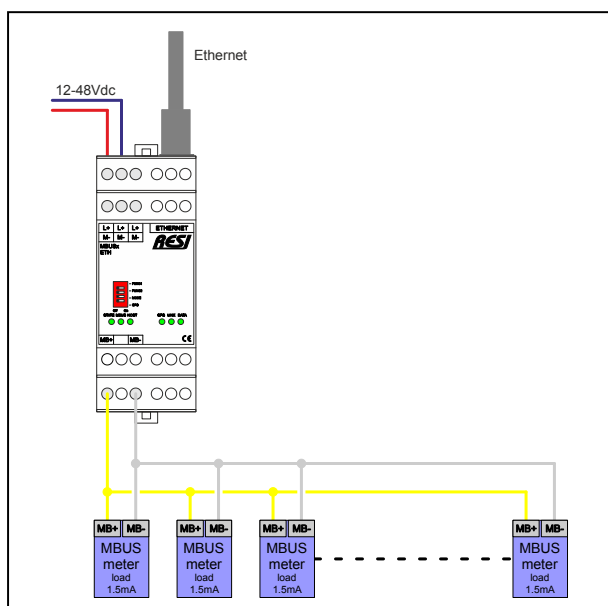
Our family of MBUS gateways



Schematics MBUS gateways with RS232 or RS485 interface



MBUS cabling topologies



Schematics MBUS gateways with Ethernet interface

### HIGHLIGHTS

- Read-out of data of up to 64 smart meter with MBUS protocol
- MODBUS or ASCII protocol
- Easy configuration & test of mapping between MODBUS and MBUS data
- MBUS cable length: max. 10km
- RESI-MBUSx-SIO: Serial interface: RS232 or RS485
- RESI-MBUSx-ETH: Ethernet interface
- Power supply: 12-48Vdc

SERIAL GATEWAYS	ETHERNET GATEWAYS	
RESI-MBUS2-SIO	RESI-MBUS2-ETH	2 meter, 40 register
RESI-MBUS8-SIO	RESI-MBUS8-ETH	8 meter, 400 register
RESI-MBUS24-SIO	RESI-MBUS24-ETH	24 meter, 1000 register
RESI-MBUS48-SIO	RESI-MBUS48-ETH	48 meter, 1200 register
RESI-MBUS64-SIO	RESI-MBUS64-ETH	64 meter, 1200 register

# Serial+Ethernet gateways between MBUS and MODBUS/ASCII

## RESI-MBUSx-SIO, RESI-MBUSx-ETH

Powerful gateways to read-out data from smart meter with MBUS interface via MODBUS or ASCII protocol

**Local COM port settings**  
 Modbus unit: 255 Device: COM8 Stopbits: 1 stopbit IP-Address: Port:  
 Baudrate: 57600 Parity: NONE

**Device specific**  
 Download config Test connection Test  
 RESI-MBUS64-SIO MBUS to MODBUS/RTU converter for 64 meters (1200 registers)  
 Software version: 5.0.0 State: no error

**MODBUS**  
 Address: 255 Parity: NONE Start: 7 Baudrate: 2400  
 Baudrate: 57600 Stopbits: 1 stopbit End: 251 Query timeout: 65535 Poll timeout: 65535

MB Register	MBUS datatype	MB datatype	Content	MBUS index	MB value HEX	Current MB value	Meter name
4x0001	INT32[4]	FLOAT32	Volume 10 <sup>-3</sup> m <sup>3</sup>	0	MSW:0000.0000.LSW	0.0000.0.00000000000000E+0	Meter 20716229_2C2D_ID_16 [S]
4x0003	INT32[4]	FLOAT32	Volume 10 <sup>-3</sup> m <sup>3</sup> Accumulation of abs value only if negative contrib	1	MSW:0000.0000.LSW	0.0000.0.00000000000000E+0	Meter 20716229_2C2D_ID_16 [S]
4x0005	INT32[4]	UINT32	On time hours	2	MSW:0000.110A.LSW	4362.0x0000110A	Meter 20716229_2C2D_ID_16 [S]
4x0007	INT16[2]	FLOAT32	Volume flow 10 <sup>-3</sup> m <sup>3</sup> /h	3	MSW:0000.0000.LSW	0.0000.0.00000000000000E+0	Meter 20716229_2C2D_ID_16 [S]
4x0009	INT8[1]	FLOAT32	External temperature 10 <sup>0</sup> °C	4	MSW:41E9.0000.LSW	29.0000.2.80000000000000E-1	Meter 20716229_2C2D_ID_16 [S]
4x0011	INT16[2]	FLOAT32	Volume flow 10 <sup>-3</sup> m <sup>3</sup> /h	5	MSW:0000.0000.LSW	0.0000.0.00000000000000E+0	Meter 20716229_2C2D_ID_16 [S]
4x0013	INT16[2]	FLOAT32	Volume flow 10 <sup>-3</sup> m <sup>3</sup> /h	6	MSW:0000.0000.LSW	0.0000.0.00000000000000E+0	Meter 20716229_2C2D_ID_16 [S]
4x0015	INT8[1]	FLOAT32	External temperature 10 <sup>0</sup> °C	7	MSW:41A8.0000.LSW	21.0000.2.10000000000000E+1	Meter 20716229_2C2D_ID_16 [S]
4x0017	INT8[1]	FLOAT32	External temperature 10 <sup>0</sup> °C	8	MSW:41F0.0000.LSW	30.0000.3.40000000000000E+1	Meter 20716229_2C2D_ID_16 [S]
4x0019	INT8[1]	FLOAT32	External temperature 10 <sup>0</sup> °C Average media temperature	9	MSW:41C0.0000.LSW	24.0000.2.40000000000000E+1	Meter 20716229_2C2D_ID_16 [S]
4x0021	INT32[4]	DATE_TIME	Time&Date data type F	10	MSW:2488.3034.LSW	16:52 D.M.Y:08.04.20 ST:0 IV:0.0x24883034	Meter 20716229_2C2D_ID_16 [S]
4x0023	INT32[4]	FLOAT32	Volume 10 <sup>-3</sup> m <sup>3</sup> [U.0.T.0.S.1]	11	MSW:0000.0000.LSW	0.0000.0.00000000000000E+0	Meter 20716229_2C2D_ID_16 [S]
4x0025	INT16[2]	FLOAT32	Volume flow 10 <sup>-3</sup> m <sup>3</sup> /h[U.0.T.0.S.1]	12	MSW:0000.0000.LSW	0.0000.0.00000000000000E+0	Meter 20716229_2C2D_ID_16 [S]
4x0027	INT16[2]	FLOAT32	Volume flow 10 <sup>-3</sup> m <sup>3</sup> /h[U.0.T.0.S.1]	13	MSW:0000.0000.LSW	0.0000.0.00000000000000E+0	Meter 20716229_2C2D_ID_16 [S]
4x0029	INT8[1]	FLOAT32	External temperature 10 <sup>0</sup> °C[U.0.T.0.S.1]	14	MSW:4170.0000.LSW	15.0000.1.50000000000000E+1	Meter 20716229_2C2D_ID_16 [S]
4x0031	INT8[1]	FLOAT32	External temperature 10 <sup>0</sup> °C[U.0.T.0.S.1]	15	MSW:41C8.0000.LSW	25.0000.2.50000000000000E+1	Meter 20716229_2C2D_ID_16 [S]
4x0033	INT8[1]	FLOAT32	External temperature 10 <sup>0</sup> °C Average media temperature [U.0.T.0.S.1]	16	MSW:41B0.0000.LSW	22.0000.2.20000000000000E+1	Meter 20716229_2C2D_ID_16 [S]
4x0035	INT16[2]	DATE_TIME	Date data type G[U.0.T.0.S.1]	17	WORD:239F	D.M.Y:31.03.20.0x239F	Meter 20716229_2C2D_ID_16 [S]
4x0036	INT16[2]	UINT16	Info code	18	WORD:0001	1.0x0001	Meter 20716229_2C2D_ID_16 [S]
4x0037	INT48[6]	UINT64	Config number	19	MSW:000000175464.86AE.LSW	100200122030.0x17546486AE	Meter 20716229_2C2D_ID_16 [S]
4x0041	INT16[2]	UINT16	Meter type	20	WORD:2203	8707.0x2203	Meter 20716229_2C2D_ID_16 [S]
4x0042	INT16[2]	UINT16	Firmware version	21	WORD:0061	1537.0x0061	Meter 20716229_2C2D_ID_16 [S]
4x0901	N/A	UINT16	Converter state for meter	STATE	WORD:0003	3.0x0003 -> Values are valid!	Meter 20716229_2C2D_ID_16 [S]
4x0902	N/A	UINT32R	Identification number of meter	ID	LSW:6229.MSW:2071	544301609.0x20716229	Meter 20716229_2C2D_ID_16 [S]
4x1001	N/A	UINT32	Identification number of meter	ID	MSW:2071.6229.LSW	544301609.0x20716229	Meter 20716229_2C2D_ID_16 [S]
4x1003	N/A	UINT32->ASCII	Manufacturer of meter	MANUFACTURER	MSW:004D.414B.LSW	KAM	Meter 20716229_2C2D_ID_16 [S]
4x1005	N/A	UINT16	Version of meter	VERSION	WORD:001D	29.0x001D	Meter 20716229_2C2D_ID_16 [S]
4x1006	N/A	UINT16	Medium of meter	MEDIUM	WORD:0016	22.0x0016 -> Cold Water	Meter 20716229_2C2D_ID_16 [S]
4x1007	N/A	UINT16	Access of meter	ACCESS	WORD:00AD	173.0x00AD	Meter 20716229_2C2D_ID_16 [S]
4x1008	N/A	UINT16	Status of meter	STATUS	WORD:0000	0.0x0000	Meter 20716229_2C2D_ID_16 [S]
4x1009	N/A	UINT16	Future value of meter	FUTURE	WORD:0000	0.0x0000	Meter 20716229_2C2D_ID_16 [S]
4x1010	N/A	UINT16	Communication state with meter	COMM STATE	WORD:0003	3.0x0003 -> Values are valid!	Meter 20716229_2C2D_ID_16 [S]

Test mode started...

Our free configuration & test software MODBUSConfigurator

**Common M-Bus slave settings**  
 Change primary address Read meter data  
 Slave name: Meter 14762517\_4DEE\_04\_0D  
 Addressing mode: Primary address Secondary meter address (hex): 14762517 4DEE [04] [0D]  
 Meter status: 0.0x00 No error  
 Manufacturer name: SON  
 Poll pre delay 1: 65535 Poll repeats 1: 65535  
 Poll pre delay 2: 65535 Poll repeats 2: 65535  
 Poll post delay 1: 65535  
 Poll post delay 2: 65535

**Datapoints**  
 Add datapoint Delete datapoint Add from database... Add to database...

Index	MBUS datatype	MB datatype	Content	MBUS data	MBUS size	MBUS exponent	MB exponent
0	INT32	UINT32	Energy 10 <sup>3</sup> Wh	1-2	4	3	0
1	INT32	FLOAT32	Volume 10 <sup>-2</sup> m <sup>3</sup>	1-8	4	-2	0
2	INT24	UINT32	On time hours	1-14	3	0	0
3	BCD8	SINT32	Fabrication number	1-19	4	0	0
4	INT32	DATE_TIME	Time&Date data type F	1-25	4	0	0
5	FLOAT32	FLOAT32	Flow temperature 10 <sup>0</sup> °C	1-31	4	0	0
6	FLOAT32	FLOAT32	Return temperature 10 <sup>0</sup> °C	1-37	4	0	0
7	FLOAT32	FLOAT32	Volume flow 10 <sup>-0</sup> m <sup>3</sup> /h	1-43	4	0	0
8	FLOAT32	FLOAT32	Power 10 <sup>0</sup> W	1-49	4	0	0
9	FLOAT32	FLOAT32	Energy remainder	1-56	4	0	0
10	FLOAT32	FLOAT32	Volume remainder	1-63	4	0	0
11	INT16	UINT16	Error flags (Binary)	1-70	2	0	0
12	INT8	UINT8	Actuality duration seconds	1-74	1	0	0
13	INT8	UINT8	Averaging duration seconds	1-77	1	0	0
14	INT8	UINT8	Write protection	1-81	1	0	0
15	INT8	UINT8	Software version	1-85	1	0	0
16	INT16	UINT16	Hardware version	1-89	2	0	0
17	VARLENGTH	ASCII	Model/version	1-95	15	0	0
18	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.1.S.0]	1-113	4	3	0
19	FLOAT32	FLOAT32	Energy remainder[U.0.T.1.S.0]	1-121	4	0	0
20	BCD8	SINT32	Enhanced identification[U.1.T.0.S.0]	1-128	4	0	0
21	INT32	FLOAT32	Volume 10 <sup>-2</sup> m <sup>3</sup> [U.1.T.0.S.0]	1-135	4	-2	0
22	INT8	FLOAT32	Volume 10 <sup>-3</sup> m <sup>3</sup> increment per input pulse on input channel #0[...	1-143	1	-3	0
23	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.1]	2-3	4	3	0
24	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.2]	2-10	4	3	0
25	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.3]	2-17	4	3	0
26	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.4]	2-24	4	3	0
27	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.5]	2-31	4	3	0
28	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.6]	2-38	4	3	0
29	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.7]	2-45	4	3	0
30	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.8]	2-52	4	3	0
31	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.9]	2-59	4	3	0
32	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.10]	2-66	4	3	0
33	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.11]	2-73	4	3	0
34	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.12]	2-80	4	3	0
35	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.13]	2-87	4	3	0
36	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.14]	2-94	4	3	0
37	INT32	UINT32	Energy 10 <sup>3</sup> Wh[U.0.T.0.S.15]	2-101	4	3	0
38	INT32	FLOAT32	Volume 10 <sup>-2</sup> m <sup>3</sup> [U.0.T.0.S.1]	3-3	4	-2	0

Search for MBUS serials aborted by user!

Individual setup of polling timing and MBUS-MODBUS mapping for each connected meter

# Our MBUS portfolio



Overview of our MBUS product range with serial (RS232 or RS485) or Ethernet Interface

