

FAZEL



RESI-ENOCEAN-GW



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1 History

Date	Editor	Description
26.05.15	DI HC Sigl	Initial release

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3 IMPORTANT SECURITY NOTES



Danger to life through electrical current!

Only skilled personal trained in electro-engineering should perform the described steps in the following chapters. Please observe the country specific rules and standards. Do not perform any electrical work while the device is connected to power.

Pay attention to the following rules:

1. Disconnect the system from power
2. Secure the system against automatic power on
3. Check that the system is de-energized
4. Cover other energized parts of the system

IMPORTANT HINT: Before you start with the installation and the initial setup of the device, you have to read this document and the attached installation guide and the actual manual for the device very carefully. You have to follow all the herein given information very accurate!

- Only authorized and qualified personnel are allowed to install and setup the device!
- The connection of the device must be done in de-energized state!
- Do not perform any electrical work while the device is connected to power!
- Disable and secure the system against any automatic restart or power on procedure!
- The device must be operated with the defined voltage level!
- Supply voltage jitters must not exceed the technical specifications and tolerances given in the technical manuals for the product. If you do not obey this issue, the proper performance of the device cannot be guaranteed. This can lead to fail functions of the device and in worst case to a complete breakdown of the device!
- You have to obey the current EMC regulations for wiring!
- All signal, control and supply voltage cables must be wired in a way, that no inductive or capacitive interference or any other severe electrical noise disturbance may interfere with the device. Wrong wiring can lead to a malfunction of the device!
- For signal or sensor cables you have to use shielded cables, to avoid damages through induction!
- You have to obey and to apply the current safety regulations given by the ÖVE, VDE, the countries, their control authorities, the TÜV or the local energy supply company!
- Obey country-specific laws and standards!
- The device must be used for the intended purpose of the manufacturer!
- No warranties or liabilities will be accepted for defects and damages resulting from improper or incorrect usage of the device!
- Subsequent damages, which results from faults of this device, are excluded from warranty and liability!
- Only the technical data, wiring diagrams and operation instructions, which are part to the product shipment are valid!
- The information on our homepage, in our datasheets, in our manuals, in our catalogues or published by our partners can deviate from the product documentation and is not necessarily always actual, due to constant improvement of our products for technical progress!
- In case of modification of our devices made by the user, all warranty and liability claims are lost!
- The installation has to fulfill the technical conditions and specifications (e.g. operating temperatures, power supply, ...) given in the devices documentation!
- Operating our device close to equipment, which do not comply with EMC directives, can influence the functionality of our device, leading to malfunction or in worst case to a breakdown of our device!

- Our devices must not be used for monitoring applications, which solely serve the purpose of protecting persons against hazards or injury, or as an emergency stop switch for systems or machinery, or for any other similar safety-relevant purposes!
- Dimensions of the enclosures or enclosures accessories may show slight tolerances on the specifications provided in these instructions!
- Modifications of this documentation is not allowed!
- In case of a complaint, only complete devices returned in original packing will be accepted!

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4 General Information

With the RESI-ENOCHEAN-GW gateway, a ENOCHEAN wireless system can be integrated in almost every system with a RS232 or RS485 interface. The gateway is a wireless coupler between ENOCHEAN® and RS232 or RS485 serial interface with the ENOCHEAN Serial Protocol Version 3 (ESP3) to the host. The time critical communication on the ENOCHEAN side is done by the gateway itself. All telegrams between ENOCHEAN and serial line are encoded in the EnOcean Serial Protocol version 3 (ESP3) as binary data.

- Easy integration of an ENOCHEAN wireless system in any system
- Protocol ENOCHEAN® Serial Protocol Version 3 (ESP3)
- Chipset TCM-310-DC, 868Mhz
- Host interfaces: RS232, 9600 to 57600 bps, 8 data bits, no or even parity, 1 stop bit
- Power supply with 24VDC
- Power consumption <1.5W
- Mountable onto a EN50022 DIN rail

Type	Description	Voltage	Power	Weight
RESI-ENOCHEAN-GW	ENOCHEAN gateway with RS232 or RS485 interface, supports the EnOcean Serial Protocol version 3 (ESP3) protocol	24 V=	<1.5W	55 g

Technical data			
Power supply			
Supply voltage	24 V= +/-10%	Storage temperature	-20...85 °C
Power LED indicator	Yes	Operation temperature	0...60°C
Power consumption	<1.5W	Humidity	25...90 % rH not condensing
		Protection class	IP20 (EN 60529)
		Dimensions LxWxH	17,5mm x 90mm x 58mm
		Weight	55g
		Mounting	on DIN EN50022 rail
Serial interface		Factory settings	
Protocol	EnOcean® Serial Protocol Version 3 (ESP3)	Baud rate	9600
Type	RS232 or RS485	Parity	No parity
Baud rate	9600 to 57600/8/N or E/1	Interface	RS232
Cable connection	Via clamps		
LED indicator	Yes		
ENOCEAN interface			
Protocol	ENOCEAN		
Base frequency	868.3Mhz		
Antenna connection	SMA		
LED indicator	Yes		
Clamps			
Clamp wire cross section	Max. 1,5 mm ²	CE conformity	Yes
Tightening torque	Max. 0.5Nm		

IT Accessories

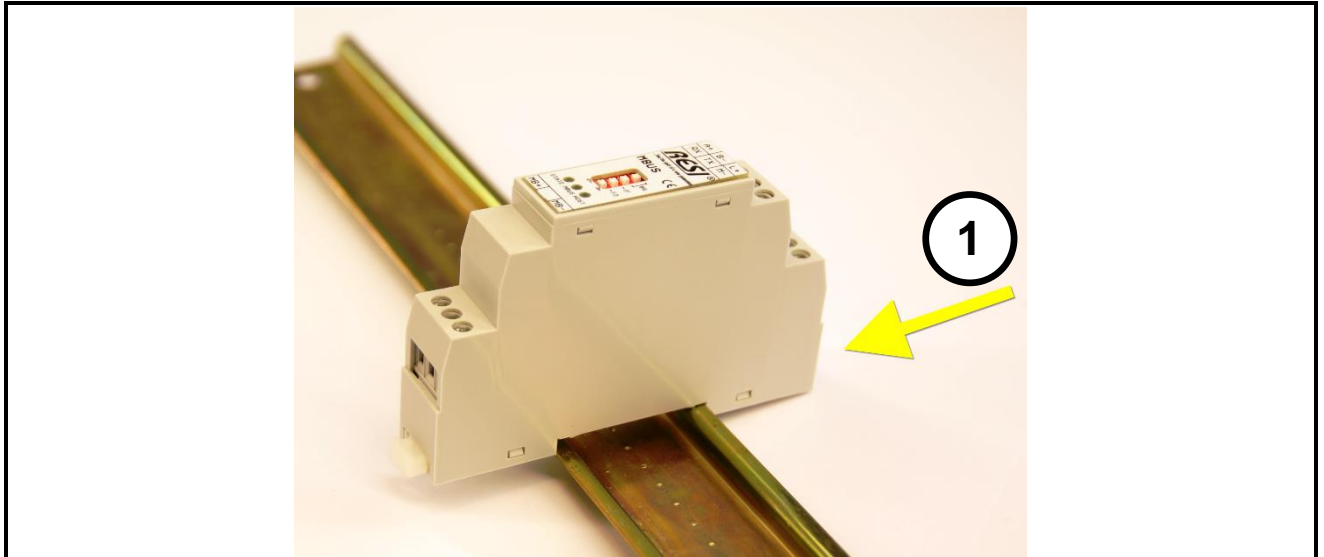
hterm	Use the free terminal software hterm from the internet to communicate with our gateway
--------------	--

5 Mounting and Connections

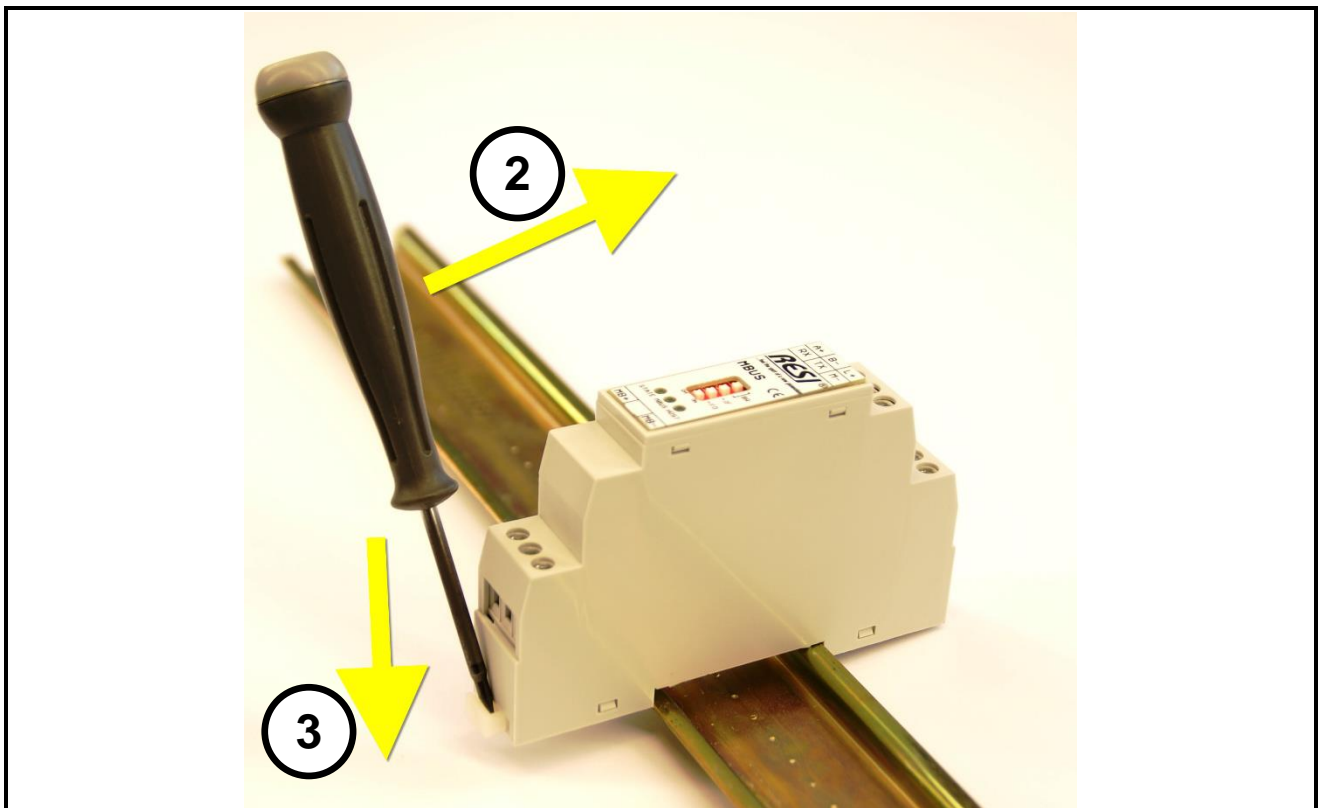
5.1 Assembling

Our RESI-ENOCAN-GW gateway is designed for mounting on a 35mm DIN-EN50022 rail. Please note, that there are symbol photos used in the mounting pictures below.

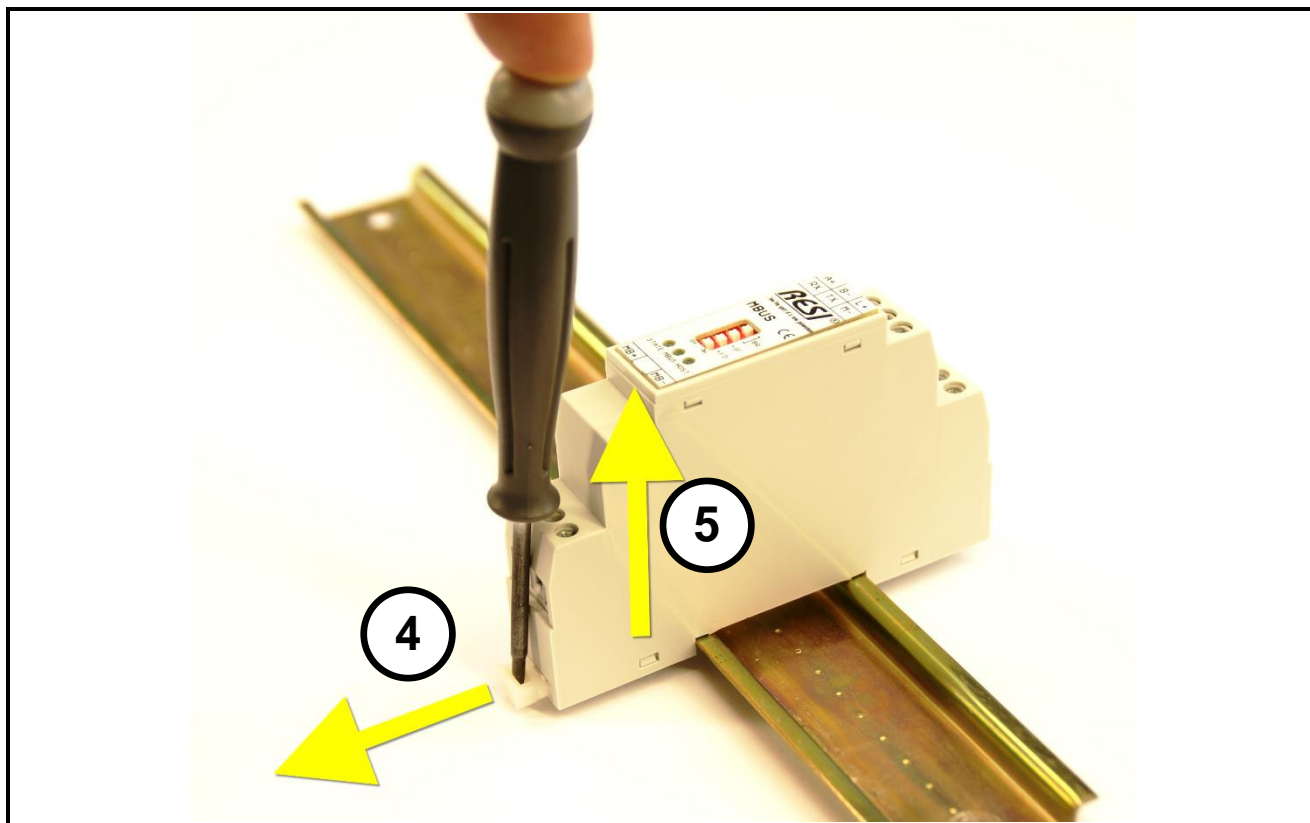
At first, put the gateway with the top side on the DIN rail (1).



Then open the clamp lever on the bottom side with a screw driver (2) and press the device on the DIN rail (3). Release the clamp lever. The module is now placed correctly on the DIN rail.



To dismount the module from the DIN rail first open the clamp lever with a screwdriver on the bottom side (4). Hold the clamp lever opened while you lift the module from the DIN rail (5). Then remove the gateway from the bar with while pulling it on the top side.



5.2 Clamps and LEDs

	RESI-ENOCEAN-GW
L+	Power supply
M-	L+: 24 V= M-: Ground
A	RS485 Modbus/RTU slave interface
B	A: DATA+ B: DATA-
RX	RS232 Modbus/RTU slave interface
TX	RX: serial receive
M-	TX: serial transmit M-: Ground for RS232
SMA Antenna	Connector for the antenna
STATE	State-LED, flashes slowly, when gateway is ok
EO	ENOCEAN activity LED, this LED is on while the gateway send or receives ENOCEAN telegrams
HOST	HOST-LED, flashes, when host sends/receive ASCII telegrams

Table: Description of connectors and LEDs of the RESI-ENOCEAN-GW gateway

5.3 DIP switch settings

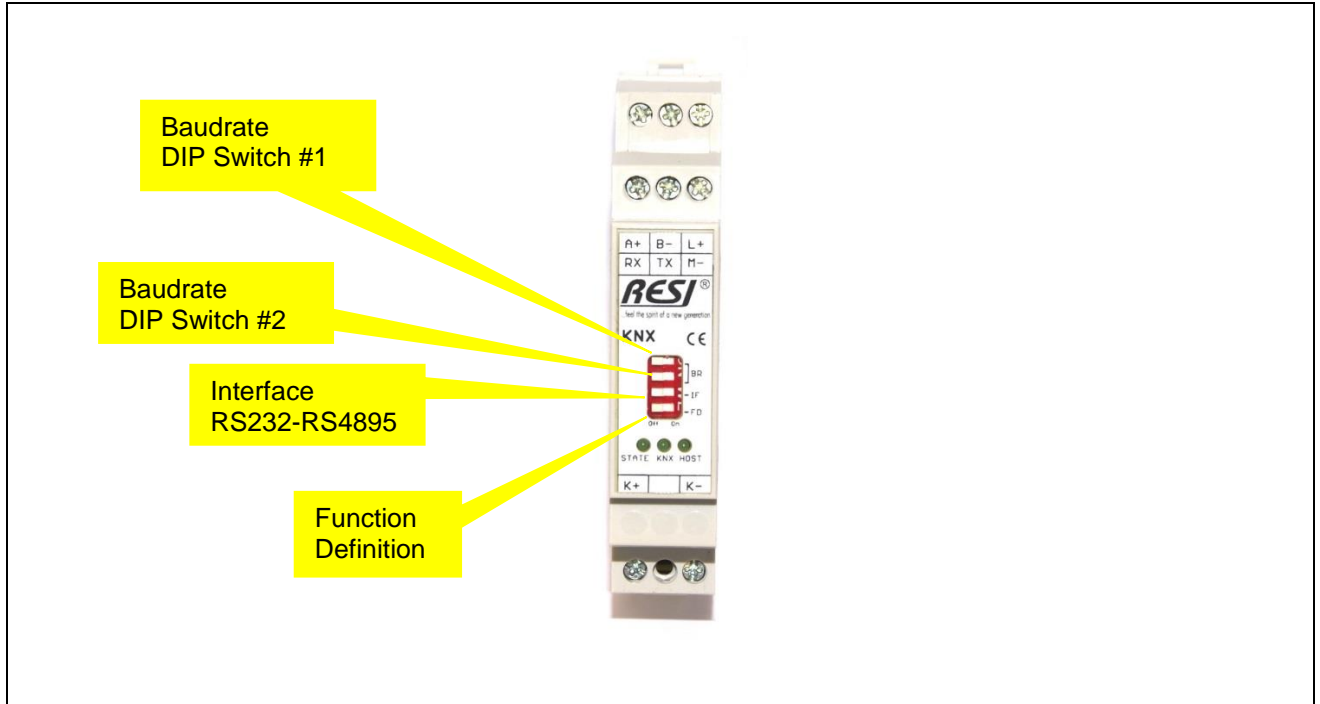


Illustration: Description of the DIP switch settings and LED status displays

DIP Switch	RESI-ENOCEAN-GW
Baudrate BR	Use DIP Switches 1+2 to select baud rate: OFF OFF: 9600Bd ON OFF: 19200Bd OFF ON: 38400Bd ON ON: 57600Bd
Interface IF	Select serial interface for ASCII host OFF=RS232 ON=RS485
Function Definition FD	Selects the parity: OFF=No parity ON=Even parity

Table: Description of DIP switch functions

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5.4 Wiring diagram

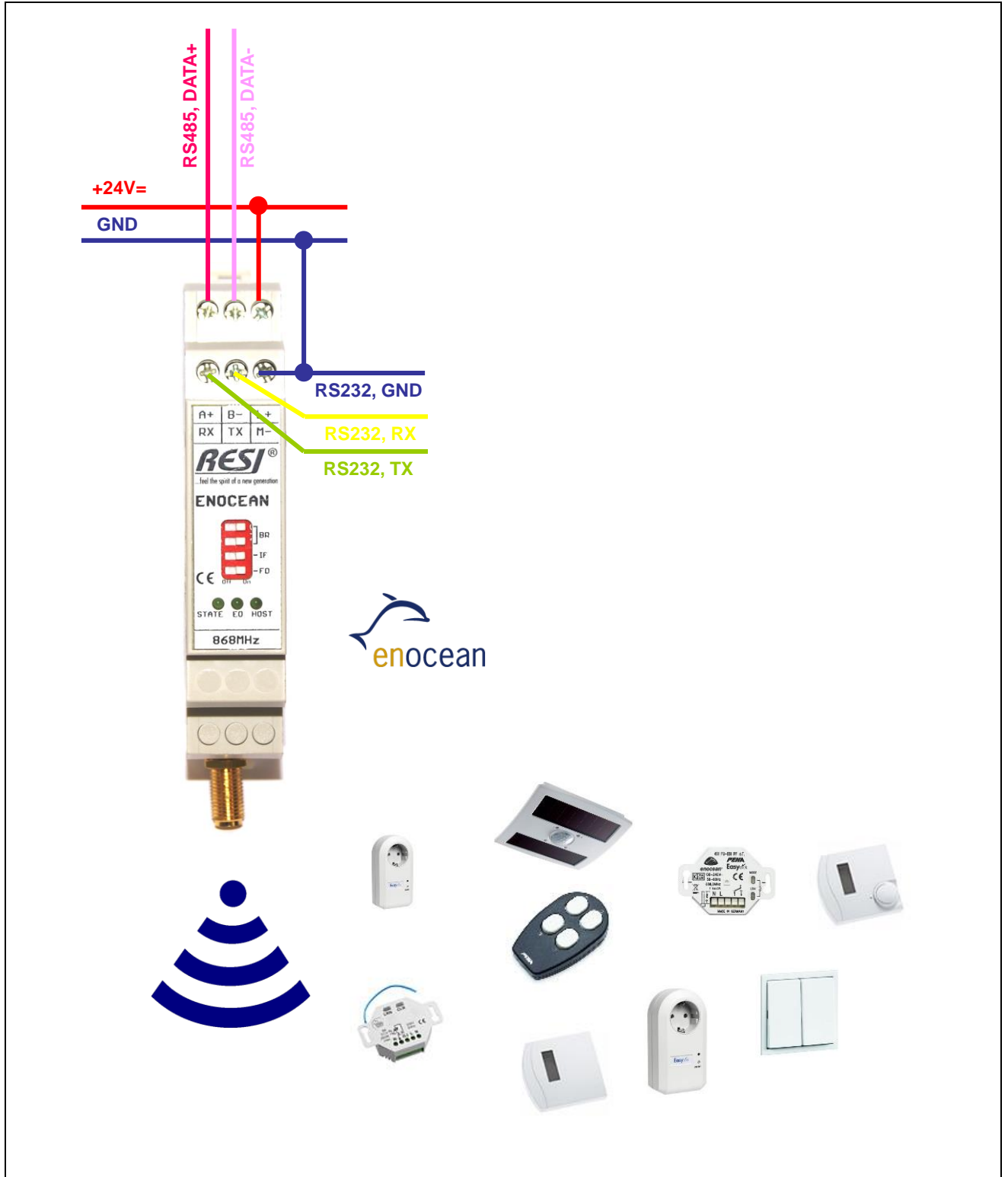


Illustration: wiring diagram of the RESI-ENOCEAN-GW gateway

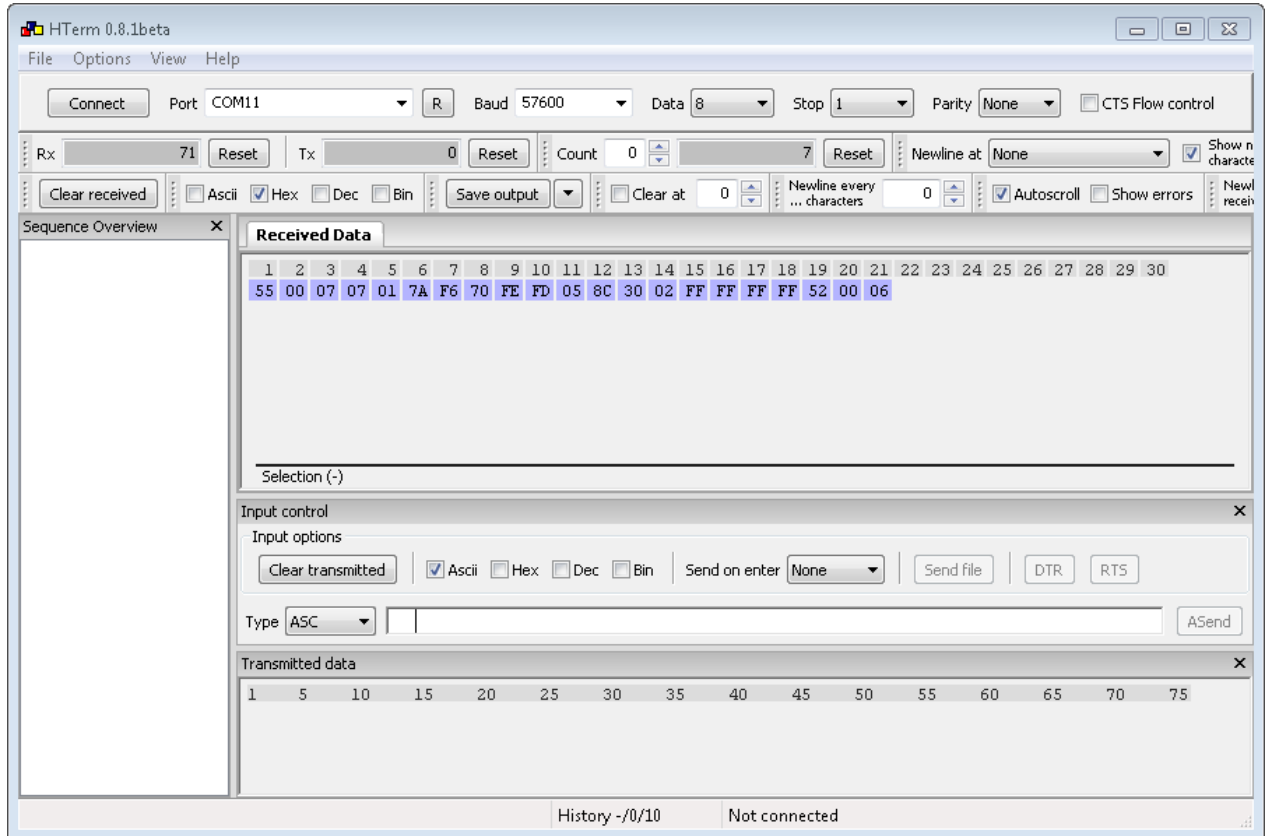
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6 Functional Description

The RESI-ENOCHEAN-GW gateway communicates with the host with the ENOCHEAN® defined EnOcean Serial Protocol Version 3 (ESP3). We offer an actual version as a download on our homepage. Please refer to the article RESI-ENOCHEAN-GW in our web shop. There you will find this document. Or you search in the internet for the document EnOceanSerialProtocol3.pdf.

First established a connection to our gateway with a terminal software like HTERM. Check the DIP switch settings for your communication speed and parity. If you then receive successfully an ENOCHEAN® telegram eg. from a rocket switch, you will get a similar output on the screen.



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You can also use the ENOCEAN® software DolphinView to communicate over our gateway with your ENOCEAN system. You can get the software directly by ENOCEAN.

DolphinView Advanced 3.5.0.0 [Expires: 31.12.2015]

File View Window Help

COM11 FTFORJN7A GATEWAYCTRL 2.7.1.101 ID: 0188733A [Connect [F5] Disconnect [F6] Firmware Download]

Node List: Workspace (Count: 0), Unassigned (Count: 1) - ID: FEFD058C Device_058C

EnOcean Equipment Profile:

RORG: 0xF6: RPS Telegram
 FUNC: 0x02: Rocker Switch, 2 Rocker
 TYPE: 0x01: Light and Blind Control - Application Style 1

Learn Telegram: N/A

Data Telegram Interpretation:

Rocker 1st action: **Button BI: "Switch light on" or "Dim light down" or "Move blind closed"**

Energy Bow: **pressed**

Rocker 2nd action: **Button AI: "Switch light on" or "Dim light down" or "Move blind closed"**

2nd Action: **No 2nd action**

Number of buttons pressed simultaneously (other bit combinations are not valid): **no button**

Energy Bow: **released**

Telegram Log

Direction	Port	Time	ID	RORG	Data	Status	dBm	Subtel	DestinationID	Security	TimeDiff.
→	COM11	17:29:29.285	FEFD058C	RPS	50	30	-73	2	FFFFFFF		00:00:00.000
→	COM11	17:29:30.499	FEFD058C	RPS	00	20	-74	1	FFFFFFF		00:00:01.214
→	COM11	17:29:37.452	FEFD058C	RPS	50	30	-68	1	FFFFFFF		00:00:06.952
→	COM11	17:29:37.851	FEFD058C	RPS	00	20	-70	1	FFFFFFF		00:00:00.399

DolphinView Advanced 3.5.0.0 [Expires: 31.12.2015]

File View Window Help

COM11 FTFORJN7A GATEWAYCTRL 2.7.1.101 ID: 0188733A [Connect [F5] Disconnect [F6] Firmware Download]

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2nd Action: **No 2nd action**

Number of buttons pressed simultaneously (other bit combinations are not valid): **no button**

Energy Bow: **released**

Telegram Log

Direction	Port	Time	Type	Data	Decoded
→	COM11	17:29:29.285	Type: 01 Radio,	Data[7]: F6 50 FE FD 05 8C 30,	OptionalData[7]: 02 FF FF FF FF 49 00
→	COM11	17:29:30.499	Type: 01 Radio,	Data[7]: F6 00 FE FD 05 8C 20,	OptionalData[7]: 01 FF FF FF FF 4A 00
→	COM11	17:29:30.499	Type: 01 Radio,	Data[7]: F6 00 FE FD 05 8C 20,	OptionalData[7]: 01 FF FF FF FF 4A 00
→	COM11	17:29:37.452	Type: 01 Radio,	Data[7]: F6 50 FE FD 05 8C 30,	OptionalData[7]: 01 FF FF FF FF 44 00
→	COM11	17:29:37.851	Type: 01 Radio,	Data[7]: F6 00 FE FD 05 8C 20,	OptionalData[7]: 01 FF FF FF FF 46 00
→	COM11	17:29:37.851	Type: 01 Radio,	Data[7]: F6 00 FE FD 05 8C 20,	OptionalData[7]: 01 FF FF FF FF 46 00

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7 Specifications

7.1 Dimensions

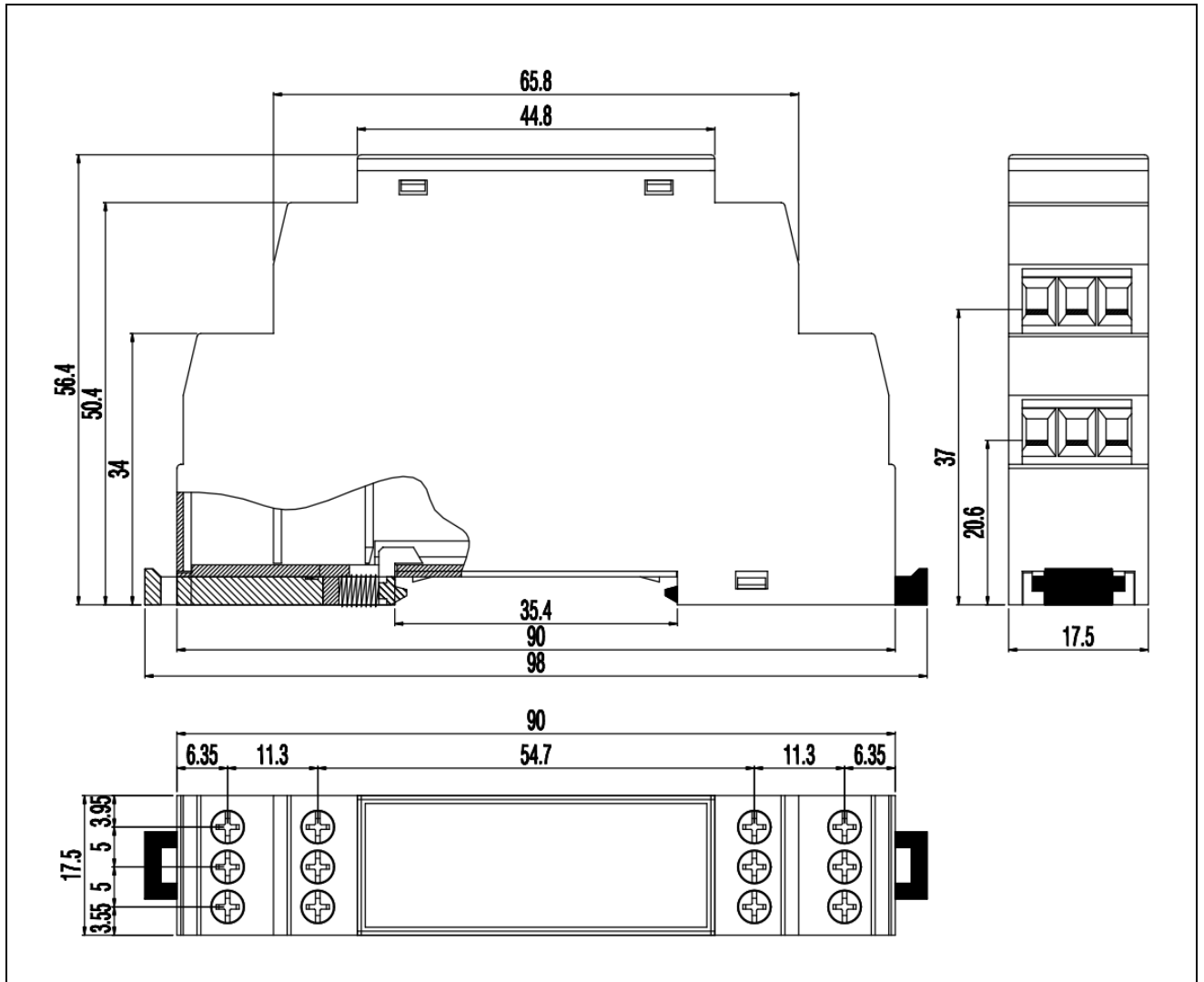


Illustration: dimension illustration in mm

Dimensions	
Enclosure dimensions L x W x H (mm)	17,5 x 90 x 58
Weight	55 g
Colour	Grey RAL7035
Material	PA - UL 94 V0
Protection class	IP20 based on DIN 40050/EN 60529

Table: Data of enclosure

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7.2 3D Drawing

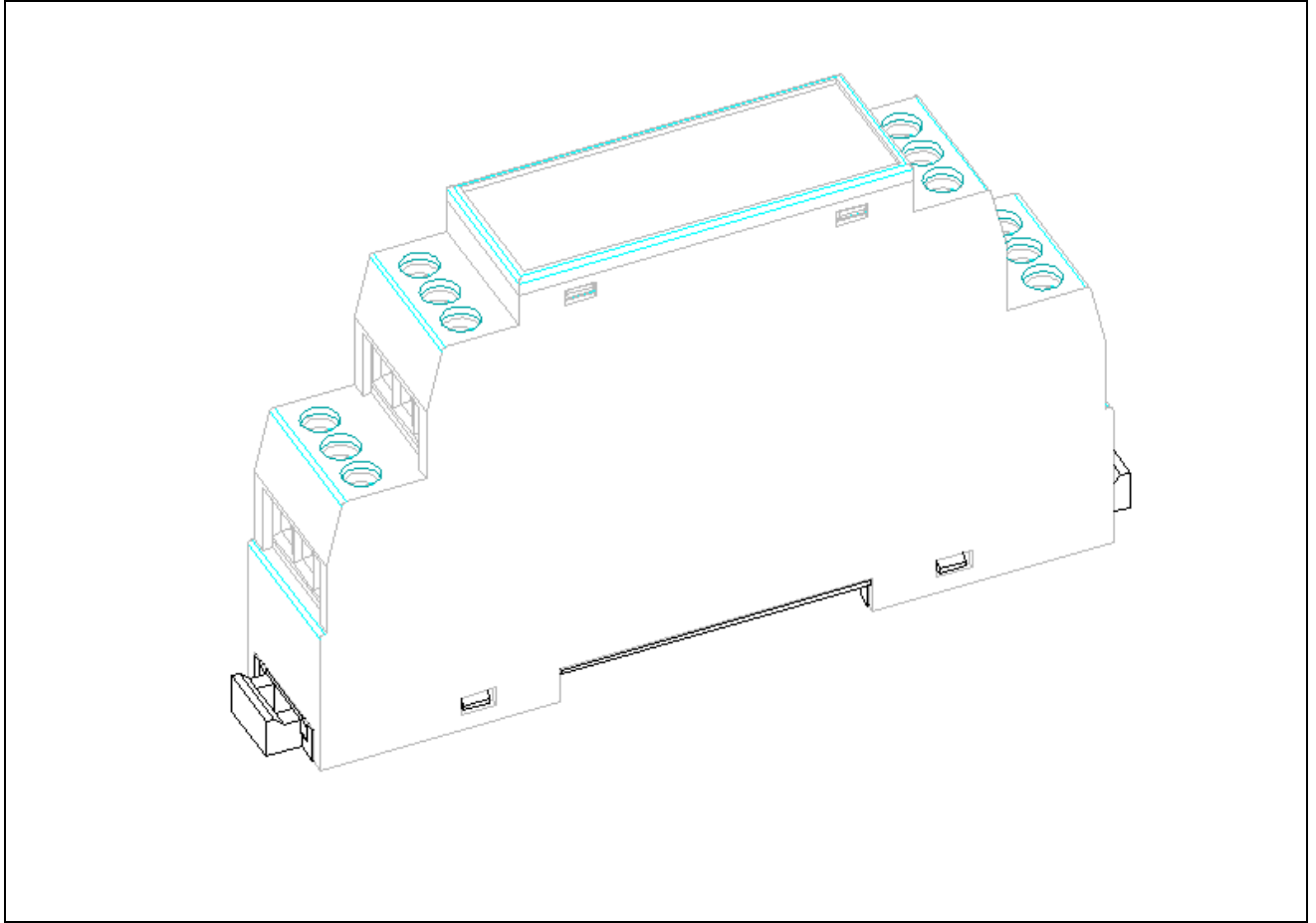


Illustration: Dimension illustration in 3D

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