

### Intended use

AdComNet products may be installed and put into operation only by installation companies specially trained and certified for AdComNet by D+H Mechatronic.  
The installation instructions in the AdComNet manual must be observed!

The ACN-GW501-MRTU Modbus gateway is an externally supplied, configurable and galvanically isolated interface converter between AdComNet and Modbus.

It establishes the connection between AdComNet and Modbus RTU.

- For connecting outside fields, such as fire alarm systems, building control technology or central activation, to AdComNet
- Power can be supplied using a SHEV controller
- Current consumption of approximately 30 mA
- Additional battery capacity of 1.2 Ah is required
- The device is fastened to a top hat rail in a controller or on its own housing (Dimensions WxHxD: 52 x 86 x 58 mm)

The Modbus interface has the following settings:

- Medium: RS 485
- Transmission rate: 19,200 baud
- Slave address 1, ... (100), ... 247
- Data frame: 8 data bits, even parity, 1 stop bit (8E1)
- Modbus protocol: RTU
- Modbus timeout: 100ms, ... (disabled), ... 99 min

The slave address and the Modbus timeout parameters are configured through AdComNet.

The Modbus is implemented as a slave.

### Safety notes

#### 24 VDC operating voltage!

Do not connect directly to the mains power supply!

- **May be connected only by authorised D+H specialised personnel!**
- Only use in dry spaces
- Only intended for installation indoors

### Scope of supply

- 1x ACN-GW501-MRTU Modbus gateway
- 2x 110 Ω terminal resistor

#### Supply

- 24 V DC
- Inputs N+ for detecting power failure and SB for battery failure in the external supply
- Can be supplied from a SHEV controller (AdComNet ready)

#### DIP switch

For configuring the Modbus connection

#### Modbus connection

RS-485 connection in accordance with EIA-485 with galvanic isolation.

- 0 = Transceiver connection 0
- 1 = Transceiver connection 1
- = Cable shielding (earth on one side)

#### AdComNet connection

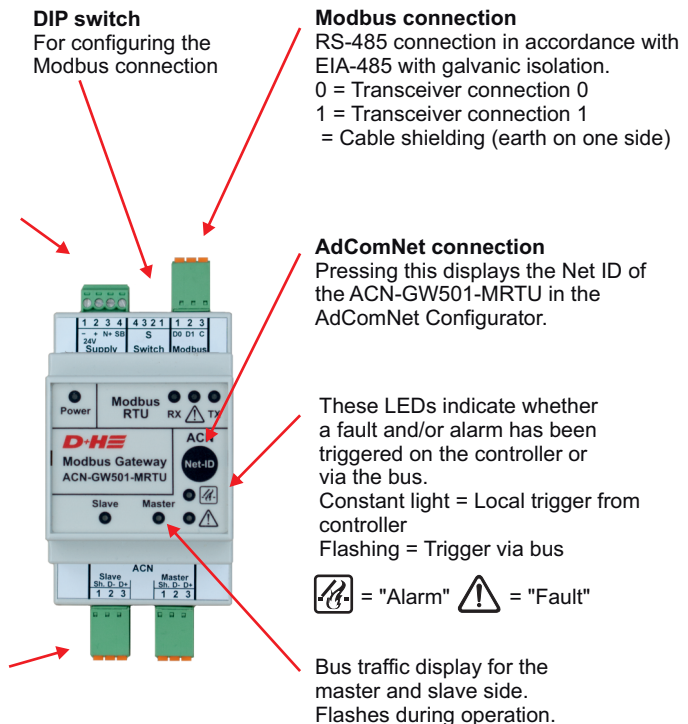
Pressing this displays the Net ID of the ACN-GW501-MRTU in the AdComNet Configurator.

These LEDs indicate whether a fault and/or alarm has been triggered on the controller or via the bus.  
Constant light = Local trigger from controller  
Flashing = Trigger via bus

= "Alarm" = "Fault"

Master and slave connection for the bus line (Sh. = Routing point for the shielding.  
**Not an earthing point!**)

Bus traffic display for the master and slave side.  
Flashes during operation.

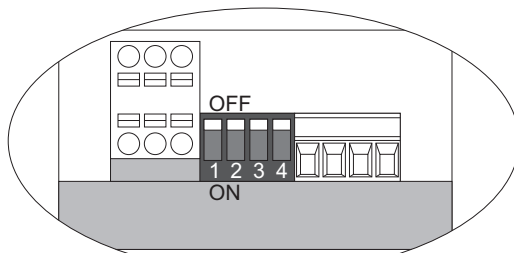
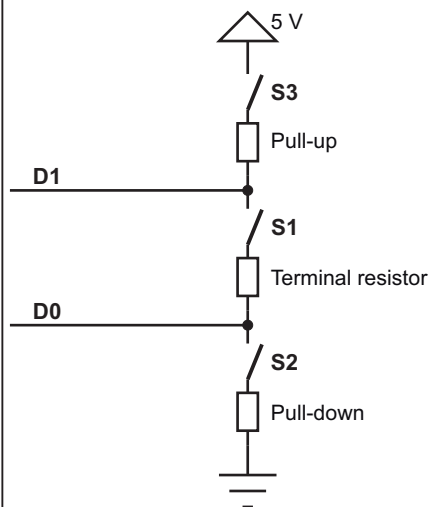


## Connection

### DIP switch

The ACN-GW501-MRTU provides the option of connecting both a bus terminator and a bias network to the data bus as needed. S2 and S3 must be used together.

S4 remains clear for later use and has to be switched off.

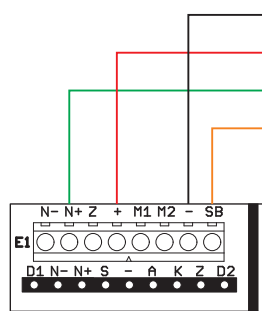


### Modbus connection – RS 485

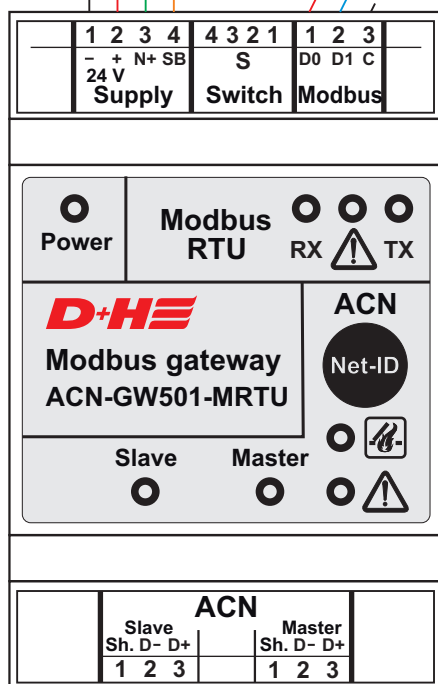
The RS-485/Modbus connection is specified in accordance with EIA-485 and designed with galvanic isolation.

The following values must be observed for wiring:

- Maximum cable length for 26AWG and 19k2 is approximately 500 m
  - Bus line must have a terminal resistor on both sides
  - Network topology: Line
- Connect shield / common to „C“!



RZN 4404-M  
RZN 4408-K  
RZN 4408-M  
RZN 4416-M  
"AdComNet ready"



Earth the shielding **once** for each segment.



\* Termination:  
**Every segment** must be terminated with **2 resistors (110 Ω)**. The resistors must be connected **as far apart as possible**.  
**Unused connections** must also have terminal resistors!



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**AdComNet connection**  
(connected as a master in this case)

