Repeater base module CM11

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Products, data sheets, documentation, MR12-SCHEMA-calculator: www.schneid.at

Repeater-Basismodul CM11

Base board for repeater and gateway

Order number:	**020.15224**
Order code:	**Repeater-Basismodul CM11**

Overview:

SCHNEID repeater base module CM11 for various gateways and repeater combinations.
Depending on the equipment, different variants can be produced.
e.g .: RS422 // RS422 repeater
e.g .: TCPIP // RS422 gateway

A corresponding bus module can be fitted for each of the three bus interfaces, depending on the application.
The following bus modules are available:

-RS232 bus module	-TCP/IP Ethernet bus module
-RS485 bus module	-BT (Bluetooth) module
-RS422 bus module	-RF (RadioFrequency) module
-MBUS-Master bus module	-GPRS module
-MBUS-Slave bus module	-MP-Bus module
-USB bus module	PGW-Bacnet module

Terminal plan:

Supply connections:

L	Supply 230VAC
N	Supply 230VAC
PE	
L	Supply 230VAC
N	Supply 230VAC
PE	
+5VDC	Output terminal 5VDC
PE	

Repeater base module CM11

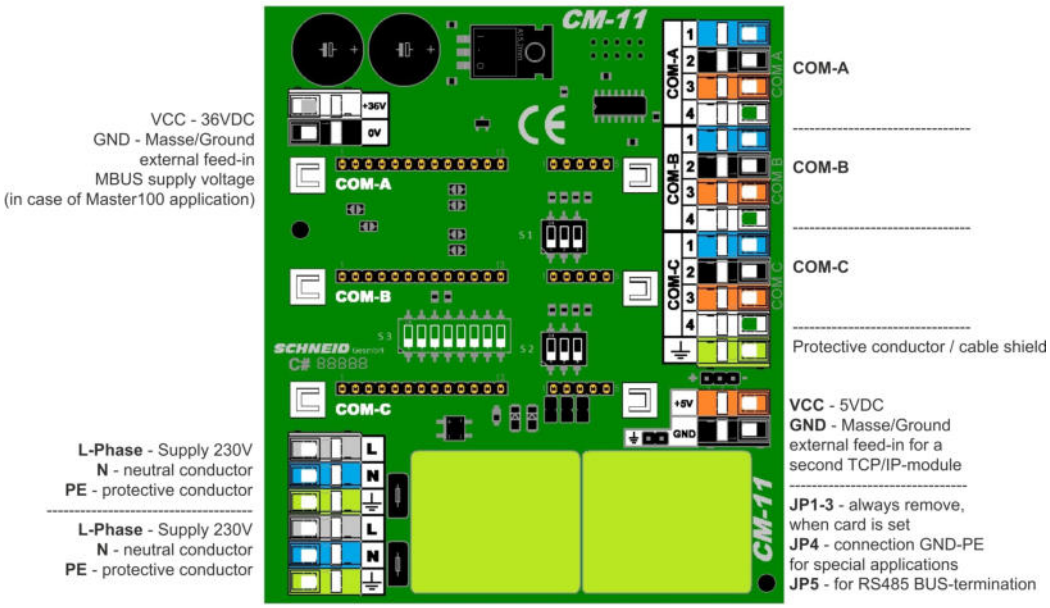
Interface connections:

There are three slots for communication plug-in card modules on the module.
The slots COM A, COM B, COM C are routed to terminals.

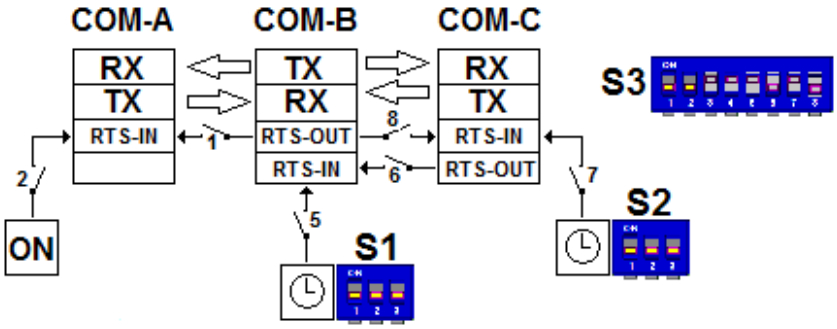
Links:
COM A to terminals A1-A4 -
COM B to terminals B1-B4 -
COM C to terminals C1-C4 -

Depending on the interface card, terminals 1-4 have different assignments. Depending on the module type used, external surge protection must be provided! (e.g. SCHNEID data socket 12P)

COM-B and COM-C each have an adjustable RTS timer.
COM-A-RTS can only be set permanently (for RS422 masters) or controlled by COM-B
(Requirement for COM-B = intelligent module).



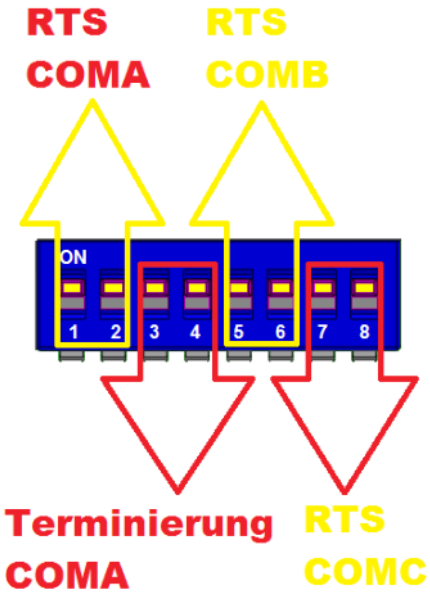
Block diagram:



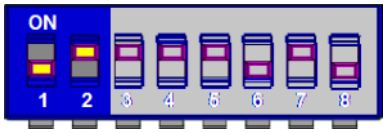
Dipswitch default s

Dipswitch:

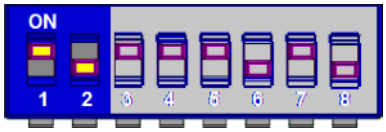
Assignment of the individual switches



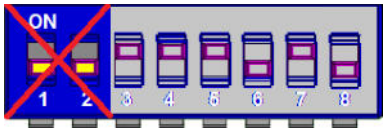
Dipswitch 1+2 COM-A-RTS
RTS = permanently "ON" is required for RS422 masters

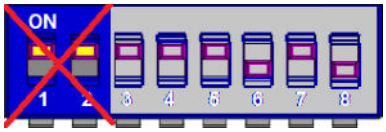


RTS = controlled by COM-B
!! With COM-B, an "intelligent" interface card is required, e.g. TCPIP, Bluetooth or radio !!



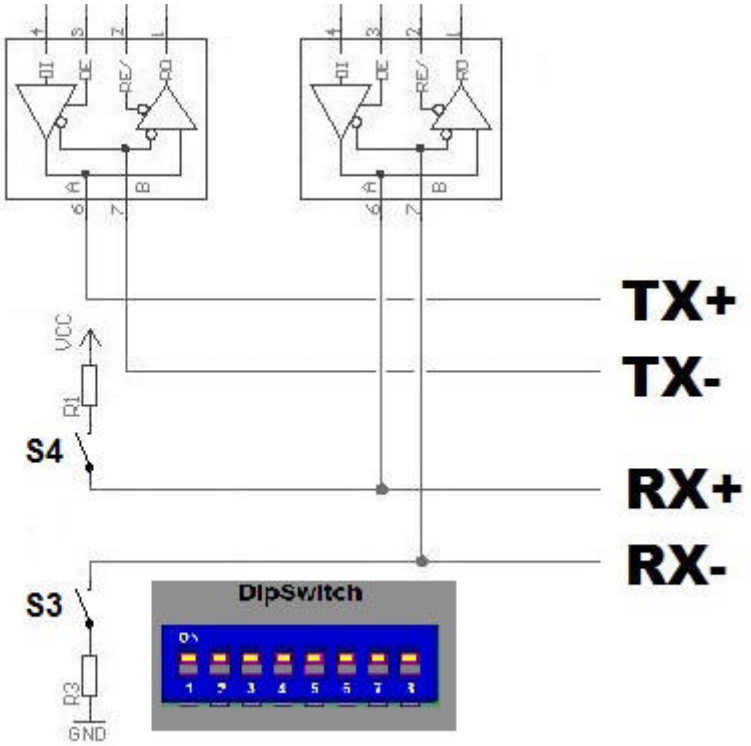
The following combinations are not permitted:





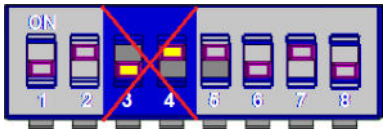
Dipswitch 3 + 4 RX-COMA termination

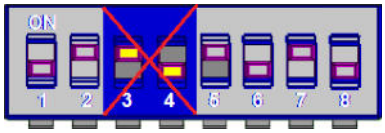
Termination = ON is required for RS422 masters.
This sets the RX + and RX signals to a defined quiescent level (RX + 5V and RX-GND).



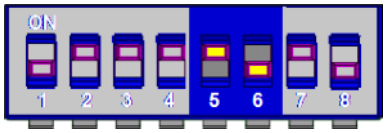
Termination = OFF is required if other interfaces are used that do not need or are not allowed to use termination such as: MBUS.

The following combinations are not permitted:



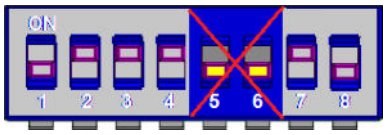


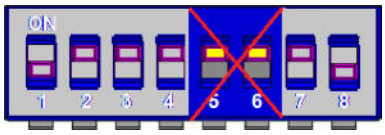
Dipswitch 5+6 COM-B-RTS
RTS = controlled by timer (time adjustable with S1)
RTS control takes place via the integrated timer (the delay time can be set with S1)
The timer is necessary if pure level converter cards are used on COM-B and C, e.g. RS422, RS485, RS232, M-BUS, MP-BUS



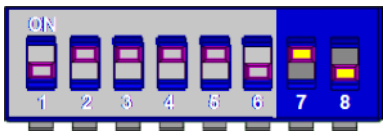
RTS = controlled by COM-C
The RTS control is carried out here by an "intelligent" interface card on COM-B.
With COMB, an "intelligent" interface card is therefore necessary, e.g. CM08-RF (radio), CM08-BT (Bluetooth) or TCP-08 (except TCP06 with Tibbo).

The following combinations are not permitted:

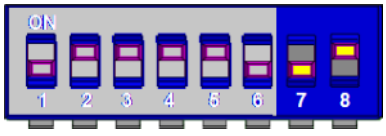




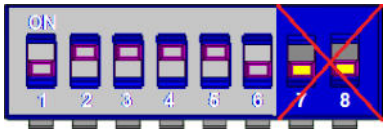
Dipswitch 7+8 COM-C-RTS
RTS = controlled by timer (time adjustable with S2)
RTS control takes place via the integrated timer (the delay time can be set with S2)
The timer is necessary if pure level converter cards are used on COM-B and C, e.g. RS422, RS485, RS232, M-BUS, MP-BUS

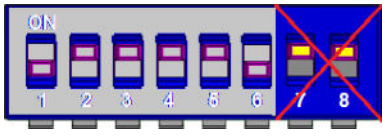


RTS = controlled by COM-B
The RTS control is carried out here by an "intelligent" interface card on COM-B.
With COMB, an "intelligent" interface card is therefore necessary, e.g. CM08-RF (radio), CM08-BT (Bluetooth) or TCP-08 (except TCP06 with Tibbo).



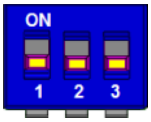
The following combinations are not permitted:

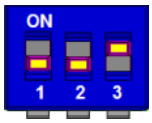


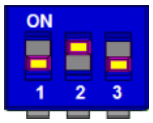


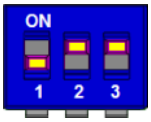
Dipswitch S1 = Timer Com-B

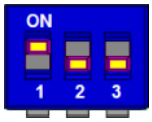
Dipswitch S2 = Timer Com-C

Delay: 45 msec 

Delay: 14 msec 

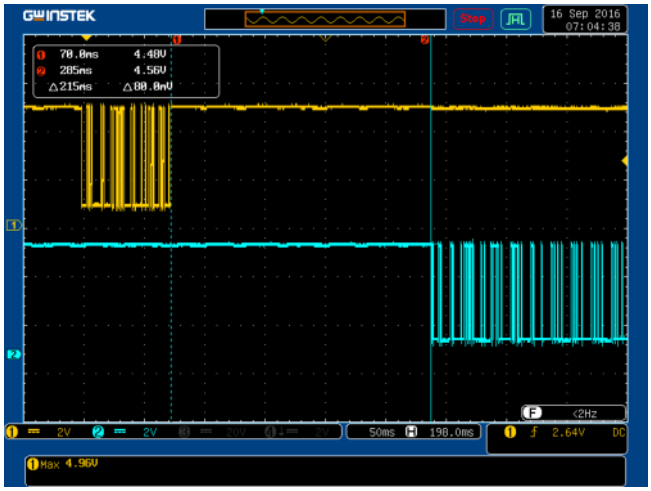
Delay: 10 msec 

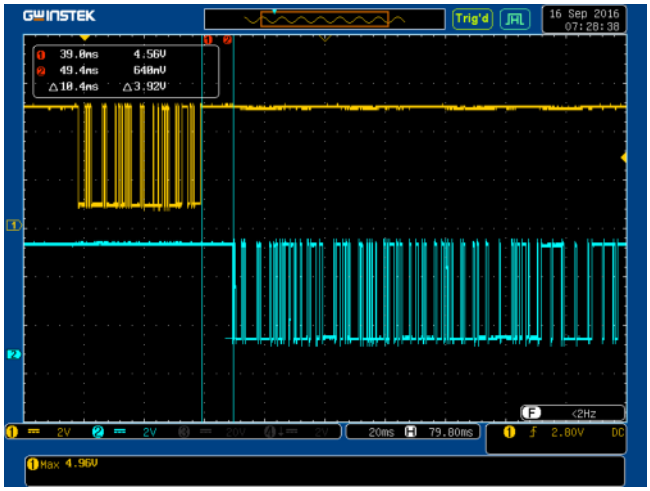
Delay: 5 msec 

Delay: 1 msec 

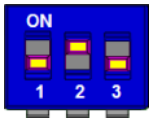
These timers are important as soon as bidirectional communication occurs as in the case of an RS485.
In contrast to RS422, data is sent and received on the same line pair with RS485. It is therefore necessary to switch between transmission and reception.

Depending on the controller generation, it takes a certain amount of time before receiving a request from the master a response from the controller is sent.
With the controllers of the generation MR05 / 06 it takes between 60 and 150msec to start sending the response telegram.



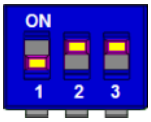


The controllers from generation MR07 already respond within approx. 10msec.

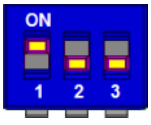


At baud rates 1200baud and lower both timers have to be set to 10msec.

The baud rate 2400baud works with both 10msec and 5msec.



From a baud rate of 4800baud and higher, the timers should be set to 5msec.

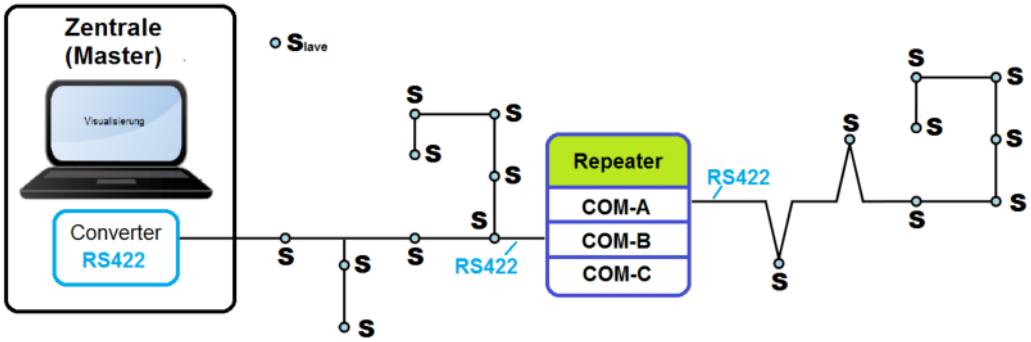


From a baud rate of 14400baud, the timer can be set to 1msec.

Both Dipswitch S1 and S2 are always set to the same time unit.
Different timer settings are only necessary in special cases and require consultation with our technicians.

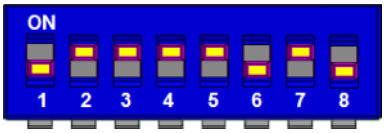
Practical examples:

Standard FSS-Repeater RS422 --> RS422

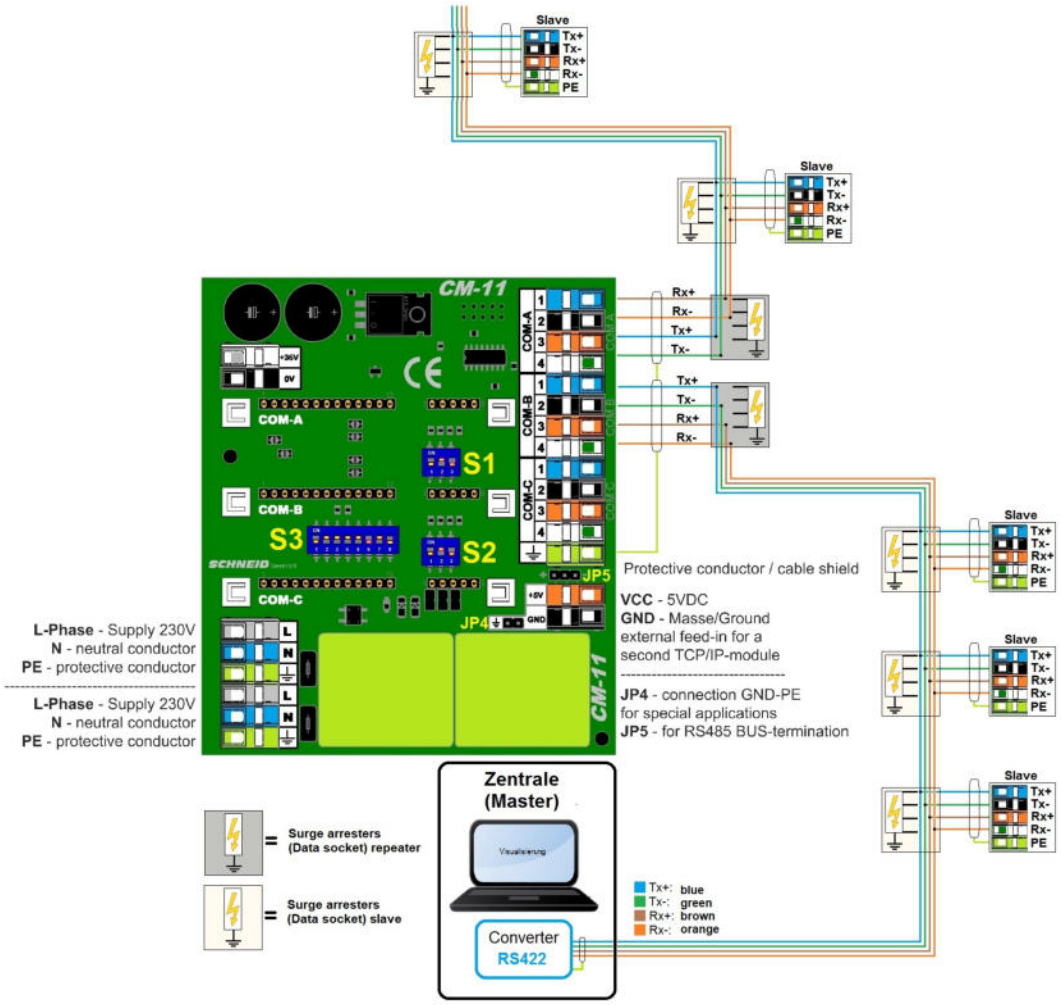


COM-A = RS422 module
COM-B = RS422 module

Dipswitch S3



Dipswitch S1 and S2 (RTS delay) according to baud rate and table



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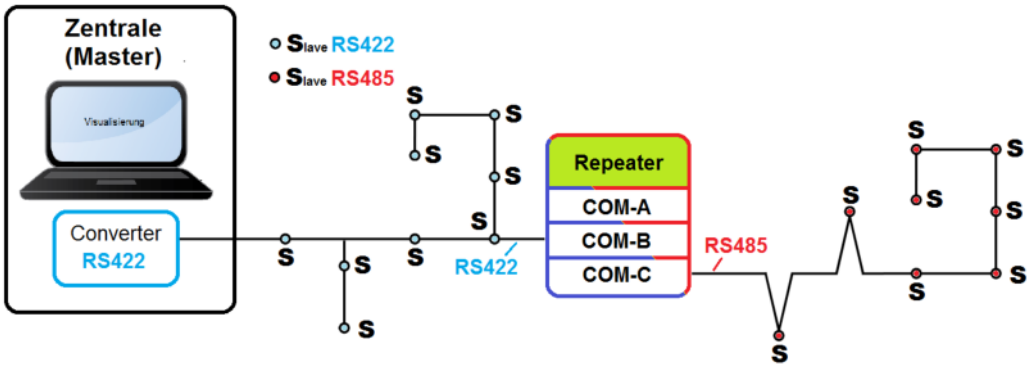
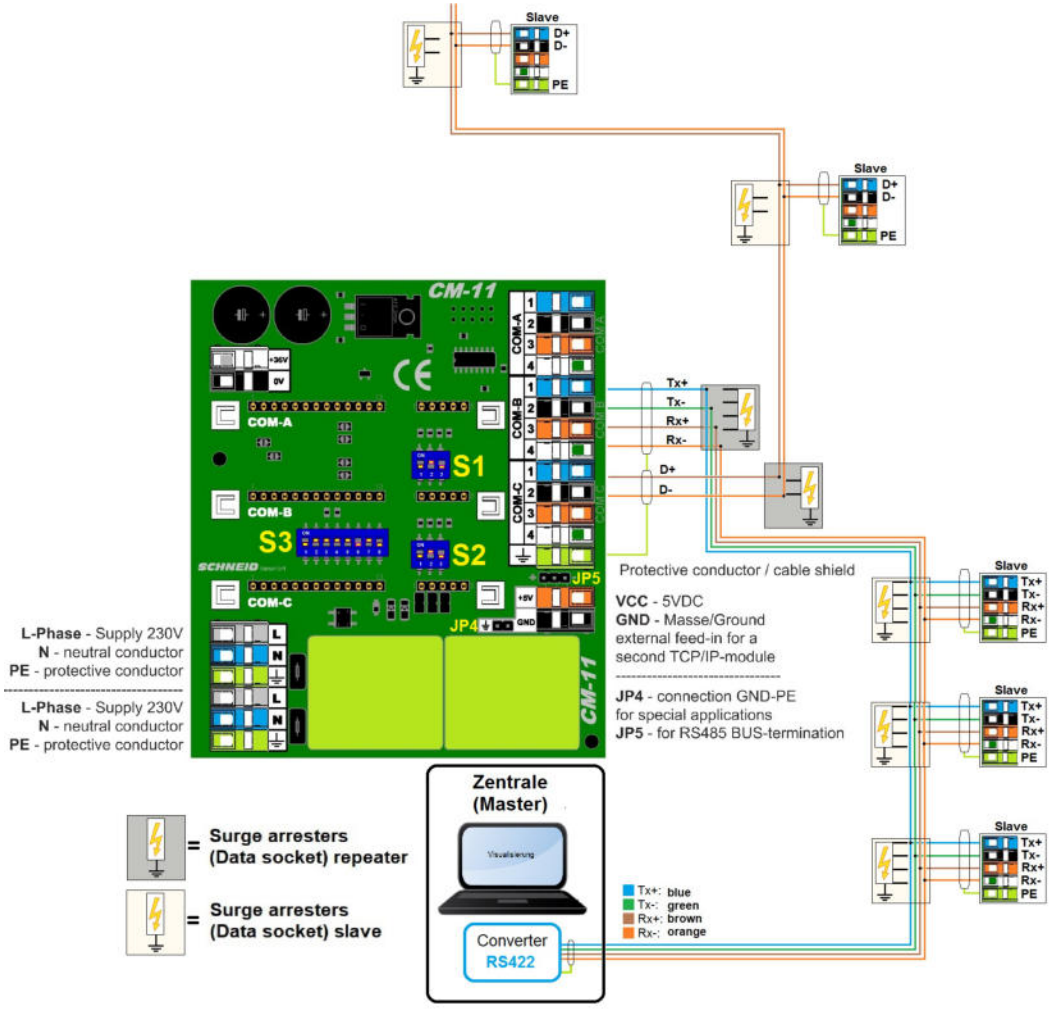
Repeater RS422 --> RS485



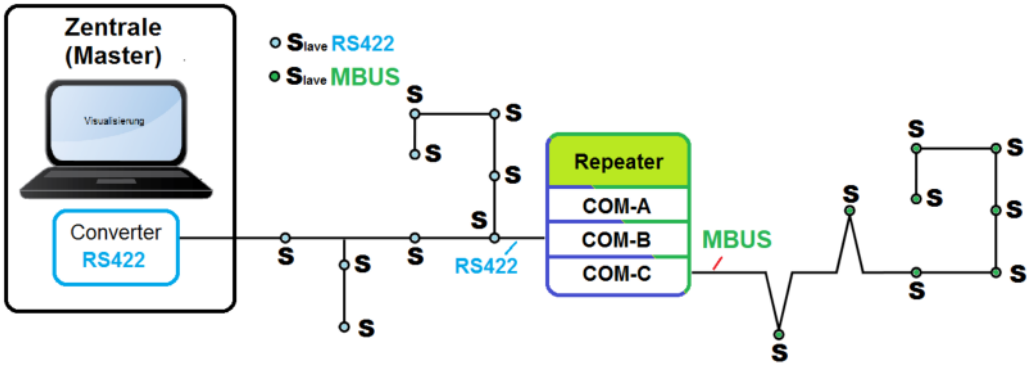
COM-B = RS422 module
COM-C = RS485 module

Dipswitch S3

Dipswitch S1 and S2 (RTS delay) according to baud rate and table

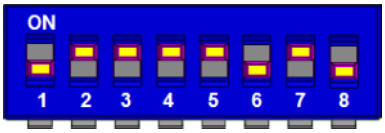


Repeater RS422 --> MBus-Master08

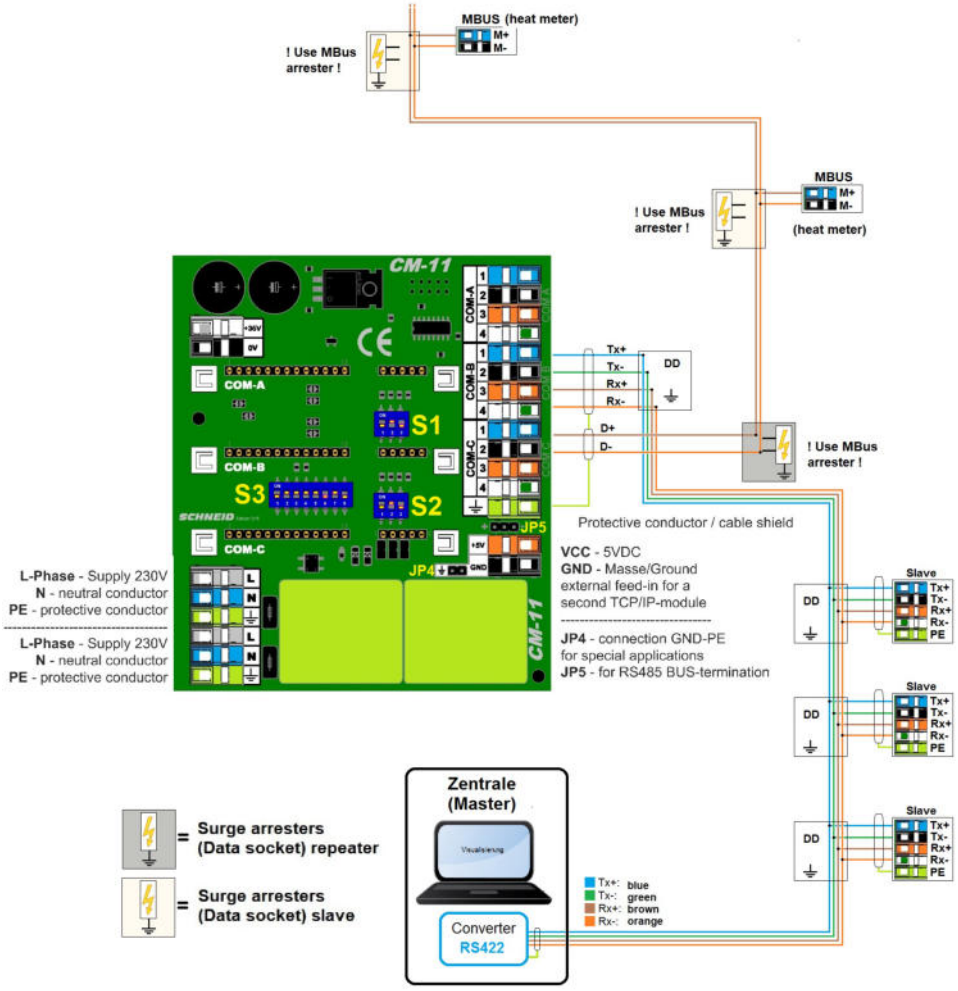


COM-B = RS422 module
COM-C = MBusMaster08 module

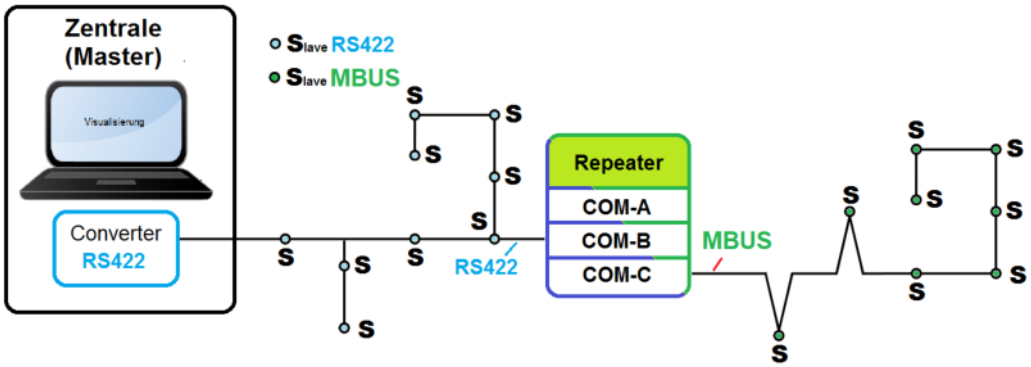
Dipswitch S3



Dipswitch S1 and S2 (RTS delay) according to baud rate and table.

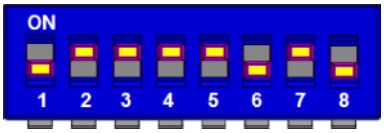


Gateway RS422 --> MbusMaster80

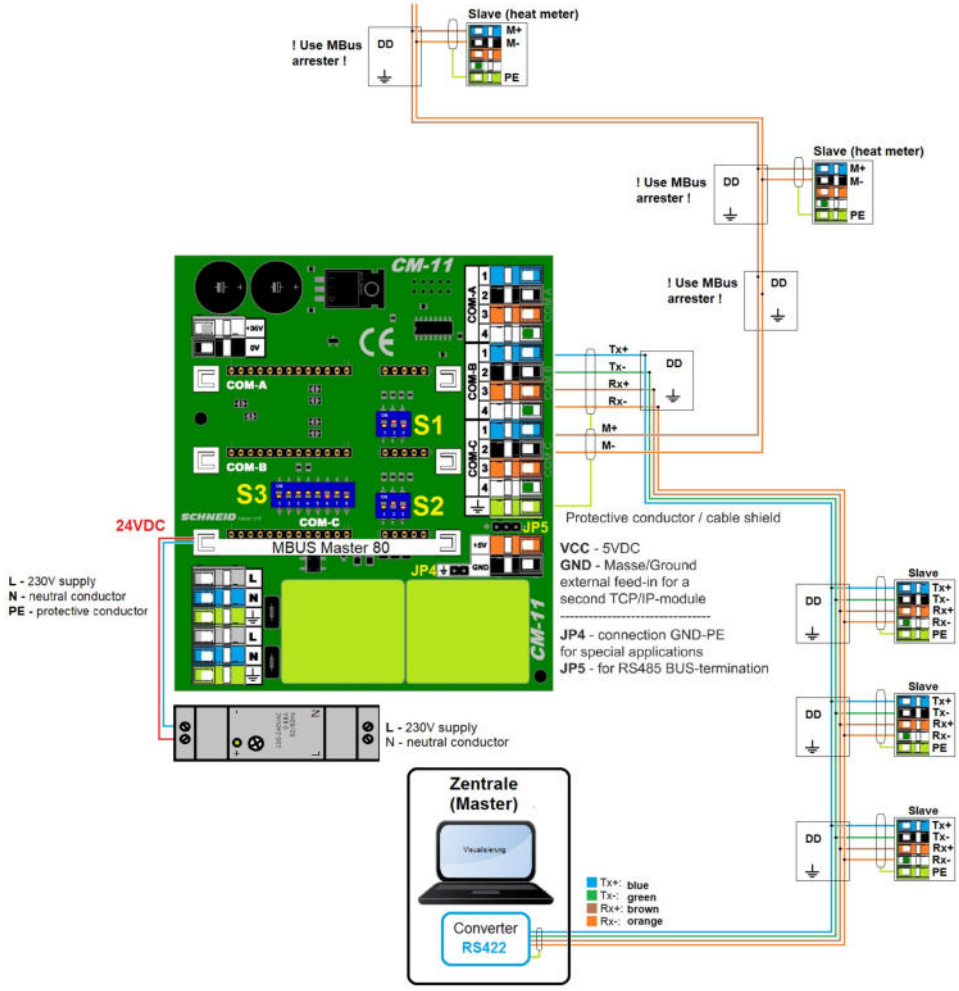


COM-B = RS422 module
COM-C = MBusMaster80 module

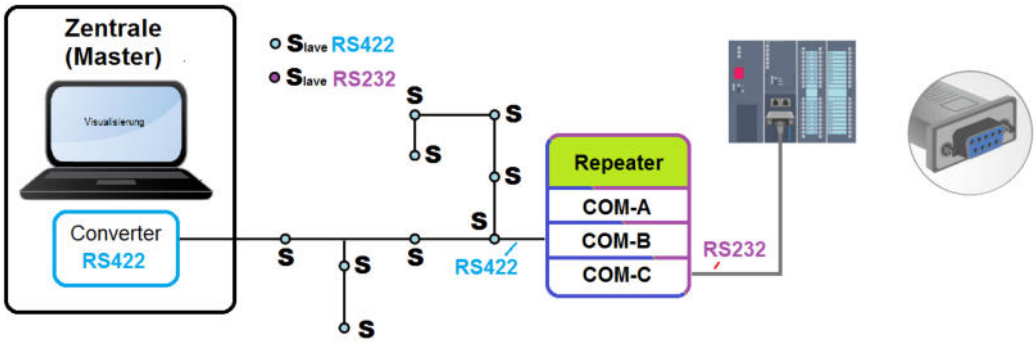
Dipswitch S3



Dipswitch S1 and S2 (RTS delay) according to baud rate and table.

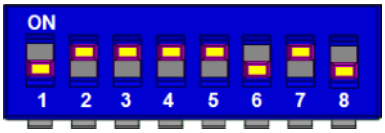


Gateway RS422 --> RS232

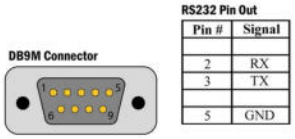


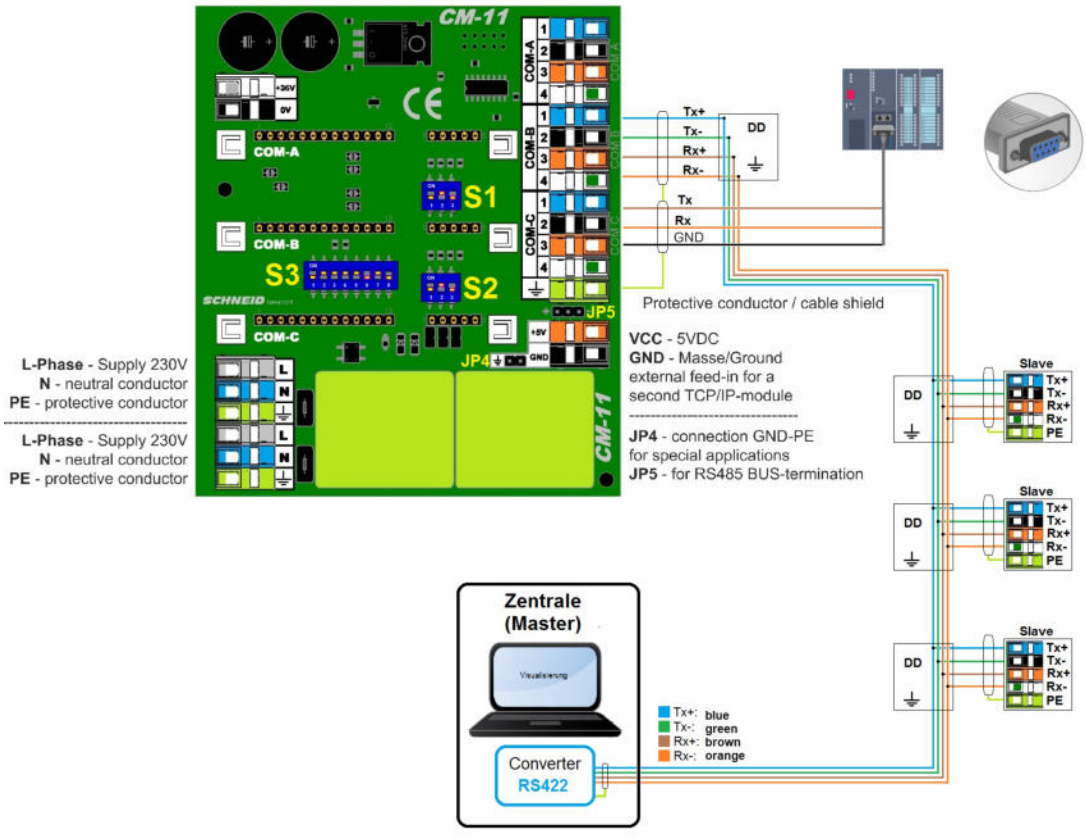
COM-B = RS422 module
COM-C = RS232 module

Dipswitch S3



Dipswitch S1 and S2 (RTS delay) according to baud rate and table





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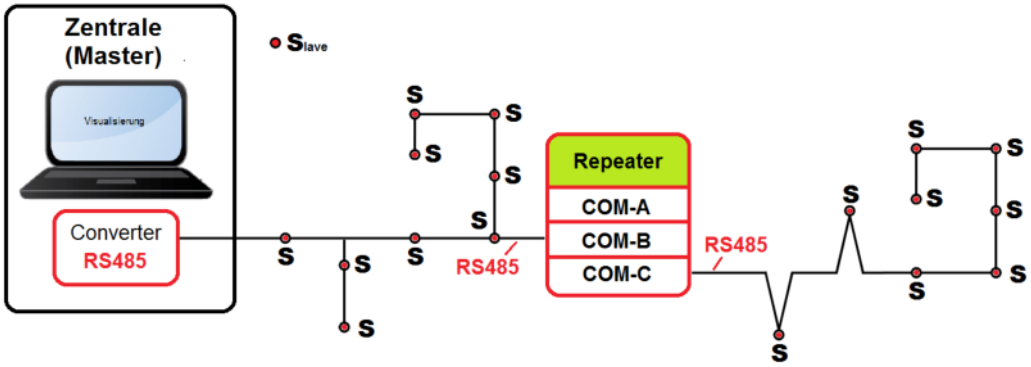
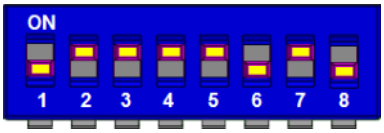
Repeater RS485 --> RS485

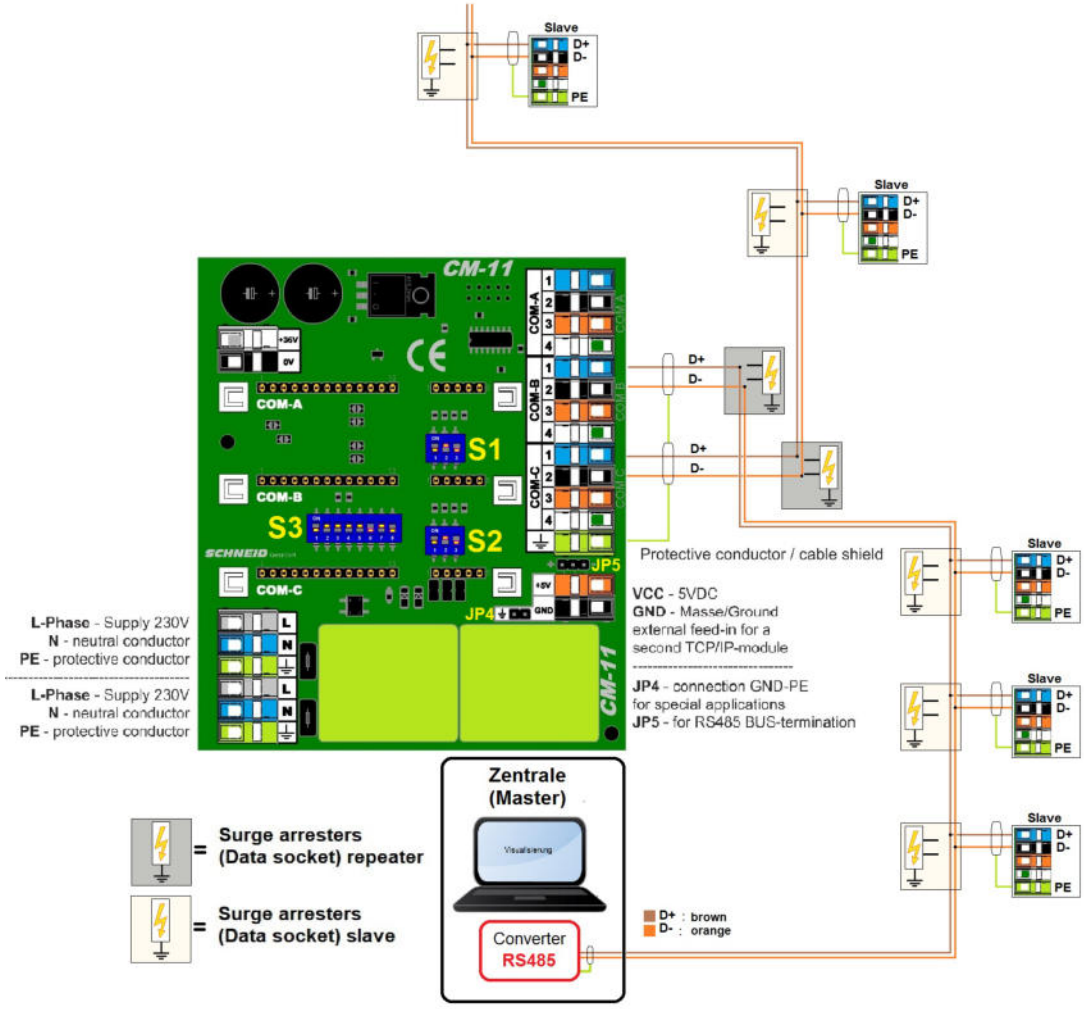


COM-B = RS485 module
COM-C = RS485 module

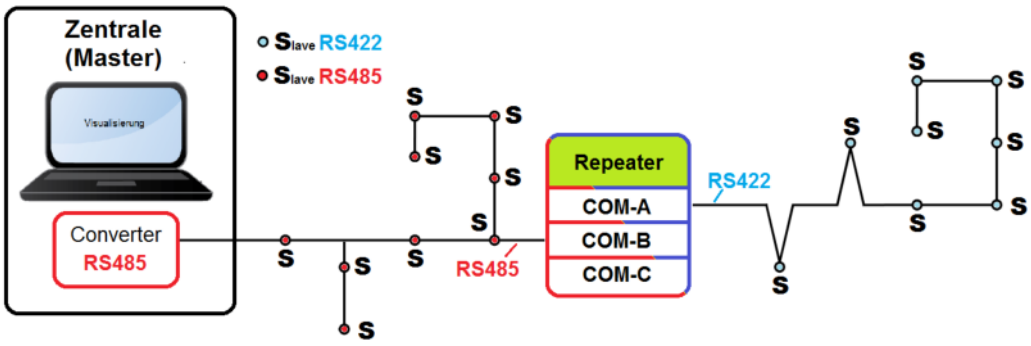
Dipswitch S3



Dipswitch S1 and S2 (RTS delay) according to baud rate and table.



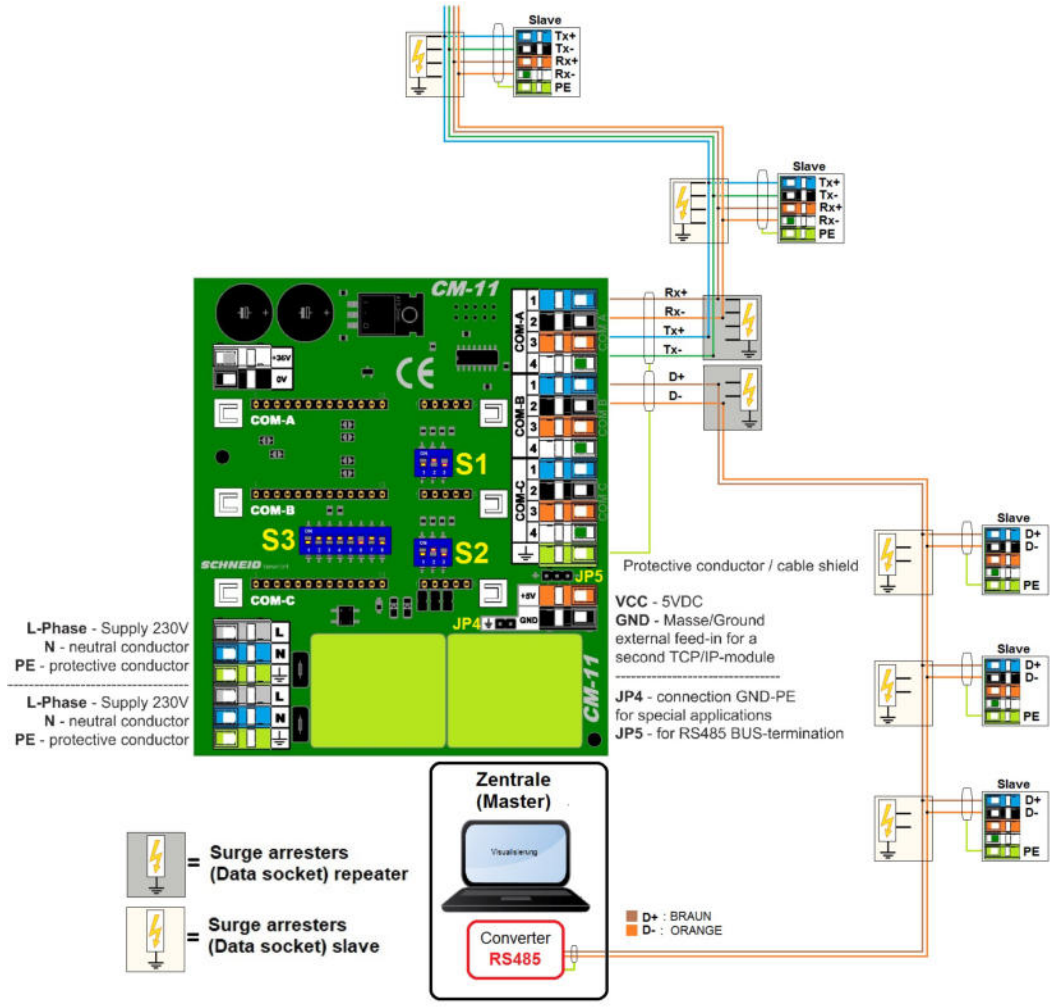
Repeater RS485 --> RS422



COM-A = RS422 module
COM-B = RS485 module

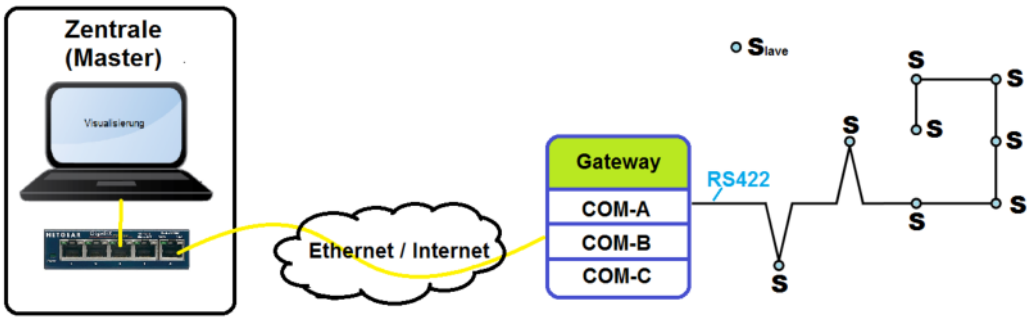
Dipswitch S3

Dipswitch S1 and S2 (RTS delay) according to baud rate and table.



Repeater base module CM11

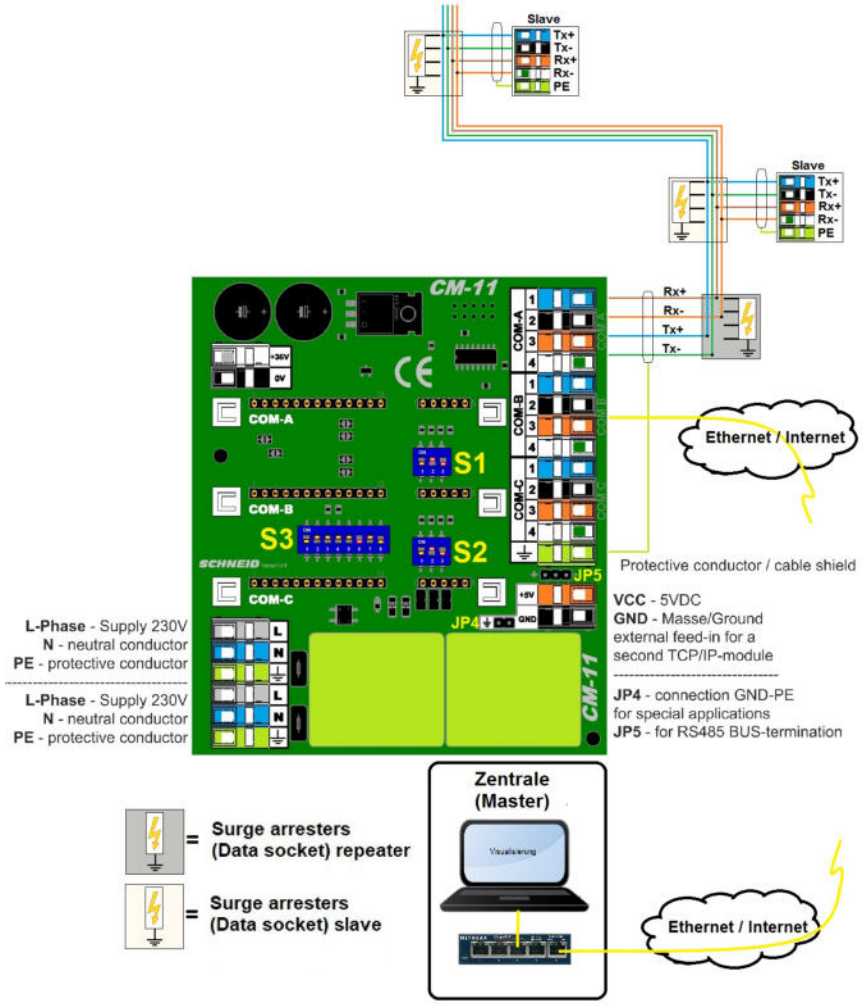
Gateway TCPIP --> RS422



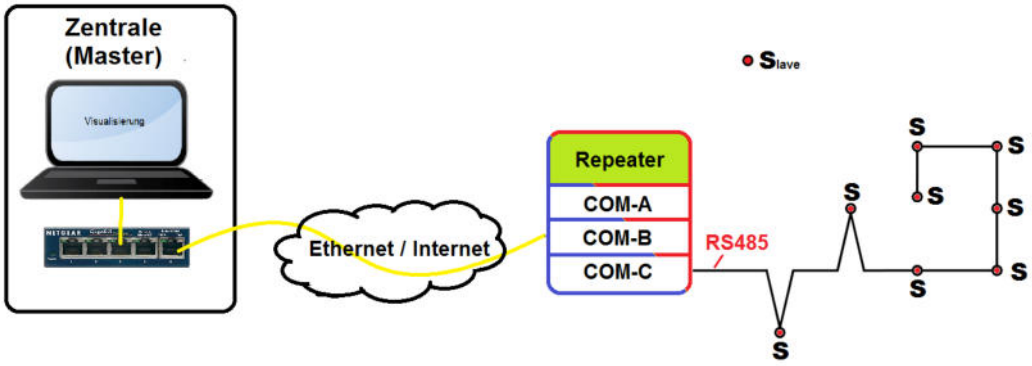
COM-A = RS422 module
COM-B = CM08-TCP module (Wiznet) or CM06-TCP module (Tibbo)

Dipswitch S3

Dipswitch S1 and S2 (RTS delay) according to baud rate and table.

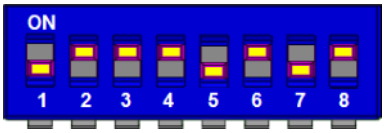


Gateway TCPIP --> RS485

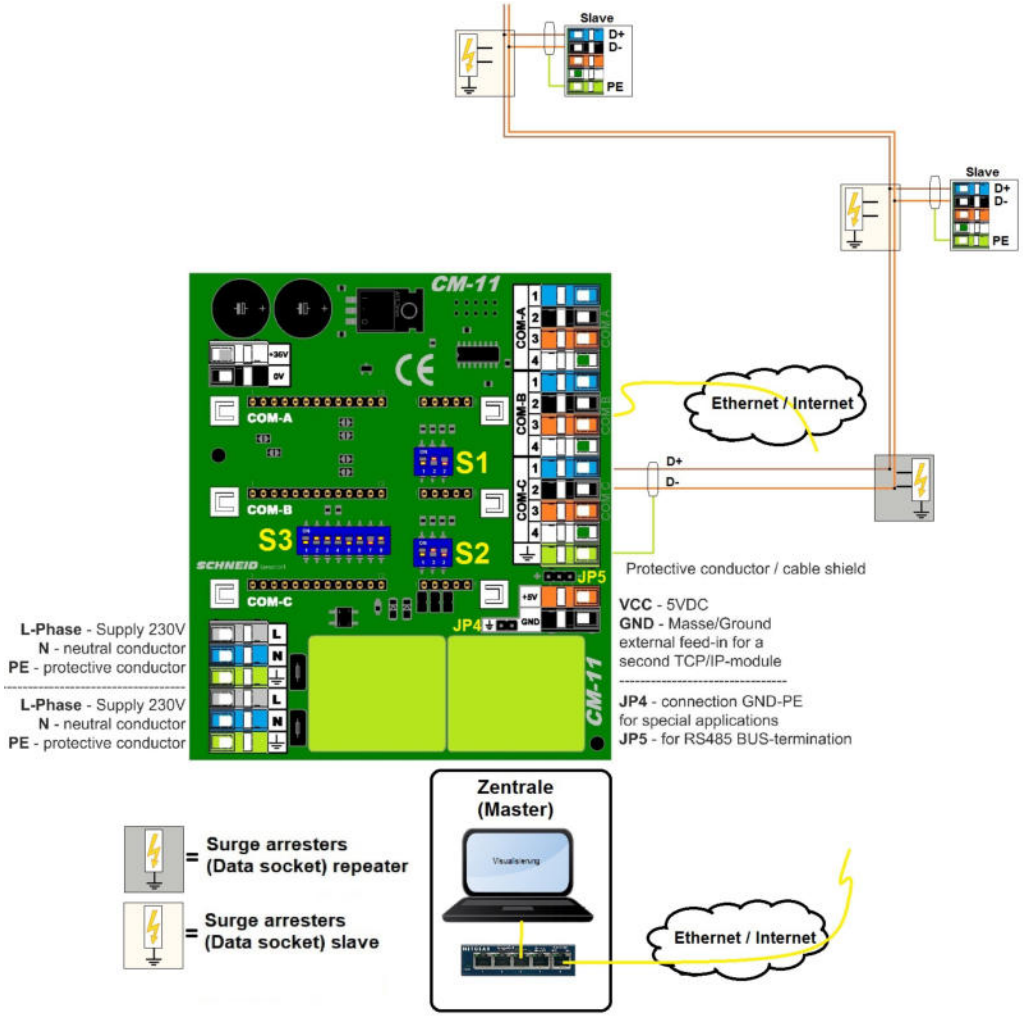


COM-B = CM08-TCP module (Wiznet)
COM-C = RS485 module (configured as master)

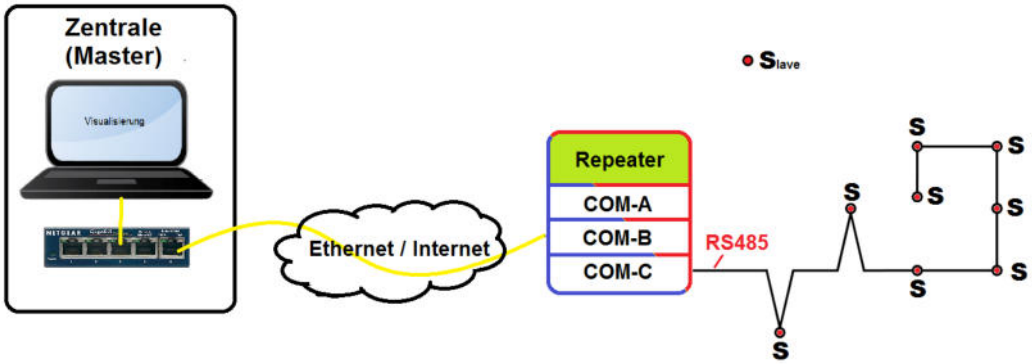
Dipswitch S3



Dipswitch S1 and S2 (RTS Delay) no function in this case.



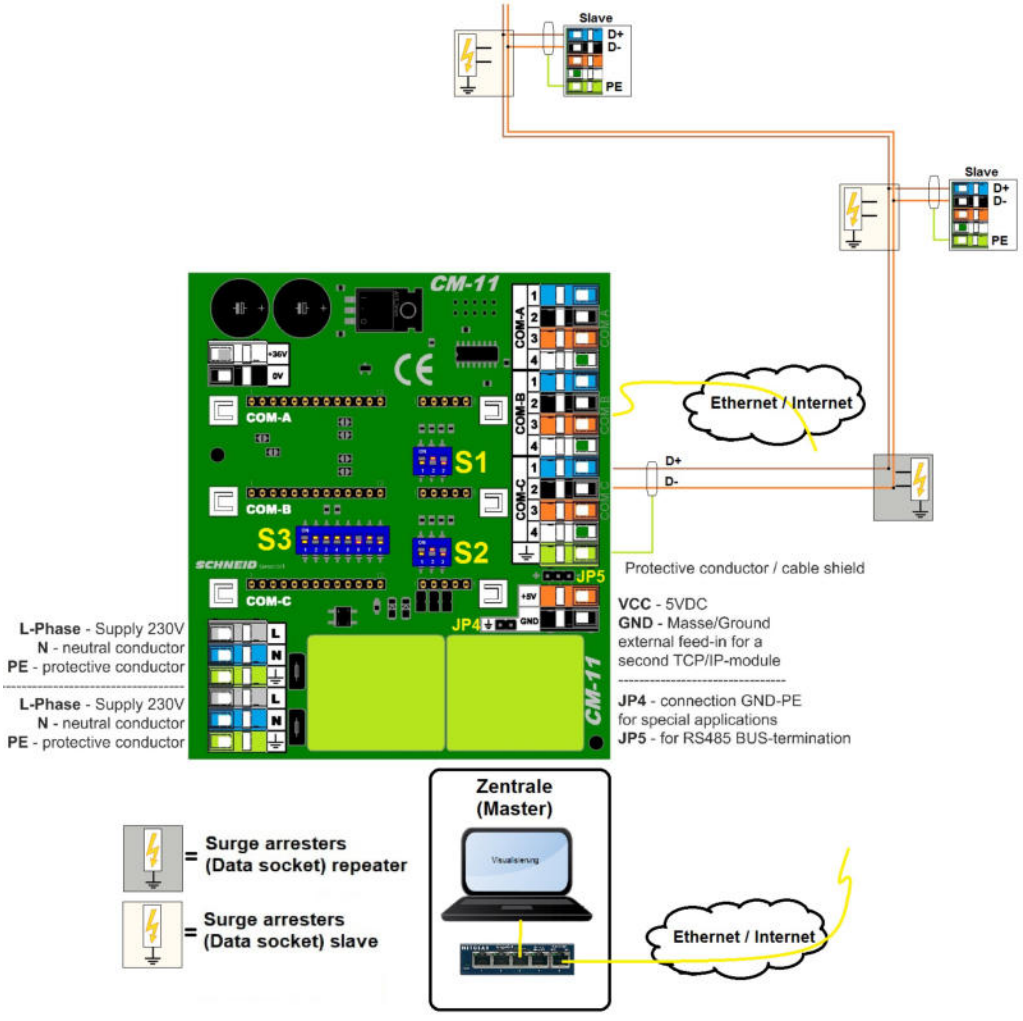
Gateway TCPIP --> RS485 / ALTERNATIVBESTÜCKUNG (TCPIP-CM06)



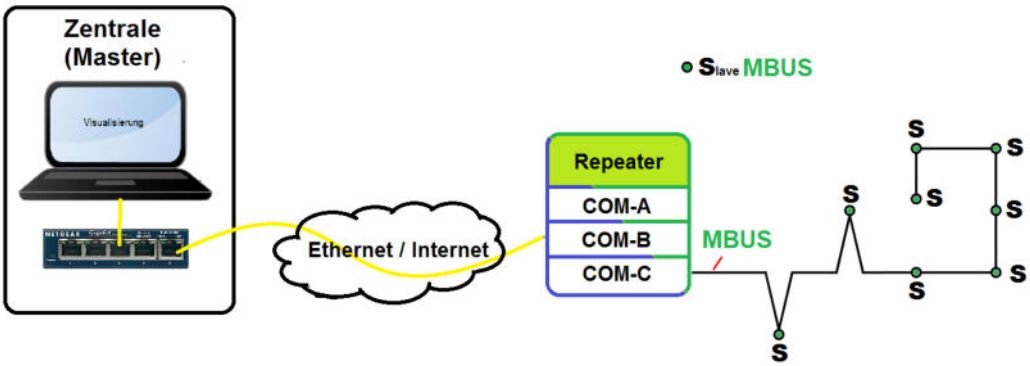
COM-B = CM06-TCP module (Tibbo)
COM-C = RS485 module (configured as master)

Dipswitch S3

Dipswitch S1 and S2 (RTS delay) according to baud rate and table.



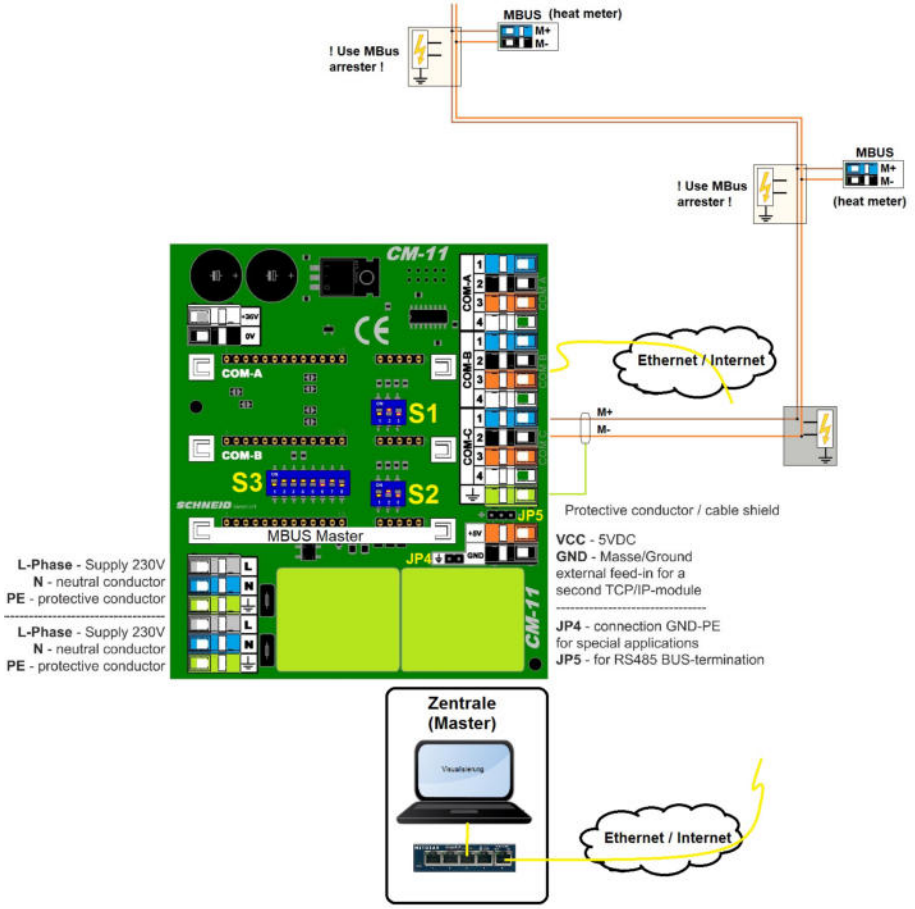
Gateway TCPIP --> MbusMaster08



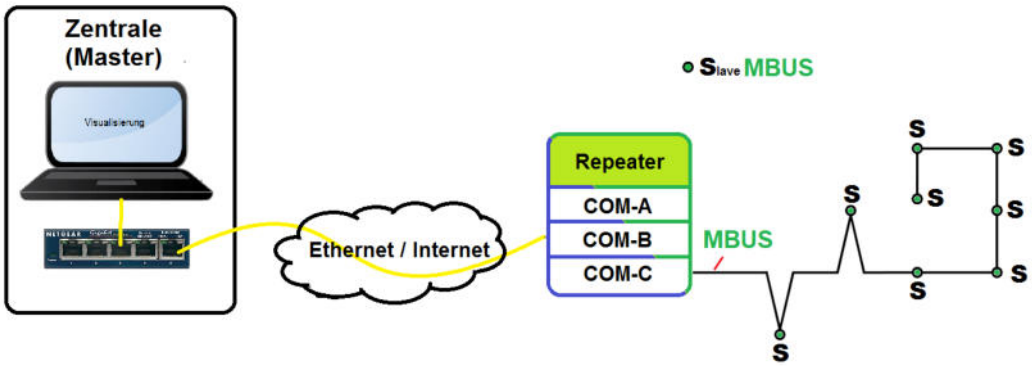
COM-B = CM08-TCP module (Wiznet) or CM06-TCP module (Tibbo)
COM-C = Mbus-Master08 module

Dipswitch S3

Dipswitch S1 and S2 (RTS delay) according to baud rate and table.

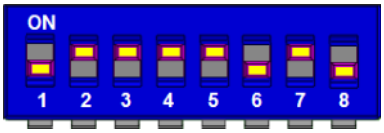


Gateway TCPIP --> MbusMaster80

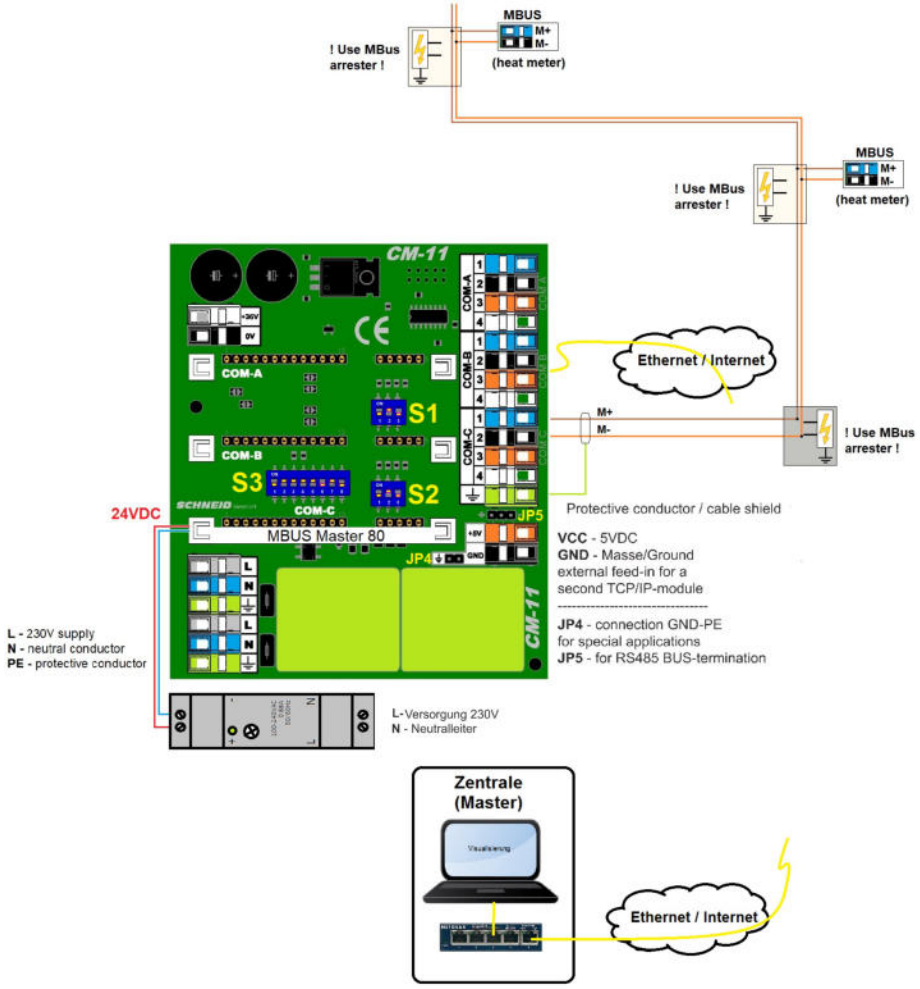


COM-B = CM08-TCP module (Wiznet) or CM06-TCP module (Tibbo)
COM-C = Mbus-Master80 module

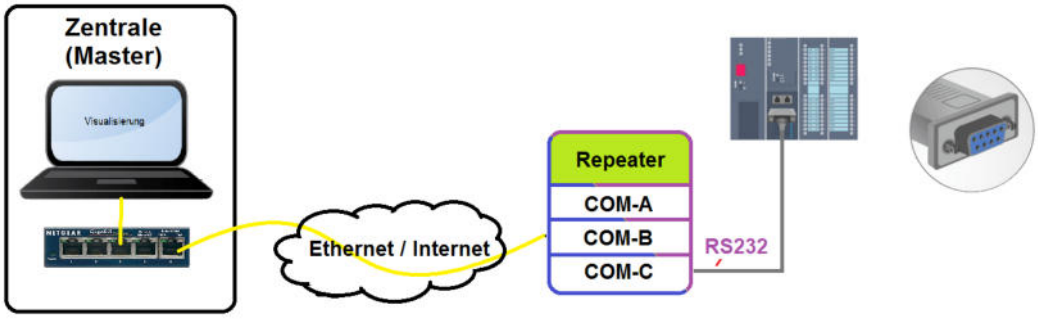
Dipswitch S3



Dipswitch S1 and S2 (RTS delay) according to baud rate and table.



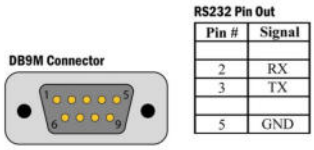
Gateway TCPIP --> RS232

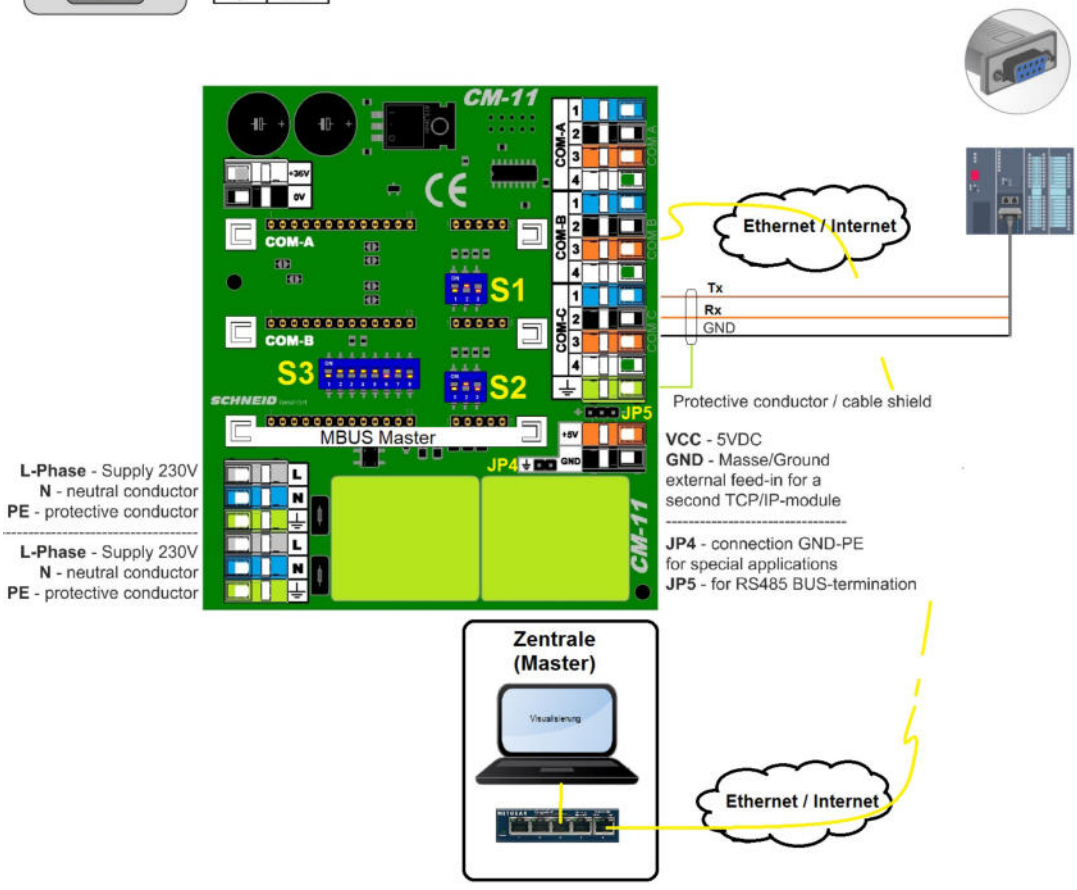


COM-B = CM08-TCP module (Wiznet) or CM06-TCP module (Tibbo)
COM-C = RS232

Dipswitch S3

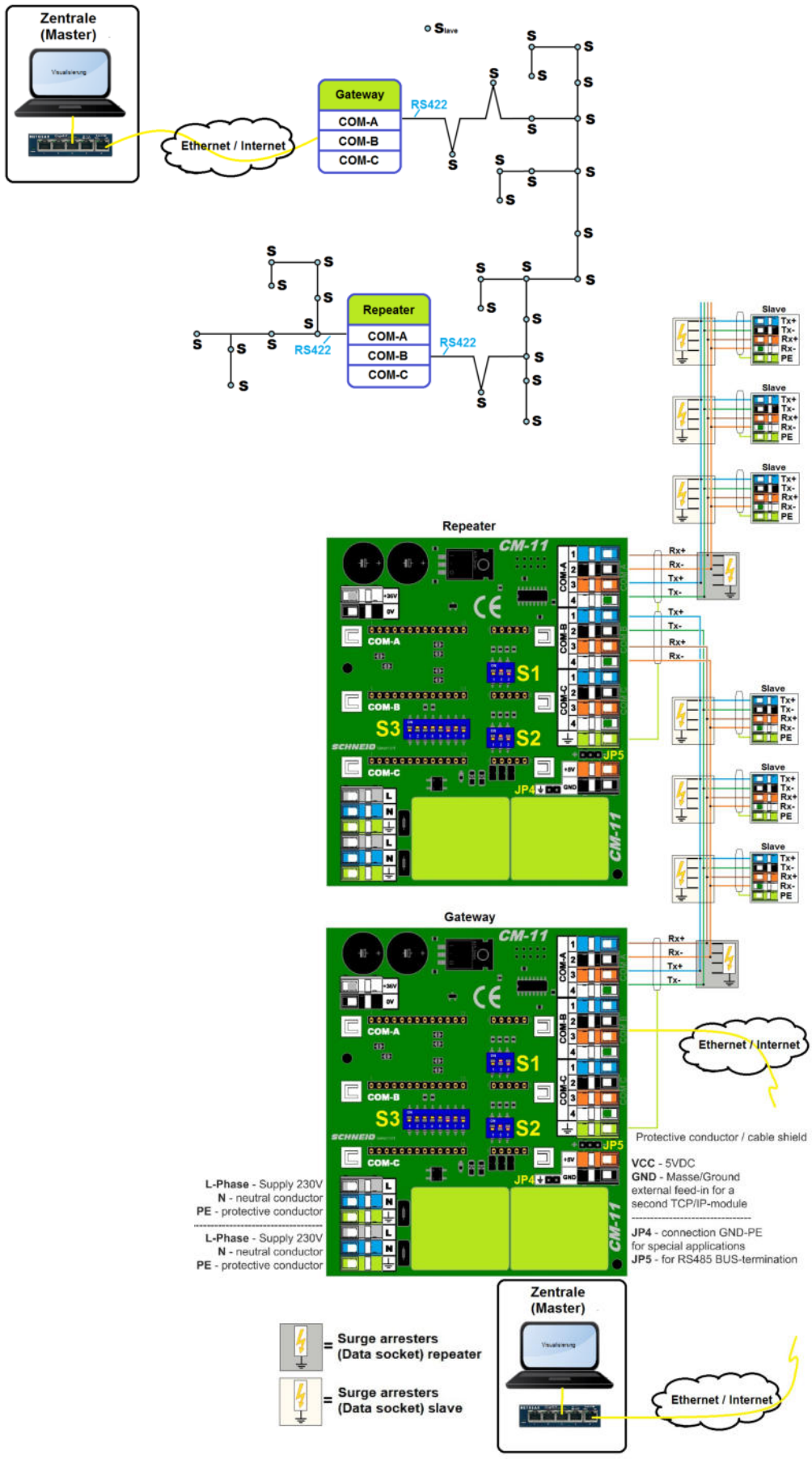
Dipswitch S1 and S2 (RTS Delay) no function in this case.





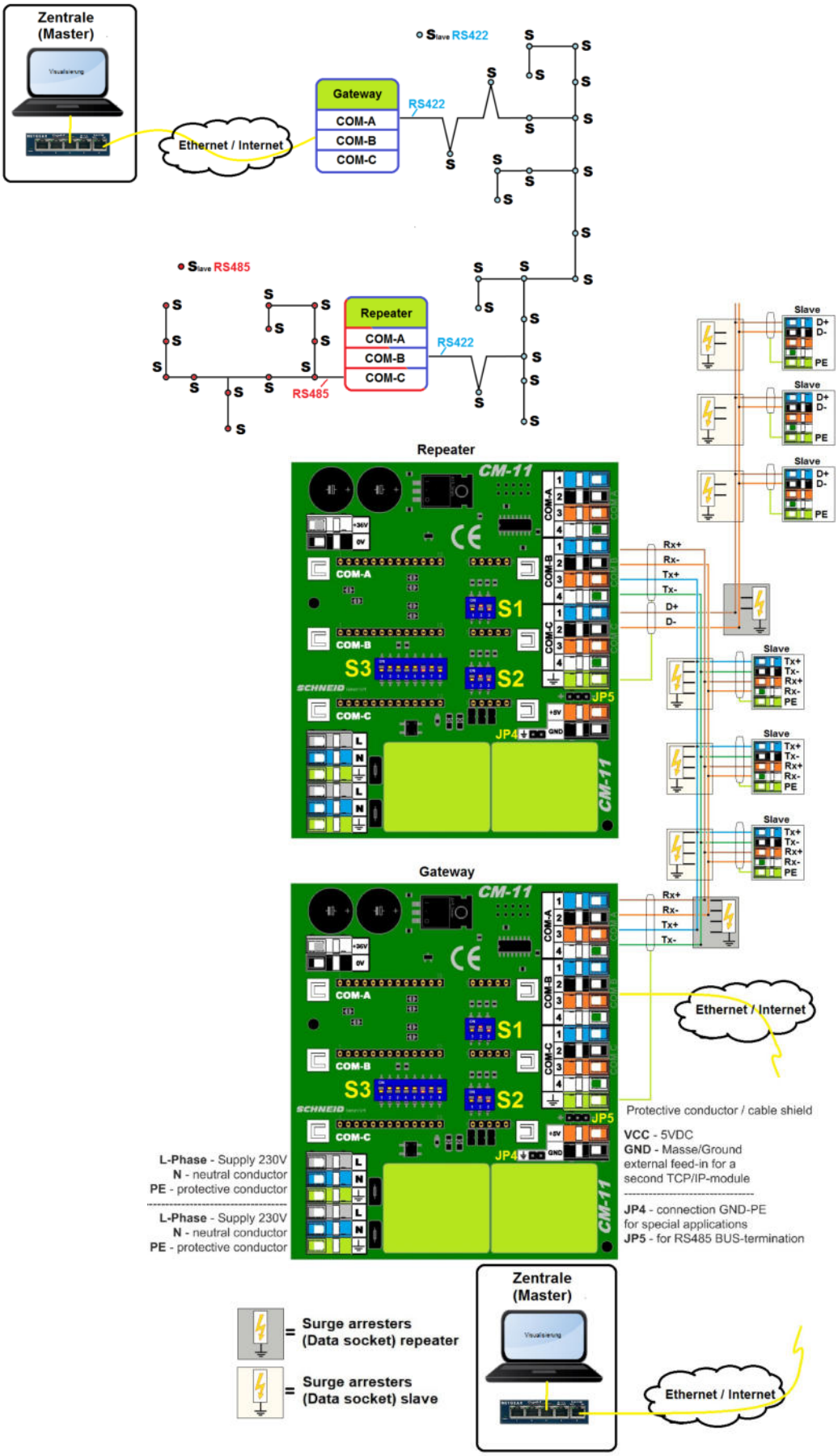
Repeater base module CM11

Special examples



Repeater base module CM11

Special examples



Repeater base module CM11

Scope of delivery:

SCHNEID repeater base board CM11 in DIN rail with two side covers and two clips.

Technical specifications:

Intrastat Number:	8537.10.91.90
Country of origin	EU/AT
Height, width, depth (in mm)	121x111x79
Weight (in kg)	0,425
Degree of protection	IP-20
Ambient temperature	0°C....+40°C
Operating voltage	230VAC
Power consumption	Max. 5VA
Maximum power 5VDC	250mA
Maximum power 36VDC	100mA
Connection type	Fixed wiring terminals
Connection technology	Spring clamp
Cable cross section	Max. 2.5mm²
Mounting type	DIN-RAIL TS35
Operating time	Continuous operation
Degree of pollution	2
Rated impulse voltage	1kV