

General layout of bus structure and bus topology with terminating and bias resistors



## General layout of bus structure



## Bus topology with terminating and bias resistors



Terminating resistor may only be installed at the ends of the bus line. In networks with repeaters not more than two line terminations are allowed. Line termination at the device can be activated via DIP switch 6. The bias resistors for bus level definition in the resting state are usually activated at the Modbus master / repeater.

The maximum number of subscribers per Modbus segment is 32 devices. When the number of subscribers is greater, the bus must be subdivided into several segments separated by repeaters. The subscriber address can be set from 1 to 247.

For the bus line, a twisted-pair cable data line / power supply line and copper mesh wire shield must be used. Therefore, the line capacitance should be less than 100 pF/m (e.g. Profibus cable).

**•** +49 (0) 911 / 5 19 47-0





General technical data Modbus sensors (RTU cable)



TECHNICAL DATA	
Power supply:	24 V AC (± 20%); 1536 V DC
Power consumption:	< 1 W / 24 V DC; < 1.6 VA / 24 V AC
Electrical connection:	see schematic diagram 0.2 - 1.5 mm², via push-in terminals
Bus parameters:	without power supply (in powerless mode) configurable and addressable via DIP switch!
Bus interface:	RS 485, <b>galvanically isolated</b> , Bus termination activatable via DIP switches. Up to 32 devices possible in one segment. In case of a greater number of devices, RS485 transceivers must be used.
Bus protocol:	Modbus (RTU mode), address range 0 <b>247</b> selectable
Baud rate:	9600, 19200, 38400 Baud
Status indicator:	LED green = Telegram valid LED red = Telegram error
Display:	The Modbus interface allows the display to be <b>individually</b> configured both in the 7-segment area and in the dot-matrix area.

2 separate **plug terminals** (push-in terminals)

OFFSET correction
LED for telegram indication (green for reception , red for error)

Push-button for manual zero point calibration

DIP switches block A for bus address

DIP switches block B for bus parameters

Foldable **display** (optional), Individually programmable display

2 separate **cable glands** (M2O) with seal and strain relief

Rev. 2024-V34 GB

**A** +49 (0) 911 / 5 19 47-0

www.SplusS.de