Built-in repeater DLP30

Function

The built-in repeater DLP30 is a RS 485 repeater for feedback-free connection of a PROFIBUS slave as an active spur.

The main field of application of this product is instrument manufacture. It may happen that the internal PROFIBUS interfacing has to be installed at a certain distance from the PROFIBUS module location proper. Often the connection is rendered through a line section which from a length of >10 cm as passive spur line has a negative impact on the data communication quality.

If several of these devices are in one segment, the lengths of the internal spurs must be added together.

Although according to PNO the sum of spur lines in the PROFIBUS of 6.6 m is admissible with a Baud rate of up to 1.5 Mbps, passive spur lines of any length should not be used for the sake of a long-term, safe and reliable data communication.

Installation recommendation

The external PROFIBUS connection is rendered through a relevant casing cut-out for a 9-pin sub-D connector. Should an additional mechanical protection be needed, a suitable guard plate can be provided.

Bus connection

- 9-pin standard PROFIBUS connector
- The slave is connected via a 10-pin ribbon cable.
- Total length 20 m must not be exceeded.
- A shielded type is recommended from a length of 0.3 m.
- The internal connecting cable is not included in the scope of supply.

Upon request delivery/assembly will be customized (line lengths and connector design).

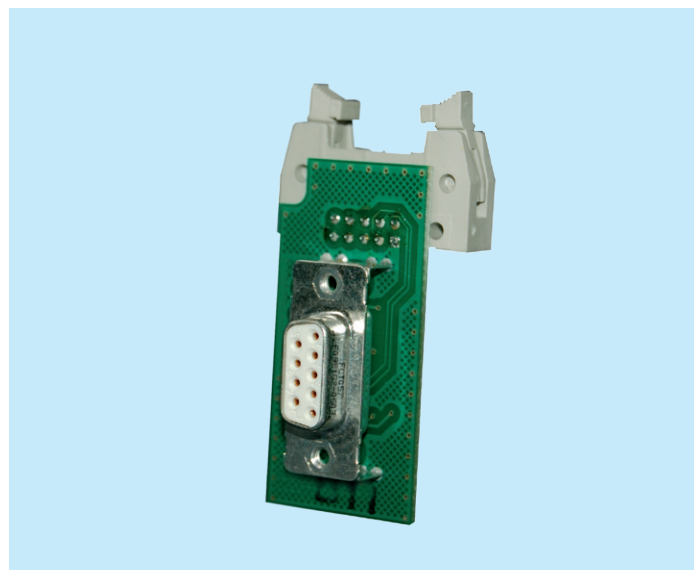## Electrical parameters

- +5 V and RTS signal must be available at slave
- Baud rate: 9.6 kbps to 12 Mbps

Ambient conditions
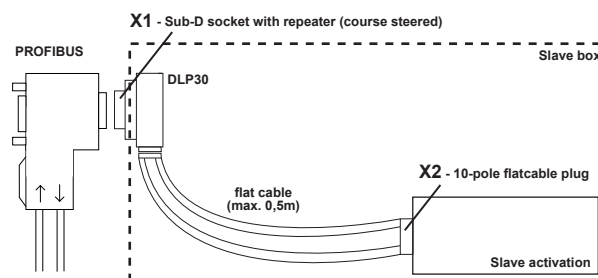
- Operating temperature: 0 °C to +60 °C
- Transport / storage temperature: -20 °C to +60 °C
- Relative humidity: max. 75 %
                                    (non-condensing)
- Protective system: IP20

Testing

It is recommended to test the proper function after installation by measurements.

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Engineering drawing

Connector X1 (sub-D), connection measuring (repeater function)

Pin	Function	Not
1	not used	
2	M24	connects to X2 Pin 3
3	B	RS-485 Daten
4	not used	
5	GND	connects to X2 Pin 9
6	VCC	supply voltage +5V
7	P24	connects to X2 Pin 4
8	A	RS-485 data reversed
9	not used	

Connector X2 (ribbon cable connector), connection slave

Pin	Function	Note
1	not used	
2	VCC	supply voltage +5V
3	M24	connects to X1 Pin 2
4	P24	connects to X1 Pin 7
5	B	RS-485 datan
6	A	RS-485 data reversed
7	RTS-AS	connects to X1 Pin 7
8	not used	
9	GND	connects to X2 Pin 5
10	not used	

Pin assignment

Ordering details	Art. No.
Build-in repeater DLP30	110030005