

Technical Documents - PROFIBUS connector



Connect & Detect: HB157 / vol. 4.03

The bus connector connects PROFIBUS user knots or complete PROFIBUS net components to the PROFIBUS line. Each connector has switchable terminating resistors. Dependent of the type of connector, a PD/diagnosis socket as well as a controller with 4 LED indicators are additionally integrated.

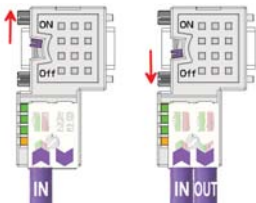


- Cable diagnosis functions via LEDs
- Switchable terminating resistors
- Integrated controller for transfer rates up to 12Mbit/s
- Metal casing with lose-protected single-screw-mounting
- Fast connection via insulation cutting clamps

Switch	PWR	TxD	Term	ERR	Description
ON/OFF	green	green	green	yellow	
x	●	x	x	x	Power is OK (+5V ±5%)
x	BB	x	x	x	Power is out of +5V ±5%
x	BB	x	x	BB	Short-circuit of bus wire possible
x	x	○	x	x	No bus activity of participant
x	x	BB	x	x	Bus activity of participant
x	x	●	x	x	Bus activity, RTS (pin 4) of RS485 is not connected
OFF	x	x	○	x	Termination is switched off
OFF	x	x	BB	x	Internal terminating resistor faulty
ON	x	x	●	x	Termination is activated
x	x	x	x	○	No errors detected
OFF	x	BB	○	●	Bus is not terminated
OFF	x	○	○	●	Bus is open

on: ● | off: ○ | blinking: BB | not relevant: X

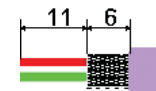
Switchable terminating resistors



The switchable terminating resistors are activated by a slide switch, easily accessible from both sides right and rear. Hereby shutoff of the outgoing bus line is possible. Also for testing purposes the following PROFIBUS components connected via "OUT" can be switched off without removing the connector. Please make sure to terminate the last participants on the bus at both ends and to connect them to the bus cable via "IN".

Measures in mm:				Technical data	
				Power supply by end device	DC 4.75 ... 5.25V
				Current consumption	10 ... 30mA
				PROFIBUS	SubD-male-9pole
				Plugging cycles jack	min. 200
				Fixing screws	4-40 UNC
				max. Tightening torque	0.02Nm
				Cable diameter	8mm
				Casing / degree of protection	Zinc-Diecast / IP20
A	64	61	66	Contact cover screw	M3x15
B	34	53	40	max. Tightening torque	0.08Nm
C	15.8	15.8	15.8	Temperature range	-20°C ... +75°C
Note!				Stripping length	
Starting with release 5 also highly flexible bus cable may be used as e.g. Lapp Kabel order no.: 2170222, 2170822, 2170322.				Outside cover / shielding	17mm / 6mm
				Connecting technique	Insulation cutting clamps
				Bus cable	Type A (EN50170)

Stripping the cable (tool example)



1. Measure wire length on template.
2. Insert end of cable and push fixing slider as far as it goes.
3. Rotate stripping tool repeatedly around the cable.
4. Pull off stripper (in closed state).
5. Remove cut-off wire/core insulations remainder.

Connecting the PROFIBUS cable



1. Loosen the contact cover screw.
2. Lift the contact-cover.
3. Insert both wires into the ducts provided - connect the **green** wire at 'A' and the **red** wire at 'B'!
4. Please take care that you do not cause a short circuit between screen and data lines!
5. Close the contact cover
6. Tighten the contact cover screw.