



Technical Documents

Profibus connector

Connect & Detect

HB157 / vol. 4.01

General Information

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.

Features

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

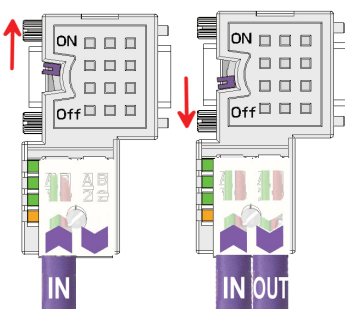


Diagnosis via LEDs

While connected, the Profibus connector offers the following test functions for start-up and trouble shooting – indicated by LEDs as below:

Name	Color	LED off	LED on	LED blinking (5Hz)
PWR	green	No Power (< 4V)	Self-test finished, Power OK (4...5.5V)	Short-circuit of bus wire possible. Blinks simultaneously with ERR LED.
TXD	green	No bus activity	-	Data transfer active
Term	green	No termination	Termination active	Internal terminating resistor faulty. Blinks simultaneously with ERR LED.
ERR	yellow	No errors detected	Signal levels out of defined range, possibly termination failure in bus line.	Short-circuit of bus wire possible respectively internal resistor faulty.
The LED flashes sporadically: The Profibus device is near the reference level, which is defined in the Profibus connector. Appearing differences were compensated by the protocol.				

Switchable terminating resistors

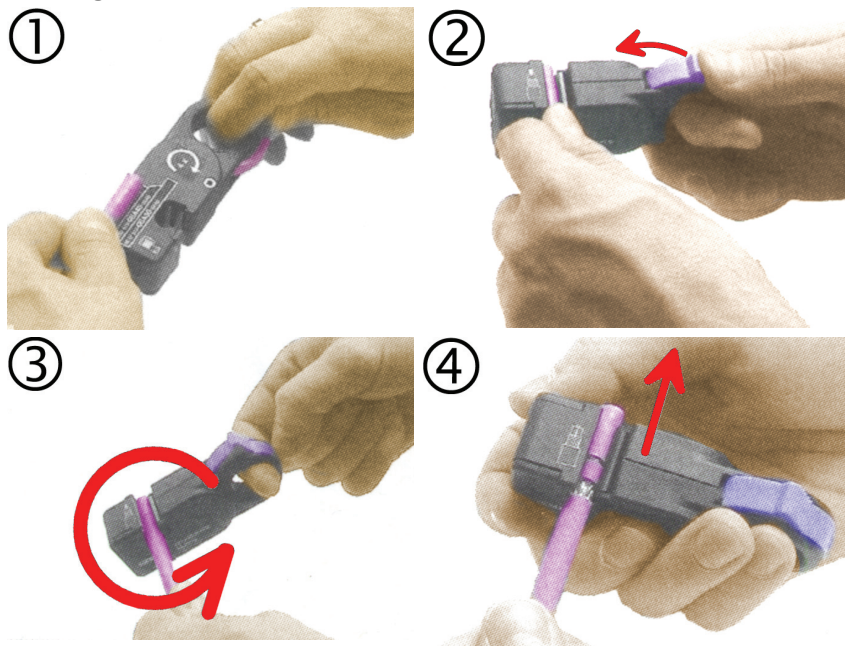


The switchable terminating resistors are activated by a slide switch, easily accessible from both sides right and rear.

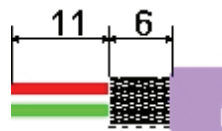
Hereby shutoff of the outgoing bus line is possible. Also for testing purposes the following PROFIBUS components connected via "OUT" can be switched off without removing the plug.

Please make sure to terminate the last participants on the bus at both ends and to connect them to the bus cable via "IN".

Stripping the cable (tool example)

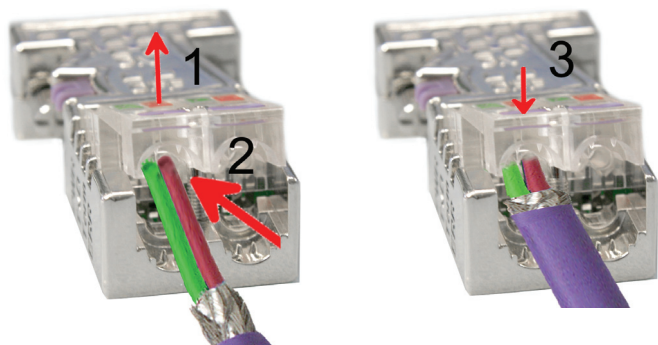


- Measure wire length on template:



- Insert end of cable and push fixing slider as far as it goes
- Rotate stripping tool repeatedly around the cable
- Pull off stripper (in closed state)
- Remove cut-off wire/core insulations remainder

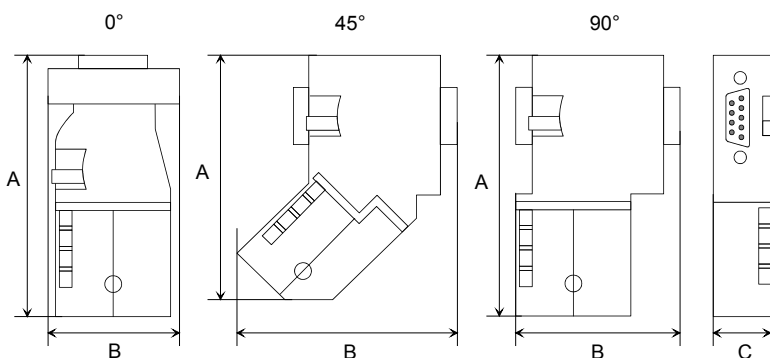
Connecting the Profibus cable



- Loosen the screw
- Lift contact-cover
- Insert both wires into the ducts provided (watch for the correct line color as below!)
- Please take care that you do not cause a short circuit between screen and data lines!
- Close the contact cover
- Tighten screw

Please note: the green line must be connected to A, the red line to B!

Measures in mm:



	0°	45°	90°
A	64	61	66
B	34	53	40
C	15.8	15.8	15.8

Technical data	
Power supply by end device	DC 4.75 ... 5.25V
Current	5 ... 30mA
Profibus	SubD-male-9pole
Plugging cycles jack	min. 200
Cable diameter	8 mm
Casing	Zinc-Diecast
Degree of protection	IP20
Temperature range	-20°C ... +75°C
Fixing screws / max. tightening torque	4-40 UNC / 0.4Nm
Stripping Lengths	
Outside cover/shielding	17mm / 6mm
Connecting technique	Insulation cutting clamps
Bus cable	Type A (EN50170)

Note!

Starting with release 5 also highly flexible bus cable may be used:
Lapp Kabel order no.: 2170222, 2170822, 2170322.