Technical Documents

Profibus plug

Connect & Detect

HB156 / vol. 1.00

General Information

The bus plug connects PROFIBUS user knots or complete PROFIBUS net components to the PROFIBUS line. Switchable terminating resistors, a PD/diagnosis socket as well as a controller with 4 LED indicators are integrated.

Features

- Diagnosis functions via LEDs
- Switchable terminating resistors
- Integrated controller for transfer rates up to 12 MBaud
- Metal casing with lose-protected “single-screw-mounting”
- Connection via insulation cutting clamps

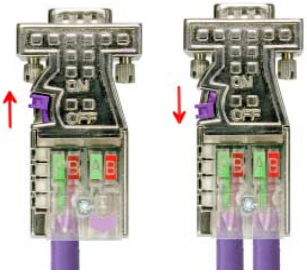
Diagnosis via LEDs

While connected, the Profibus plug 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	yellow	No Power (< 4V)	Self-test finished, Power OK (4...5,5V)	Short-circuit of bus wire possible*
TXD	green	No bus activity	-	Data transfer occurs
Term	yellow	No termination	Termination active	Internal terminating resistor faulty*
ERR	red	No errors detected	Signal levels out of defined range possibly termination failure in bus line	Short-circuit of bus wire possible* abbr. internal resistor faulty

*) blinks simultaneously with ERR-LED

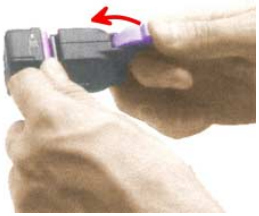
Switchable terminating resistors



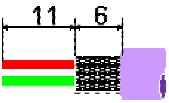
The switchable terminating resistors are activated by a slide switch, easily accessable from both sides right and rear.

With this, shutoff of the outgoing bus line is possible. Also for testing purpose the following PROFIBUS components can be switched off without removing the plug.

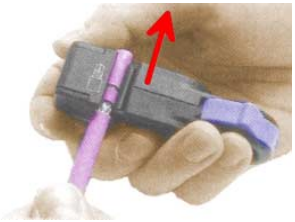
Stripping the cable (tool example)



- Measure wire length on template:



- Insert end of cable and push fixing slider as far as it goes

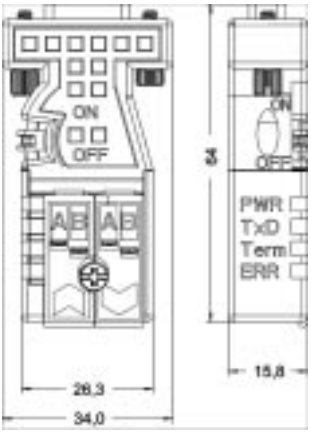


- Rotate stripping tool repeatedly around the cable
- Pull off stripper (in closed state)
- Remove cut-off wire/core insulations remainder

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!



Technical data	
Power supply by end device	DC 4,75 ... 5,25V
Current	Max. 30mA
Profibus	SubD-male – 9 pole
Plugging Cycles	min. 200
Cable Diameter	8 mm
Casing	Zinc-Diecast
Temperature Range	-30°C ... +55°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	Typ A (EN50170)