

Brief Instruction PROFIBUS Compact Repeater

Version

4 from
HW 4

Application and functional description

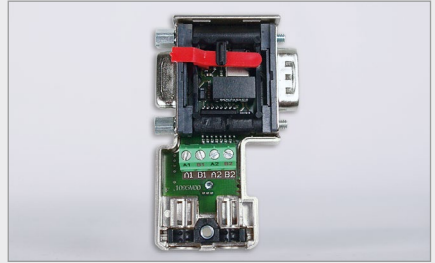
In spite of its compact design, the PROFIBUS Compact Repeater is a completely normal PROFIBUS Repeater. It regenerates the signals in flank slope, level and duty cycle.



Connection of the PROFIBUS cable on the bottom of the device

The PROFIBUS is connected to the PROFIBUS Compact Repeater via a terminal block.

The Compact Repeater must be opened for this. The shield-grounding is performed via the metallised Repeater case.



Checking the setting of the bus termination

(switch on the top side of the device)

If the PROFIBUS Compact Repeater is located at the end of a segment, you must activate the bus termination (ON).

If the PROFIBUS Compact Repeater is located in the middle of a segment (e.g. to open a branch line), you must deactivate the bus termination (OFF).



The PROFIBUS Compact Repeater is plugged directly onto the Sub-D socket of the PROFIBUS participant instead of the normal PROFIBUS device connector. It is fastened using the two screws above and underneath the socket.

Note: The PROFIBUS participant must provide 5 V/100 mA for the Compact Repeater.

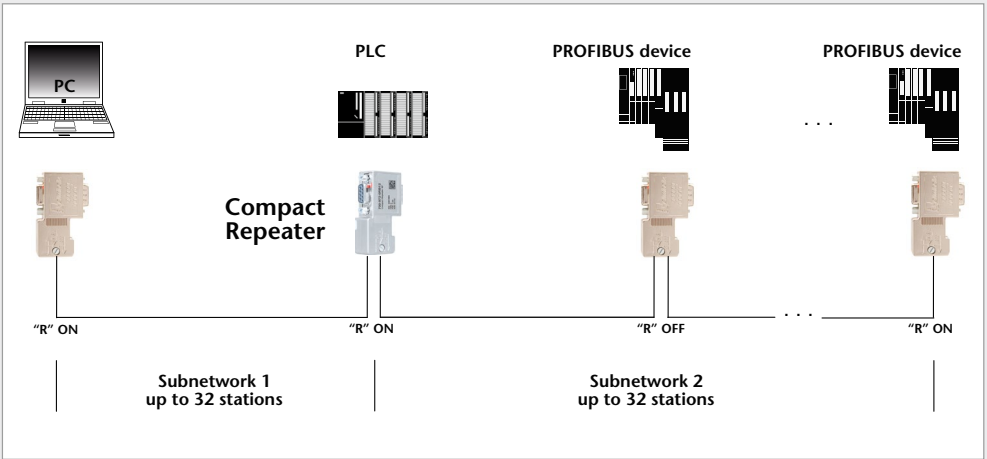
Please check this in the respective manual of the PROFIBUS participant.



Application examples

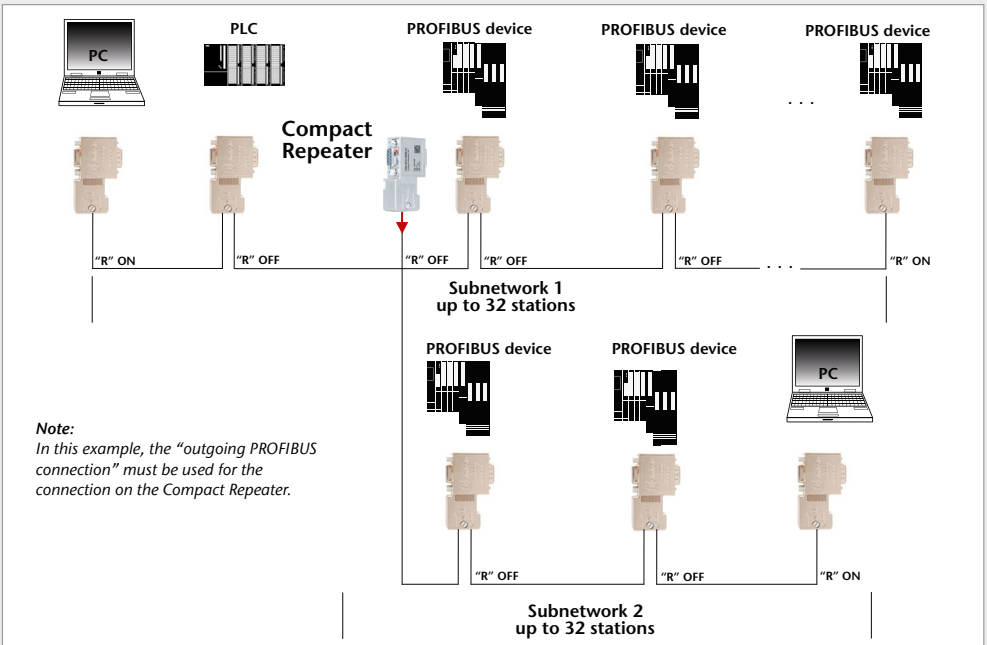
Example 1:

Extension of a bus.



Example 2:

For complex bus structures.



Note:

In this example, the "outgoing PROFIBUS connection" must be used for the connection on the Compact Repeater.

Technical Data

Dimensions in mm (L x W x H)	64 x 40 x 17
Weight	Approx. 40 g
Case	Protection class IP 20
Power supply	
Voltage	+5 V DC
Current consumption	typically 100 mA
Electrical isolation*	500 V
Permitted ambient conditions	
• Ambient temperature in operation	0°C...+60°C
• Transport and storage temperature	-25°C...+75°C
PROFIBUS interface	
Transmission rate	9.6 19.2 45.45 93.75 187.5 500 Kbps 1.5 3 6 and 12 Mbps automatic detection
Protocol PROFIBUS-DP	According to EN 61 158-2:2011-09
Connection socket	SUB-D 9-pin
Special features	Quality assurance according to ISO 9001:2008

* The „outgoing PROFIBUS connection“ is to the „incoming PROFIBUS connection“ as well as to the Sub-D connection sockets isolated.

LED description

Power	Blue	<i>Flashing</i>	Repeater determines the baud rate, "R" OFF
		<i>Continuous light beacons</i>	Baud rate detected, "R" OFF
	Green	<i>Flashing</i>	Repeater determines baud rate "R" ON
		<i>Continuous light beacons</i>	Baud rate detected, "R" ON
Error	Red	Incorrect data are received on the segment 2. <i>Flash frequency depends on the number of invalid telegrams (steady light possible).</i>	
BUS	Yellow	Data traffic takes place on the segment 2. <i>Flash frequency depends on baud rate and number of participants of the port (steady light possible).</i>	

Note

The content of this Brief Instruction has been checked by us for the matching with the described hardware and software. Nevertheless, as differences cannot be ruled out, we cannot make any guarantee for the complete matching. However, the information in this Brief Instruction is updated regularly. For the use of the purchased products, please observe in each case the most current version of the Brief Instruction which can be viewed on the World Wide Web at www.helmholz.com and can also be downloaded from there. Our customers are important to us. We look forward to receiving suggestions for improvement and other feedback.