RS-485 repeaters for PROFIBUS, Modbus, and company-specific 2-wire systems

The performance and availability of bus systems can be significantly increased by using repeaters. In addition to electrical isolation, bus segmentation with repeaters makes it possible to multiply the permissible coverage of the network and to extend the number of devices.

The **PSI-REP-PROFIBUS/12MB** modular repeater has been specially developed for the requirements of PROFIBUS systems.
– Bit retiming for unrestricted cascading of devices
– Filtering of faulty telegrams based on start delimiter detection
– Routing of supply voltage and data signals through DIN rail connectors

As a modular repeater, the **PSI-REP-RS485W2** can be used in RS-485 2-wire bus systems.
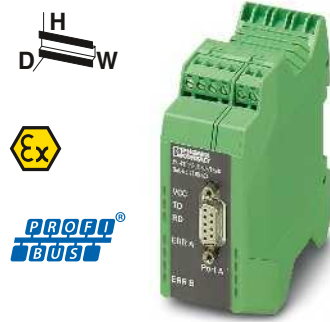– Bit retiming for unrestricted cascading of devices
– Routing of supply voltage and data signals through DIN rail connectors

The **PSM-ME-RS485/RS485-P** compact repeater is designed for universal use in RS-485 2-wire bus systems.
– Transmission speeds of up to 1.5 Mbps
– Space-saving slim 22.5 mm device
– Shipbuilding approval according to DNV

The **PSI-TERMINATOR-PB** ensures interference-free communication in PROFIBUS and RS-485 networks.
– Permanently active termination of the bus line, particularly in applications involving alternating bus devices
– Fixed programming interface on the network

Repeater for PROFIBUS, 4-way isolation, supports modular expansion

Ex:

Technical data

Supply	
Supply voltage	-
Supply voltage range	18 V DC ... 30 V DC (via plug-in COMBICON screw terminal block)
Nominal current consumption	90 mA (24 V DC)
RS-485 interface	PROFIBUS according to IEC 61158, RS-485 2-conductor
Data format/coding	UART (11 bit, NRZ)
Data direction switching	Automatic control, min. station response time 2 bits
Termination resistor	External
Transmission speed	9,6/19,2/45,45/93,75/187,5/500/1500/3000/6000/12000 kbps (can be set manually and automatically)
Transmission length	≤ 1200 m (Depends on transmission speed and cable type)
Connection method	D-SUB-9 socket
General data	
bit distortion, input	Max. ± 35 %
bit distortion, output	< 6.25 %
bit delay	1 bit (Direct mode)
Alarm output	30 V DC (1 A) / 65 V DC (0.46 A) / 150 V AC (0.46 A)
Test voltage	1.5 kV$_{rms}$ (50 Hz, 1 min.)
Ambient temperature range	-20 °C ... 60 °C
Electrical isolation	VCC // TBUS // PROFIBUS (A) // PROFIBUS (B)
Dimensions W / H / D	35 mm / 99 mm / 105 mm
EMC note	Class A product, see page 527
Conformance / approvals	
ATEX	II 3 G Ex nA nC IIC T4 Gc X
UL, USA / Canada	cULus listed UL 508 Class I, Zone 2, AEx nA IIC T6 Class I, Zone 2, Ex nA IIC T6 Gc X Class I, Div. 2, Groups A, B, C, D

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Repeater, for electrical isolation and increased range			
	PSI-REP-PROFIBUS/12MB	2708863	1
Active termination resistor, bus termination can be activated, programming interface			

Accessories

Description	Type	Order No.	Pcs. / Pkt.
DIN rail connector (optional), for routing through the supply voltage and data signal, two pieces are required per device	ME 17,5 TBUS 1,5/ 5-ST-3,81 GN	2709561	10
System power supply, primary-switched	MINI-SYS-PS-100-240AC/24DC/1.5	2866983	1