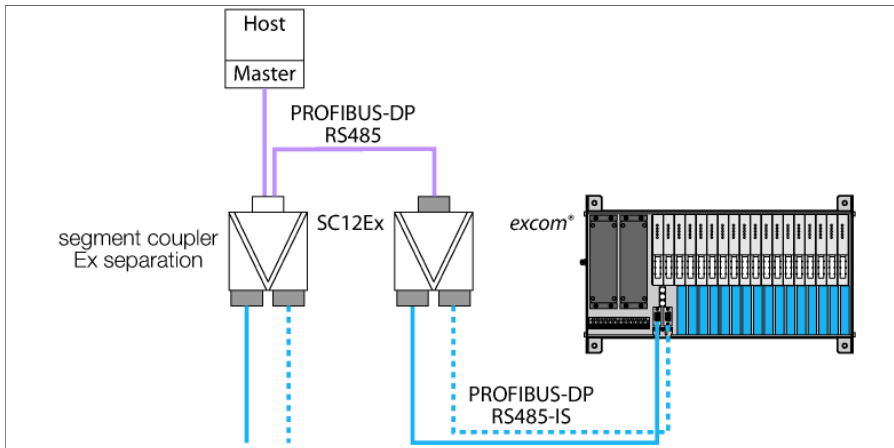# excom I/O System
PROFIBUS-DP interface
GDP1.5-FW1.7.6

The GDP1,5-FW1.7.6 gateway serves to connect the *excom®* system to PROFIBUS-DP networks. Connections to the PROFIBUS-DP can be established via fiber optics or with copper cables. When using copper cables it is required to use a segement coupler (RS485-IS coupler) on the PROFIBUS-DP side to ensure explosion protection.

The gateway may be configured for a maximum transmission rate of 1500 kBaud. The bus is connected via a standard miniature SUB-D connector on the module rack.

A device data base file (GSD) for system configuration is available. This file contains all configuration files and parameter sets needed by the system. When connected to certain host systems, it is possible to alter the system configuration during operation.

The gateway provides the entire range of PROFIBUS diagnostic functions including port-related diagnostics. In addition, manufacturer-specific error codes are generated. They include HART communication errors, power supply errors, planning errors as well as information on simulators, internal communication, redundancy toggle, etc.

Redundancy:

The use of two gateways and two bus cables ensures error-free communication, in case one gateway or one bus line may fail. If one gateway fails, the other takes over smoothly, this is called line redundancy. System redundancy (two masters, each with its own segment coupler connected to a gateway) is also supported.

Recommended wiring components:

- PROFIBUS-DP cable, ident. no. 6914367
- Connector ident. no. 6890944

- Intrinsically safe gateway for PROFIBUS-DPV1
- Connection of the excom station to the PROFIBUS
- Baud rate max. 1.5 Mbaud
- PROFIBUS interface, customized version (RS485 Ex-Layer)

Edition • 2025-02-28T15:17:07+01:00

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Dimensions

Type	GDP1.5-FW1.7.6
ID	6884165
Supply voltage	Via module rack, central power supply module
Power consumption	$\leq$ 3 W
Galvanic isolation	Complete galvanic isolation acc. to EN 60079-11

Transmission rate	9.6 kbps up to 1.5 Mbps

Ex approval acc. to conformity certificate	PTB 00 ATEX 2162
Device designation	⟨Ex⟩ II 2 G SYST Ex ib IIC T4

Displays/Operating elements	
Operational readiness	1 × green/red
Int. communication (CAN)	1 × yellow/red
Ext. Communication (PDP)	1 × yellow/red
Redundancy readiness	1 × yellow/red
Error indication	1 x red

Housing material	Plastic
Connection mode	module, plugged on rack
Protection class	IP20
Ambient temperature	-20…+60 °C
Relative humidity	$\leq$ 93 % at 40 °C acc. to IEC 60068-2-78
Vibration test	Acc. to IEC 60068-2-6
Shock test	Acc. to IEC 60068-2-27
EMC	Acc. to EN 61326-1
	Acc. to Namur NE21
MTTF	126 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18 x 118 x 106 mm

Comments	**External RS485 fieldbus system:**
	Protection type:SYST EEx ib IIC/IIB
	Highest value of each terminal pair:
	U_i=4.2V
	Highest value of each terminal pair:
	ΣI_i=2.66A
	Cable types A or B
	according to EN 50039 with the following values:
	L'/R' $\leq$15 µH/ ΩC' $\leq$250nF/km
	Ølitz wire $\geq$0.2mm
	concentrated inductances and capacitances in the
	course of the external fieldbus system are **not**al-
	lowed
Approvals	ATEX