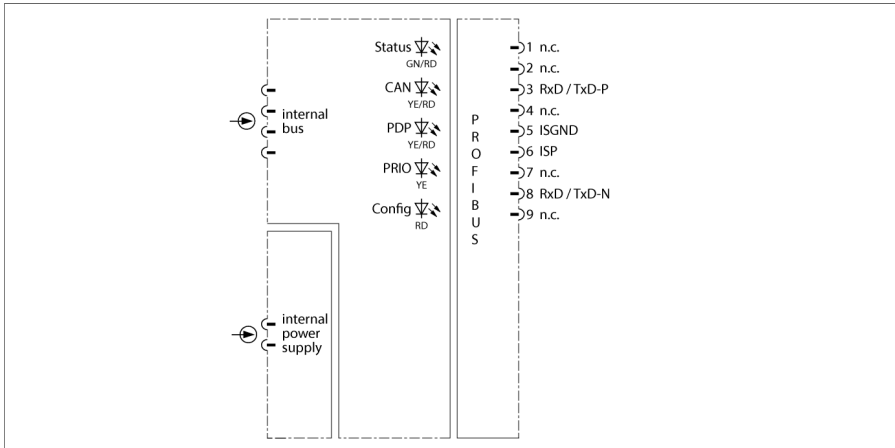


# excom I/O System PROFIBUS-DP Interface GDP-IS/FW2.3



The GDP-IS gateway serves to connect the *excom*® system to PROFIBUS-DP networks. Connection to the PROFIBUS-DP is established via optical fibers or copper cables. When using optical fibers for data transfer an optocoupler pair must be installed between wired and optical PROFIBUS which also adapts the level to the IS layer. When using copper cables a segment coupler (RS485-IS coupler) must be installed to ensure explosion protection.

The gateway can be operated at a maximum transmission rate of 1500 kbps. The bus is connected to a standard miniature SUB-D slot on the module rack.

A GSD file containing all configuration files and parameter sets is available for system configuration. When connected to suitable host systems, you can change 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 connected to a gateway) is also supported.

Recommended wiring components:

- PROFIBUS-DP cable, type 451B
- D9T-RS485IS connector
- SC12Ex segment coupler
- OC11Ex/... optocoupler

- Intrinsically safe gateway for PROFIBUS-DPV1
- Connection of the excom station to the PROFIBUS
- Baud rate max. 1.5 Mbps
- PROFIBUS interface acc. to PROFIBUS user organization (PNO) with RS485-IS layer

## Dimensions

|  |  |
|--|--|
| Type                                       | GDP-IS/FW2.3                                 |
| ID   | 6884275                                      |
| Supply voltage                             | Via module rack, central power supply module |
| Power consumption                          | ≤ 1 W  |
| Galvanic isolation                         | Complete galvanic isolation EN 60079-11      |
| Transmission rate                          | 9.6 kbps up to 1.5 Mbps                      |
| Addressing range                           | 1...125                                      |
| Ex approval acc. to conformity certificate | IECEX PTB 13.0037                            |
| Ex approval acc. to conformity certificate | PTB 09 ATEX 2013                             |
| Device designation                         | Ⓔ II 2 G Ex ib IIC T4                        |
| <b>Displays/Operating elements</b>         |  |
| 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                                      |
| <b>Housing material</b>                    |  |
| Housing material                           | Plastic                                      |
| Connection mode                            | module, plugged on rack                      |
| Protection class                           | IP20   |
| Ambient temperature                        | -20...+70 °C                                 |
| Relative humidity                          | ≤ 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<br>Acc. to Namur NE21     |
| MTTF                                       | 126 years acc. to SN 29500 (Ed. 99) 40 °C    |
| Dimensions                                 | 18 x 118 x 106 mm                            |



|           |  |
|-----------|--|
| Comments  | <p><b>External RS485 fieldbus system:</b><br/>         Protection type Ex ib IIC<br/>         Highest value of each terminal pair: <math>U_i = 4.2 \text{ V}</math><br/>         Highest value of the terminal pairs: <math>\Sigma I_i = 4.8 \text{ A}</math><br/> <b>Cables type A resp. B</b> acc. to EN 60079-25 with the following assignments:<br/> <math>L'/R' \leq 15 \mu\text{H}/\Omega</math><br/> <math>C' \leq 250 \text{ nF}/\text{km}</math><br/> <math>\varnothing</math> stranded wire <math>\geq 0.2 \text{ mm}</math><br/>         Massed inductances and capacitances in the external fieldbus system are <b>not</b> permitted</p> |
| Approvals | ATEX<br>cFMus<br>cFM<br>IECEX<br>CCC<br>KOSHA<br>EAC Ex<br>DNV GL<br>BV<br>LR<br>KR<br>KCC<br>UKCA<br>CE   |