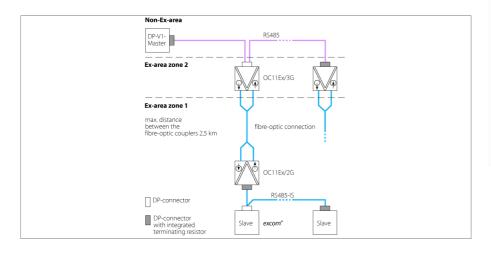


## excom I/O System PROFIBUS-DP fiber-optic coupler for zone 1 OC11EX/2G.2



The optocoupler OC11Ex/2G.2 converts the PROFIBUS-DP signals on copper cables into optical signals. The bus signals can therefore be transmitted from the safe area to the Ex area over long distances without potential or interference. When using fiber-optic cables, the maximum baud range is 2500 m for OM1 (62.5/125- $\mu$ m) cables and 1500 m for OM2 (50/125- $\mu$ m) cables.

The OC11Ex/3G.2 in zone 2 transmits the signals via the optical interface to the OC11Ex/2G.2 in zone 1 which converts them. The signals are then output intrinsically safe at the RS485-IS interface.

The RS485-IS interface is entirely realized according to the PNO PROFIBUS guideline. The optocoupler OC11Ex/2G.2 is equipped with

- intrinsically safe RS485-IS PROFIBUS interface (acc. to the RS485-IS draft worked out by the PNO work group)
- intrinsically safe optical interface with ST connectors for emitter and receiver

Up to 31 bus nodes can be connected to the fiber-optic coupler. Baud rates of 9.6 kbps up to 1.5 Mbps are possible, or will be automatically detected.

For diagnostic purposes there are four status LEDs that indicate power ON, fiber-optic segment, RS485 interface and baud rate. The device features an M8 communication interface. Two OC11Ex devices can be coupled together via the M8 interface. Wire-break and short-circuit are not transmitted from one segment to the next one. All segments can thus be operated trouble-free and independently of one another.

In order not to limit the number of nodes and cable length of a PROFIBUS-DP segment, amplitude and phase are reproduced in the coupler. The OC11Ex/2G.2 shield is always capacitively coupled to the equipotential bonding.



- Device for data transmission between electrical and optical fieldbus circuits
- Power supply of max. 31 nodes
- OM1 (62.5/125) for transmitting data over distances up to 2500 m
- OM2 (50/125) for transmitting data over distances up to 1500 m
- Mounting in zone 1 possible
- Note: Idle level corresponds to active light!



## excom I/O System PROFIBUS-DP fiber-optic coupler for zone 1 OC11EX/2G.2

|  |   | <b>Dimensions</b>    |
|--|---|----------------------|
| Type designation                           | OC11EX/2G.2   |                      |
| ldent no.                                  | 6890427   |                      |
| Nominal voltage                            | 24 VDC  | - 31                 |
| Operating voltage                          | 1832 VDC  | $\sim$               |
| Current consumption                        | 100 mA  | <ul> <li></li> </ul> |
| Galvanic isolation                         | Complete galvanic isolation acc. to EN 60079-11                         |                      |
| Number of channels                         | 1   |                      |
| Transmission rate                          | 9.6 kbps up to 1.5 Mbps   |                      |
| Type of optical fiber                      | Multi-mode fiber 62.5/125 µm  |                      |
| Ex approval acc. to conformity certificate | IECEx PTB 15.0042X  | _                    |
| Ex approval acc. to conformity certificate | PTB 05 ATEX 2051 X  |                      |
| Device designation                         | $\textcircled{\mbox{\sc blue}}$ II 2 G $$ Ex eb mb [ib op is Gb] IIC T4 |                      |
| Indication                                 |   | _                    |
| Operational readiness                      | 1 × green   |                      |
| State/ Fault                               | 2 × yellow/red  |                      |
| Baud rate detection                        | 1 × yellow  |                      |
| Housing material                           | Anodized aluminium  |                      |
| Front plate                                | FR4, gray   |                      |
| Connection mode                            | snap-fit on DIN rail (DIN 60715) or wall mounting                       |                      |
| Protection class                           | IP20  |                      |
| Ambient temperature                        | -20+70 °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                                       | 234 years acc. to SN 29500 (Ed. 99) 40 °C                               |                      |
| Dimensions                                 | 72 x 105.5 x 31 mm  |                      |
| Approvals                                  | ATEX  | _                    |
|  | TR CU   |                      |
|  | KOSHA   |                      |
|  | INMETRO   |                      |
|  | DNV GL  |                      |
|  | BV  |                      |
|  | LR  |                      |