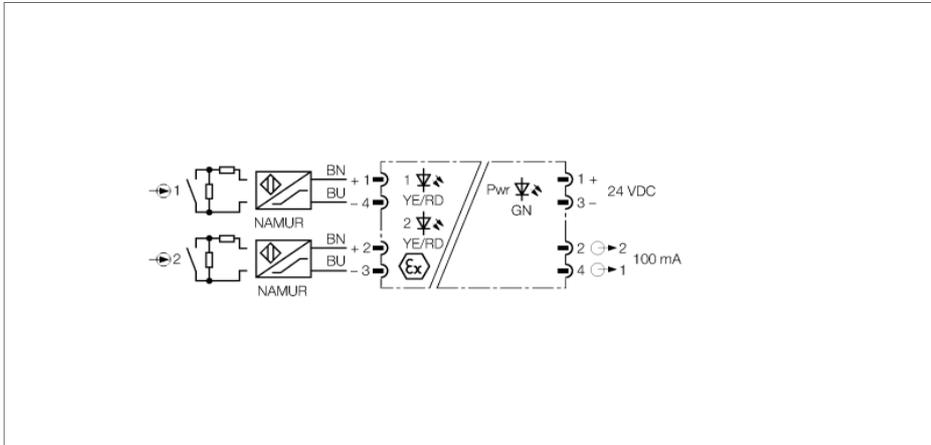




Isolating switching amplifier
2-channel
IMC-DI-22EX-PNC/24VDC

TURCK

Industrial
Automation



The dual-channel isolating switching amplifier IMC-DI-22EX-PNC/24VDC is equipped with intrinsically safe input circuits.

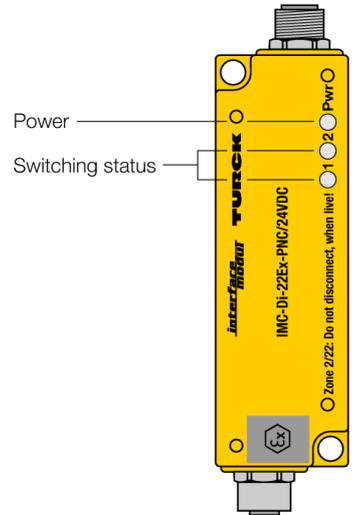
Sensors according to EN 60947-5-6 (NAMUR), variable resistances or potential-free contactors can be connected to the device.

The output circuits feature two NC transistors.

In case of unprotected mounting in zone 2 i.e. zone 22 the devices need to be protected with the TURCK metal cover plate IMC-SG (Ident no.: 7560016) against mechanical damages of the connectors and the housings.

The green LED indicates operational readiness.

- **Dual-channel isolating switching amplifier with M12x1 male connectors**
- **Intrinsically safe inputs circuit Ex ia**
- **Application area acc. to ATEX: II (1) GD, II 3 GD**
- **Line monitoring for wire-break/short-circuit**
- **PNP transistor output, NC**
- **Galvanic separation of input circuits, output circuits and power supply**
- **Protection class IP67**





Isolating switching amplifier

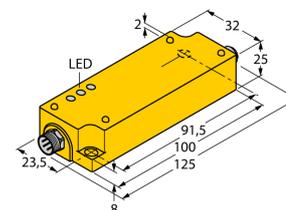
2-channel

IMC-DI-22EX-PNC/24VDC

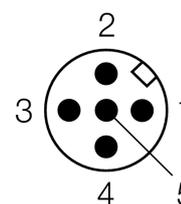
TURCK

Industrial
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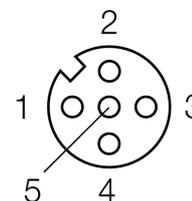
Dimensions



pin configuration M12 connectors



pin assignment female M12 (intrinsically safe end)



| Type | IMC-DI-22EX-PNC/24VDC | | | | | | | | | | | | | | | |
|--|---|-------|------|-------|-----|--|---------|------|------|------|------|---------|------|------|------|-------|
| Ident-No. | 7560010 | | | | | | | | | | | | | | | |
| Nominal voltage | 24 VDC | | | | | | | | | | | | | | | |
| Operating voltage range | 20...30 VDC | | | | | | | | | | | | | | | |
| NAMUR | EN-60947-5-6 | | | | | | | | | | | | | | | |
| No-load voltage | 8.2 VDC | | | | | | | | | | | | | | | |
| Short-circuit current | 8.2 mA | | | | | | | | | | | | | | | |
| Input resistance | 1 kΩ | | | | | | | | | | | | | | | |
| Cable resistance | ≤ 50 Ω | | | | | | | | | | | | | | | |
| Switch-on threshold: | 1.55 mA | | | | | | | | | | | | | | | |
| Switch-off threshold: | 1.75 mA | | | | | | | | | | | | | | | |
| Voltage drop | ≤ 2.5 V | | | | | | | | | | | | | | | |
| Semiconductor output circuit(s) | | | | | | | | | | | | | | | | |
| Output circuits (digital) | 2 x transistors (pnp, short-circuit proof) | | | | | | | | | | | | | | | |
| Switching voltage | ≤ 30 VDC | | | | | | | | | | | | | | | |
| Switching current per output | ≤ 50 mA | | | | | | | | | | | | | | | |
| Switching frequency | ≤ 3000 Hz | | | | | | | | | | | | | | | |
| Galvanic separation | | | | | | | | | | | | | | | | |
| Test voltage | 2.5 kV | | | | | | | | | | | | | | | |
| Ex approval acc. to conformity certificate | TÜV 07 ATEX 553447 | | | | | | | | | | | | | | | |
| Application area | II (1) GD | | | | | | | | | | | | | | | |
| Protection type | [Ex ia] IIC/IIB | | | | | | | | | | | | | | | |
| Max. output voltage U _o | ≤ 9.6 V | | | | | | | | | | | | | | | |
| Max. output current I _o | ≤ 10 mA | | | | | | | | | | | | | | | |
| Max. output power P _o | ≤ 24 mW | | | | | | | | | | | | | | | |
| Rated voltage | 250 V | | | | | | | | | | | | | | | |
| Characteristic | linear | | | | | | | | | | | | | | | |
| Internal inductance/capacitance L/C _i | C _i = negligibly small, L _i = 0.15 mH | | | | | | | | | | | | | | | |
| External inductance/capacitance L _e /C _e | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Ex ia</th> <th colspan="2">IIC</th> <th colspan="2">IIB</th> </tr> </thead> <tbody> <tr> <td>Lo [mH]</td> <td>0.85</td> <td>10</td> <td>1.85</td> <td>20</td> </tr> <tr> <td>Co [nF]</td> <td>1100</td> <td>750</td> <td>5300</td> <td>3400</td> </tr> </tbody> </table> | Ex ia | IIC | | IIB | | Lo [mH] | 0.85 | 10 | 1.85 | 20 | Co [nF] | 1100 | 750 | 5300 | 3400 |
| Ex ia | IIC | | IIB | | | | | | | | | | | | | |
| Lo [mH] | 0.85 | 10 | 1.85 | 20 | | | | | | | | | | | | |
| Co [nF] | 1100 | 750 | 5300 | 3400 | | | | | | | | | | | | |
| Ex approval acc. to conformity certificate | TÜV 07 ATEX 554027 X | | | | | | | | | | | | | | | |
| Application area | II 3 GD | | | | | | | | | | | | | | | |
| Protection class for belonging equipment | Ex nA [nL] IIC/IIB T4 bzw. Ex tD A22 IP67 T96°C | | | | | | | | | | | | | | | |
| Max. output voltage U _o | ≤ 9.6 V | | | | | | | | | | | | | | | |
| Max. output current I _o | ≤ 10 mA | | | | | | | | | | | | | | | |
| Max. output power P _o | ≤ 24 mW | | | | | | | | | | | | | | | |
| Characteristic | linear | | | | | | | | | | | | | | | |
| External inductance/capacitance L _e /C _e | C _i = negligibly small; L _i = 0.15 mH | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Ex nL</th> <th colspan="2">IIC</th> <th colspan="2">IIB</th> </tr> </thead> <tbody> <tr> <td>Lo [mH]</td> <td>5.0</td> <td>0.85</td> <td>10</td> <td>0.85</td> </tr> <tr> <td>Co [nF]</td> <td>1400</td> <td>1900</td> <td>6600</td> <td>11000</td> </tr> </tbody> </table> | Ex nL | IIC | | IIB | | Lo [mH] | 5.0 | 0.85 | 10 | 0.85 | Co [nF] | 1400 | 1900 | 6600 | 11000 |
| Ex nL | IIC | | IIB | | | | | | | | | | | | | |
| Lo [mH] | 5.0 | 0.85 | 10 | 0.85 | | | | | | | | | | | | |
| Co [nF] | 1400 | 1900 | 6600 | 11000 | | | | | | | | | | | | |
| Indication | | | | | | | | | | | | | | | | |
| Operational readiness | green | | | | | | | | | | | | | | | |
| Switching state | yellow | | | | | | | | | | | | | | | |
| Error indication | red | | | | | | | | | | | | | | | |
| Protection class | IP67 | | | | | | | | | | | | | | | |
| Ambient temperature | -25...+70 °C | | | | | | | | | | | | | | | |
| Storage temperature | -40...80°C | | | | | | | | | | | | | | | |
| Dimensions | 100 x 32 x 25 mm | | | | | | | | | | | | | | | |
| Weight | 149 g | | | | | | | | | | | | | | | |
| Mounting instruction | Mounting on backplane | | | | | | | | | | | | | | | |
| Housing material | Polycarbonate/ABS | | | | | | | | | | | | | | | |
| Electrical connection | M12 flange connection | | | | | | | | | | | | | | | |