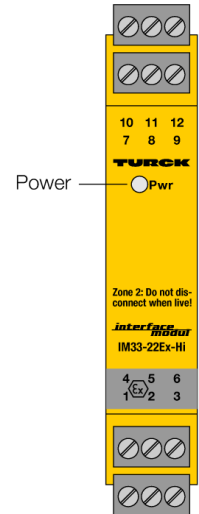
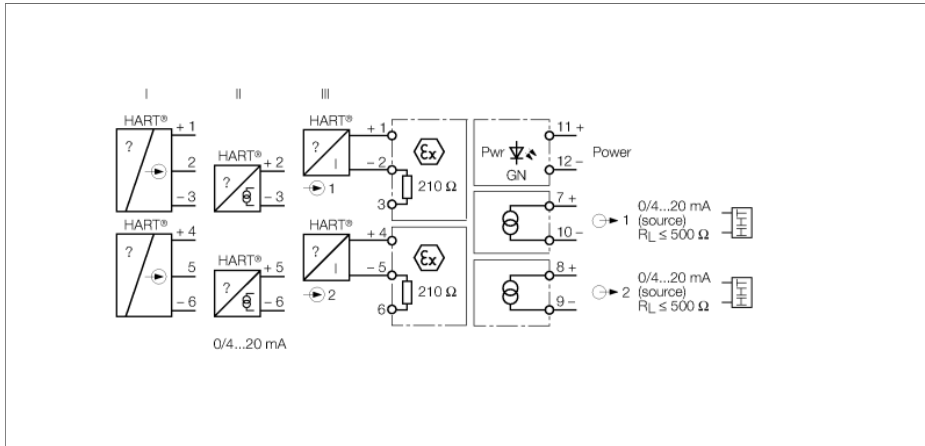


**Ex-HART<sup>®</sup> Isolating transducer  
2-channel  
IM33-22EX-HI/24VDC**



The 2-channel HART<sup>®</sup> isolating transducer IM33-22EX-HI/24VDC is designed to operate intrinsically safe HART<sup>®</sup> 2-wire transducers (III) in the Ex area and to transfer the measured signals to the non-Ex area. In addition to analog signals, the isolating transducer also transfers digital HART<sup>®</sup> communication signals bidirectionally.

Alternatively, active 2-wire HART<sup>®</sup> transmitters (II) and passive 3-wire HART<sup>®</sup> transmitters (I) can be operated.

The device features 0/4...20 mA input and output circuits. A green LED indicates operational readiness.

The input signals are transferred 1:1 without attenuation to the outputs in the non-Ex area.

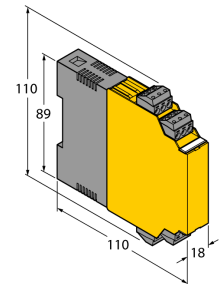
Due to the 1:1 transmission characteristic, wire-break or short-circuit of the measuring transducer circuit are indicated as currents of 0 mA resp. > 22.5 mA.

The removable terminal blocks feature test sockets (Ø 2 mm) for connection of a HART<sup>®</sup> handheld. Further devices with different Ex-criteria are available on request.

- Intrinsically safe input circuits EEx ia
- Application area acc. to ATEX: II (1) GD; II 3 G
- Installation in zone 2
- Power supply of 2-wire measuring transducers via HART<sup>®</sup> communication as well as connection to active 2-wire and passive 3-wire transmitters
- Input circuits: 0/4...20 mA
- Output circuits: 0/4...20 mA
- SIL2
- Removable terminal blocks, screwable, 2mm test socket
- Complete galvanic separation

**Ex-HART<sup>®</sup> Isolating transducer  
2-channel  
IM33-22EX-HI/24VDC**

**Dimensions**



<b>Type code</b>	IM33-22EX-HI/24VDC									
Ident no.	7506441									
<b>Nominal voltage</b>	24 VDC									
Operating voltage range	19...29 VDC									
Power consumption	≤ 3.2 W									
<b>Transmitter connection</b>										
Supply voltage	≥ 17 V									
Current input	0/4...20 mA									
Input resistance (current)	250 Ω									
<b>Output circuits</b>										
Output current	0/4...20 mA									
Load resistance current output	≤ 0.5 kΩ									
<b>Limit frequency</b>	≤ 30 Hz									
Rise time (10-90%)	≤ 50 ms									
Dropout time (90...10%)	≤ 50 ms									
Measuring accuracy	≤ 0.1 % of full scale									
Reference temperature	23 °C									
Temperature drift	≤ 0.005 % / K									
<b>Galvanic separation</b>										
Test voltage	2.5 kV									
<b>Ex approval acc. to conformity certificate</b>	TÜV 00 ATEX 1595									
Application area	II (1) GD									
Protection type	[EEx ia] IIC									
Max. output voltage U <sub>o</sub>	≤ 21.9 V									
Max. output current I <sub>o</sub>	≤ 95 mA									
Max. output power P <sub>o</sub>	≤ 747 mW									
Rated voltage	250 V									
Characteristic	Trapezoidal									
Max. input voltage U <sub>i</sub>	≤ 40 V									
Max. input power P <sub>i</sub>	≤ 650 mW									
External inductance/capacitance L <sub>i</sub> /C <sub>o</sub>	<table border="1"> <thead> <tr> <th>Ex ia</th> <th>IIC</th> <th>IIB</th> </tr> </thead> <tbody> <tr> <td>Lo [mH]</td> <td>2.8</td> <td>14</td> </tr> <tr> <td>Co [μF]</td> <td>0.057</td> <td>0,295</td> </tr> </tbody> </table>	Ex ia	IIC	IIB	Lo [mH]	2.8	14	Co [μF]	0.057	0,295
Ex ia	IIC	IIB								
Lo [mH]	2.8	14								
Co [μF]	0.057	0,295								
Ex approval acc. to conformity certificate	TÜV 06 ATEX 552977 X									
Application area	II 3 G									
Protection class for belonging equipment	Ex nA [nL] IIC/IIB T4									
Max. output voltage U <sub>o</sub>	≤ 21.9 V									
Max. output current I <sub>o</sub>	≤ 95 mA									
Characteristic	trapezoidal									
Max. input voltage U <sub>i</sub>	≤ 30 V									
Max. input power P <sub>i</sub>	≤ 650 mW									
External inductance/capacitance L <sub>i</sub> /C <sub>o</sub>	<table border="1"> <thead> <tr> <th>Ex nL</th> <th>IIC</th> <th>IIB</th> </tr> </thead> <tbody> <tr> <td>Lo [mH]</td> <td>3</td> <td>10.0</td> </tr> <tr> <td>Co [μF]</td> <td>0.12</td> <td>0.81</td> </tr> </tbody> </table>	Ex nL	IIC	IIB	Lo [mH]	3	10.0	Co [μF]	0.12	0.81
Ex nL	IIC	IIB								
Lo [mH]	3	10.0								
Co [μF]	0.12	0.81								
Ex approval acc. to conformity certificate	IS-1.102									
<b>Approval</b>	SIL 2									
MTTF	60 years acc. to SN 29500 (Ed. 99) 40 °C									
<b>Indication</b>										
Operational readiness	green									

**Ex-HART<sup>®</sup> Isolating transducer  
2-channel  
IM33-22EX-HI/24VDC**

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<b>Protection class</b>	IP20
Ambient temperature	-25...+70 °C
Storage temperature	-40...+80 °C
Relative humidity	≤ 95%
Dimensions	110x 18x 110 mm
Weight	172 g
Mounting instruction	For mounting on DIN rail or mounting panel
Housing material	Polycarbonate/ABS
Electrical connection	4 x 3-pole removable terminal blocks with test socket, reverse polarity protected, screw connection
Terminal cross-section	1 x 2.5 mm <sup>2</sup> / 2 x 1.5 mm <sup>2</sup>
Tightening torque	0.5 Nm

**Accessories**

Type code	Ident no.	Description	Dimension drawing
IM-CC-3X2BU/2BK	6900475	Cage clamp terminals for IM modules (Ex devices; width 18 mm): 2 blue/2 black, 3-pin, included in delivery.	