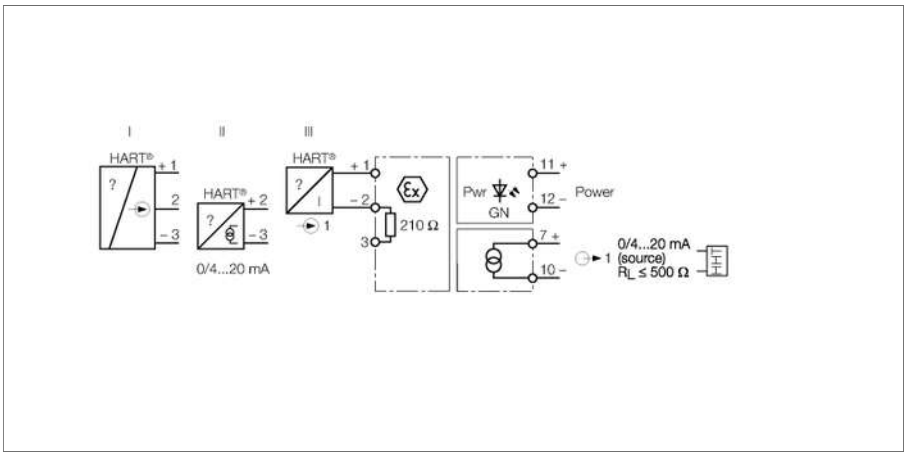
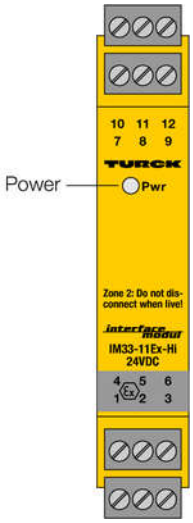
Ex-HART® Isolating transducer
1-channel
IM33-11EX-HI/24VDC





The 1-channel HART® isolating transducer IM33-11EX-HI/24VDC is designed to operate intrinsically safe HART® 2-wire transducers (III) in the Ex area and to transfer the measured signal to the non-Ex area. In addition to the analog signals, also digital HART® communication signals can be transferred bidirectionally.

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

The device features one input and one output circuit, for 0/4…20 mA. The green LED indicates operational readiness.

The input signal is transferred unattenuated 1:1 to the output in the non-Ex area.

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

The removable cage clamp terminals feature test sockets (Ø 2 mm) for connection of a HART® handheld.

Other device variants are available on request.

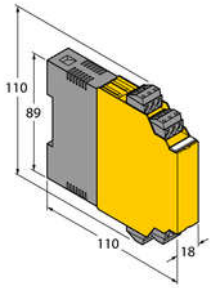
- **ATEX, IECEx, FM, UL, GOST**
- **Installation in zone 2**
- **Power supply of 2-wire measuring transducers via HART® communication as well as connection to active 2-wire and passive 3-wire transmitters**
- **Input circuit: 0/4…20 mA**
- **Output circuit: 0/4…20 mA**
- **SIL2**
- **Removable terminal blocks, screwable, with 2 mm test box**
- **Complete galvanic isolation**

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Hans Turck GmbH & Co.KG ● D-45472 Mülheim an der Ruhr ● Witzlebenstraße 7 ● Tel. 0208 4952-0 ● Fax 0208 4952-264 ● more@turck.com ● www.turck.com

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Dimensions



Type code	IM33-11EX-HI/24VDC
Ident no.	7506440
Flammability class acc. to UL 94	V-0
Nominal voltage	24 VDC
Operating voltage range	19…29 VDC
Power consumption	≤ 2.2 W
Transmitter connection	
supply current	≥ 17 V
Current	25 mA
Current input	0/4...20 mA
Input resistance (current)	≤ 250 Ω
Output circuits	
Output current	0/4...20 mA
Load resistance current output	≤ 0.5 kΩ
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
Galvanic isolation	
Test voltage	2.5 kV
Ex approval acc. to conformity certificate	TÜV 00 ATEX 1595
Application area	II (1) GD
Protection type	[EEx ia] IIC
Max. values:	terminal connection 1…3
Max.output voltage U_o	≤ 21.9 V
Max. output current I_o	≤ 95 mA
Max. output power P_o	≤ 747 mW
Characteristic	Trapezoidal
Max. input voltage U_i	≤ 40 V
Max. input power P_i	≤ 650 mW
Rated voltage	250 V

External inductance/capacitance L_o/C_o

Ex ia	IIC	IIB
Lo [mH]	2.8	11
Co [µF]	0.057	0,370

Ex approval acc. to conformity certificate	TÜV 06 ATEX 552977 X
Application area	II 3 G
Protection type	Ex nA [nL] IIC/IIB T4
Max. values:	terminal connection 1…3
Max.output voltage U_o	≤ 21.9 V
Max. output current I_o	≤ 95 mA
Characteristic	trapezoidal
Max. input voltage U_i	≤ 40 V
Max. input power P_i	≤ 650 mW

External inductance/capacitance L_o/C_o

Ex nL	IIC	IIB
Lo [mH]	3	10.0
Co [µF]	0.12	0.81

Internal resistance R_i	331 Ω
Approval	SIL 2 acc. to EXIDA FMEDA
MTTF	125 years acc. to SN 29500 (Ed. 99) 40 °C
Indication	
Operational readiness	green

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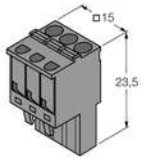
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Protection class	IP20
Ambient temperature	-25…+70 °C
Storage temperature	-40…+80°C
Relative humidity	≤ 95%
Dimensions	110 x 18 x 110 mm
Weight	146 g
Mounting instruction	For mounting on DIN rail or mounting panel
Housing material	polycarbonate/ABS
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^2 / 2 x 1.5 mm^2
Tightening torque	0.5 Nm

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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.	

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