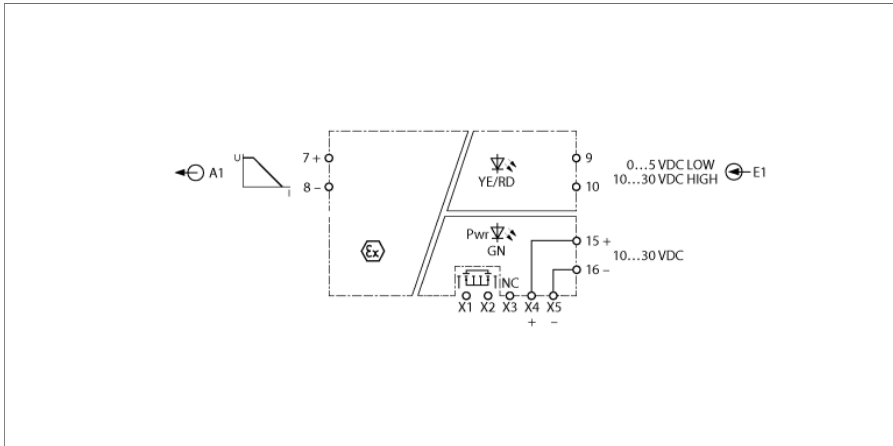


Solenoid Driver
1-channel
IMX12-DO01-1U-1U-PR/24VDC/CC

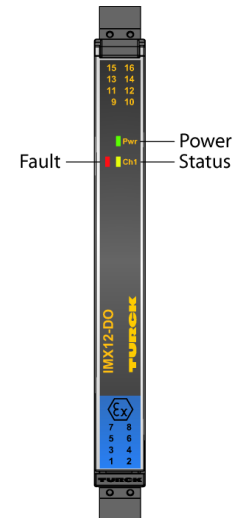


The 1-channel IMX12-DO01-1U-1U-PR/24VDC/CC solenoid driver provides an intrinsically safe output voltage limited in current and voltage. Loads in the Ex area can thus be supplied directly. Typical applications are the control of Ex i pilot valves, the powering of displays and transmitters. The device can be powered from a power rail that also transmits a common alarm.

The device is ready for operation when power is applied. The Pwr LED lights green to indicate operational readiness. A yellow LED indicates the switching state of the associated output.

The device can detect a wire break or short circuit when a "high" is present at the input. The input then switches to high impedance and the common alarm output becomes conducting. An error in the output circuit causes the red LED to flash according to NE44.

The device can be used in safety circuits up to SIL2 (high and low demand according to IEC 61508) and meets the requirements of the NE21. It is equipped with removable cage clamp terminals.



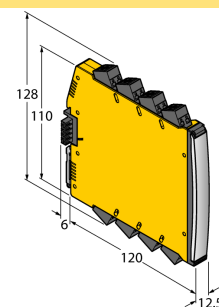
- ATEX, IECEx, cULus, INMETRO, NEPSI, Kosha, TR CU
- Installation in zone 2
- SIL 2
- Output circuits monitored for wire-break and short-circuit
- Complete galvanic isolation
- Removable cage clamp terminals
- Power rail (connector incl. in delivery)

Solenoid Driver

1-channel

IMX12-DO01-1U-1U-PR/24VDC/CC

Dimensions



Type designation	IMX12-DO01-1U-1U-PR/24VDC/CC
Ident no.	7580102
Nominal voltage	24 VDC
Operating voltage range	10...30 VDC
Power consumption	≤ 1.8 W
0-signal	0...5 VDC
1-signal	10...30 VDC
Input delay	≤ 20 ms
Short-circuit	Output at load resistance < 30 Ω, the input will be > 100 kΩ
Wire break	Output at > 20 kΩ load resistance, the input will be > 100 kΩ.
Output curve	U_{out} [V] I_{out} [mA]
Common alarm output powerail	MOSFET, U _{max} = 30 V, I _{max} = 100 mA
Limit frequency	≤ 50 Hz
Galvanic isolation	
Test voltage	2.5 kV
Input 1 to output 1	375 V peak value acc. to EN 60079-11
Input 1 to supply	300 V RMS acc. to EN 50178 and EN 61010-1
Output 1 to supply	375 V peak value acc. to EN 60079-11
Important note	For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.
Ex approval acc. to conformity certificate	TÜV 14 ATEX 149780X
Application area	II (1) G, II (1) D
ignition protection category	[Ex ia Ga] IIC; [Ex ia Da] IIIC
Application area	II 3 (1) G
Ignition protection type	Ex nA [ia Ga] IIC T4 Gc
Important note	If the device is used in applications to achieve functional safety according to IEC 61508, the safety manual must be used. Information in the data sheet are not valid for functional safety.
Use in SIL safety circuits	SIL 2 acc. to IEC 61508
Indication	
Operational readiness	green
Switching state	yellow
Error indication	red

Solenoid Driver
1-channel
IMX12-DO01-1U-1U-PR/24VDC/CC

Protection class	IP20																																																																																
Flammability class acc. to UL 94	V-0																																																																																
Ambient temperature	-25...+70 °C																																																																																
Storage temperature	-40...+80 °C																																																																																
Relative humidity	≤ 95 %																																																																																
Dimensions	120 x 12.5 x 128 mm																																																																																
Weight	147 g																																																																																
Mounting instructions	DIN rail (NS35)																																																																																
Housing material	Polycarbonate/ABS																																																																																
Electrical connection	Removable cage clamp terminals, 2-pin																																																																																
Connection variant	Power rail with collective fault signal																																																																																
Terminal cross-section	0.2...2.5 mm ² (24 ... 13 AWG)																																																																																
Environmental conditions	<table> <tr> <td>Operating altitude</td><td>Up to 2000 m above sea level</td></tr> <tr> <td>Pollution degree</td><td>II</td></tr> <tr> <td>Surge category</td><td>II (EN 61010-1)</td></tr> <tr> <td>Standards used</td><td></td></tr> <tr> <td>Voltage resistance and insulation</td><td></td></tr> <tr> <td></td><td>EN 50178</td></tr> <tr> <td></td><td>EN 61010-1</td></tr> <tr> <td></td><td>EN 50155</td></tr> <tr> <td></td><td>GL VI-7-2</td></tr> <tr> <td>Shock</td><td></td></tr> <tr> <td></td><td>EN 61373 class B</td></tr> <tr> <td></td><td>EN 50155</td></tr> <tr> <td></td><td>GL VI-7-2</td></tr> <tr> <td></td><td>EN 60068-2-6</td></tr> <tr> <td></td><td>EN 60068-2-27</td></tr> <tr> <td>Temperature</td><td></td></tr> <tr> <td></td><td>EN 60068-2-1 Ad</td></tr> <tr> <td></td><td>EN 50155</td></tr> <tr> <td></td><td>GL VI-7-2</td></tr> <tr> <td></td><td>EN 60068-2-2 Bd</td></tr> <tr> <td></td><td>EN 60068-2-1</td></tr> <tr> <td>Humidity</td><td></td></tr> <tr> <td></td><td>EN 60068-2-38</td></tr> <tr> <td>EMC</td><td></td></tr> <tr> <td></td><td>EN 50155</td></tr> <tr> <td></td><td>GL VI-7-2</td></tr> <tr> <td></td><td>NE21</td></tr> <tr> <td></td><td>EN 61326-1</td></tr> <tr> <td></td><td>EN 61326-3-1</td></tr> <tr> <td></td><td>EN 61000-4-2</td></tr> <tr> <td></td><td>EN 61000-4-3</td></tr> <tr> <td></td><td>EN 61000-4-4</td></tr> <tr> <td></td><td>EN 61000-4-5</td></tr> <tr> <td></td><td>EN 61000-4-6</td></tr> <tr> <td></td><td>EN 61000-4-11</td></tr> <tr> <td></td><td>EN 61000-4-29</td></tr> <tr> <td></td><td>EN 55011</td></tr> <tr> <td></td><td>EN 55016</td></tr> <tr> <td></td><td>EN 50121-3-2</td></tr> <tr> <td></td><td>EN 61000-6-2</td></tr> </table>	Operating altitude	Up to 2000 m above sea level	Pollution degree	II	Surge category	II (EN 61010-1)	Standards used		Voltage resistance and insulation			EN 50178		EN 61010-1		EN 50155		GL VI-7-2	Shock			EN 61373 class B		EN 50155		GL VI-7-2		EN 60068-2-6		EN 60068-2-27	Temperature			EN 60068-2-1 Ad		EN 50155		GL VI-7-2		EN 60068-2-2 Bd		EN 60068-2-1	Humidity			EN 60068-2-38	EMC			EN 50155		GL VI-7-2		NE21		EN 61326-1		EN 61326-3-1		EN 61000-4-2		EN 61000-4-3		EN 61000-4-4		EN 61000-4-5		EN 61000-4-6		EN 61000-4-11		EN 61000-4-29		EN 55011		EN 55016		EN 50121-3-2		EN 61000-6-2
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Solenoid Driver
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Accessories

Type code	Ident no.	Description	
IMX12-PS02-UI-UIR-PR/24VDC/CC	7580611	Power supply module power rail; Collective fault signal via relay; Single and redundant power supply via terminals; Removable cage clamp terminals	