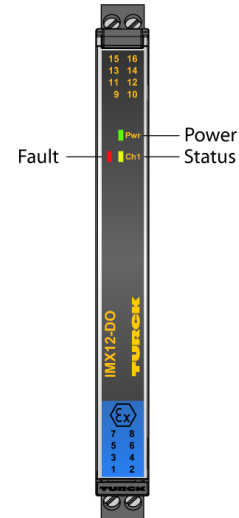
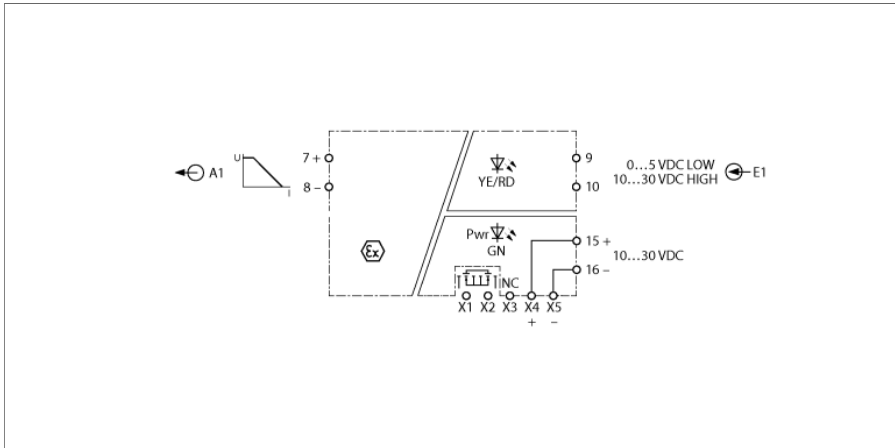


# Solenoid Driver

## 1-channel

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



The 1-channel IMX12-DO01-1U-1U-PR/24VDC 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 bridge that also transmits a collective fault signal.

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.

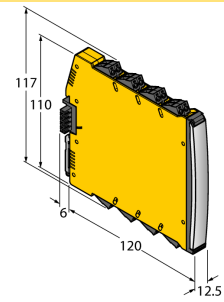
The device can detect a wire break or short circuit when a "high" is present at the input. The input then switches to high impedance and the common alarm output becomes conducting. An error in the output circuit causes the red LED to flash according to NE44.

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 screw terminals.

The device is equipped with removable screw terminals.

- Output circuits monitored for wire-break and short-circuit
- Complete galvanic isolation
- Input reverse-polarity protected
- Removable screw terminals
- Power bridge (connector incl. in delivery)
- ATEX, IECEx, cUL, cFM, INMETRO, NEPSI, Kosha, TIIS
- Use in Zone 2
- SIL 2

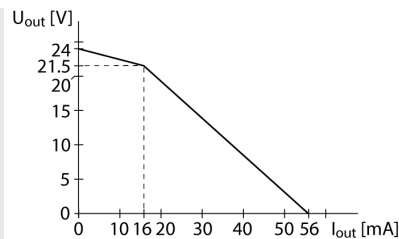
## Dimensions



Type	IMX12-DO01-1U-1U-PR/24VDC
ID	7580100
Nominal voltage	24 VDC
Operating voltage	10...30 VDC
Power consumption	≤ 1.8 W
Power dissipation, typical	≤ 0.75 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



Response characteristic	
Limit frequency	≤ 50 Hz

Galvanic isolation	
Test voltage	2.5 kV RMS
Input 1 to output 1	375 V peak value acc. to EN 60079-11
Input 1 to supply	300 V RMS according 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

Displays/Operating elements	
Operational readiness	Green
Switching state	Yellow
Error indication	red

Mechanical data			
Protection class	IP20		
Flammability class acc. to UL 94	V-0		
Ambient temperature	-25...+70 °C		
Storage temperature	-40...+80 °C		
Dimensions	120 x 12.5 x 117 mm		
Weight	152 g		
Mounting instructions	DIN rail (NS35)		
Housing material	Polycarbonate/ABS		
Electrical connection	Removable screw terminals, 2-pin		
Terminal cross-section	0.2...2.5 mm <sup>2</sup> (AWG: 24...14)		
Tightening torque	0.5 Nm		
Tightening torque	4.43 LBS-Inch		
Environmental conditions	Operating height	Up to 2000 m above sea level	
	Pollution degree	II	
	Surge/Overvoltage 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
	Air 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		

**Accessories**

Type code	Ident no.		Dimension drawing
IMX12-SC-2X-4BK	7580940	Screw terminals for IM(X)12 modules; included in delivery: 4 pcs. of 2-pin black terminals	
IMX12-SC-2X-4BU	7580941	Screw terminals for IM(X) 12 modules; included in delivery: 4 pcs. of 2-pin blue terminals	
IMX12-CC-2X-4BK	7580942	Spring terminals for IM(X)12 modules; included in delivery: 4 pcs. black terminals, 2-pin	
IMX12-CC-2X-4BU	7580943	Spring terminals for IM(X)12 modules; included in delivery: 4 pcs. blue terminals, 2-pin	