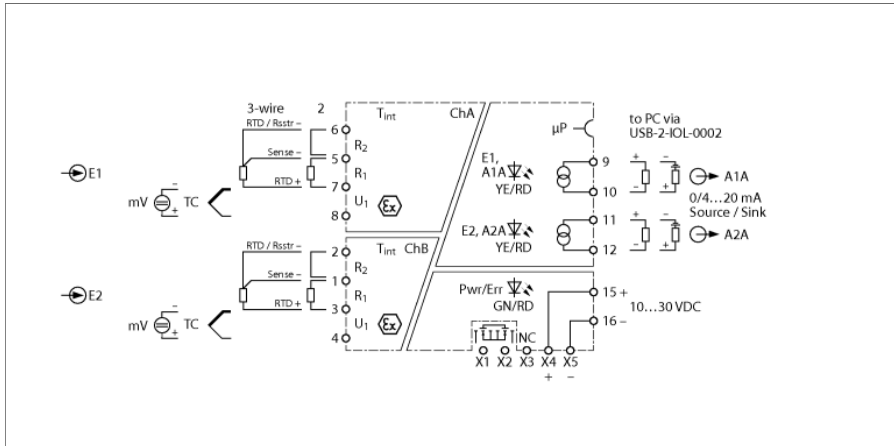


Temperature measuring amplifier 2-channel IMX12-TI02-2TCURTDR- 2I-CPR/24VDC

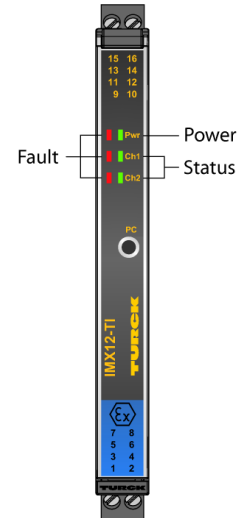


The 2-channel temperature measuring amplifier IMX12-TI02-2TCURTDR-2I-CPR/24VDC has inputs for: Thermocouples acc. to IEC 60584, DIN 43710, GOST R 8.585-2001, low voltages (-150...+150 mV), RTDs acc. to IEC 60751, DIN 43760, GOST 6651-94 (2, 3-wire) and resistors 0...5 kΩ (2, 3-wire). The device can be powered from a power bridge that also transmits a collective fault signal.

The cold junction compensation can be set to internal, external, or to a constant value. The device is configured via the PC interface. The current outputs can be set to 0/4 ... 20 mA and source or sink.

A green LED indicates operational readiness. A fault in the input circuit leads to a flashing red LED according to NE44, an internal error to a steady read LED. The fault current can be adjusted to < 3.5 mA or > 21.5 mA.

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.

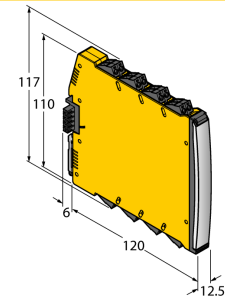


- Input circuits monitored for wire-break and short-circuit
- Parametrized via PC
- Complete galvanic isolation
- Input reverse-polarity protected
- Removable screw terminals
- Power bridge (connector incl. in delivery)
- ATEX, IECEx, cFM, cUL, NEPSI, IN-METRO, Kosha, TR CU EAC CMI, TS
- Installation in zone 2
- SIL 2

Temperature measuring amplifier 2-channel IMX12-TI02-2TCURTDR- 2I-CPR/24VDC

Type designation	IMX12-TI02-2TCURTDR- 2I-CPR/24VDC
Ident-No.	7580508
Nominal voltage	24 VDC
Operating voltage range	10...30 VDC
Power consumption	≤ 2.7 W
Power dissipation, typ.	≤ 1.6 W
Input circuits	RTD Type DIN EN 60751 Pt50, Pt100, Pt 500, Pt1000 RTD Type DIN EN 43760 Ni50, Ni100, Ni500, Ni1000 RTD Type Gost 6651-94 Pt50, Pt100, Pt 500, Pt1000, CU50, Cu53, Cu100, CU500, CuZn100 TC Type DIN EN 60584 Type A, Type B, Type C, Type E, Type J, Type K, Type N, Type R, Type S, Type T TC Type DIN 43710 Type L TC Type Gost 8.585-2001 Type A1, Type A2, Type A3, Type L, Type M Low voltage input -150...150 mV Resistance input 0...5000 Ohm Thermocouples -50...200°C; 0...400°C; 0...600°C
Output circuits	Output current 2 × source/sink (15...28 V) 0/4...20 mA Load resistance, current output ≤ 0.8 kΩ Power-Bridge common alarm output MOSFET, U _{max} = 30 V, I _{max} = 100 mA
Reference temperature	23 °C
Measuring accuracy current output (including linearity, hysteresis and repeatability)	± 10 µA
Temperature drift analog output	0.0025 %/K
Accuracy, RTD input, 0...500 ohm	± 50 mΩ
Temperature drift, RTD input, 0...500 ohm	± 5 mΩ/K
Accuracy, RTD input, 500...5000 ohm	± 500 mΩ
Temperature drift, RTD input, 500...5000 ohm	± 30 mΩ/K
Measuring accuracy TC input (including linearity, hysteresis and repeatability)	± 15 µV
Temperature drift, TC input	+/- 3.2 µV/K
Cold junction compensation error	with cold junction compensation < 2 K
Note	With 3-wire connection the errors double
Galvanic isolation	
Test voltage	2.5 kV
E1,E2-A1A,A2A	375 V peak value acc. to EN 60079-11
E1,E2 supply voltage	375 V peak value acc. to EN 60079-11
A1A supply voltage	300 V RMS acc. to EN 50178 and EN 61010-1
A2A supply voltage	300 V RMS acc. to EN 50178 and EN 61010-1
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 15 ATEX 168214 X
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

Dimensions



Temperature measuring amplifier

2-channel

IMX12-TI02-2TCURTDR- 2I-CPR/24VDC

Indication

Operational readiness	green
Switching state	Yellow
Error indication	red

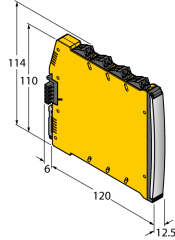
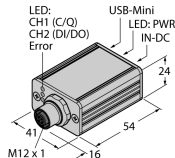
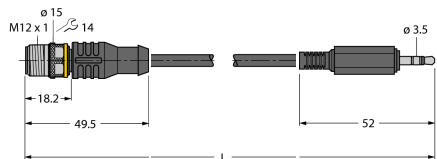
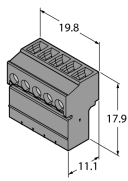
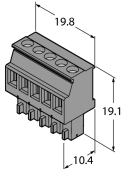
Protection class

Flammability class acc. to UL 94	IP20
Ambient temperature	V-0
Storage temperature	-25...+70 °C
Relative humidity	-40...+80 °C
Dimensions	≤ 95 %
Weight	120 x 12.5 x 117 mm
Mounting instructions	172 g
Housing material	DIN rail (NS35)
Electrical connection	Polycarbonate/ABS
Connection variant	Removable screw clamp terminals, 2-pin
Terminal cross-section	Power bridge with collective fault signal
Tightening torque	0.2...2.5 mm² (24 ... 13 AWG)
Tightening torque	0.5 Nm
Environmental conditions	4.43 LBS-Inch

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

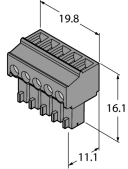
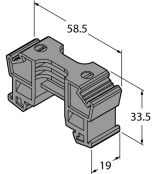
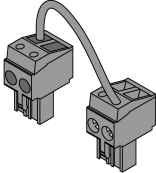
Temperature measuring amplifier
2-channel
IMX12-TI02-2TCURTDR- 2I-CPR/24VDC

Accessories

Type code	Ident-No.	Description	Dimension drawing
IMX12-PS02-UI-UIR-PR /24VDC	7580610	Power supply module power bridge; Collective fault signal via relay; Single and redundant power supply via terminals; Removable screw terminals	
USB-2-IOL-0002	6825482	IO-Link Master with integrated USB port	
IOL-COM/3M	7525110	The communication line IOL-PROG/3M connects IO-Link devices to an IO-Link master via a 3.5 mm jack plug.	
IMC 1.5/ 5-ST-3.81 BK	7580954	Power Bridge Connection Terminal	
MCVR 1.5/ 5-ST-3.81 BK	7580955	Power Bridge Connection Terminal	

Temperature measuring amplifier
2-channel
IMX12-TI02-2TCURTDR- 2I-CPR/24VDC

Accessories

Type code	Ident-No.	Description	Dimension drawing
MC 1.5/ 5-ST-3.81 BK	7580956	Power Bridge Connection Terminal	
E/ME TBUS NS35 BK	7580957	Power Bridge Connection Terminal	
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	
IMX12-2-CJT	100003646		