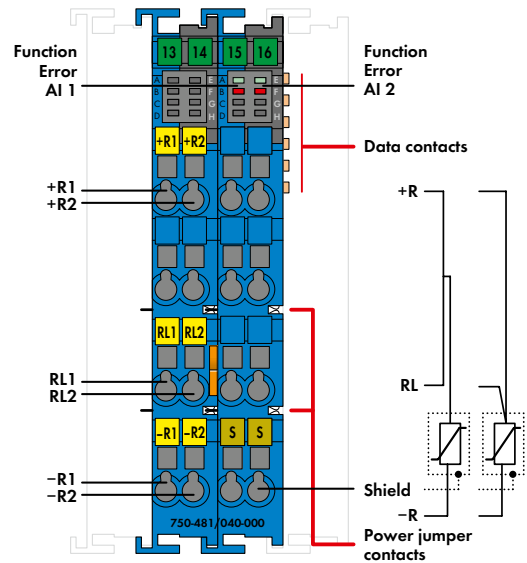


2-Channel Analog Input; Resistance Measurement; Intrinsically Safe; Extreme



This analog input module directly connects to Pt and Ni resistance sensors or potentiometers located in hazardous areas of Zones 0 and 1.

The WAGO-I/O-SYSTEM 750 XTR must be installed either in Zone 2 or in a non-hazardous area.

The 24 V supply is derived from the module's power jumper contacts. The shield is directly connected to the DIN-rail.

Indicators:

- Green LED (availability ON/OFF)
- Red LED (short circuit, wire breakage, measurement range overflow/underflow)

Field and system levels are electrically isolated.

Note: The analog output module must only be operated via 24 VDC Ex i XTR power supply (750-606/040-000)!

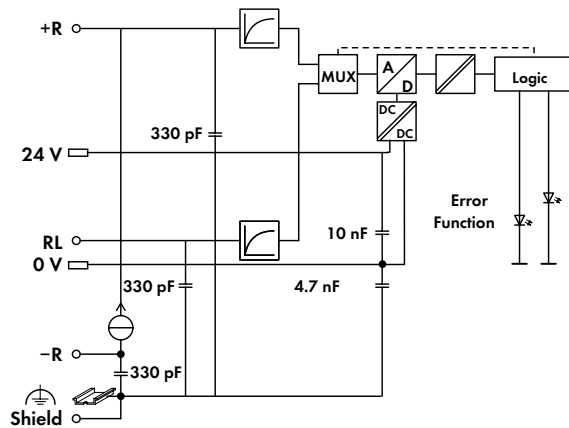
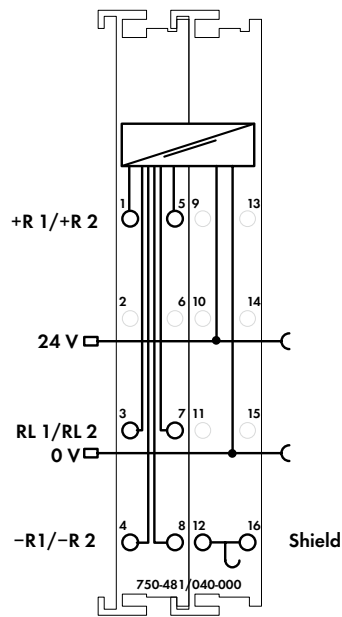
General information (e.g., installation regulations) on explosion protection is available in the WAGO-I/O-SYSTEM 750 XTR manuals!

The device is ideal for operation in harsh environments thanks to:

- Extended temperature range
- Greater immunity to impulse voltages and electromagnetic interference
- Higher vibration and shock resistance

Description	Item No.	Pack. Unit
2AI RTD Ex i XTR	750-481/040-000	1
Accessories	Item No.	Pack. Unit
Mini-WSB Quick Marking System, plain	248-501	50

Technical Data	
Number of analog inputs	2
Signal type	Resistance thermometers: Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000; Resistors: 1.2 k Ω , 5 k Ω ; Potentiometer setting: 0 ... 100 % (1.2 k Ω , 5 k Ω)
Sensor connection	2-conductor; 3-conductor
Temperature range	-200 ... +850 °C (Pt), -60 ... +250 °C (Ni), -80 ... +320 °C (Ni 120)
Resolution	0.1 °C; 0.1 Ω ; 0.0049 %
Conversion time	150 ... 500 ms (per channel)
Measurement/output error (25 °C)	< \pm 0.2 % of the largest measurement/output area
Temperature coefficient	< \pm 0.01 %/K of the largest measurement/output area
Measured current (typ.)	< 0.5 mA
Supply voltage (field)	24 VDC via power jumper contacts (Ex i XTR power supply: U _O = max. 26.8 V)
Current consumption (field supply)	12 mA
Current consumption (system supply)	25 mA
Power consumption P _{max.}	0.45 W
Power loss P _I	0.45 W
Data width (internal)	2 x 16-bit data; 2 x 8-bit control/status (optional)



Technical Data

Isolation	$U_m = 300$ VAC system/supply
Rated surge voltage	1 kV; Rated surge voltage between intrinsically safe and non-intrinsically safe circuits: 1.5 kV (EN 60079-11)
Connection technology	CAGE CLAMP®
Conductor range	0.25 ... 2.5 mm ² / 24 ... 14 AWG
Strip length	8 ... 9 mm / 0.33 inch
Dimensions W x H x D	24 x 67.8 x 100 mm
Weight	91.6 g
Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	Max. 95 %, short-term condensation per Class 3K7 / IEC EN 60721-3-3 and E DIN 40046-721-3 (except wind-driven precipitation, water and ice formation)
Operating altitude	Without temperature derating: 0 ... 2000 m; With temperature derating: 2000 ... 5000 m (0.5 K/100 m); Maximum: 5000 m
Vibration resistance	Per IEC 60068-2-6 (acceleration: 5 g), EN 60870-2-2, IEC 60721-3-1, -3
Shock resistance	Per IEC 60068-2-27 (15 g/11 ms/half-sine/1,000 shocks; 25 g/6 ms/1,000 shocks), EN 61373
EMC immunity to interference	EN 61000-6-1, EN 61000-6-2, EN 61131-2 (marine applications), EN 60255-26, EN 60870-2-1, EN 61850-3, IEC 61000-6-5, IEEE 1613, VDEW: 1994
EMC emission of interference	EN 61000-6-3 and EN 61000-6-4, EN 61131-2, EN 60255-26 (marine applications), EN 60870-2-1 and EN 61850-3 (industrial and residential areas)

Explosion protection

Safety-relevant data (circuit)	$U_o = 7.2$ V; $I_o = 5.8$ mA; $P_o = 10.5$ mW; Linear characteristic curve
Reactances Ex ia IIC	$L_o = 100$ mH; $C_o = 13.5$ μ F
Reactances Ex ia IIB	$L_o = 100$ mH; $C_o = 240$ μ F
Reactance Ex ia IIA	$L_o = 100$ mH; $C_o = 1000$ μ F
Reactances Ex ia I	$L_o = 100$ mH; $C_o = 1000$ μ F
Reactances	Reactances without considering the concurrence of L and C; for reactances that account for the concurrence of L and C, see manual

Guidelines and Approvals

Conformity marking	CE
Ex guideline	EN/IEC 60079-0, -7, -11
Marine applications	ABS, DNV GL, LR, PRS
☉ E175199 Ordinary Locations	
TÜV 17 ATEX 196484 X	☉ II 3 (1) G Ex ec [ia Ga] IIC T4 Gc ☉ II (1) D [Ex ia Da] IIIC ☉ I (M1) [Ex ia Ma] I
IECEx TUN 17.0005X	Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC [Ex ia Ma] I
☉ UL E198726 Hazardous Locations	Cl I, Div 2, Group A, B, C, D, T4