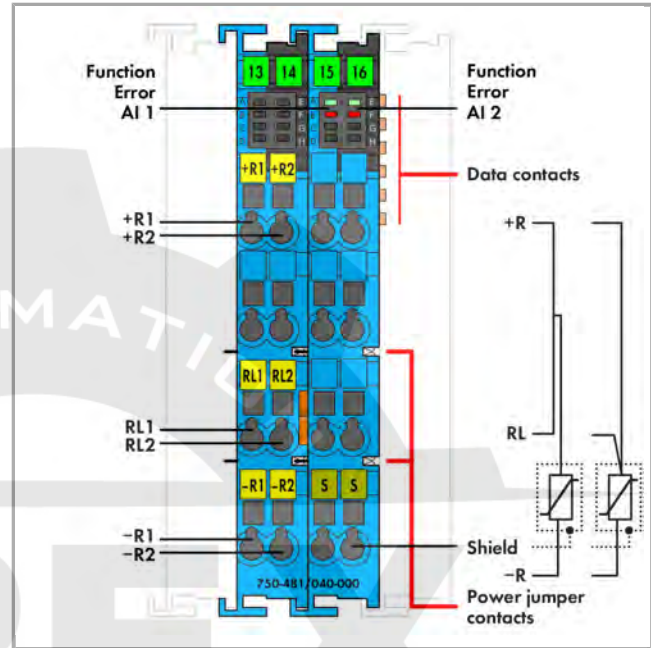
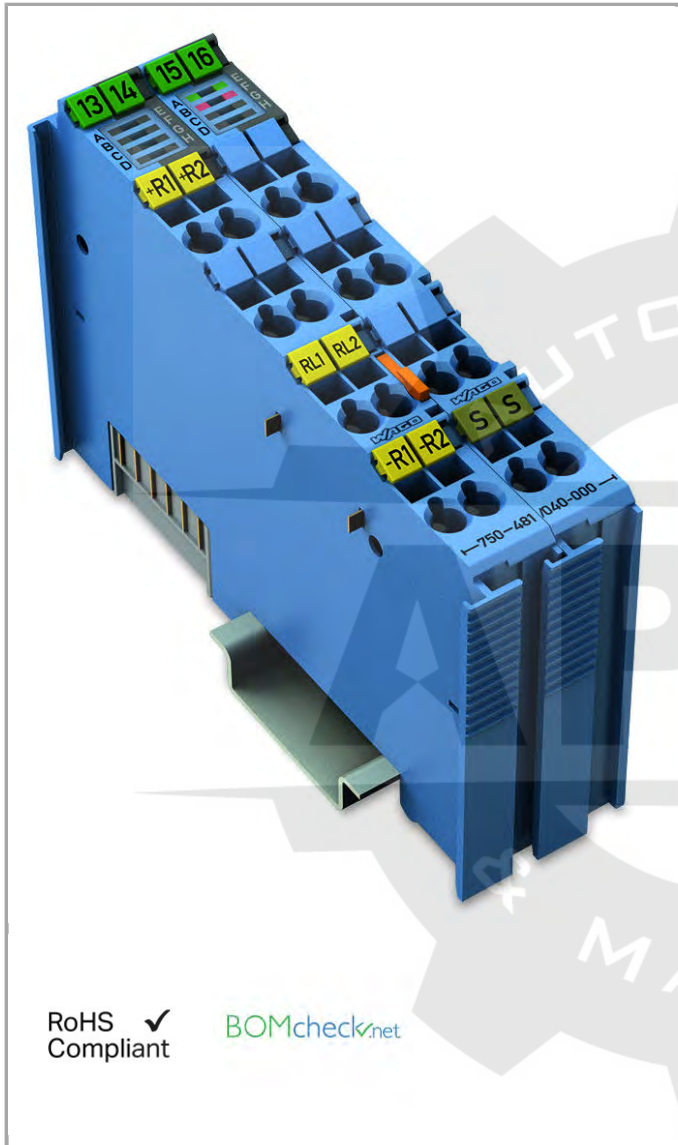
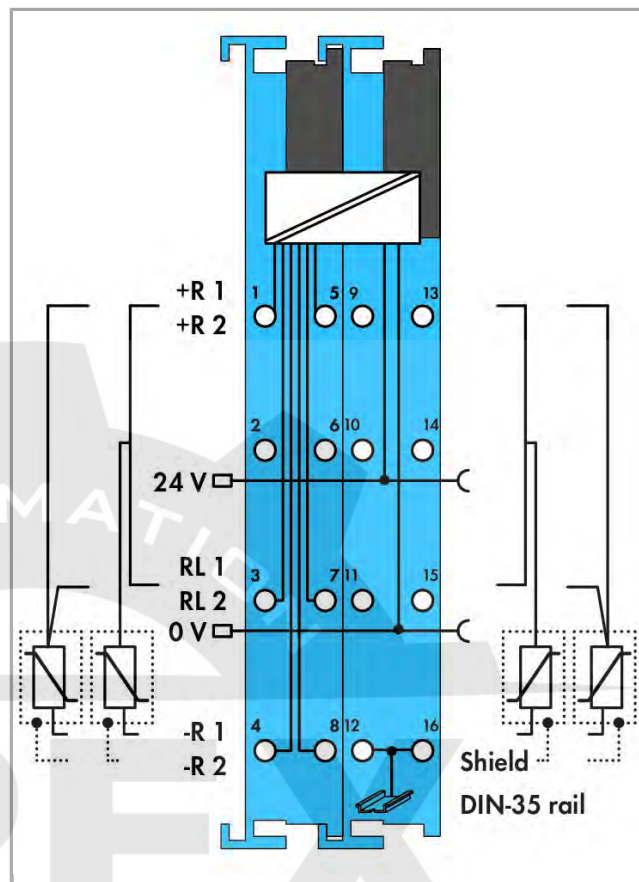
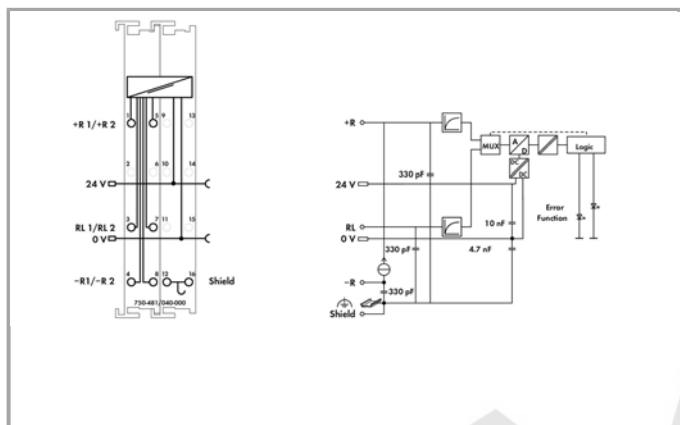




RoHS
Compliant

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Item description

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.

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

Note:

The analog input 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!

Data

Technical Data

Number of analog inputs	2
Total number of channels (module)	2
Type of signal	Resistance measurement Potentiometer positions
Configurable type of signal	yes
Sensor connection	2 x (2-conductor, 3-conductor)
Power consumption $P_{\max}$	0.45 W
Bit width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Resolution (over entire range)	0.1 °C, 0.1 Ω, 0.0049 %
Conversion time (typ. ≤)	325 ms
Conversion time	150 ... 500 ms (per channel)
Messfehler, Bezugstemperatur	25 °C
Messfehler, Abweichung max. vom Messbereichsendwert	0.2 %
Temperaturfehler max. vom Messbereichsendwert	0.01 %/K
Measuring current (typ.)	< 0.5 mA
Intrinsic safety Ex i	yes
Sensor types	Pt100; configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000; Resistors: 1.2 kΩ, 5 kΩ; Potentiometer setting 0 ... 100 %: 1k2, 5k0
Temperature range	-200 ... + 850 °C (Pt), -60 ... +250 °C (Ni), -80 ... +320 °C (Ni120)
System supply voltage	DC 5 V; via data contacts
Current consumption, system supply (5 V)	25 mA
System and sensor supply voltage	)
Field supply voltage	DC 24 V; via power jumper contacts (Ex i XTR power supply: U_0 = max. 27.3 V)
Current consumption, field supply (module with no external load)	12 mA
Power loss P_V	0.45 W
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1
Rated surge voltage	1 kV; Rated surge voltage between intrinsically safe and non-intrinsically safe circuits: 1.5 kV (EN 60079-11)
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity of the power jumper contacts	1 A
Ex guideline	EN/IEC 60079-0, -7, -11
Electric circuit, safety-relevant data	U_0 = 7,2 V; I_0 = 5,8 mA; P_0 = 10,5 mW; Kennlinie: Linear
Reactances Ex ia IIC	L_0 = 100 mH; C_0 = 13,5 μF

Reactances Ex ia IIB	$L_o = 100 \text{ mH}; C_o = 240 \mu\text{F}$
Ex ia IIA reactances	$L_o = 100 \text{ mH}; C_o = 1000 \mu\text{F}$
Reactances Ex ia I	$L_o = 100 \text{ mH}; C_o = 1000 \mu\text{F}$
Reactances	(The above-listed ratings do not account for the coincidental occurrence of capacitances and inductances. For ratings taking the coincidental occurrence of capacitances and inductances into account, see manual)

Connection data

Connection technology: In-/Outputs	16 x CAGE CLAMP®
Connection type (1)	Inputs/Outputs
Solid conductor	0.25 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.25 ... 2.5 mm ² / 24 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Geometrical Data

Width	24 mm / 0.945 inch
Height	67.8 mm / 2.669 inch
Height from upper-edge of DIN-35 rail	60.6 mm / 2.386 inch
Depth	100 mm / 3.937 inch

Mechanical data

Type of mounting	DIN-35 rail
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Material Data

Housing material	Polycarbonate, polyamide 6.6
Weight	90.6 g
Conformity marking	1

Environmental Requirements

Surrounding air (operating) temperature	-40 ... 70 °C
Surrounding air (storage) temperature	-40 ... 85 °C
Protection class	IP20
Degree of pollution (5)	2 per IEC 61131-2
Operating altitude	without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); max.: 5000 m
Mounting position	horizontal (standing/lying) or vertical
Relative air humidity (no condensation)	95 %
Relative humidity	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E DIN 40046-721-3 (except wind-driven precipitation, water and ice

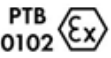
	formation)
Vibration resistance	acc. to IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3
Shock resistance	per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 61373
EMC immunity to interference	acc. to EN 61000-6-1, -2, EN 61131-2, marine applications, EN 60255-26, EN 60870-2-1, EN 61850-3, IEC 61000-6-5, IEEE 1613, VDEW: 1994
EMC emission of interference	acc. to EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H ₂ S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data

Country of origin	DE
GTIN	4055143649445
Customs Tariff No.	85389099990

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV_17_ATEX_196484X
	IECEx TUEV Nord Cert GmbH	IEC 60079-0	IECEx TUN 17.0005X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726 Sec.1

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	LR Lloyds Register	-	17/20073 LR
	PRS	-	TE/2215



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UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec10

Compatible products

shield connection

	Item no.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor	790-108
	Item no.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm	790-116
	Item no.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	790-124
	Item no.: 790-140 Shield clamping saddle; diameter of compatible conductor	790-140
	Item no.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm	790-208
	Item no.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm	790-216
	Item no.: 790-220 Shield clamping saddle; 30 mm wide; 6 ... 20 mm	790-220

power supply

	Item no.: 750-606/040-000 Power Supply; 24 VDC; Intrinsically safe; Extreme	750-606 /040-000
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Marking accessories

	Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145
	Item no.: 2009-145/000-002 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-002

	Item no.: 2009-145/000-005 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-005	2009-145
	Item no.: 2009-145/000-006 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-006	2009-145
	Item no.: 2009-145/000-007 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-007	2009-145
	Item no.: 2009-145/000-012 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-012	2009-145
	Item no.: 2009-145/000-023 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-023	2009-145
	Item no.: 2009-145/000-024 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-024	2009-145
	Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card		248-501
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-002	248-501
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-005	248-501
	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-006	248-501
	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-007	248-501
	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-012	248-501
	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-017	248-501
	Item no.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-023	248-501
	Item no.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-024	248-501

	Item no.: 750-103 Group marker carrier	750-103
	Item no.: 750-107 Group marker carrier	750-107
Carrier rail		
	Item no.: 210-112 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm	210-112
	Item no.: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715	210-113
	Item no.: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715	210-114
	Item no.: 210-115 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm	210-115
	Item no.: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	210-118
	Item no.: 210-196 Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715	210-196
	Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	210-197
	Item no.: 210-198 Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	210-198
	Item no.: 210-504 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715	210-504
	Item no.: 210-505 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715	210-505
	Item no.: 210-506 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715	210-506
	Item no.: 210-508 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715	210-508

Downloads

Documentation

Data sheet

750-481/040-000, 2AI RTD Ex i XTR	pdf 220.1 kB	Download
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Manual

2-channel, resistance measurement, Ex i /XTR PT100 / RTD	V 1.0.0	pdf 1.9 MB	Download
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Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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System Description

System Manual /XTR Basic conditions and recommendations for higher operational safety	V 1.2.0	pdf 2.9 MB	Download
Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 780.2 kB	Download
Intrinsically Safe XTR Modules – General Product Information		pdf 401.8 kB	Download

CAD/CAE - Smart Data**CAD data**

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Product family**750 XTR Series – I/O System**

I/O-System 750 XTR: Dort automatisieren, wo jedes andere System an seine Grenzen stößt – und das zuverlässig und wirtschaftlich! XTR – dieses Kürzel im Systemnamen steht für extremen Schutz vor klimatischen Einflüssen, Schwingungen, Erschütterungen und Überspannungen.

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