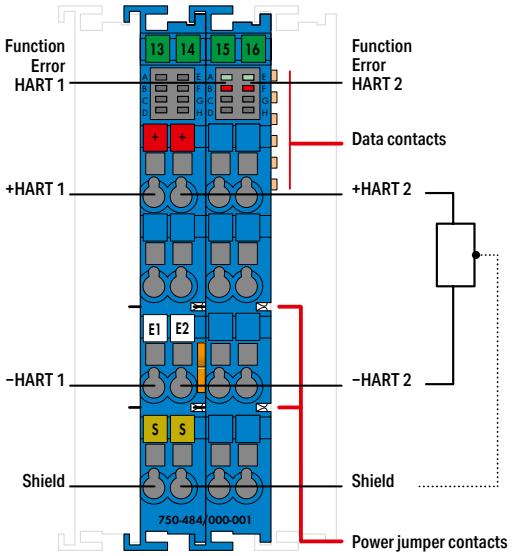
2-channel analog input; 4–20 mA HART; NAMUR NE43; intrinsically safe



This analog input module connects two field-side signal conditioners equipped with a HART interface that will be used in hazardous areas of Zone 0+1.
The module supplies signal conditioners, reads process values via analog interface and enables HART communication for configuring and importing dynamic variables. 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 supplied to the field contacts (HART +) from the power jumper contacts via multipliers.
The shield directly connects to the DIN-rail.

The measurement input is equipped with current limitation, which limits the current to 25 mA. This module can supply the voltage for two-wire signal conditioners that have no power supply of their own.
Up to four HART dynamic variables (PV, SV, TV, QV) per channel can be mapped to the cyclic process image of the fieldbus coupler or controller (parameterizable). For HART communication with connected intelligent HART field devices, the HART protocol can be mapped to the cyclic process image of the fieldbus coupler or controller (parameterizable). FDT/DTM device drivers are available for select (programmable) fieldbus couplers, allowing HART tool routing to the connected HART device.
The input current is discretized in the range from 3.6 mA to 21 mA. Acyclic PROFIBUS diagnostics according to NAMUR recommendation 43 are also possible with items 750-333 and 750-833.

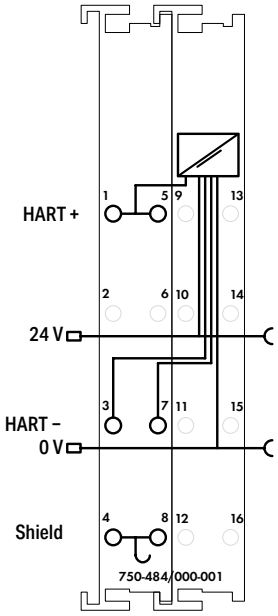
Note: The analog output module must only be operated via 24 VDC Ex i!

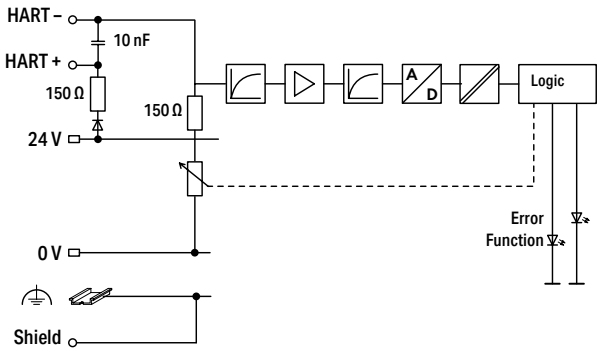
General information (e.g., installation regulations) on explosion protection is available in the WAGO-I/O-SYSTEM 750 manuals.

Description	Item No.	Pack. unit
2AI 4–20 mA HART NAMUR NE43 Ex i	750-484/000-001	1

Accessories	Item No.	Pack. unit
Mini-WSB Quick Marking System; plain	248-501	50

Technical Data	
Number of analog inputs	2
Signal type	4 … 20 mA
Signal characteristic	Single-ended
Resolution	12 bits
Overvoltage protection	30 V; protected against polarity reversal
Conversion time (typ.)	10 ms
Input filter	Parameterizable
Measurement/output error (25 °C)	0.2 % of upper-range value (non-linearity)
Temperature coefficient	< ± 0.01 %/K of the largest measurement/output area
Supply voltage (field)	24 VDC via power jumper contacts (Ex i power supply: U_O = max. 27.3 V)
Transmitter supply	U_V = 16.5 V at 20 mA
Current consumption (field supply)	26 mA + load
Current consumption (system supply)	25 mA
Power consumption Pmax	1.60 W (with slaves (20 mA))
Power loss P_l	0.62 W (without slaves)
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Diagnostics	Wire break; short circuit; measurement range overflow; measurement range underflow according to NAMUR recommendation 43
HART devices per channel	One device (single-drop, no multi-drop)
HART modems per channel	One modem (no multiplex)





Technical Data	
Isolation	300 VAC system/supply
Connection technology	CAGE CLAMP®
Conductor cross section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch
Dimensions W x H x D	24 x 67.8 x 100 mm
Weight	92.4 g
Surrounding air temperature (operation)	0 … +55 °C
EMC immunity to interference	Per EN 61000-6-2; marine applications
EMC emission of interference	Per EN 61000-6-3; marine applications

Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 92.7 mA; P_o = 630 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 1.5 mH; C_o = 87 nF
Reactances Ex ia IIB	L_o = 15 mH; C_o = 670 nF
Reactance Ex ia IIA	L_o = 38 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 36 mH; C_o = 3.49 µF
Reactances	Reactances (reactances without taking into account the concurrence of L and C; for reactances that take into account the concurrence of L and C, see manual)

Guidelines and Approvals	
Conformity marking	CE
E175199 Ordinary Locations	
TÜV 12 ATEX 106032 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 12.0039 X	Ex ec [ia Ga] IIC T4 Gc
	[Ex ia Da] IIIC
	[Ex ia Ma] I
TÜV 14.1911 X	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