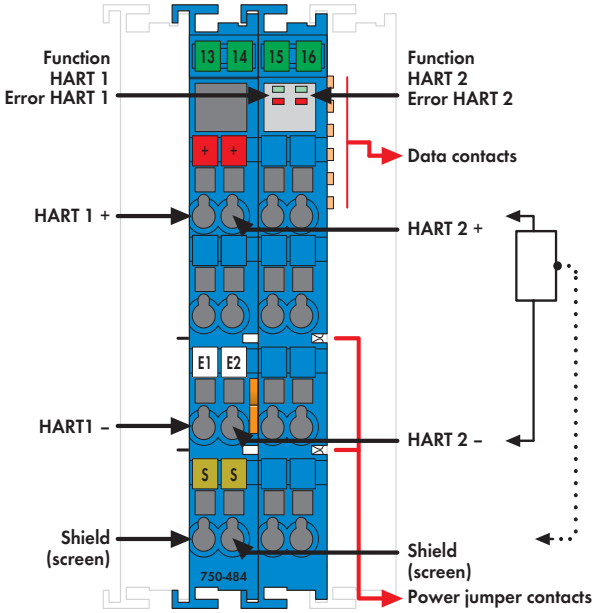
2-Channel Analog Input Module 4-20 mA HART, Ex i

Single-ended (S.E.)



Delivered without miniature WSB markers

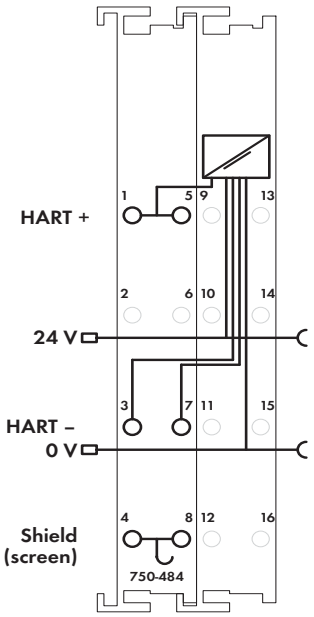
The analog input module connects two field-side transformers equipped with a HART interface that are to be used in hazardous environments of Zones 0+1. It supplies the transducers, reads the process values via analog interface and enables HART communication for configuring and importing dynamic variables.
The WAGO-I/O-SYSTEM 750 must be installed either in Zone 2 or in a non-hazardous area.
The 24V supply is derived from the power jumper contacts via multipliers to the field contacts (HART +). The shield (screen) is directly connected to the DIN rail.
The measurement input is equipped with current limitation, which limits the current to a max. 25mA. These modules can supply the voltage for 2-wire transducers without dedicated power supply.

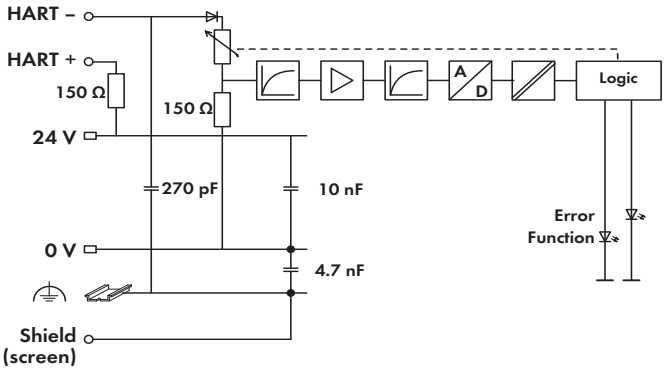
Up to 4 HART dynamic variables (PV, SV, TV, QV) per channel can be mapped in the cyclic process image of the coupler or controller (configurable). For HART communication with connected intelligent HART field devices, the HART protocol can be mapped in the cyclic process image of the coupler or controller (configurable).
FDT/DTM device drivers are available for select (programmable) couplers, allowing HART tool routing to the connected HART device.
Note:
Only use the analog input module in connection with the 24VDC Ex i Supply Module!
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 S.E. HART Ex i	**750-484**	1

Accessories		Item No.	Pack. Unit
PROFIBUS/HART Gateway DTM		**759-360**	1
MODBUS TCP/HART Gateway DTM		**759-359**	1
Miniature WSB Quick marking system			
	plain	**248-501**	5
	with marking	see Section 11	

Technical Data	
Number of inputs	2
Current consumption, system voltage typ.	
(5 VDC)	25 mA
Voltage via power jumper contacts	24 V DC (provided via Ex-i supply
	U_O = max. 27.3 V)
Transmitter supply	U_V = 16.5 V at 20 mA
Signal current	4 mA ... 20 mA
Overvoltage protection	30 V, reverse polarity protected
Conversion time (typ.)	10 ms
Input filter	parameterizable
Resolution	12 bits
Measuring error (25 °C)	0.2 % of upper range value (non-linearity)
Temperature coefficient	< ± 0.01 % / K of full scale value
Current consumption, power jumper	
contact typ. (24 VDC)	26 mA + load
Power consumption $P_{max.}$	1.60 W (with slaves (20 mA))
Power loss P_V	0.62 W (without slaves)
Isolation	U_M = 375 V system/supply
Bit width	2 x 2 bytes data
	2 x 2 bytes data + 2n x 4 bytes data
	(n = number of dynamic variables)
	2 x 2 bytes data + 6 bytes mailbox
Diagnostics	Wire break, measuring range overrun
HART devices per channel	1 device (single-drop, no multi-drop)
HART modems per channel	1 modem (no multiplex)





Technical Data

Wire connection	CAGE CLAMP®
Cross sections	0.08 mm² ... 2.5 mm² / AWG 28 ... 14
Strip lengths	8 ... 9 mm / 0.33 in
Width	24 mm
Weight	55 g
EMC immunity of interference	acc. to EN 61000-6-2, marine applications
EMC emission of interference	acc. to EN 61000-6-3, marine applications

Explosion Protection

Electric circuit, safety-relevant data	U_o = 27.3 V; I_o = 92.7 mA; P_o = 630 mW; Characteristic: Linear
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
Reactances 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	(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)

Standards, Guidelines and Approvals

Conformity marking	CE
ATEX Guideline 2014/34/EU	EN 60079-0, -7, -11, -26, -31
EC EMC guideline 2014/30/EU	
Korea Certification	
Marine applications	ABS, BV, DNV, GL, KR, LR, NKK, PRS, RINA
E175199 Ordinary Locations	
TÜV 12 ATEX 106032 X	I M2 (M1) Ex d [ia Ma] I Mb, II 3 (1) G Ex ec [ia Ga] IIC T4 Gc, II 3 (1) D Ex tc [ia Da] IIIC T135°C Dc
IECEx TUN 12.0039 X	Ex d [ia Ma] I Mb, Ex ec [ia Ga] IIC T4 Gc, Ex tc [ia Da] IIIC T135°C Dc
TÜV 14.1911 X	Ex d [ia Ma] I Mb, Ex nA [ia Ga] IIC T4 Gc, Ex tc [ia Da] IIIC T135 °C Dc
UL E480271 Hazardous Locations (Zone classified)	Cl I Zn 2 AEx nA [ia Ga] IIC T4 Gc Cl I Zn 2 AEx nA [ia IIIC] IIC T4 Gc Ex nA [ia Ga] IIC T4 Gc X Ex nA [ia IIIC] IIC T4 Gc X
UL E198726 Hazardous Locations (Division classified)	Class I, Div. 2, Group A B C D, T4