

Data sheet | Item number: 750-484

2-channel analog input; 4 ... 20 mA HART; Intrinsically safe

www.wago.com/750-484



Color:



Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
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Item description

This analog input module connects two field-side signal conditioners equipped with a HART interface that are to 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 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 powers 2-wire signal conditioners without dedicated power supply.

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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 (parameterizable). 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 (parameterizable).

FDT/DTM device drivers are available for select (programmable) couplers, allowing HART tool routing to the connected HART device.

Data

Notes

Note	The analog input 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!

Technical data

Number of analog inputs	2
Total number of channels (module)	2
Signal type	Current
Signal type (current)	4 ... 20 mA DC
Sensor connection	2 x (2-wire)
Input filter	parameterizable
Input filter: parametrizable (channel by channel)	Yes
Signal characteristics	Single-ended
Overvoltage protection	30 V, reverse polarity protected
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Intrinsic safety Ex i	Yes
Diagnostics	Wire break, measurement range overflow
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
Configuration options	WAGO-I/O-CHECK e!COCKPIT
HART devices per channel	1 device (single-drop, no multi-drop)
HART modems per channel	1 modem (no multiplex)
Supply voltage (system)	5 VDC; via data contacts

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Current consumption (5 V system supply)	25 mA
Supply voltage (field)	24 VDC; (Ex i power supply: $U_o = \text{max. } 27.3 \text{ V}$); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	26 mA
Power consumption P_{max}	1.60 W (with slaves (20 mA))
Power loss P_l	0.62 W (without slaves)
Isolation	300 VAC system/supply
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	1 A
Indicators	LED (A, E) green: Function HART 1, HART 2; LED (B, F) red: Error HART 1, HART 2
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I

Explosion protection

Ex standard	EN IEC 60079-0, -7, -11
Safety-relevant data (circuit)	$U_o = 27.3 \text{ V}$; $I_o = 92.7 \text{ mA}$; $P_o = 630 \text{ mW}$; linear characteristic curve
Reactances Ex ia IIC	$L_o = 1.5 \text{ mH}$; $C_o = 87 \text{ nF}$
Reactances Ex ia IIB	$L_o = 15 \text{ mH}$; $C_o = 670 \text{ nF}$
Reactances Ex ia IIA	$L_o = 38 \text{ mH}$; $C_o = 2.2 \text{ }\mu\text{F}$
Reactances Ex ia I	$L_o = 36 \text{ mH}$; $C_o = 3.49 \text{ }\mu\text{F}$
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)

Connection data

Connection technology: inputs/outputs	16 x CAGE CLAMP®
Connection type 1	Inputs/outputs
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

Physical data

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

Mechanical data

Mounting type	DIN-35 rail
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Material data

Color	blue
Housing material	Polycarbonate; polyamide 6.6
Fire load	2.034 MJ
Weight	92 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-25 ... +85 °C
Protection type	IP20
Pollution degree	2 per IEC 61131-2
Operating altitude	0 ... 2000 m / 0 ... 6562 ft
Mounting position	horizontal (standing/lying); vertical
Relative humidity (without condensation)	95 %
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2, marine applications
EMC emission of interference	per EN 61000-6-3, marine applications
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

Product Group	15 (I/O System)
eCl@ss 10.0	27-24-26-01
eCl@ss 9.0	27-24-26-01

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ETIM 8.0	EC001596
ETIM 7.0	EC001596
Recupel Type	
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
Customs tariff number	8538909990

Environmental Product Compliance

CAS-No.	11120-22-2 1303-86-2 1317-36-8 7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide Lead silicate
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Bulgaria)	b0643f05-8768-49bd-adcc-22cfdd43a1ed
SCIP notification number (Czech Republic)	c5777387-8a65-481c-bd87-ffe09d2c209f

Commercial data

eCl@ss 9.0
ETIM 8.0
ETIM 7.0
Customs tariff number

Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C-DE.AM02. B.00087

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KC National Radio Research Agency	Article 58-2, Clause 3	MSIP- REM-W43- AIM750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	22-2219060
	BV Bureau Veritas S.A.	-	30389/C0 BV
	DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194
	KR Korean Register of Shipping	-	KR HMB05880- AC001
	LR Lloyds Register EMEA	-	LR22180952TA
	PRS Polski Rejestr Statków	-	TE/2236/880590 /19
	RINA RINA Germany GmbH	-	ELE343521XG001

Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	AEx UL International Germany GmbH	UL 60079	E480271
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV_12_ATEX_106032X (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
	CCC CNEX	CNCA-C23-01	2020312310000211 (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B. 00163/19 ([ExiaMa]I X,2Ex e[iaGa]IIC T4Gc X,[ExiaDa] IIIC X)

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INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV_14.1911_X
TUEV Nord TUEV Nord Cert GmbH	IEC 60079	IECEX TUN 12.0039X (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Optional accessories

Marking accessories

Marker carrier		
Item no.: 750-103 Group marker carrier		www.wago.com/750-103
Marker		
Item no.: 2009-145/000-006 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue		www.wago.com/2009-145/000-006
Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white		www.wago.com/2009-145
Item no.: 2009-145/000-002 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow		www.wago.com/2009-145/000-002
Item no.: 2009-145/000-007 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray		www.wago.com/2009-145/000-007
Item no.: 2009-145/000-005 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red		www.wago.com/2009-145/000-005
Item no.: 2009-145/000-012 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange		www.wago.com/2009-145/000-012
Item no.: 2009-145/000-023 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green		www.wago.com/2009-145/000-023
Item no.: 2009-145/000-024 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet		www.wago.com/2009-145/000-024

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**Item no.: 248-501/000-006**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

www.wago.com/248-501/000-006**Item no.: 248-501/000-007**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

www.wago.com/248-501/000-007**Item no.: 248-501/000-002**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

www.wago.com/248-501/000-002**Item no.: 248-501/000-012**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

www.wago.com/248-501/000-012**Item no.: 248-501**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

www.wago.com/248-501**Item no.: 248-501/000-017**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green

www.wago.com/248-501/000-017**Item no.: 248-501/000-005**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

www.wago.com/248-501/000-005**Item no.: 248-501/000-024**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

www.wago.com/248-501/000-024**Item no.: 248-501/000-023**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

www.wago.com/248-501/000-023**Group marker carrier****Item no.: 750-107**

Group marker carrier

www.wago.com/750-107**Carrier rail****Mounting accessories****Item no.: 210-197**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored

www.wago.com/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; copper-colored

www.wago.com/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; silver-colored

www.wago.com/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;

www.wago.com/210-505

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silver-colored

Item no.: 210-506Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored www.wago.com/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; silver-colored www.wago.com/210-508**Item no.: 210-113**Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored www.wago.com/210-113**Item no.: 210-118**Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored www.wago.com/210-118**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; silver-colored www.wago.com/210-112**Item no.: 210-114**Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored www.wago.com/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; silver-colored www.wago.com/210-115**Item no.: 210-196**Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored www.wago.com/210-196**Supply module**

Supply module

Item no.: 750-625/000-001Power Supply; 24 VDC; Intrinsically safe www.wago.com/750-625/000-001**Item no.: 750-606**Power Supply; 24 VDC; Diagnostics; Intrinsically safe www.wago.com/750-606**Shield termination**

Shield clamping saddles

Item no.: 790-116Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm www.wago.com/790-116**Item no.: 790-124**Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm www.wago.com/790-124**Item no.: 790-108**Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm www.wago.com/790-108**Item no.: 790-140**Shield clamping saddle; diameter of compatible conductor www.wago.com/790-140**Item no.: 790-216**Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm www.wago.com/790-216

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Item no.: 790-220

Shield clamping saddle; 30 mm wide; 6 ... 20 mm

www.wago.com/790-220

Item no.: 790-208

Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

www.wago.com/790-208

Downloads

Documentation

Data sheet

750-484, 2AI 4-20mA 12 Bit S.E. HART Ex i, data sheet		pdf	Download
		251.7 kB	

Manual

System Manual WAGO I/O System 750/753 Decentralized Automation Technology	V 3.3.3 2023 年8月29 日	pdf	Download
		8.7 MB	
Product Manual 2-channel, 4-20mA, HART, Ex i, single ended	V 1.4.0	pdf	Download
		2.9 MB	

Bid Text

750-484 X81 - Datei	2019 年2月19 日	xml	Download
		8.1 kB	
750-484 doc - Datei	2018 年9月13 日	doc	Download
		33.8 kB	

Instruction Leaflet

CCC Ex (Additional information) WAGO-I/O-SYSTEM 750-*** Ex i	2023 年4月26 日	pdf	Download
		147.4 kB	

Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 年8月18 日	pdf	Download
		2.2 MB	

System Description

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf	Download
		223.5 kB	
Ex i Overview		pdf	Download
		233.9 kB	

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Application Notes

Application Note CoDeSys 2.3

HART Tool Routing via PROFIBUS with 750-833 and 750-333 (a116140)	1.0.0	pdf	Download
This application note describes how to set up asset management systems, which facilitate simple, efficient configuration of HART field devices. Using the Cerabar PMC51 (Endress+Hauser) as an example, connecting any HART sensor to a WAGO PROFIBUS controller and a WAGO PROFIBUS Coupler is explained. The cyclic PROFIBUS Master (750-8208) realizes the data exchange. As an acyclic master, a TH LINK PROFIBUS provides access for the plant asset management applications WAGOframe, PACTware and FieldCare.	2019 年3月22 日	5.3 MB	

HART Tool Routing via ETHERNET with 750-820x/750-88x and CODESYS 2.3 (a116120)	1.0.0	pdf	Download
This application note describes how to set up asset management systems, which facilitate simple, efficient configuration of HART field devices. With the Cerabar PMC51 (Endress+Hauser) as an example, a connection is established from any HART sensor to a WAGO PROFIBUS Controller and a WAGO ETHERNET Fieldbus Coupler. The configuration is made with the asset management software WAGOframe, PACTware und FieldCare.	2019 年3月22 日	3.9 MB	

Application Note e!COCKPIT

HART Tool Routing via ETHERNET with 750-820x and e!RUNTIME (a116130)	1.0.0	pdf	Download
This application note describes how to set up asset management systems, which facilitate simple, efficient configuration of HART field devices. With the Cerabar PMC51 (Endress+Hauser) as an example, a connection is established from any HART sensor to a WAGO PROFIBUS Controller and a WAGO ETHERNET fieldbus coupler. The configuration is made with the asset management software WAGOframe, PACTware und FieldCare.	2019 年3月22 日	2.9 MB	

Application note, other

HART Tool-routing with Emerson AMS (a116110)	1.0.0	zip	Download
This App Note describes the HART® over PROFIBUS and the hardware configuration of a tool routing application based on the Asset Management Software AMS® from Emerson and network components from Softing. Details about the HART® over PROFIBUS communication component such as TH LINK PROFIBUS, hardware configuration tool, TACC gateway software and the Asset Management Software AMS® are available in the device setup manual from Softing AG and Emerson.	2016 年5月12 日	1.6 MB	

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Libraries

Library

Connecting HART-Modules 750-482 and 750-484	3.1.0	zip	Download
The library "WagoLibHART_03.lib" offers a set of function blocks to execute HART-commands (Revision 5) in a PLC program. The principal item of this library is program HART_INFO, it identifies connected HART modules like 750-482 and coordinates the Kbus access. In addition you find with HART_FDT program that act as counterpart to WAGO-ModbusTCP-HART-DTM, who enable configuration of HART devices with every FDT-Frameapplication like "WAGOframe".	2018 年1月19 日	331.0 kB	

Utilize HART-Modules 750-482 and 750-484	1.7	zip	Download
The library "WagoLibHART_05.lib" offers a set of function blocks to execute HART-commands (Revision 5) in a PLC program. The principal item of this library is program HART_INFO, it identifies connected HART modules like 750-482 and coordinates the Kbus access. In addition you find with HART_FDT program that act as counterpart to WAGO-ModbusTCP-HART-DTM, who enable configuration of HART devices with every FDT-Frameapplication like "WAGOframe". This library utilizes "WagoLibKBUS.lib" for MailBox-communication.	2018 年1月19 日	21.9 MB	

CAD/CAE-Data

CAE data

EPLAN Data Portal 750-484		URL	Download
WSCAD Universe 750-484		URL	Download
ZUKEN Portal 750-484		URL	Download

CAD data

2D/3D Models 750-484		URL	Download
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Device Files

Device Driver

ModbusTCP/ HART Gateway DTM / HART 750-48x, 753-48x	1.00.0000	zip	Download
	2015 年8月20 日	21.5 MB	
759-360; Profibus/ HART Gateway DTM / HART 750-48x , 753-48x	1.1.0.7	zip	Download
	2015 年8月20 日	4.6 MB	

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In Verbindung mit dem PROFIBUS DP/V1 Feldbuskoppler 750-333 bzw. Feldbuscontroller 750-833 und dem PROFIBUS/HART Gateway DTM 759-360 ist FDT Toolrouting zum DTM des angeschlossenen HART Gerätes möglich.

WAGO USB Service Kabel Treiber / Serie 750 und 857	6.5.3.0 2014 年9月10 日	zip 4.8 MB	Download
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Installation Notes

Product family

WAGO I/O System 750/753

[Show all products from the family](#)

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