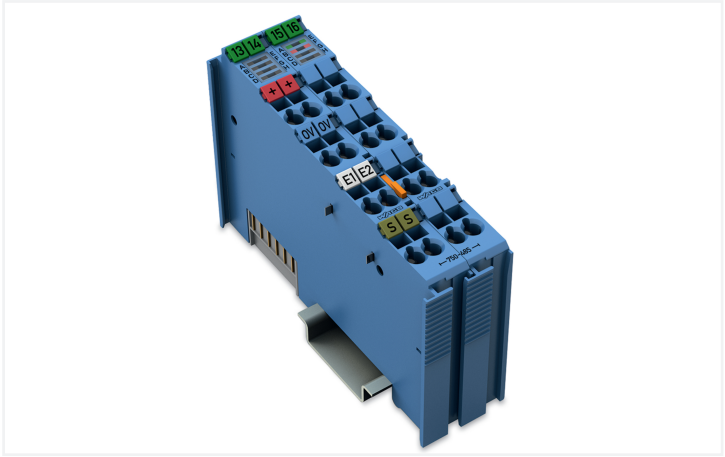
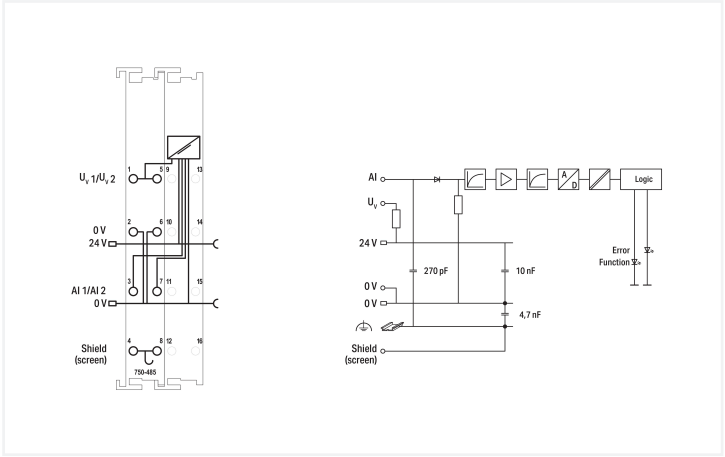
Data Sheet | Item Number: 750-485

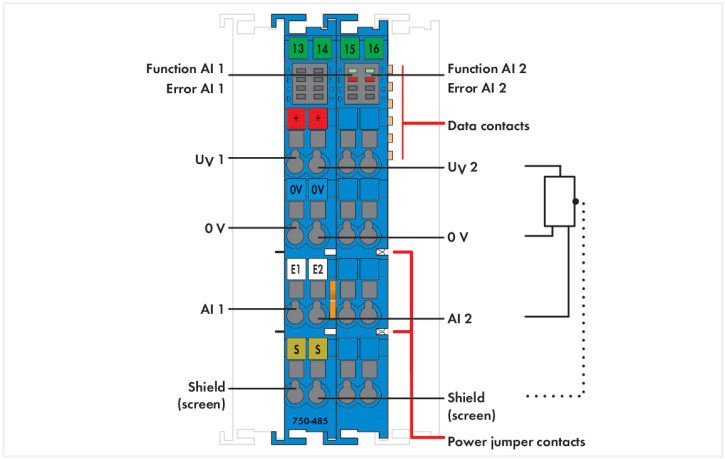
2-channel analog input; 4 … 20 mA; Single-ended; Intrinsically safe

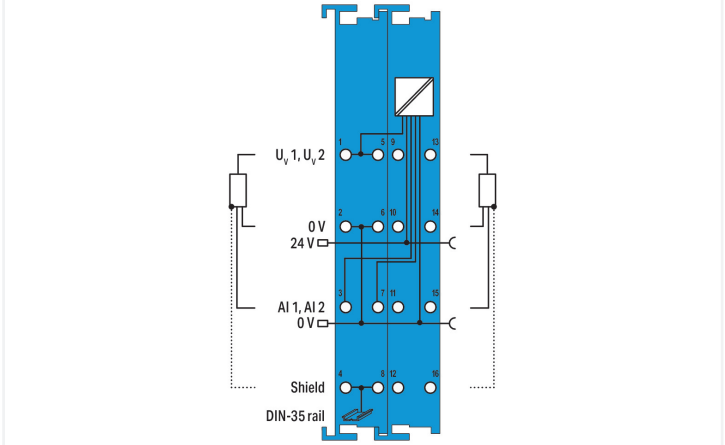
https://www.wago.com/750-485





Color: ■ blue





This analog input module supplies intrinsically safe signal conditioners in hazardous areas classified as Zone 0 and Zone 1, and processes their analog measurement signals.
The WAGO I/O System 750/753 must be installed either in Zone 2 or in a non-hazardous area.
The 24 V supply voltage is fed in via the power jumper contacts.
The transmitter power supply is conditionally short-circuit protected.
The shield connection directly connects to the DIN-rail.
Indicators:

- Green LED (signal current on/off)
- Red LED (wire breakage, measurement range overflow/underflow)

Field and system levels are electrically isolated.

Notes

Note	The analog output module must only be operated with a 24 VDC Ex i power supply! General information on explosion protection, including installation regulations, can be found in the WAGO I/O System 750/753 manuals!

Technical data

Item description	2-Channel Analog Input; 4 … 20 mA
Number of analog inputs	2
Total number of channels (module)	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (3-wire)
Signal characteristics	Single-ended
Sensor supply	16 VDC
Resolution [bit]	12 bits
Conversion time (typ.)	2 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
Input resistance (max.)	100 Ω
Intrinsically safe Ex i	Yes
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Supply voltage (system)	5 VDC; via data contacts
Current consumption (system supply)	31 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 26.8 V); via power jumper contacts (supply via blade contact; distribution via spring contact)
Current consumption, field supply (module with no external load)	11 mA
Power consumption $P_{max.}$	1.3 W
Power loss P_l	0.75 W
Isolation	300 VAC system/supply
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Indicators	LED (A, E) green: Function AI 1, AI 2; LED (B, F) red: Error AI 1, AI 2

Explosion protection

Identification	**ATEX:** 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/INMETRO:** Ex ec [ia Ga] IIC T4 Gc; [Ex ia Da] IIIC; [Ex ia Ma] I **cULus (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 **cULus (Devision classified):** Class I, Div. 2, Group A B C D, T4
Ex standard	EN IEC 60079-0, -7, -11
Safety-relevant data (circuit)	U_o = 26.8 V; I_o = 88.4 mA; P_o = 593 mW; linear characteristic curve
Reactances Ex ia IIC	L_o = 4.54 mH; C_o = 92 nF
Reactances Ex ia IIB	L_o = 18.19 mH; C_o = 720 nF
Reactances Ex ia IIA	L_o = 36.39 mH; C_o = 2.37 µF
Reactances Ex ia I	L_o = 59.71 mH; C_o = 4.2 µF
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_o) and inductance (L_o)

Continued on next page

Connection Data

Connection technology: I/O	8 x CAGE CLAMP®
Connectable conductor materials	Copper
Connection type	Inputs/outputs
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inches

Physical data

Width	24 mm / 0.945 inches
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

Material data

Color	blue
Housing material	Polycarbonate; polyamide 6.6
Fire load	2.036 MJ
Weight	97.6 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 left, horizontal right, horizontal top, horizontal bottom, vertical top and vertical bottom
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_2S 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)
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454725556
Customs tariff number	85437090990

Continued on next page

Product Classification

UNSPSC	32151705
eCl@ss 10.0	27-24-26-01
eCl@ss 9.0	27-24-26-01
ETIM 9.0	EC001596
ETIM 10.0	EC001596
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Bulgaria)	5065582b-f270-43af-9e74-f9e23017a7b1
SCIP notification number (Czech Republic)	0170611b-8bdf-4c42-9ac1-72bd32bec088

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-AIM750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Ex-Declaration of Conformity WAGO GmbH & Co. KG	-	-
UK-Ex-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	-	25-0415412
BV Bureau Veritas S.A.	-	13453/E0 BV
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194
KR Korean Register of Shipping	-	KR HMB05880-AC001
LR Lloyds Register EMEA	-	LR22180952TA

Approvals for marine applications

PRS Polski Rejestr Statków	-	TE/1101/880590/23
RINA RINA Germany GmbH	-	ELE343521XG001

Continued on next page

Approvals for hazardous areas

Approval	Standard	Certificate Name
AEx UL International Germany GmbH	UL 60079	E480271
ATEX TUEV Nord Cert GmbH	EN 60079	TUEV12ATEX106032X (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] II-IC, [Ex iaMa] I)
IECEx TUEV Nord Cert GmbH	IEC 60079	IECEx TUN12.0039X (Ex ec [iaGa] IIC T4 Gc, [Ex iaDa] II-IC, [Ex iaMa] I)
INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV_14.1911_X
KTL Korea Testing Laboratory	KOSHA Article 34, IEC60079-0	20-KA4BO-0643X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-485	

Documentation

Manual

Product Manual 2-channel, 4-20mA, Ex i, single-ended	3844108171 | 3 | en-US | 2025-05-30 09:41 14.11.2025	pdf 3002.47 KB	

System Description

750/753 Series I/O-System – General Product Information	pdf 953.35 KB	
Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	
Ex i Overview	pdf 442.07 KB	

Bid Text

750-485	19.02.2019	xml 6.15 KB	
750-485	06.10.2017	doc 31.50 KB	

Instruction Leaflet

CCC Ex (Additional information)	26.04.2023	pdf 143.96 KB	

Continued on next page

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 750-485	EPLAN Data Portal 750-485
	WSCAD Universe 750-485
	ZUKEN Portal 750-485

Device Files

Device Driver		
WAGO USB Service Kabel Treiber / Serie 750 und 857	6.5.3.0 10.09.2014	zip 4721.96 KB

1 Compatible Products

1.1 Optional Accessories

1.1.1 DIN-rail

1.1.1.1 Mounting accessories



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



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



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



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



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



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



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

1.1.2 Marking

1.1.2.1 Group marker carrier



Item No.: 750-107
Group marker carrier

1.1.2.2 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



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



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



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



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



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



Item No.: 2009-145
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



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

Continued on next page

1.1.2.2 Marker



Item No.: 248-501/000-006
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue



Item No.: 248-501/000-007
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray



Item No.: 248-501/000-023
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green



Item No.: 248-501/000-017
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green



Item No.: 248-501/000-012
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange



Item No.: 248-501/000-005
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red



Item No.: 248-501/000-024
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet



Item No.: 248-501
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 248-501/000-002
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

1.1.2.3 Marker carrier



Item No.: 750-103
Group marker carrier

1.1.3 Shield termination

1.1.3.1 Shield clamping saddles



Item No.: 790-108
Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 … 8 mm



Item No.: 790-208
Shield clamping saddle; 12.4 mm wide; 3 … 8 mm

Item No.: 790-116
Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 … 16 mm



Item No.: 790-216
Shield clamping saddle; 21.8 mm wide; 6 … 16 mm



Item No.: 790-124
Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 … 24 mm



Item No.: 790-220
Shield clamping saddle; 30 mm wide; 6 … 20 mm



Item No.: 790-140
Shield clamping saddle; diameter of compatible conductor

1.1.4 Supply module

1.1.4.1 Supply module



Item No.: 750-606
Power Supply; 24 VDC; Diagnostics; Intrinsically safe



Item No.: 750-625/000-001
Power Supply; 24 VDC; Intrinsically safe