

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

WAGO GmbH & Co. KG

Hansastraße 27

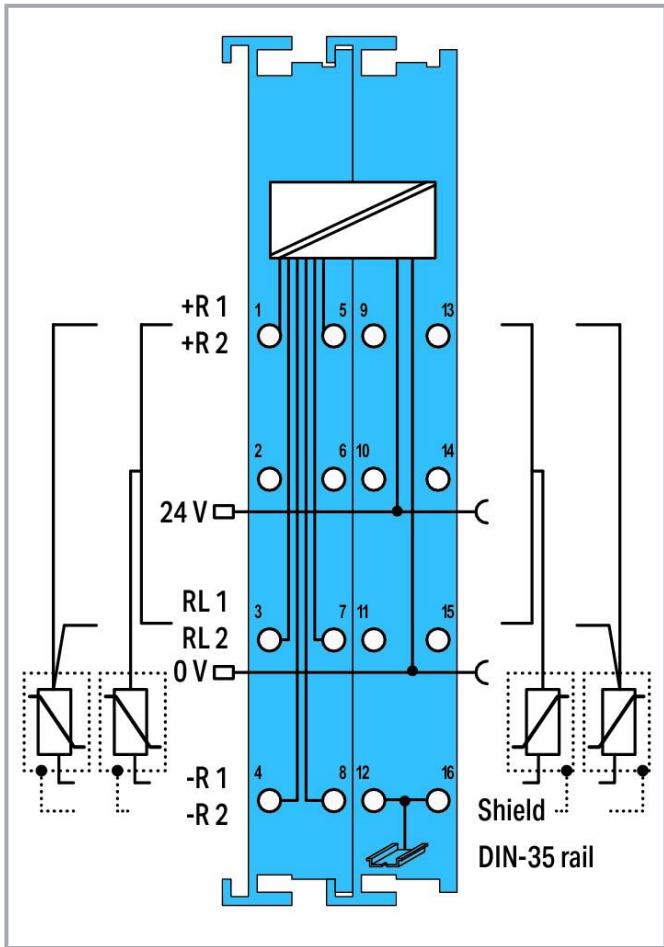
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This item has been discontinued and is no longer available as of 31.12.2021.

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 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 directly connects 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.

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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	Resistance measurement Potentiometer positions
Signal type (configurable)	yes
Sensor connection	2 x (2-wire, 3-wire)
Power consumption P _{max.}	0.45 W
Data 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)
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
Measuring current (typ.)	< 0.5 mA
Intrinsic safety Ex i	yes
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000; Potentiometer setting 0 ... 100 %: 1k2, 5k0
Temperature range	-200 ... +850 °C (Pt), -60 ... +250 °C (Ni), -80 ... +320 °C (Ni120)
Configuration options	WAGO-I/O-CHECK CODESYS Library e!COCKPIT
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	25 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U _O = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)

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Current consumption, field supply (module with no external load)	12 mA
Power loss P_I	0.45 W
Isolation	300 VAC system/field
Indicators	LED (A, E) green: Function AI 1, AI 2; LED (B, F) red: Error AI 1, AI 2
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	1 A
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)	$U_o = 7.2 \text{ V}$; $I_o = 5.8 \text{ mA}$; $P_o = 10.5 \text{ mW}$; Linear characteristic curve
Reactances Ex ia IIC	$L_o = 0.9 \text{ H}$; $C_o = 13.5 \mu\text{F}$
Reactances Ex ia IIB	$L_o = 1 \text{ H}$; $C_o = 240 \mu\text{F}$
Reactances Ex ia IIA	$L_o = 1 \text{ H}$; $C_o = 1000 \mu\text{F}$
Reactances Ex ia I	$L_o = 1 \text{ H}$; $C_o = 1000 \mu\text{F}$
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 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

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Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Housing material	Polycarbonate; polyamide 6.6
Fire load	2.299 MJ
Weight	94.1 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
ETIM 8.0	EC001596
ETIM 7.0	EC001596
PU (SPU)	1 pcs
Packaging type	box

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GTIN	4045454725549
End of Sale	2021-12-31
End of Production	2022-02-01
End of Delivery	2022-03-01
End of Service and Repair	2023-12-31

Environmental Product Compliance

CAS-No.	11120-22-2 7439-92-1
REACH Candidate List Substance	Lead Lead silicate
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Bulgaria)	6d2bf9cb-ecdc-4f7e-82a7-c38d961359f7
SCIP notification number (Czech Republic)	ad08b048-63a1-469e-a4a2-db978fcc9267

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 /19
	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	-	-

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Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	22-2219060
	BV Bureau Veritas S.A.	-	30389/B1 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 (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)	TUEV_12_ATEX_106032X
	CCC	CNCA-C23-01	2020312310000211 (Ex

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CNEX



ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)

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

Supply module

Supply module



Item no.: 750-625/000-001

Power 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

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; silver-colored

www.wago.com/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; silver-colored

www.wago.com/210-506

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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"; www.wago.com/210-112; 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

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"; www.wago.com/210-115; silver-colored

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

Shield termination**Shield clamping saddles****Item no.: 790-116**

Shield 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

**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

Marking accessories**Marker carrier****Item no.: 750-103**

Group marker carrier

www.wago.com/750-103

Marker

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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**

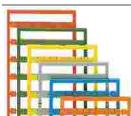
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

www.wago.com/2009-145/000-012**Item no.: 2009-145/000-023**

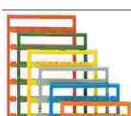
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

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**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

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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

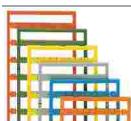
Item no.: 248-501/000-005

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

Downloads

Documentation

Data sheet

750-481/003-000, 2AI RTD Ex i, data sheet

pdf
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Manual

System Manual WAGO I/O System 750/753

V 3.3.0

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Decentralized Automation Technology

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Product Manual 2-channel, resistance sensors, Ex i

V 1.4.0

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Instruction Leaflet

CCC Ex (Additional information)

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WAGO-I/O-SYSTEM 750-*** Ex i

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Additional Information

Disposal and Recycling

V 1.1.0

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Electrical and electronic equipment, Batteries, Packaging

2022 Aug 18

2.2 MB

System Description

Ex i Overview

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750/753 Series I/O-System – General Product Information

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Overview on WAGO-I/O-SYSTEM 750 approvals

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Application Notes**Application Note CoDeSys 2.3**

Application Note Library ModuleAccess_01

05.01.2016

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These instructions describe the use of the ModuleAccess_01.lib library using 4 examples.

2016 Jan 29

1.0 MB

Libraries**Library**

ModuleAccess_01.lib

1.8.7

zip

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The ModuleAccess_01 library provides both module configuration and access to its process data within a CoDeSys project without the use of WAGO I/O Check.

2020 Jan 27

2.2 MB

CAD/CAE-Data**CAE data**[EPLAN Data Portal 750-481/003-000](#)

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ZUKEN Portal 750-481/003-000

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2D/3D Models 750-481/003-000

[URL](#)[Download](#)**Device Files****Device Driver**

WAGO USB Service Kabel Treiber / Serie 750 und 857

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