

Data sheet | Item number: 750-470

2-channel analog input; 0 ... 20 mA; Single-ended

www.wago.com/750-470



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 processes standard 0–20 mA signals.

The input signal is electrically isolated and is transmitted with a resolution of 12 bits.

The 24 V field supply is derived from the module's power jumper contacts.

The shield directly connects to the DIN-rail.

This module supplies the short circuit-proof voltage for 2-wire signal conditioners.

A short circuit to power is indicated as an error/fieldbus failure and a message is sent to the supervisory control.

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

Data

Technical data

Number of analog inputs	2
Total number of channels (module)	2
Signal type	Current
Signal type (current)	0 ... 20 mADC
Sensor connection	2 x (2-wire, 3-wire)
Input filter frequency (analog)	50 Hz
Input voltage (note)	Non-linear, overload protected $U = 1.2 \text{ V} + 100 \Omega \times I \text{ meas}$
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Input resistance (max.)	160 Ω
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Noise rejection at sampling frequency	-100 dB
Noise rejection above sampling frequency	-40 dB
Conversion time (typ.)	80 ms
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	100 mA
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Isolation	500 V system/field
Indicators	LED (A, C) green: Function AI 1, AI 2; LED (B, D) red: Error AI 1, AI 2
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2

Connection data

Connection technology: inputs/outputs	8 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

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



Physical data

Width	12 mm / 0.472 inches
Height	100 mm / 3.937 inches
Depth	69.8 mm / 2.748 inches
Depth from upper-edge of DIN-rail	62.6 mm / 2.465 inches

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.967 MJ
Weight	52 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-40 ... +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

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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
Recupel Type	
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4050821866985
Customs tariff number	85389099990

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 (Austria)	9c39a140-bfeb-4171-a638-e8a4c2b6963e
SCIP notification number (Belgium)	c25726b7-9b75-44ea-ad87-04dafbf7baa7
SCIP notification number (Bulgaria)	184de753-4dae-4366-9d26-b68552a69b28
SCIP notification number (Czech Republic)	258dae87-1705-4c91-9579-048b797616c5
SCIP notification number (Denmark)	ad718194-0894-452d-8221-b57590f52b1c
SCIP notification number (Finland)	b33326e1-efb4-4227-8253-153a1020df89
SCIP notification number (France)	08f1fbfa-0844-4a6f-93bf-7deef40f68b7
SCIP notification number (Germany)	26919951-b6b0-43b3-a909-95da5a5af386
SCIP notification number (Hungary)	3f3350b9-0c6c-459a-8a68-bc8f262760c6
SCIP notification number (Italy)	0a995d30-3d73-4f42-8325-f558381b8efe
SCIP notification number (Netherlands)	c81cbab5-7b1a-4fb1-852b-89b9b07728b1
SCIP notification number (Poland)	9b87f5f6-caec-469a-af7e-9ff36b9147a7

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SCIP notification number (Romania)	1ecc4fd6-f723-4e64-8757-3f22fc517d92
SCIP notification number (Sweden)	a0860704-c32e-4fb0-9db9-f4fd24310c1e

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	-	-
	UK-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
	BSH Bundesamt fuer Seeschifffahrt und Hydrographie	-	1104
	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
	PRS Polski Rejestr Statków	-	TE/2236/880590/19
	RINA RINA Germany GmbH	-	ELE343521XG001

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Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc)
	CCCEX CQST/CNEx	CNCA-C23-01	2020312310000213 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B.00163 /19 (2Ex nA IIC T4 Gc X)
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 14.0035 X (Ex ec IIC T4 Gc)
	INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079-0	BR-Ex_TÜV 12.1297 X
	UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WAGO22UKEX003X_ec
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Optional accessories

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
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		

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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

System housing

System enclosure

Item no.: 850-814/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate

www.wago.com/850-814/002-000

Item no.: 850-815/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate

www.wago.com/850-815/002-000

Item no.: 850-816/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate

www.wago.com/850-816/002-000

Item no.: 850-817/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate

www.wago.com/850-817/002-000

Item no.: 850-825

IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20

www.wago.com/850-825

Item no.: 850-826

IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

www.wago.com/850-826

Item no.: 850-827

IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

www.wago.com/850-827

Item no.: 850-827/002-000

IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

www.wago.com/850-827/002-000

Item no.: 850-826/002-000

IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

www.wago.com/850-826/002-000

Item no.: 850-828/002-000

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IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip

www.wago.com/850-828/002-000

Item no.: 850-828

IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip

www.wago.com/850-828

Item no.: 850-834

IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20

www.wago.com/850-834

Item no.: 850-835

IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

www.wago.com/850-835

Item no.: 850-836

IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

www.wago.com/850-836

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

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

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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

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

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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
Item no.: 750-100 Marker card; as a DIN A4 sheet; plain	www.wago.com/750-100
Group marker carrier	
Item no.: 750-106 Group marker carrier	www.wago.com/750-106
Supply module	
Supply module	
Item no.: 750-601 Power Supply; 24 VDC; fuse holder	www.wago.com/750-601
Item no.: 750-610 Power Supply; 24 VDC; fuse holder; Diagnostics	www.wago.com/750-610
Item no.: 750-602 Power Supply; 24 VDC	www.wago.com/750-602
Item no.: 750-612 Power Supply; 0 ... 230 V AC/DC	www.wago.com/750-612

Downloads

Documentation

Manual

System Manual WAGO I/O System 750/753 Decentralized Automation Technology	V 3.3.3 2023 年8月29 日	pdf 8.7 MB	Download
Product Manual 2-channel, 0-20mA, single-ended short-circuit protected	V 1.1.0	pdf 2.1 MB	Download
System Manual Series 750/753 Online HTML		URL	Download

Bid Text

750-470 X81 - Datei	2019 年2月19 日	xml 4.7 kB	Download
750-470 doc - Datei	2017 年10月17 日	doc 29.2 kB	Download

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Instruction Leaflet

CCC Ex (Additional information) WAGO-I/O-SYSTEM *750-****/*	2023 年4月26 日	pdf 163.6 kB	Download
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System Description

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 223.5 kB	Download
750/753 Series I/O-System – General Product Information		pdf 976.2 kB	Download

Additional Information

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

CAD data

2D/3D Models 750-470		URL	Download
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CAE data

EPLAN Data Portal 750-470		URL	Download
ZUKEN Portal 750-470		URL	Download
WSCAD Universe 750-470		URL	Download

Device Files

Device Driver

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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Environmental Product Compliance

Compliance Search

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Data sheet | Item number: 750-470

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Environmental Product Compliance 750-470

2-channel analog input; 0 ... 20 mA; Single-ended

Installation Notes

Product family

WAGO I/O System 750/753

[Show all products from the family](#)

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