

Data sheet | Item number: 750-586

2-channel analog output; 4 ... 20 mA; Intrinsically safe

www.wago.com/750-586



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

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Do you have any questions about our products?
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Item description

This analog output module transmits intrinsically safe 4–20 mA signals in Zone 0+1 hazardous areas.

The WAGO I/O System 750 must be installed either in Zone 2 or in a non-hazardous area.

Power is derived from the power jumper contacts.

The outputs are short-circuit-protected.

Indicators:

- Green LED (output status)

Field and system levels are electrically isolated.

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Data Notes

Note	The analog output module must only be operated with a 24 VDC Ex i power supply!
	General information (e.g., installation regulations) on explosion protection is available in the WAGO I/O System 750 manuals!

Technical data

Number of analog outputs	2
Total number of channels (module)	2
Signal type	Current
Signal type (current)	4 ... 20 mADC
Actuator connection	2 x (2-wire)
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Linearity	± 2 LSB
Output error, reference temperature	25. °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.01 %/K
Load impedance (current output)	≤ 500 Ω
Intrinsic safety Ex i	Yes
Data width	2 x 16-bit data
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	21 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)	19 mA
Power consumption P_{max}	1.5 W
Power loss P_l	0.9 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 AO 1, AO 2

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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
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Explosion protection

Ex standard	EN IEC 60079-0, -7, -11
Safety-relevant data (circuit)	$U_o = 27.3 \text{ V}$; $I_o = 57.5 \text{ mA}$; $P_o = 392 \text{ mW}$; linear characteristic curve
Reactances Ex ia IIC	$L_o = 11 \text{ mH}$; $C_o = 88 \text{ nF}$
Reactances Ex ia IIB	$L_o = 56 \text{ mH}$; $C_o = 680 \text{ nF}$
Reactances Ex ia IIA	$L_o = 90 \text{ mH}$; $C_o = 2.2 \text{ }\mu\text{F}$
Reactances Ex ia I	$L_o = 110 \text{ mH}$; $C_o = 3.5 \text{ }\mu\text{F}$
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
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

Housing material	Polycarbonate; polyamide 6.6
Fire load	2.297 MJ
Weight	94.7 g
Conformity marking	CE

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

Environmental Product Compliance

CAS-No.	11120-22-2 1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Diboron trioxide Lead

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	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)	51713fbc-7882-4bfe-bcd7-20644e4a9b46
SCIP notification number (Czech Republic)	fe19d413-cc71-4113-83e2-a34d554272d1

Commercial data

eCl@ss 9.0
ETIM 8.0
ETIM 7.0
Customs tariff number

Technical data

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

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-AOM750
	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-Ex-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
	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 ([Ex iaMa] I X, 2Ex e[iaGa] IIC T4 Gc X, [Ex iaDa] IIIC X)
	INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV_14.1911_X
	KTL Korea Testing Laboratory	KOSHA Article 34, IEC60079-0	21-KA4BO-0558X
	TUEV Nord TUEV Nord Cert GmbH	IEC 60079, IEC 60079-0	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

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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	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.: 750-625/000-001	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

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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
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

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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
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

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750-586, 2AO 4-20mA Ex i, data sheet		pdf 247.7 kB	Download
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, 4 - 20 mA, Ex i	V 1.2.0	pdf 2.0 MB	Download
Bid Text			
750-586 X81 - Datei	2019 年2月19 日	xml 5.9 kB	Download
750-586 doc - Datei	2017 年10月6 日	doc 30.2 kB	Download
Instruction Leaflet			
CCC Ex (Additional information) WAGO-I/O-SYSTEM 750-*** Ex i	2023 年4月26 日	pdf 147.4 kB	Download
System Description			
Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 223.5 kB	Download
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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
CAD/CAE-Data			
CAD data			
2D/3D Models 750-586		URL	Download

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CAE data

EPLAN Data Portal 750-586	URL	Download
WSCAD Universe 750-586	URL	Download
ZUKEN Portal 750-586	URL	Download

Installation Notes

Product family

WAGO I/O System 750/753

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