

**Data sheet | Item number: 750-539**

4-channel digital output; 24 VDC; Valve; Intrinsically safe

[www.wago.com/750-539](http://www.wago.com/750-539)



**Color:**



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

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Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.



## Item description

This digital output module controls actuators operating in Zone 0+1 hazardous areas.

Intrinsically safe valves can be directly controlled.

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

All outputs are electronically short-circuit-protected.

Indicators:

- Green LED (output status)
- Red LED (wire breakage, short circuit)

Field and system levels are electrically isolated.

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**Data****Notes**

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

**Technical data**

Number of digital outputs	4
Total number of channels (module)	4
Signal type	Digital
Signal type (voltage)	24 VDC
Actuator connection	4 x (2-wire)
Output characteristic	high-side switching
Switching frequency (max.)	100 Hz
Load type	Resistive, inductive, lamp load
Power consumption $P_{max}$	4.86 W (at 47 mA output current)
Input data width (internal) max.	4 bits
Output data width (internal) max.	4 bits
Intrinsic safety Ex i	yes
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	20 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)	10 mA
Isolation	300 VAC system/supply
Indicators	LED (A, B, E, F) green: Status DO 1 ... DO 4; LED (C, D, G, H) red: Diagnostics DO 1 ... DO 4
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

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## Explosion protection

Ex standard	EN IEC 60079-0, -7, -11
Safety-relevant data (circuit)	$U_o = 27.3 \text{ V}$ ; $I_o = 117.5 \text{ mA}$ ; $P_o = 800.1 \text{ mW}$ ; Linear characteristic curve
Reactances Ex ia IIC	$L_o = 13 \mu\text{H}$ ; $C_o = 88 \text{ nF}$
Reactances Ex ia IIB	$L_o = 8.1 \text{ mH}$ ; $C_o = 683 \text{ nF}$
Reactances Ex ia IIA	$L_o = 14 \text{ mH}$ ; $C_o = 2.28 \mu\text{F}$
Reactances Ex ia I	$L_o = 21 \text{ mH}$ ; $C_o = 540 \text{ nF}$
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 <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

## Physical data

Width	24 mm
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	light blue
Housing material	Polycarbonate; polyamide 6.6
Fire load	2.035 MJ
Weight	88.5 g
Conformity marking	CE

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



## 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	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 <sub>2</sub> S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO <sub>2</sub> contaminant concentration at a relative humidity 75 %	25 ppm

## Commercial data

eCl@ss 10.0	27-24-26-04
eCl@ss 9.0	27-24-26-04
ETIM 8.0	EC001599
ETIM 7.0	EC001599
Recupel Type	
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4055143514149
Customs tariff number	85371098990

## Environmental Product Compliance

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

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



RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	e34a3d4a-a1fb-40f8-bb5b-54bf7c28fdaa
SCIP notification number (Belgium)	2ce8ca47-89a4-4c43-9427-dd8fe99d3e7b
SCIP notification number (Bulgaria)	75528983-07fe-4087-af2d-af7edf979c73
SCIP notification number (Czech Republic)	f9fb62b0-c110-4b20-b537-5f7510b2a650
SCIP notification number (Denmark)	64b48830-f285-4cef-aac8-318ab049c8ef
SCIP notification number (Finland)	d21d7caf-d593-4078-a77f-144b060c5b80
SCIP notification number (France)	8b7b3506-826e-4320-9f88-d4aca5af520d
SCIP notification number (Germany)	8ec2c402-dd38-40d4-a575-630c5dcb958a
SCIP notification number (Hungary)	441ec9b2-f306-4c04-afe9-d73926e312af
SCIP notification number (Italy)	74e79e14-0ac4-47f2-8486-55872426dabd
SCIP notification number (Netherlands)	74678b8e-c44c-499b-a41f-66be291f6a26
SCIP notification number (Poland)	7afc2831-b145-414f-83b7-93c174189b9a
SCIP notification number (Romania)	470ef858-fac1-4205-8178-bee373f05ff7
SCIP notification number (Sweden)	3528ae04-7447-476d-a23d-783b22d2f64a

## Physical data

Width	24 mm / 0.945 inches
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## Notes

Note	
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## Technical data

Actuator connection	
Output characteristic	
Load type	
Intrinsic safety Ex i	
Supply voltage (field)	
Indicators	

## Mechanical data

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

## Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-25 ... +85 °C
Pollution degree	
Operating altitude	
Mounting position	
EMC immunity to interference	
EMC emission of interference	
Exposure to pollutants	

## Connection data

Connection type 1
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## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>EAC</b> Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C-DE.AM02.B.00087/19
	<b>KC</b> National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-DOM750
	<b>UL</b> Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199
	<b>UL</b> Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	-	E175199

### Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	<b>EU-Ex-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-

### Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	22-2219060
	<b>DNV</b> DNV GL SE	DNV-CG-0339, Aug. 2021	TAA0000194

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<b>KR</b> Korean Register of Shipping	-	KR HMB05880-AC001
<b>LR</b> Lloyds Register EMEA	-	LR22180952TA
<b>PRS</b> Polski Rejestr Statków	-	TE/2236/880590/19
<b>RINA</b> RINA Germany GmbH	-	ELE343521XG001

**Approvals for hazardous areas**

Logo	Approval	Additional Approval Text	Certificate name
<b>ATEX</b> TUEV Nord Cert GmbH		EN 60079-0	TUEV_12_ATEX_106032X (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
<b>CCC</b> CNEX		CNCA-C23-01	2020312310000211 (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
<b>EAC</b> 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)
<b>INMETRO</b> TÜV Rheinland do Brasil Ltda.		-	TÜV_14.1911_X
<b>KTL</b> Korea Testing Laboratory		KOSHA Article 34, IEC60079-0	21-KA4BO-0560X
<b>TUEV Nord</b> 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)
<b>UL</b> Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)		UL 121201	E198726 Sec.1

**Optional accessories****Carrier rail**

Mounting accessories		
<b>Item no.: 210-197</b>	Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-197">www.wago.com/210-197</a>
<b>Item no.: 210-198</b>	Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored	<a href="http://www.wago.com/210-198">www.wago.com/210-198</a>
<b>Item no.: 210-504</b>	Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-	<a href="http://www.wago.com/210-504">www.wago.com/210-504</a>

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colored

<b>Item no.: 210-505</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-505">www.wago.com/210-505</a>
<b>Item no.: 210-506</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-506">www.wago.com/210-506</a>
<b>Item no.: 210-508</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-508">www.wago.com/210-508</a>
<b>Item no.: 210-113</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-113">www.wago.com/210-113</a>
<b>Item no.: 210-118</b> Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-118">www.wago.com/210-118</a>
<b>Item no.: 210-112</b> 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	<a href="http://www.wago.com/210-112">www.wago.com/210-112</a>
<b>Item no.: 210-114</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-114">www.wago.com/210-114</a>
<b>Item no.: 210-115</b> 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	<a href="http://www.wago.com/210-115">www.wago.com/210-115</a>
<b>Item no.: 210-196</b> Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-196">www.wago.com/210-196</a>

**Shield termination**

## Shield clamping saddles

<b>Item no.: 790-116</b> Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm	<a href="http://www.wago.com/790-116">www.wago.com/790-116</a>
<b>Item no.: 790-124</b> Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	<a href="http://www.wago.com/790-124">www.wago.com/790-124</a>
<b>Item no.: 790-108</b> Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm	<a href="http://www.wago.com/790-108">www.wago.com/790-108</a>
<b>Item no.: 790-140</b> Shield clamping saddle; diameter of compatible conductor	<a href="http://www.wago.com/790-140">www.wago.com/790-140</a>
<b>Item no.: 790-216</b> Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm	<a href="http://www.wago.com/790-216">www.wago.com/790-216</a>
<b>Item no.: 790-220</b> Shield clamping saddle; 30 mm wide; 6 ... 20 mm	<a href="http://www.wago.com/790-220">www.wago.com/790-220</a>
<b>Item no.: 790-208</b> Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm	<a href="http://www.wago.com/790-208">www.wago.com/790-208</a>

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## Supply module

Supply module

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

[www.wago.com/750-625/000-001](http://www.wago.com/750-625/000-001)

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

[www.wago.com/750-606](http://www.wago.com/750-606)

## Marking accessories

Marker carrier

**Item no.: 750-103**  
Group marker carrier

[www.wago.com/750-103](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://www.wago.com/248-501/000-006)

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<b>Item no.: 248-501/000-007</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray	<a href="http://www.wago.com/248-501/000-007">www.wago.com/248-501/000-007</a>
<b>Item no.: 248-501/000-002</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow	<a href="http://www.wago.com/248-501/000-002">www.wago.com/248-501/000-002</a>
<b>Item no.: 248-501/000-012</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange	<a href="http://www.wago.com/248-501/000-012">www.wago.com/248-501/000-012</a>
<b>Item no.: 248-501</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/248-501">www.wago.com/248-501</a>
<b>Item no.: 248-501/000-017</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green	<a href="http://www.wago.com/248-501/000-017">www.wago.com/248-501/000-017</a>
<b>Item no.: 248-501/000-005</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red	<a href="http://www.wago.com/248-501/000-005">www.wago.com/248-501/000-005</a>
<b>Item no.: 248-501/000-024</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet	<a href="http://www.wago.com/248-501/000-024">www.wago.com/248-501/000-024</a>
<b>Item no.: 248-501/000-023</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green	<a href="http://www.wago.com/248-501/000-023">www.wago.com/248-501/000-023</a>
Group marker carrier	
<b>Item no.: 750-107</b> Group marker carrier	<a href="http://www.wago.com/750-107">www.wago.com/750-107</a>

## Downloads

### Documentation

#### Data sheet

750-539, 4DO 24 VDC Valve Ex i, Datasheet	pdf	Download
	212.6 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 4-Channel, 24 VDC, VALVE Ex i	V 1.0.1	pdf	Download
		2.1 MB	

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short-circuit-protected, high-side switching

System Manual Series 750/753 Online HTML	URL	Download
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**Bid Text**

750-539 X81 - Datei	2019 年2月19 日	xml 6.0 kB	Download
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750-539 doc - Datei	2017 年10月6 日	doc 32.3 kB	Download
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**Instruction Leaflet**

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

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 223.5 kB	Download
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Ex i Overview		pdf 233.9 kB	Download
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750/753 Series I/O-System – General Product Information		pdf 976.2 kB	Download
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**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 750-539	URL	Download
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**CAE data**

EPLAN Data Portal 750-539	URL	Download
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WSCAD Universe 750-539	URL	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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