

Data sheet | Item number: 750-538

2-channel relay output; Potential-free; 2 changeover contacts; Intrinsically safe



www.wago.com/750-538



Color:



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

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Item description

This digital output module switches intrinsically safe circuits of Zone 0+1 (e.g., magnetic valves, contactors, optical/acoustic encoders).

The internal system voltage triggers the relay.

Both maximum switching current and voltage must comply with EN 60079-11.

The state of the relays is indicated by a green LED.

The NO contacts are electrically isolated.

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

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Data Notes

Note	The digital output 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 digital outputs	2
Total number of channels (module)	2
Signal type	Digital
Signal type (voltage)	100 VAC; 30 VDC
Actuator connection	2 x (2-wire)
Output circuit design	2 changeover contacts Relay
Output characteristic	potential-free
Switching frequency (max.)	0.3 Hz
Load type	Resistive, inductive, lamp load
Switching voltage (max.)	100 VAC, 30 VDC
Switching current (max.)	0.5 A
Switching current (note)	0.5 A at 100 VAC; 1 A at 30 VDC
Switching voltage (min.)	0.1 V
Switching current (min.)	0.01 mA
Power consumption P_{\max}	0.8 W
Switching power	50 VA / 30 W
Pull-in time (max.)	4 ms
Drop-out time (max.)	4 ms
Electrical switching operations (min.) (at max. resistive load)	100 x 10 ³ switching operations
Mechanical switching operations (min.) (at max. resistive load)	100 x 10 ⁶ switching operations
Output data width (internal) max.	2 bits
Intrinsic safety Ex i	yes
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	26 mA
Supply voltage (field)	24 VDC; (Ex i power supply: $U_O = \max. 27.3 \text{ V}$); via power jumper

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	contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	24 mA
Power loss P_i	0.8 W
Isolation	300 VAC system/supply
Indicators	LED (A, E) green: Status relay 1, relay 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)	Relay output: $U_i = 30$ VDC; $I_i = 1$ A; $P_i = 30$ W; $U_i = 100$ VAC; $I_i = 0.5$ A; $P_i = 50$ VA; $L_i =$ negligibly small; $C_i =$ negligibly small

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

Physical data

Width	12 mm / 0.472 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

Color	blue
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Contact material	Ag alloy (with gold flash)
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.976 MJ
Weight	49.1 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	27-24-26-04
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	4050821694823
Customs tariff number	85371098990

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Environmental Product Compliance

CAS-No.	11120-22-2 1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Diboron trioxide Lead 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 (Austria)	d5f097b7-abf8-45ad-b3d6-b946671af2f4
SCIP notification number (Belgium)	bc938025-28c2-42df-b54b-e4afb7730e85
SCIP notification number (Bulgaria)	002bd186-d5e3-47b3-a7a0-0389c8b06f75
SCIP notification number (Czech Republic)	5a60556d-909a-4527-8f57-cb9a00d43af1
SCIP notification number (Denmark)	6022b4af-1510-49c7-a5c1-b9597d95f99e
SCIP notification number (Finland)	8a5098d3-6519-4d07-827a-b7bbeb879faa
SCIP notification number (France)	406fa678-d793-411e-a492-2067b6d1f6fd
SCIP notification number (Germany)	3c9d315e-a017-4d5c-91f8-d6a6defebaf3
SCIP notification number (Hungary)	06717bb8-38dd-42c6-8d6a-45e1ce22fe4e
SCIP notification number (Italy)	e749c4cb-46c1-49e0-af72-1f7934257865
SCIP notification number (Netherlands)	f9ba7bbb-cfc3-498a-b3b2-912cd79b6bcf
SCIP notification number (Poland)	058fa26f-3bef-4e58-bcab-a083d9b032cf
SCIP notification number (Romania)	72236ad5-6438-41d5-a481-598ef0fdf16d
SCIP notification number (Sweden)	3a2c1934-049e-4915-848c-d5761f0faec8

Notes

Note

Explosion protection

Safety-relevant data (circuit)

Technical data

Actuator connection

Output characteristic

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



Output circuit design

Load type

Intrinsic safety Ex i

Supply voltage (field)

Power consumption P_{max} .

Indicators

Marking

Mechanical data

Mounting type

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

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-DOM750
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

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Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Ex-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
	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 ([ExiaMa]I X,2Ex e[iaGa]IIC T4Gc X,[ExiaDa] IIIC X)
	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

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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

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
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

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**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

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

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**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**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**Downloads****Documentation**

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Data sheet

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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
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Product Manual 2-channel, Relay Output Module 100V AC, 30 V DC, Ex i isolated outputs, 2 changeover contacts	V 1.4.2 2020 年11月25 日	pdf 4.5 MB	Download
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Bid Text

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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

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 750-538	URL	Download
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CAE data

EPLAN Data Portal 750-538	URL	Download
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WSCAD Universe 750-538	URL	Download
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ZUKEN Portal 750-538	URL	Download
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Installation Notes

Product family

WAGO I/O System 750/753

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