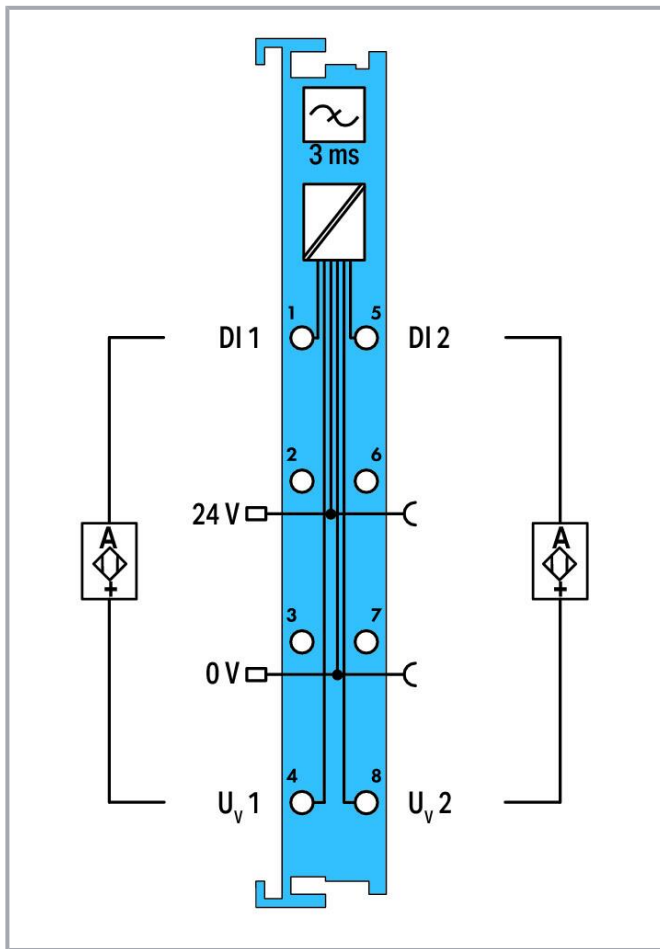


Subject to changes. Please also observe the further product documentation!

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## Item description

This digital input module records binary signals from sensors operating in Zone 0+1 hazardous areas.

NAMUR sensors, optocouplers, mechanical contacts or other actuating elements can also be connected via intrinsically safe devices.

The WAGO I/O System 750 must be installed either in Zone 2 or in a non-hazardous area. Each sensor is supplied with a short-circuit-protected voltage of 8.2 V.

Indicators:

- Green LED (signal on)

Field and system levels are electrically isolated.

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

**Data****Notes**

## Note

The digital input 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 digital inputs	2
Total number of channels (module)	2
Signal type	NAMUR NAMUR
Supply voltage (sensor)	8.2 VDC; short-circuit-protected, each channel supplied separately
Sensor connection	2 x (2-wire)
Input characteristic	high-side switching
Input filter (digital)	3 ms 3 ms
Open-circuit voltage	8.2 V
Short-circuit current	≤ 8.2 mA
Signal current (0) NAMUR	≤ 1.2 mA
Signal current (1) NAMUR	≥ 2.1 mA
Switching hysteresis	0.2 mA
Input pulse length	5 ms
Input pulse separation	3 ms
Power consumption $P_{max}$	0.4 W
Input data width (internal) max.	2 bits
Intrinsic safety Ex i	yes
Input resistance	1,000 Ω
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	2.5 mA
Supply voltage (field)	24 VDC; (Ex i power supply: $U_O = \max. 27.3 \text{ V}$ ); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	16 mA

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



Power loss $P_I$	0.27 W
Isolation	300 VAC system/field
Indicators	LED (A, E) green: Status DI 1, DI 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)	$U_o = 12 \text{ V}$ ; $I_o = 13.5 \text{ mA}$ ; $P_o = 40.5 \text{ mW}$ ; Linear characteristic curve
Reactances Ex ia IIC	$L_o = 190 \text{ mH}$ ; $C_o = 1.4 \mu\text{F}$
Reactances Ex ia IIB	$L_o = 600 \text{ mH}$ ; $C_o = 9 \mu\text{F}$
Reactances Ex ia IIA	$L_o = 1 \text{ H}$ ; $C_o = 36 \mu\text{F}$
Reactances Ex ia I	$L_o = 1 \text{ H}$ ; $C_o = 38 \mu\text{F}$
Reactances (note)	Reactances without accounting for the concurrence of capacitance ( $C_o$ ) and inductance ( $L_o$ )

### Connection data

Connection technology: inputs/outputs	8 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	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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Subject to changes. Please also observe the further product documentation!



## Material Data

Housing material	Polycarbonate; polyamide 6.6
Fire load	0.976 MJ
Weight	44.1 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 <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

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
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4045454725525
Customs tariff number	85389099990




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

## Environmental Product Compliance

CAS-No.	693-98-1 7439-92-1
REACH Candidate List Substance	2-methylimidazole Lead
RoHS Compliance Status	Compliant, With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	2e881213-5d48-42e5-b089-c0bc8feeb830
SCIP notification number (Belgium)	7f5cda66-bae8-45d4-99be-4c8bf82b8719
SCIP notification number (Bulgaria)	a006b846-32ea-4a4b-b020-423b59a70af6
SCIP notification number (Czech Republic)	a0c4088e-2a56-4bb5-b35d-c1a879757654
SCIP notification number (Denmark)	266a171e-1682-4cf9-941c-65c6e91d93a5
SCIP notification number (Finland)	c2870d4e-763a-456d-baab-20e8882d1f3d
SCIP notification number (France)	62fee0f7-d05a-4ad7-9448-a09a4a57a708
SCIP notification number (Germany)	22a209d7-87fc-4d51-814a-39506fa84040
SCIP notification number (Hungary)	6ab9fa73-1997-4a0a-beb5-883e8fc28960
SCIP notification number (Italy)	5daa5544-8b46-45ae-936f-3f7b548ea68b
SCIP notification number (Netherlands)	5acce4f3-f366-45b8-b331-953da14ce73a
SCIP notification number (Poland)	e94fed5d-7868-42fa-a949-706526904ad5
SCIP notification number (Romania)	ac2ddcca-2db4-4f18-95dd-a6d9ac278146
SCIP notification number (Sweden)	1526fa2f-851b-4482-9b36-36bb138fd1fb

## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCC CNEX	CNCA-C23-01	2020312310000211 (Ex ec[jaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
	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- DIM750
	UL Underwriters Laboratories Inc. (ORDINARY)	UL 508	E175199 Sec.1

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LOCATIONS)

## 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>BV</b> Bureau Veritas S.A.	-	30389/B1 BV
	<b>DNV</b> DNV GL SE	DNV-CG-0339, Aug. 2021	TAA0000194
	<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


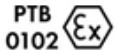




## Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
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	<b>AEx</b> UL International Germany GmbH	UL 60079	E480271
	<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>TUEV Nord</b> TUEV Nord Cert GmbH	IEC 60079	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

### 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>

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	<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>


**Supply module**


Supply module		
	<b>Item no.: 750-625/000-001</b> Power Supply; 24 VDC; Intrinsically safe	<a href="http://www.wago.com/750-625/000-001">www.wago.com/750-625/000-001</a>
	<b>Item no.: 750-606</b> Power Supply; 24 VDC; Diagnostics; Intrinsically safe	<a href="http://www.wago.com/750-606">www.wago.com/750-606</a>


**Marking accessories**


Marker carrier		
	<b>Item no.: 750-103</b> Group marker carrier	<a href="http://www.wago.com/750-103">www.wago.com/750-103</a>
Marker		
	<b>Item no.: 2009-145/000-006</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue	<a href="http://www.wago.com/2009-145/000-006">www.wago.com/2009-145/000-006</a>
	<b>Item no.: 2009-145</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/2009-145">www.wago.com/2009-145</a>
	<b>Item no.: 2009-145/000-002</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow	<a href="http://www.wago.com/2009-145/000-002">www.wago.com/2009-145/000-002</a>
	<b>Item no.: 2009-145/000-007</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray	<a href="http://www.wago.com/2009-145/000-007">www.wago.com/2009-145/000-007</a>
	<b>Item no.: 2009-145/000-005</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red	<a href="http://www.wago.com/2009-145/000-005">www.wago.com/2009-145/000-005</a>
	<b>Item no.: 2009-145/000-012</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange	<a href="http://www.wago.com/2009-145/000-012">www.wago.com/2009-145/000-012</a>
	<b>Item no.: 2009-145/000-023</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green	<a href="http://www.wago.com/2009-145/000-023">www.wago.com/2009-145/000-023</a>


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	<b>Item no.: 2009-145/000-024</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet	<a href="http://www.wago.com/2009-145/000-024">www.wago.com/2009-145/000-024</a>
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	<b>Item no.: 248-501/000-006</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue	<a href="http://www.wago.com/248-501/000-006">www.wago.com/248-501/000-006</a>
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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>
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	<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>
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	<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>
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	<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>
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	<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>
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	<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>
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	<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>
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	<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>
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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>
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Carrier rail

Mounting accessories

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

	<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-colored	<a href="http://www.wago.com/210-504">www.wago.com/210-504</a>
	<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>

## Downloads

### Documentation

#### Data sheet

750-438, 2DI NAMUR Ex i, data sheet

pdf Download  
221.3 kB

#### Manual

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.



System Manual WAGO I/O System 750/753 Decentralized Automation Technology	V 3.3.0 2023 May 4	pdf 8.8 MB	Download
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Product Manual 2-Channel, NAMUR Ex i Proximity switch acc. to DIN EN 50227	V 1.4.0	pdf 2.0 MB	Download
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System Manual Series 750/753 Online HTML		URL	Download
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### Bid Text

750-438 X81 - Datei	2019 Feb 19	xml 6.2 kB	Download
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750-438 doc - Datei	2017 Oct 6	doc 31.7 kB	Download
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### Instruction Leaflet

CCC Ex (Additional information) WAGO-I/O-SYSTEM 750-*** Ex i	2023 Apr 26	pdf 147.4 kB	Download
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### Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 Aug 18	pdf 2.2 MB	Download
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### System Description

750/753 Series I/O-System – General Product Information		pdf 1.7 MB	Download
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Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 789.0 kB	Download
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Ex i Overview		pdf 452.7 kB	Download
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### CAD/CAE-Data

#### CAD data

2D/3D Models 750-438		URL	Download
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#### CAE data

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EPLAN Data Portal 750-438	URL	Download
WSCAD Universe 750-438	URL	Download
ZUKEN Portal 750-438	URL	Download

## Device Files

### Device Driver

WAGO USB Service Kabel Treiber / Serie 750 und 857	6.5.3.0 2014 Sep 10	zip 4.8 MB	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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