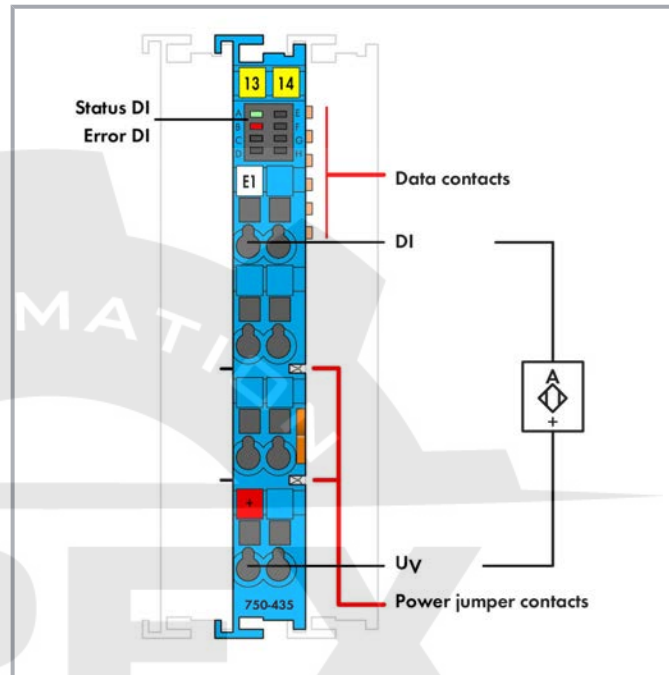
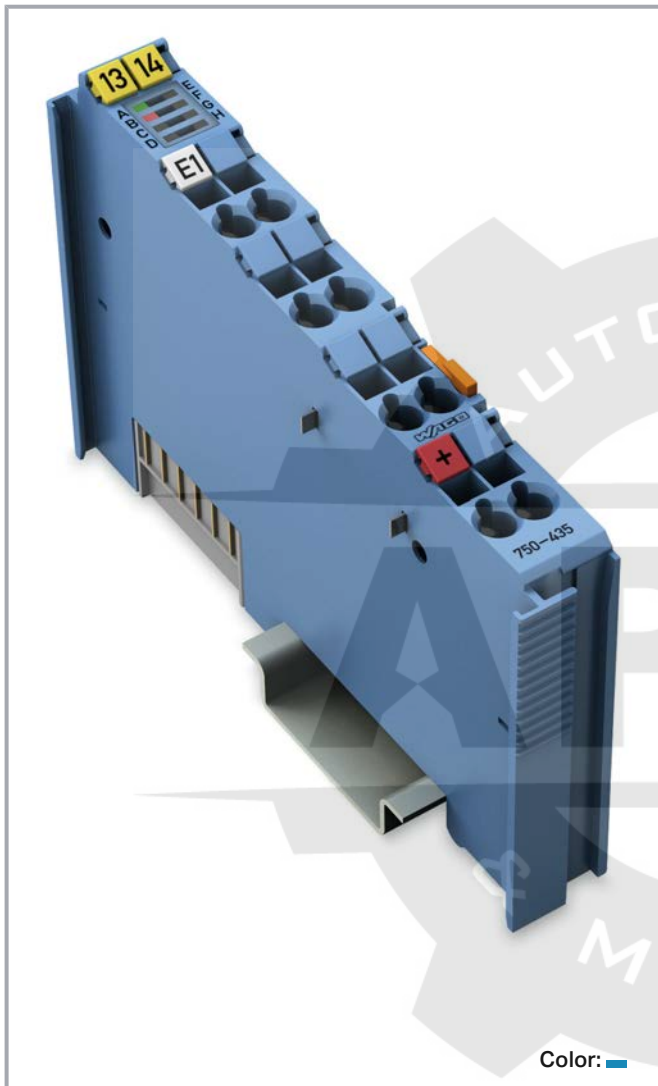


Data sheet | Item number: 750-435

1-channel digital input; NAMUR; Intrinsically safe

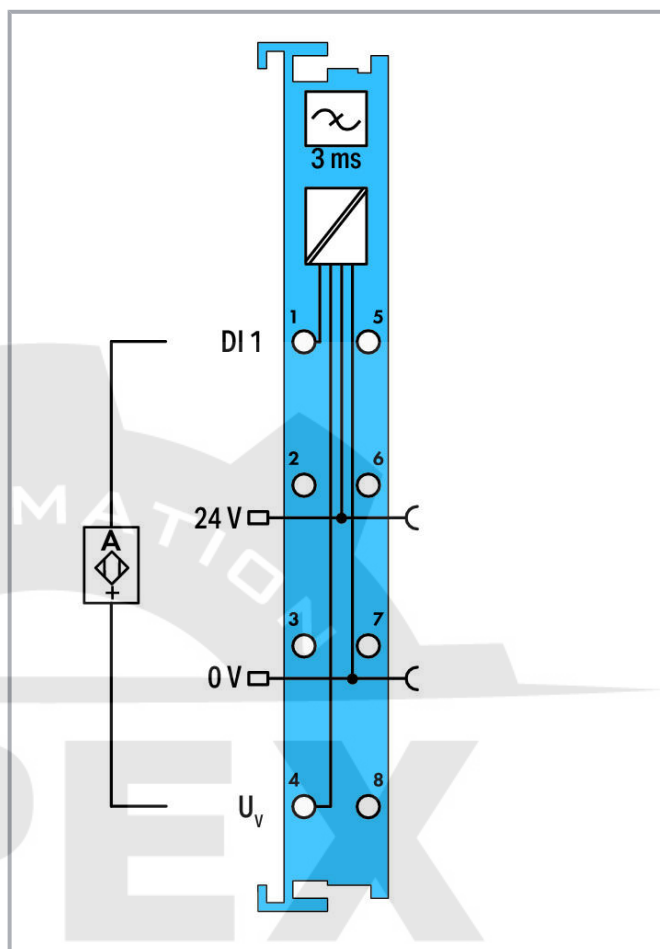
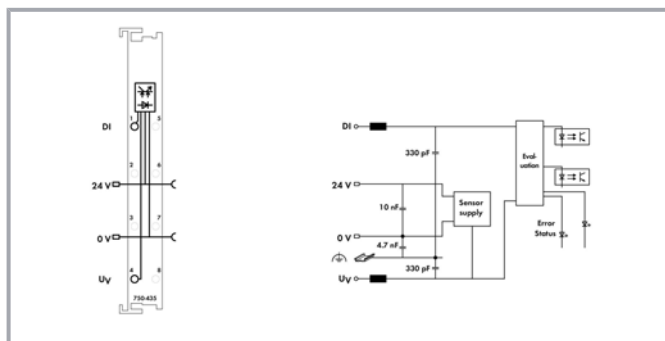
www.wago.com/750-435



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

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This digital input module records binary signals from sensors operating 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.

Each sensor is supplied with a short-circuit-protected voltage of 8.2 V.

Indicators:

- Green LED (signal on)
- Red LED (short circuit, wire breakage)

Field and system levels are electrically isolated.

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**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!

Data**Technical data**

Number of digital inputs	1
Number of Channels	1
Signal type	NAMUR
Supply voltage (sensor)	8.2 VDC; Short-circuit-protected, isolated channels
Sensor connection	1 x (2-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Protection against incorrect wiring	Short circuit monitoring: > 6.4 mA Wire break monitoring: < 0.2 mA
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
Diagnostics	Short circuit, wire break
Contact resistance (max.)	1000 Ω
Input pulse length	5 ms
Input pulse separation	3 ms
Power consumption $P_{max.}$	0.5 W
Input data width (internal) (max.)	2 Bit
Data width	2-bit input: 1-bit status, 1-bit error (short circuit/wire break)
Intrinsic safety Ex i	Yes
Supply voltage (system)	5 VDC; via data contacts
Power 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)
Power consumption, field supply (module with no external load)	13 mA
Power loss P_I	0.37 W

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Isolation	300 VAC system/field
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	1 A
Ex guideline	EN IEC 60079-0, -7, -11
Safety-relevant data (circuit)	$U_o = 12 \text{ V}$; $I_o = 16 \text{ mA}$; $P_o = 48 \text{ mW}$; Linear characteristic curve
Reactances Ex ia IIC	$L_o = 180 \text{ mH}$; $C_o = 1.4 \text{ }\mu\text{F}$
Reactances Ex ia IIB	$L_o = 560 \text{ mH}$; $C_o = 9 \text{ }\mu\text{F}$
Reactances Ex ia IIA	$L_o = 900 \text{ mH}$; $C_o = 36 \text{ }\mu\text{F}$
Reactances Ex ia I	$L_o = 1 \text{ H}$; $C_o = 38 \text{ }\mu\text{F}$
Reactances (note)	Reactances without accounting for the concurrence of L and C
Marking	ATEX, IECEx, INMETRO, Underwriters Laboratories Inc.

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 inch

Physical data

Width	12 mm / 0.472 inch
Height	100 mm / 3.937 inch
Depth	67.8 mm / 2.669 inch
Depth from upper edge of DIN-rail	60.6 mm / 2.386 inch

Mechanical data

Mounting type	DIN-35 rail
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Material data

Color	blue
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.871 MJ
Weight	46 g

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Conformity marking

CE

Environmental requirements

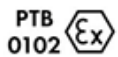
Surrounding air temperature (operation)	0 ... 55 °C
Surrounding air temperature (storage)	-40 ... 85 °C
Protection type	IP20
Pollution degree (5)	2 per IEC 61131-2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying); vertical
Relative humidity (without condensation)	95 %
Vibration 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 pollutant concentration H ₂ S at a relative humidity < 75%	10 ppm
Permissible pollutant concentration SO ₂ at a relative humidity < 75%	25 ppm

Commercial data

Product Group	15 (Remote I/O)
Packaging type	BOX
Country of origin	DE
GTIN	4045454725532
Customs tariff number	8538901000

Approvals / Certificates

Ex-Approvals

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
	CCCEX CQST/CNEx	CNCA-C23-01	2020312310000211

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	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B. 00163/19
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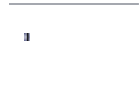
	INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV_14.1911_X
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	TUEV Nord TUEV Nord Cert GmbH	IEC 60079-0	IECEx TUN 09.0001 X
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	TUEV Nord TUEV Nord Cert GmbH	IEC 60079	IECEx TUN 12.0039X
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	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1
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Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	KC National Radio Research Agency	Article 58-2, Clause 3	MSIP- REM-W43- DIM750

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1821926
	BV Bureau Veritas S.A.	-	13453/DO BV
	DNV GL	-	TAA0000194

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Korean Register of Shipping

KR
HMB05880-
AC001

LR
Lloyds Register

02/20026 (E6)


NK
Nippon Kaiji Kyokai

TA17255M


PRS
Polski Rejestr Statków

TE/2236
/880590/19

RINA
RINA Germany GmbH

ELE066419XG

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

Optional accessories

Marking accessories

✓	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

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✓	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.: 2009-145/000-006 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.: 2009-145/000-007 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.: 2009-145/000-012 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 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/248-501
	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.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red	www.wago.com/248-501/000-005
	Item no.: 248-501/000-006 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.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange	www.wago.com/248-501/000-012
	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green	www.wago.com/248-501/000-017

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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.: 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.: 750-103**

Group marker carrier

www.wago.com/750-103**Item no.: 750-107**

Group marker carrier

www.wago.com/750-107**Shield termination****Item no.: 790-108**

Shield clamping saddle; 11 mm wide; 0-8 mm diameter conductors

www.wago.com/790-108**Item no.: 790-116**

Shield clamping saddle; 19 mm wide; 7-16 mm diameter conductors

www.wago.com/790-116**Item no.: 790-124**

Shield clamping saddle; 27 mm wide; 6-24 mm diameter conductors

www.wago.com/790-124**Item no.: 790-140**

Shield clamping saddle; 43 mm wide; 22-40 mm diameter conductors

www.wago.com/790-140**Item no.: 790-208**

Shield clamping saddle; 12.4 mm wide; 3-8 mm diameter conductors

www.wago.com/790-208**Item no.: 790-216**

Shield clamping saddle; 21.8 mm wide; 6-16 mm diameter conductors

www.wago.com/790-216**Item no.: 790-220**

Shield clamping saddle; 30 mm wide; 6-20 mm diameter

www.wago.com/790-220**Supply module****Item no.: 750-606**

Power Supply; 24 VDC; Diagnostics; Intrinsically safe

www.wago.com/750-606**Item no.: 750-625/000-001**

Power Supply; 24 VDC; Intrinsically safe

www.wago.com/750-625/000-001**Carrier rail****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.: 210-113**

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.: 210-114**

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

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

	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; www.wago.com/210-115 silver-colored	
	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.: 210-196 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
	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
Sensors		
	Item no.: 288-936 Component module with resistor; 2,50 mm ²	www.wago.com/288-936

Downloads

Documentation

Data sheet

750-435, 1DI NAMUR Ex i, data sheet	pdf 237.7 kB	Download
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Manual

1-Channel, NAMUR Ex i Proximity switch acc. to DIN EN 50227	V 1.3.0	pdf 2.0 MB	Download
System Manual WAGO I/O System 750 / 753 Decentralized Automation Technology	V 3.0.2 Apr 27, 2021	pdf 6.6 MB	Download

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System Manual Series 750/753		URL	Download
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750-435	Feb 19, 2019	xml	Download
X81 - Datei		6.4 kB	
System Description			
750/753 Series I/O-System – General Product Information		pdf	Download
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Term definition, marking and installation regulations		1.0 MB	
Overview on WAGO-I/O-SYSTEM 750 approvals		pdf	Download
		780.2 kB	
Additional Information			
Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf	Download
		265.8 kB	
CAD files			
CAD data			
2D/3D Models 750-435		URL	Download
CAE data			
EPLAN Data Portal 750-435		URL	Download
ZUKEN Portal 750-435		URL	Download
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Device Files

Device Driver

WAGO USB Service Kabel Treiber / Serie 750 und 857 759-923	6.5.3.0 Sep 10, 2014	zip 4.8 MB	Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-435 1-channel digital input; NAMUR; Intrinsically safe	URL	Download
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Installation Notes

Product family

Couplers & I/O modules:
[Show all products from the family](#)

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