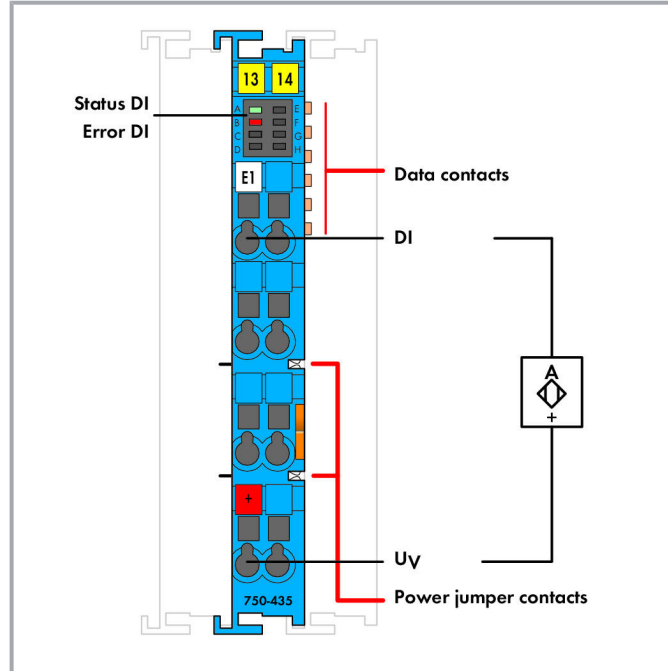
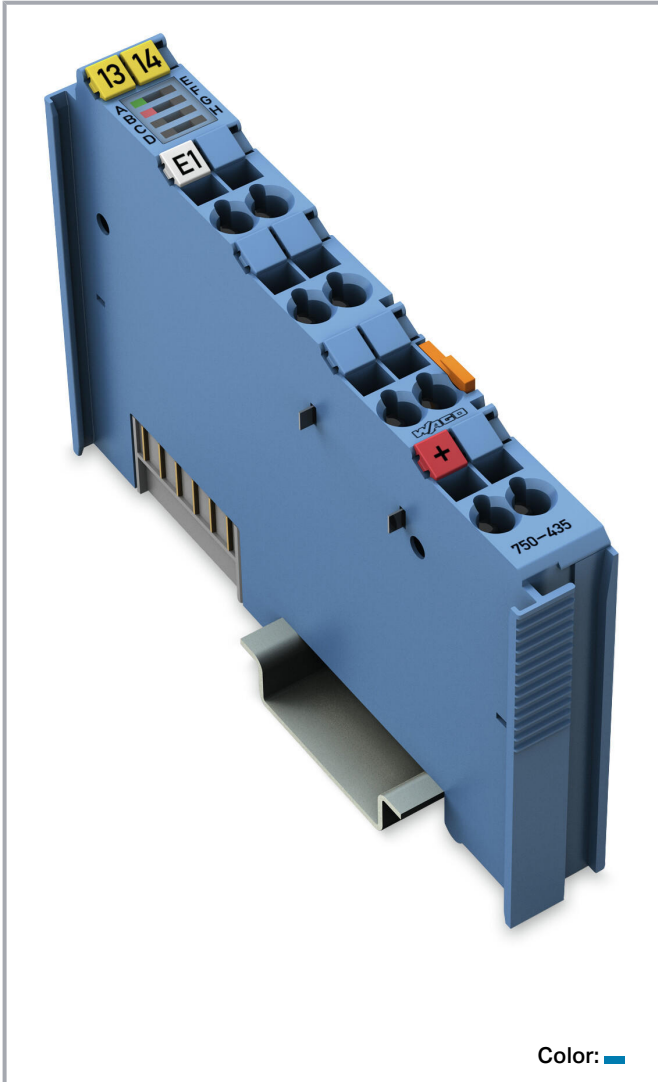


Data sheet | Item number: 750-435

1-channel digital input; NAMUR; Intrinsically safe

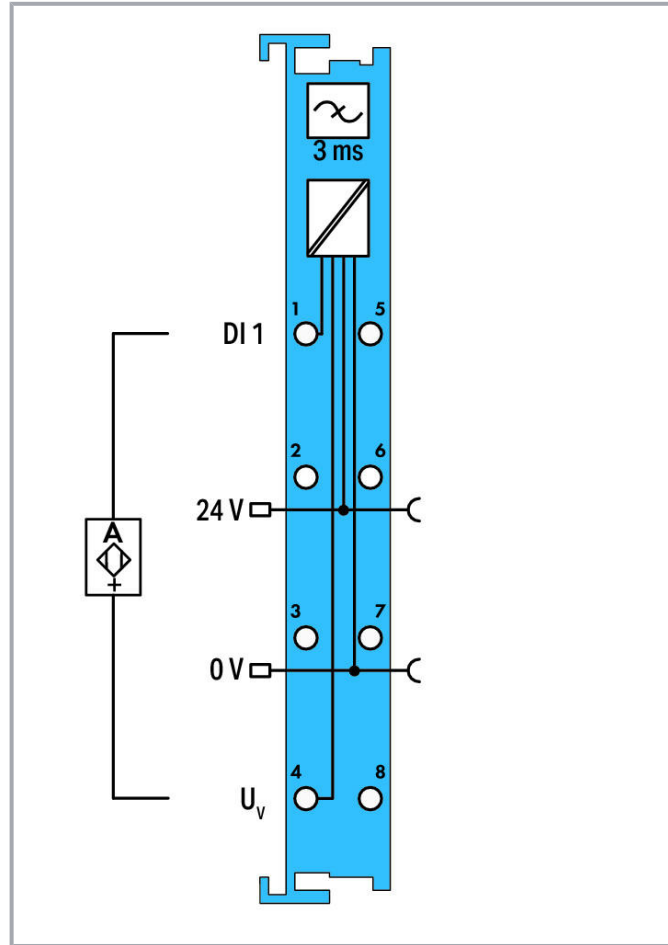
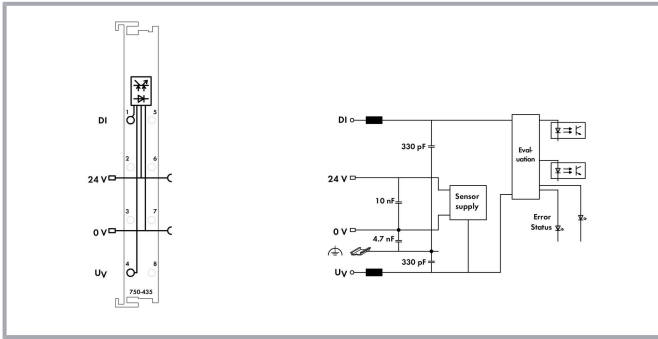
www.wago.com/750-435



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

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Item description

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

NAMUR sensors, optocouplers, mechanical contacts (in conjunction with resistance coupling module, available as an accessory) or other actuating elements can 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)
- Red LED (short circuit, wire breakage)

Field and system levels are electrically isolated.

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

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

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



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	$L_o = 180 \text{ mH}$; $C_o = 1.4 \mu\text{F}$
Reactances Ex ia IIB	$L_o = 560 \text{ mH}$; $C_o = 9 \mu\text{F}$
Reactances Ex ia IIA	$L_o = 900 \text{ mH}$; $C_o = 36 \mu\text{F}$
Reactances Ex ia I	$L_o = 1 \text{ H}$; $C_o = 38 \mu\text{F}$
Reactances (note)	Reactances without accounting for the concurrence of 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

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

Conformity marking	CE
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Environmental requirements


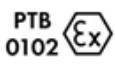
Surrounding air temperature (operation)	0 ... 55 °C
Surrounding air temperature (storage)	-40 ... 85 °C
Protection type	IP20
Pollution degree (5)	2 per IEC 61131-2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying); vertical
Relative humidity (without condensation)	95 %
Vibration 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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Brjansker Zertifizierungsstelle

TP TC 012/2011

EAC RU C-DE.AM02.B.
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INMETRO
TÜV Rheinland do Brasil Ltda.

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TÜV_14.1911_X



TUEV Nord
TUEV Nord Cert GmbH

IEC 60079-0

IECEX TUN 09.0001 X



TUEV Nord
TUEV Nord Cert GmbH

IEC 60079

IECEX TUN 12.0039X




UL
Underwriters Laboratories Inc. (HAZARDOUS
LOCATIONS)



UL 121201

E198726 Sec.1

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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Polski Rejestr Statków

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TE/2236
/880590/19




RINA
RINA Germany GmbH

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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



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

	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

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	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.: 210-118 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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Bid Text

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750-435 X81 - Datei	Feb 19, 2019	xml 6.4 kB	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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Use in Hazardous Environments Term definition, marking and installation regulations	V 1.0.0	pdf 1.0 MB	Download
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Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 780.2 kB	Download
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Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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CAD files

CAD data

2D/3D Models 750-435	URL	Download
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CAE data

EPLAN Data 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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