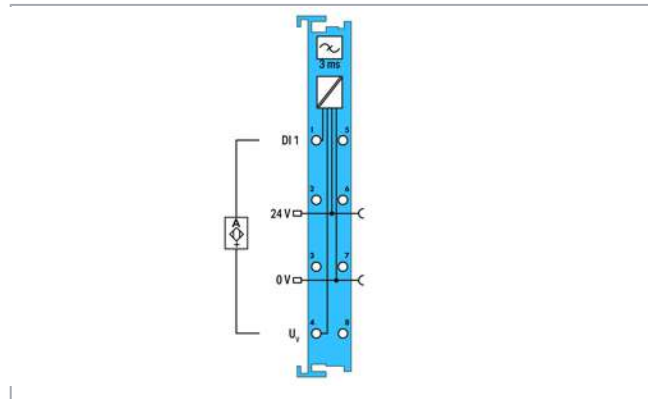
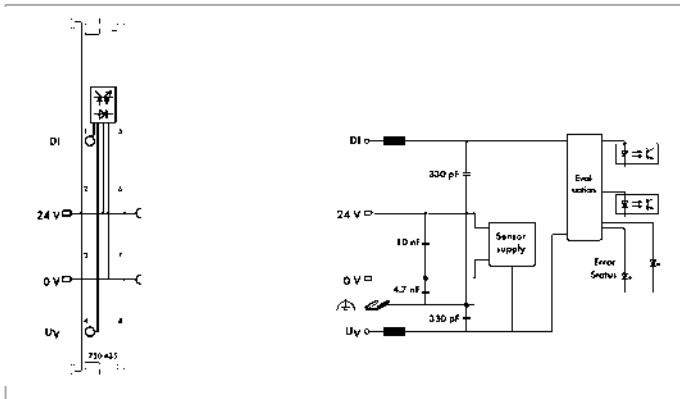
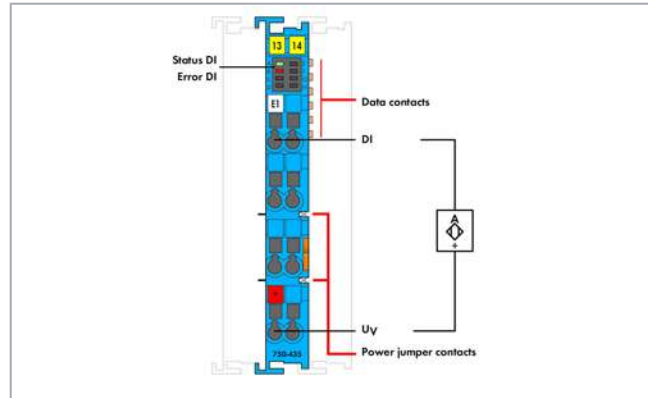


# Data sheet | Item number: 750-435

1-channel digital input; NAMUR; Intrinsically safe; blue

[www.wago.com/750-435](http://www.wago.com/750-435)



## 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.

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

WAGO Corporation  
Germantown, WI 53022  
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

Do you have any questions about our products?  
We are always happy to take your call at {0}.



## Indicators:

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

Field and system levels are electrically isolated.

**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
Total number of channels (module)	1
Signal type	NAMUR
Supply voltage (sensor)	DC 8.2 V; 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 <sub>max.</sub>	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)	DC 5 V; via data contacts

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

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Power consumption (5 V system supply)	2.5 mA
Supply voltage (field)	DC 24 V; (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)
Power consumption, field supply (module with no external load)	13 mA
Power loss $P_l$	0.37 W
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 <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 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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Subject to changes. Please also observe the further product documentation!

## Material Data

Color	blue
Housing material	Polycarbonate, polyamide 6.6
Weight	46 g
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 <sub>2</sub> S at a relative humidity < 75%	10 ppm
Permissible pollutant concentration SO <sub>2</sub> at a relative humidity < 75%	25 ppm

## Commercial data

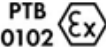



Product Group	15 (Remote I/O)
Packaging type	BOX
Country of origin	DE
GTIN	4045454725532
Customs tariff number	85389099990

## Approvals / Certificates


### Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	AEx UL International Germany GmbH	UL 60079	E480271




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

	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV_12_ATEX_106032X
	CCCEX CQST/CNEx	CNCA-C23-01	2020312310000211
	INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV_14.1911_X
	TUEV Nord TUEV Nord Cert GmbH	IEC 60079,IEC 60079-0	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 Det Norske Veritas, Germanischer Lloyd	-	TAA0000194
	KR	-	KR

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Korean Register of Shipping

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

Counterpart

Compatible products

sensors



Item no.: 288-936  
Component module with resistor; 2,50 mm<sup>2</sup>

[www.wago.com/288-936](http://www.wago.com/288-936)

Supply module

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

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

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



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

[www.wago.com/750-625/000-001](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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 [www.wago.com/210-504](http://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](http://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](http://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](http://www.wago.com/210-508)

**shield connection**



**Item no.: 790-108**  
Shield clamping saddle; 11 mm wide; 0-8 mm diameter conductors
















[www.wago.com/790-108](http://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](http://www.wago.com/790-116)

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

	<b>Item no.: 790-124</b> Shield clamping saddle; 27 mm wide; 6-24 mm diameter conductors	<a href="http://www.wago.com/790-124">www.wago.com/790-124</a>
	<b>Item no.: 790-140</b> Shield clamping saddle; 43 mm wide; 22-40 mm diameter conductors	<a href="http://www.wago.com/790-140">www.wago.com/790-140</a>
	<b>Item no.: 790-208</b> Shield clamping saddle; 12.4 mm wide; 3-8 mm diameter conductors	<a href="http://www.wago.com/790-208">www.wago.com/790-208</a>
	<b>Item no.: 790-216</b> Shield clamping saddle; 21.8 mm wide; 6-16 mm diameter conductors	<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 diameter	<a href="http://www.wago.com/790-220">www.wago.com/790-220</a>
<b>Marking accessories</b>		
	<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.: 2009-145/000-005</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.: 2009-145/000-006</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.: 2009-145/000-007</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.: 2009-145/000-012</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>
	<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>
	<b>Item no.: 248-501</b> Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card	<a href="http://www.wago.com/248-501">www.wago.com/248-501</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>

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



	<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.: 248-501/000-006</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>
	<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.: 248-501/000-012</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.: 248-501/000-017</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.: 248-501/000-023</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>
	<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.: 750-103</b> Group marker carrier; transparent	<a href="http://www.wago.com/750-103">www.wago.com/750-103</a>
	<b>Item no.: 750-107</b> Group marker carrier; transparent	<a href="http://www.wago.com/750-107">www.wago.com/750-107</a>

## Downloads

### Documentation

#### Data sheet

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

#### Manual

1-Channel, NAMUR Ex i	V 1.3.0	pdf	Download
Proximity switch acc. to DIN EN 50227		2.0 MB	

#### Bid Text

750-435	Feb 19, 2019	xml	Download
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X81 - Datei			6.4 kB	
750-435 doc - Datei	Oct 6, 2017	doc	31.2 kB	Download

**System Description**

750/753 Series I/O-System – General Product Information		pdf	1.7 MB	Download
Overview on WAGO-I/O-SYSTEM 750 approvals		pdf	780.2 kB	Download
Ex i Overview		pdf	616.0 kB	Download
Use in Hazardous Environments Term definition, marking and installation regulations	V 1.0.0	pdf	1.0 MB	Download

**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
WSCAD Universe 750-435		URL		Download
ZUKEN Portal 750-435		URL		Download

**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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## Installation Notes

## Product family

**Couplers & I/O modules:**

[Show all products from the family](#)

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

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