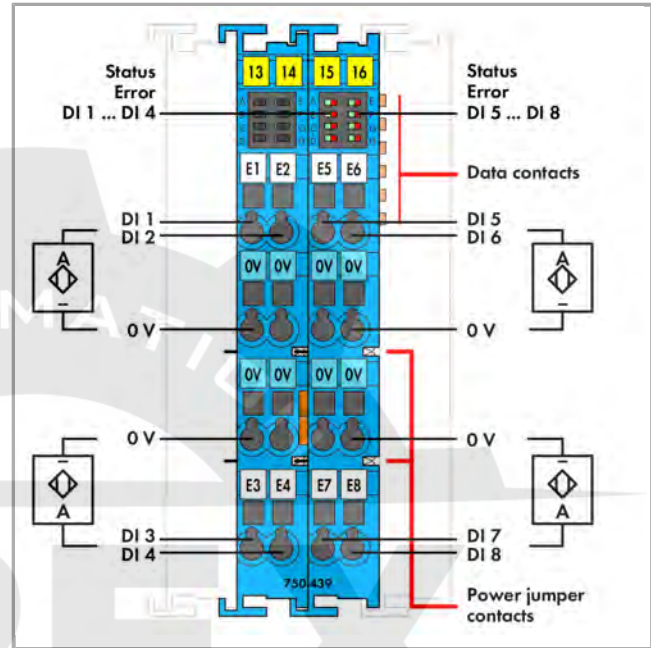
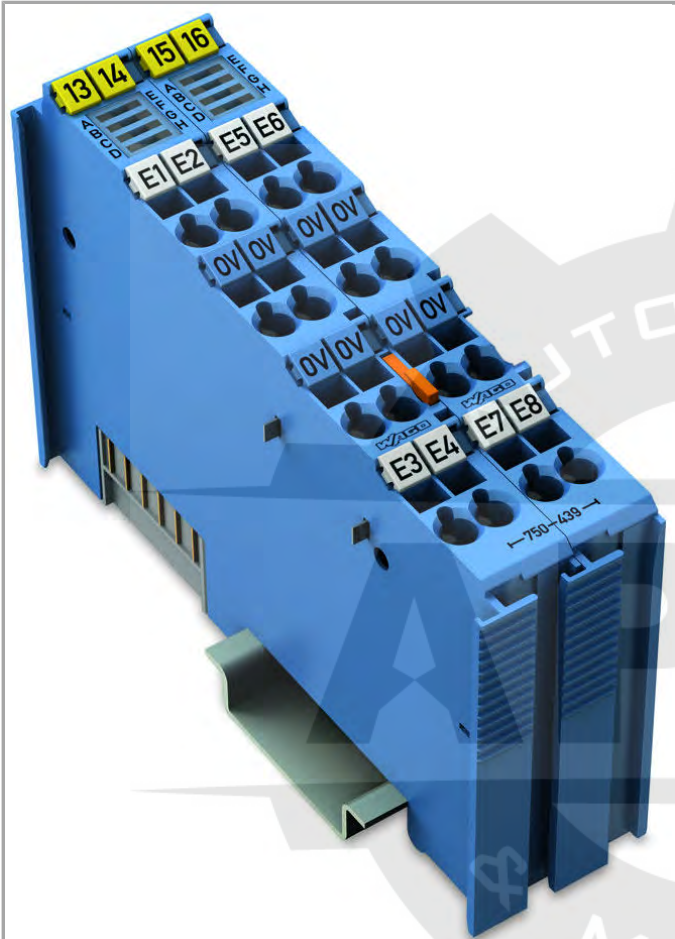


Data sheet | Item number: 750-439
8-channel digital input; NAMUR; Intrinsically safe

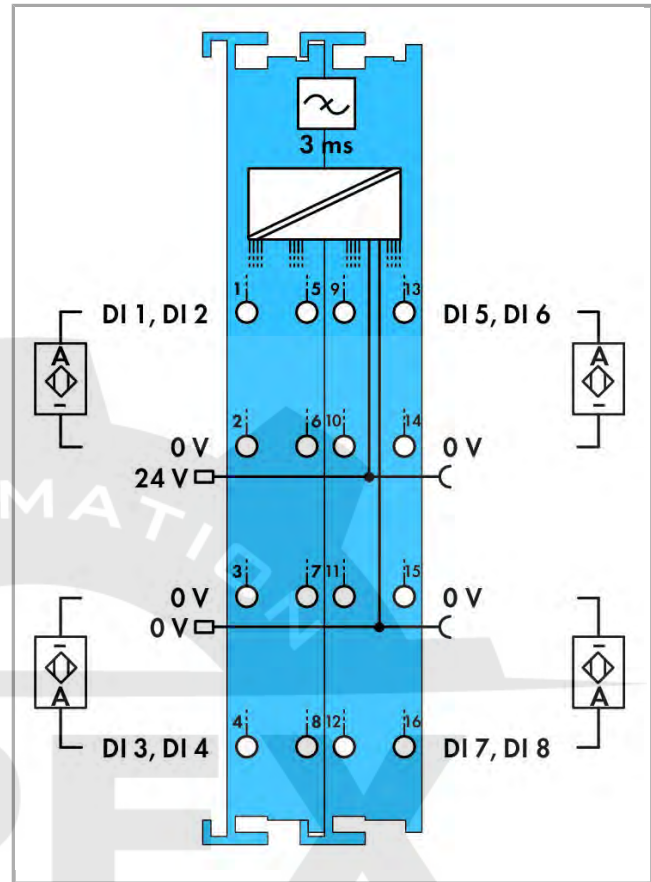
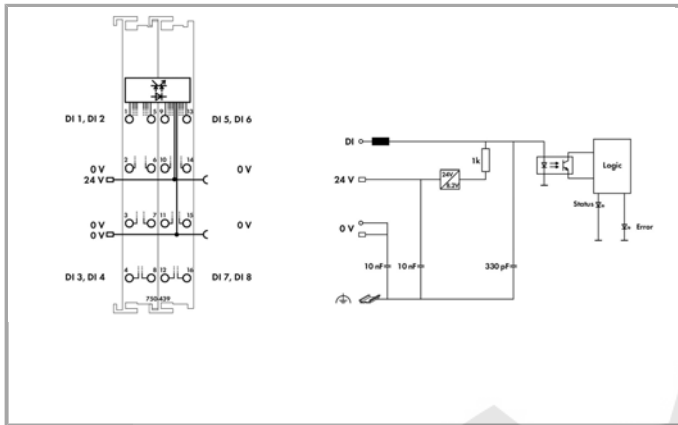


750-439



RoHS
Compliant

BOMcheck.net



Item description

The 750-439 Digital Input Module records binary signals from sensors operating in hazardous environments of Zones 0 and 1, permitting channel-by-channel short-circuit and wire-break diagnostics. NAMUR sensors, optocouplers, mechanical contacts (LED diagnostics can be turned off via control byte) 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 8.2V.

Field and system levels are electrically isolated.

LED displays:

- Green LED (signal ON)
- Red LED (short-circuit)
- Red flashing LED (wire-break)

Note:

The digital input module must only be operated via Ex i 24VDC 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	8
Total number of channels (module)	8
Type of signal	NAMUR
Sensor supply voltage	DC 8.2 V; short-circuit-protected, isolated channels
Sensor connection	4 x (2-conductor)
Input characteristic	high-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Short-circuit current	$\leq 8.2 \text{ mA}$ ($\pm 0.2 \text{ mA}$)
Signal current (0) NAMUR	1.2 mA
Signal current (1) NAMUR	2.1 mA
Switching hysteresis	0.2 mA
Contact resistance max.	1000 Ω
Input pulse duration	5 ms
Input pulse separation	3 ms
Power consumption P_{max}	1.2 W
Max input data width (internal)	16 Bit
Max output data width (internal)	16 Bit
Intrinsic safety Ex i	yes
System supply voltage	DC 5 V; via data contacts
Current consumption, system supply (5 V)	56 mA
System and sensor supply voltage	)
Field supply voltage	DC 24 V; (Versorgung über Einspeisung Ex i $U_O = \text{max. } 27,3 \text{ V}$); über Leistungskontakte (Einspeisung über Messerkontakt; Weiterleitung über Federkontakt)
Current consumption, field supply (module with no external load)	11 mA
Power loss P_V	0.54 W
Isolation	300 VAC system/supply
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity of the power jumper contacts	1 A
Ex guideline	EN/IEC 60079-0, -7, -11, -26, -31
Electric circuit, safety-relevant data	$U_O = 11.76 \text{ V}$; $I_O = 12.4 \text{ mA}$; $P_O = 36.67 \text{ mW}$; Characteristic: Linear
Reactances Ex ia IIC	$L_O = 100 \text{ mH}$; $C_O = 1 \mu\text{F}$
Reactances Ex ia IIB	$L_O = 100 \text{ mH}$; $C_O = 9.9 \mu\text{F}$
Ex ia IIA reactances	$L_O = 100 \text{ mH}$; $C_O = 9,9 \mu\text{F}$
Reactances Ex ia I	$L_O = 100 \text{ mH}$; $C_O = 30 \mu\text{F}$



Reactances

(The above-listed ratings do not account for the coincidental occurrence of capacitances and inductances. For ratings taking the coincidental occurrence of capacitances and inductances into account, see manual)

Marking

ATEX, IECEx, INMETRO, Underwriters Laboratories Inc.

Connection data

Connection technology: In-/Outputs	16 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

Geometrical Data

Width	24 mm / 0.945 inch
Height	67.8 mm / 2.669 inch
Height from upper-edge of DIN-35 rail	60.6 mm / 2.386 inch
Depth	100 mm / 3.937 inch

Mechanical data

Type of mounting	DIN-35 rail
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Material Data

Color	blue
Housing material	Polycarbonate, polyamide 6.6
Fire load	0 MJ
Weight	92.7 g
Conformity marking	1

Environmental Requirements

Surrounding air (operating) temperature	0 ... 55 °C
Surrounding air (storage) temperature	-40 ... 85 °C
Protection class	IP20
Degree of pollution (5)	2 per IEC 61131-2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying) or vertical
Relative air humidity (no condensation)	95 %
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	acc. to EN 61000-6-2, marine applications

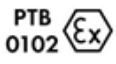
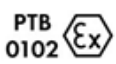
EMC emission of interference	acc. to EN 61000-6-3, marine applications
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H ₂ S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data

Product Group	15 (Remote I/O)
Country of origin	DE
GTIN	4050821623366
Customs Tariff No.	85389099990

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	AEx UL International Germany GmbH	UL 60079	E480271
	ATEX TÜV Nord Cert GmbH	EN 60079-0	TÜV_12_ATEX_106032X
	IECEx TÜV Nord Cert GmbH	IEC 60079	IECEx TUN 12.0039X
	INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV_14.1911_X
	TUEV Nord TUEV Nord Cert GmbH	EN 60079-0	TUEV_12_ATEX_106032X
	TUEV Nord TUEV Nord Cert GmbH	-	TÜV_14.1911_X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726 Sec.1

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
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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
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA0000194
	GL Germanischer Lloyd	-	11 631 - 10 HH
	PRS Polski Rejestr Statków	-	TE/2236 /880590/19

UL-Approvals

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

Compatible products

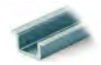
Carrier rail

	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"	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	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	210-114

**Item no.: 210-115**

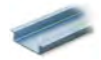
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm

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

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

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

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

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

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

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

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

210-508

shield connection**Item no.: 790-108**

Shield clamping saddle; 11 mm wide; diameter of compatible conductor

790-108

**Item no.: 790-116**

Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm

790-116

**Item no.: 790-124**

Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm

790-124

**Item no.: 790-140**

Shield clamping saddle; diameter of compatible conductor

790-140

**Item no.: 790-208**

Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

790-208

**Item no.: 790-216**

Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm

790-216

**Item no.: 790-220**

Shield clamping saddle; 30 mm wide; 6 ... 20 mm

790-220

Supply module**Item no.: 750-606**

Power Supply; 24 VDC; Diagnostics; Intrinsically safe

750-606

**Item no.: 750-625/000-001**

Power Supply; 24 VDC; Intrinsically safe

750-625

/000-001

Marking accessories

	Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type		2009-145
	Item no.: 2009-145/000-002 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-002	2009-145
	Item no.: 2009-145/000-005 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-005	2009-145
	Item no.: 2009-145/000-006 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-006	2009-145
	Item no.: 2009-145/000-007 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-007	2009-145
	Item no.: 2009-145/000-012 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-012	2009-145
	Item no.: 2009-145/000-023 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-023	2009-145
	Item no.: 2009-145/000-024 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-024	2009-145
	Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card		248-501
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-002	248-501
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-005	248-501
	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-006	248-501
	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-007	248-501
	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-012	248-501
	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-017	248-501



Item no.: 248-501/000-023
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

248-501
/000-023



Item no.: 248-501/000-024
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

248-501
/000-024



Item no.: 750-103
Group marker carrier

750-103



Item no.: 750-107
Group marker carrier

750-107

Downloads

Documentation

Data sheet

750-439, 8DI NAMUR Ex i, data sheet	pdf 130.3 kB	Download
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Manual

NAMUR, Ex-i, 8-Channel Digital Input Module Proximity switch acc. to DIN EN 50227	V 1.2.0 pdf 2.0 MB	Download
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Bid Text

750-439 IO-Klemmen	Oct 2, 2014 doc 31.2 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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System Description

Design Notes Basic conditions and recommendations for higher operational safety	V 2.0.0 pdf 1.5 MB	Download
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Ex i Overview	pdf 616.0 kB	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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750/753 Series I/O-System – General Product Information	pdf	Download
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CAD/CAE - Smart Data

CAD data

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Product family

750/753 Series I/O-System
Learn more about the product family.
Show all products from the family



Subject to changes.