

Data sheet | Item number: 750-439

8-channel digital input; NAMUR; Intrinsically safe

www.wago.com/750-439



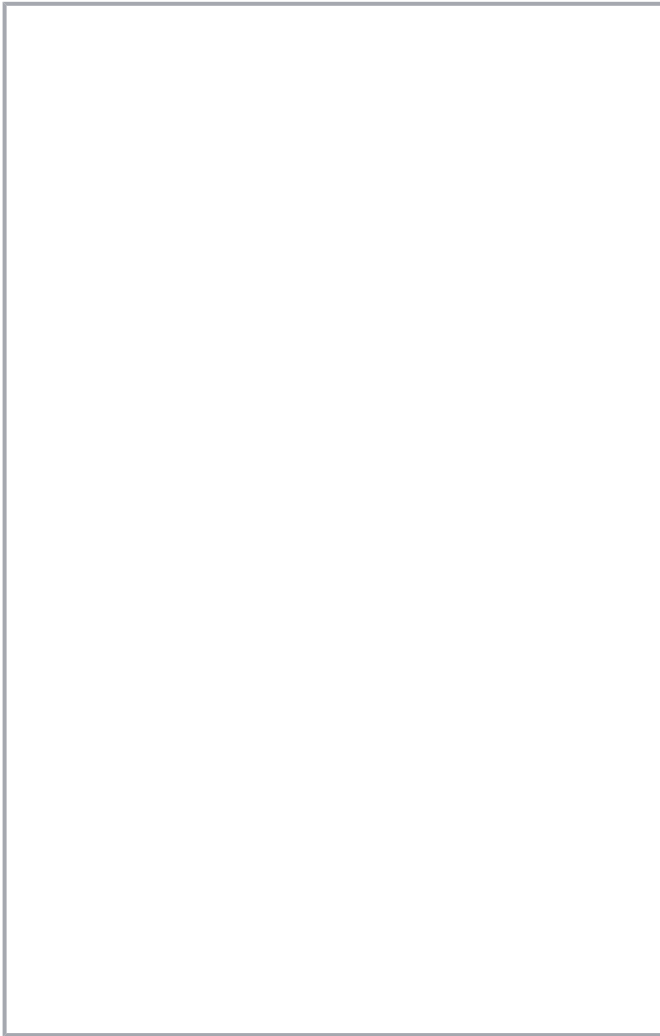
Color:



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

WAGO GmbH & Co. KG
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32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Item description

This digital input module records binary signals from sensors operating in Zone 0+1 hazardous areas, permitting channel-by-channel short circuit and wire-break diagnostics.

NAMUR sensors, optocouplers, mechanical contacts or other actuating elements can also be connected via intrinsically safe devices. The process image can be used to define the sensor type (break or make contact) as well as to switch off the diagnostics (e.g., if contact monitoring in order to suppress the LED diagnostics).

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)

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- Red LED (short circuit)
- Red flashing LED (wire-break)

Field and system levels are electrically isolated.

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	8
Total number of channels (module)	8
Signal type	NAMUR NAMUR
Sensor connection	4 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 (± 0.2 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 (can be switched off)
Input pulse length	5 ms
Input pulse separation	3 ms
Power consumption P_{max}	1.2 W
Input data width (internal) max.	16 bits
Output data width (internal) max.	16 bits
Intrinsic safety Ex i	yes
Input resistance	1,000 Ω

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Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	56 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)	11 mA
Power loss P_I	0.54 W
Isolation	300 VAC system/supply
Indicators	LED (A-H) green/red: Status/error DI 1 ... DI 8
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)	$U_O = 11.76 \text{ V}$; $I_O = 12.4 \text{ mA}$; $P_O = 36.67 \text{ mW}$; Linear characteristic curve
Reactances Ex ia IIC	$L_O = 100 \text{ mH}$; $C_O = 1 \mu\text{F}$
Reactances Ex ia IIB	$L_O = 100 \text{ mH}$; $C_O = 9.9 \mu\text{F}$
Reactances Ex ia IIA	$L_O = 100 \text{ mH}$; $C_O = 39 \mu\text{F}$
Reactances Ex ia I	$L_O = 100 \text{ mH}$; $C_O = 30 \mu\text{F}$
Reactances (note)	Reactances without accounting for the concurrence of capacitance (C_O) and inductance (L_O)

Connection data

Connection technology: inputs/outputs	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 inches

Physical data

Width	24 mm / 0.945 inches
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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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Material Data

Color	blue
Housing material	Polycarbonate; polyamide 6.6
Fire load	2.061 MJ
Weight	92.7 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 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 (I/O System)
eCl@ss 10.0	27-24-26-04
eCl@ss 9.0	27-24-26-04

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ETIM 8.0	EC001599
ETIM 7.0	EC001599
Recupel Type	
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4050821623366
Customs tariff number	85389099990

Environmental Product Compliance

CAS-No.	11120-22-2 1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide Lead silicate
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	ab2b0b13-bb95-4c15-8394-82c4c9d52749
SCIP notification number (Belgium)	c6ee6b5f-6f1a-471d-8c44-1f6d6389d951
SCIP notification number (Bulgaria)	891c072a-a3e2-4eb6-8107-16c3e92cacf2
SCIP notification number (Czech Republic)	5bf03aac-ebfb-43ce-88a4-240cf142f532
SCIP notification number (Denmark)	a03e9e8e-795d-4e0b-b425-01d5f0683a7c
SCIP notification number (Finland)	1758daaa-6689-4e30-887e-2cda3c834e90
SCIP notification number (France)	56b0f838-dc81-4307-8f78-bd3bec62180f
SCIP notification number (Germany)	f7ef89ec-ea5f-4bb7-924a-2c3007fb12ec
SCIP notification number (Hungary)	d9edf110-7a3d-4f12-ae42-db22248b10f5
SCIP notification number (Italy)	713a564a-6988-4f06-8add-5f6267f159a4
SCIP notification number (Netherlands)	55c285c4-aca9-47a9-9d76-6c974645c1f6
SCIP notification number (Poland)	d1cc851c-a1f8-4e6c-be16-f432d7894d28
SCIP notification number (Romania)	b075eed-eeb3-4cb5-959f-0a476fb1531b
SCIP notification number (Sweden)	bbcf69d5-e8d2-4110-9130-751ea0742175

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Notes

Note

Technical data

Sensor connection

Input characteristic

Intrinsic safety Ex i

Diagnostics

Supply voltage (field)

Indicators

Mechanical data

Mounting type

Environmental requirements

Ambient temperature (operation) 0 ... +55 °C

Ambient temperature (storage) -25 ... +85 °C

Pollution degree

Operating altitude

Mounting position

EMC immunity to interference

EMC emission of interference

Exposure to pollutants

Connection data

Connection type 1

Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C- DE.AM02. B.00087 /19
	KC	Article 58-2, Clause 3	MSIP-

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National Radio Research Agency

REM-W43-
DIM750

UL
Underwriters Laboratories Inc. (ORDINARY LOCATIONS)

UL 508

E175199
Sec.1

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Ex-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	22-2219060
	DNV DNV GL SE	DNV-CG-0339, Aug. 2021	TAA0000194
	KR Korean Register of Shipping	-	KR HMB05880- AC001
	LR Lloyds Register EMEA	-	LR22180952TA
	PRS Polski Rejestr Statków	-	TE/2236/880590 /19
	RINA RINA Germany GmbH	-	ELE343521XG001

Approvals for hazardous areas

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 (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
	CCC CNEX	CNCA-C23-01	2020312310000211 (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B. 00163/19 ([ExiaMa] I X, 2Ex e[iaGa] IIC T4 Gc X, [ExiaDa] IIIC X)
	INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV_14.1911_X
	KTL Korea Testing Laboratory	KOSHA Article 34, IEC60079-0	20-KA4BO-0094X

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TUEV Nord
TUEV Nord Cert GmbH

IEC 60079

IECEx TUN 12.0039X (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)

UL
Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)

UL 121201

E198726 Sec.1

Optional accessories

Marking accessories

Marker carrier

Item no.: 750-103
Group marker carrier

www.wago.com/750-103

Marker

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

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

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.: 2009-145/000-005

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.: 2009-145/000-012

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.: 248-501/000-006

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

www.wago.com/248-501/000-006

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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
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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
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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
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Item no.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/248-501
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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.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red	www.wago.com/248-501/000-005
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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
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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
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Group marker carrier

Item no.: 750-107 Group marker carrier	www.wago.com/750-107
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Supply module

Supply module

Item no.: 750-625/000-001 Power Supply; 24 VDC; Intrinsically safe	www.wago.com/750-625/000-001
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Item no.: 750-606 Power Supply; 24 VDC; Diagnostics; Intrinsically safe	www.wago.com/750-606
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Shield termination

Shield clamping saddles

Item no.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm	www.wago.com/790-116
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Item no.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	www.wago.com/790-124
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Item no.: 790-108	
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Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm	www.wago.com/790-108
Item no.: 790-140 Shield clamping saddle; diameter of compatible conductor	www.wago.com/790-140
Item no.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm	www.wago.com/790-216
Item no.: 790-220 Shield clamping saddle; 30 mm wide; 6 ... 20 mm	www.wago.com/790-220
Item no.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm	www.wago.com/790-208
Carrier rail	
Mounting accessories	
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
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.: 210-118 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.: 210-112 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.: 210-114 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
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.: 210-196	

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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

Downloads

Documentation

Data sheet

750-439, 8DI NAMUR Ex i, data sheet		pdf 194.4 kB	Download
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Manual

System Manual WAGO I/O System 750/753 Decentralized Automation Technology	V 3.3.3 2023 年8月29 日	pdf 8.7 MB	Download
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Product Manual NAMUR, Ex-i, 8-Channel Digital Input Module Proximity switch acc. to DIN EN 50227	V 1.3.0 2020 年5月27 日	pdf 3.7 MB	Download
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System Manual Series 750/753 Online HTML		URL	Download
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Bid Text

750-439 X81 - Datei	2019 年2月19 日	xml 7.7 kB	Download
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750-439 doc - Datei	2017 年10月6 日	docx 16.7 kB	Download
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Instruction Leaflet

CCC Ex (Additional information) WAGO-I/O-SYSTEM 750-*** Ex i	2023 年4月26 日	pdf 147.4 kB	Download
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System Description

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 223.5 kB	Download
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Ex i Overview		pdf 233.9 kB	Download
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750/753 Series I/O-System – General Product Information		pdf 976.2 kB	Download
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Additional Information

Disposal and Recycling	V 1.1.0	pdf	Download
Electrical and electronic equipment, Batteries, Packaging	2022 年8月18日	2.2 MB	

CAD/CAE-Data

CAD data

2D/3D Models 750-439	URL	Download
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CAE data

EPLAN Data Portal 750-439	URL	Download
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WSCAD Universe 750-439	URL	Download
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ZUKEN Portal 750-439	URL	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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