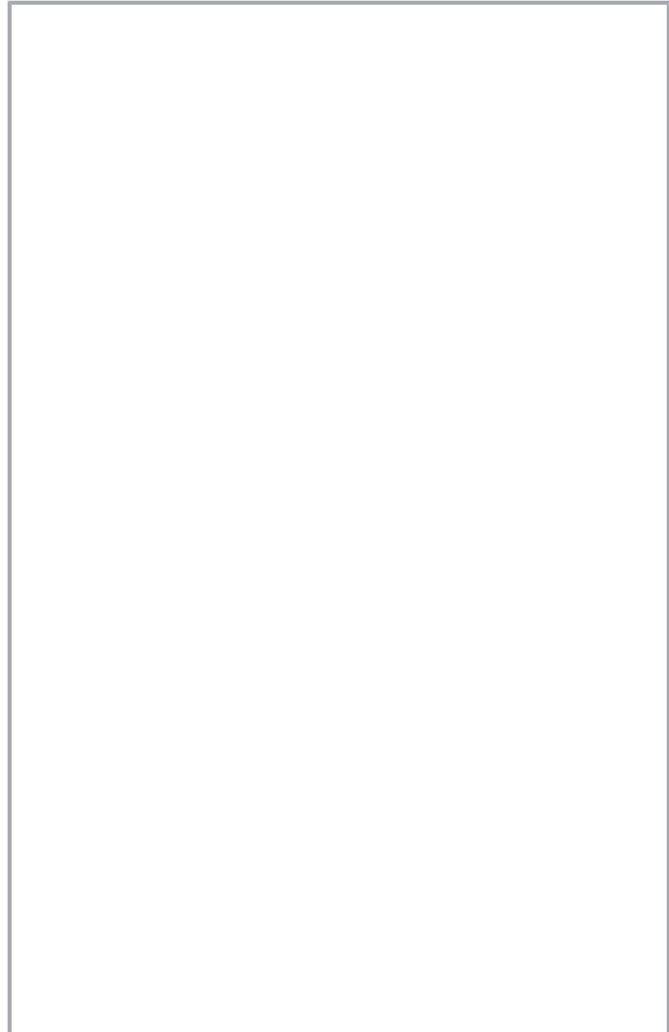
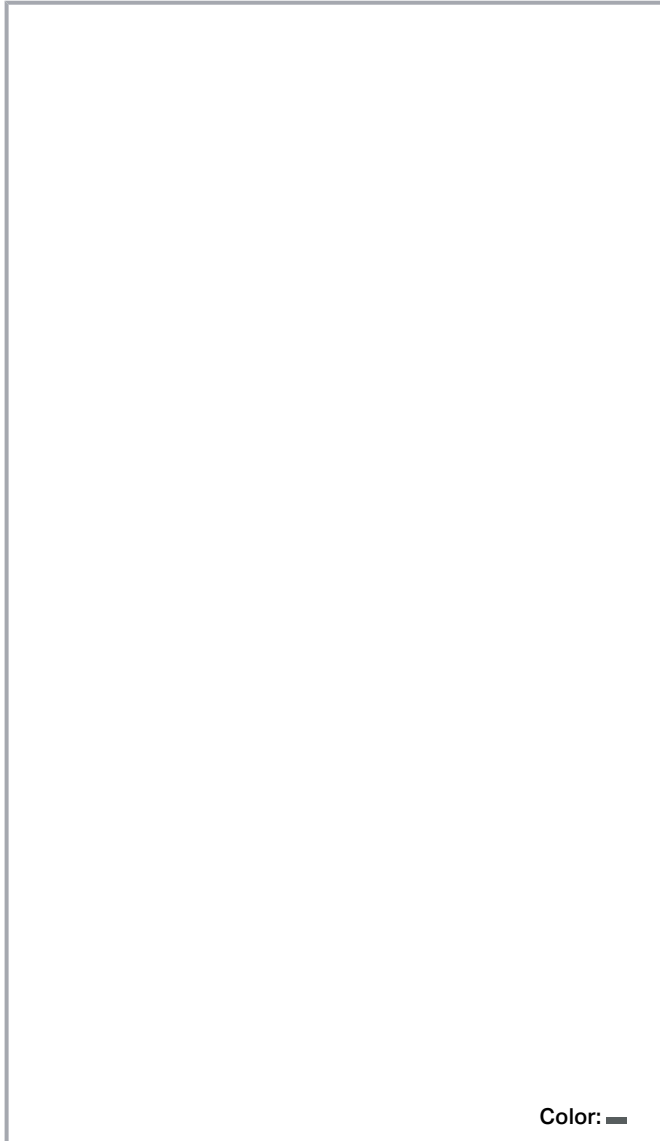


Data sheet | Item number: 750-1405/040-000
16-channel digital input; 24 VDC; 3 ms; Extreme

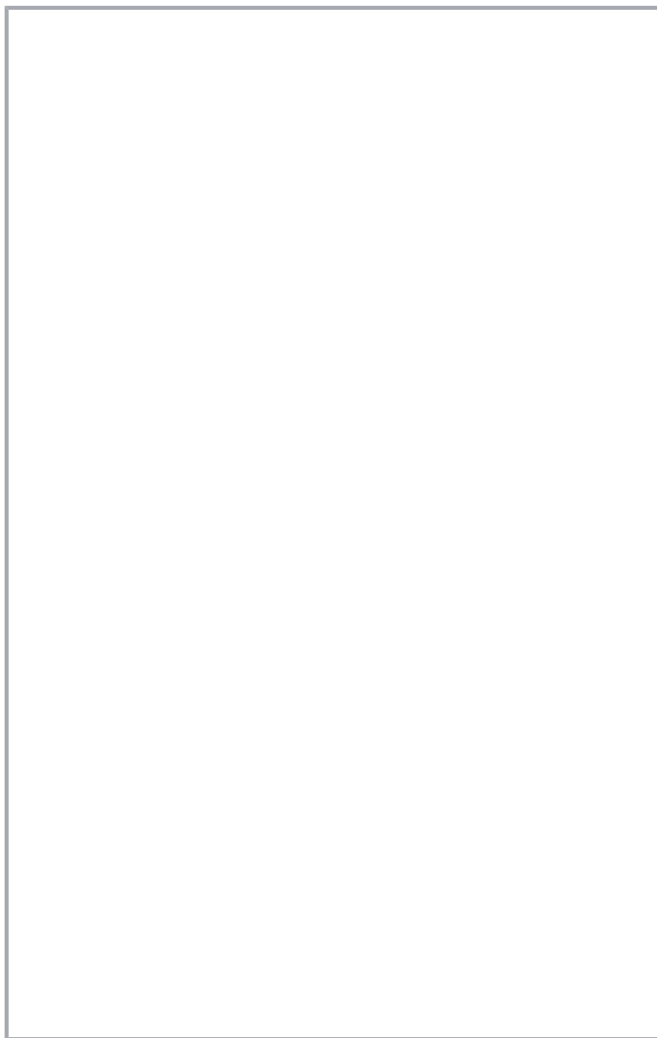
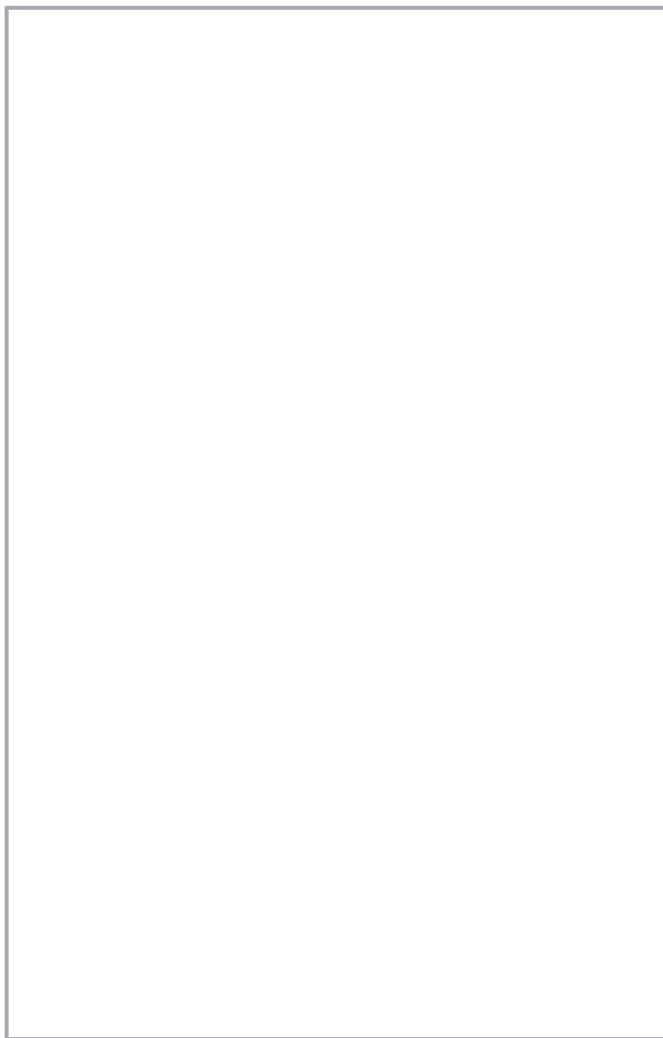
www.wago.com/750-1405/040-000



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Item description

This digital input module features 16 channels in a width of just 12 mm (0.47 inch).

It receives binary control signals from digital field devices (e.g., sensors, encoders, switches or proximity sensors).

The module features Push-in CAGE CLAMP[®] connections enabling solid conductors to be connected by simply pushing them in.

Each input channel has a noise-rejection RC filter with 3.0 ms time constant.

A green LED indicates the signal state of each channel.

Field and system levels are electrically isolated.

An operating tool with a 2.5 mm blade (210-719) is required to open the Push-in CAGE CLAMP[®] connections.

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The device is ideal for operation in extreme environments thanks to:

- An extended temperature range
- Greater immunity to impulse voltages and electromagnetic interference
- Higher vibration and shock resistance

Data

Technical data

Number of digital inputs	16
Total number of channels (module)	16
Signal type	Voltage
Signal type (voltage)	24 VDC
Sensor connection	16 x (1-wire)
Input characteristic	high-side switching
Input characteristic	Type 1
Input filter (digital)	3 ms
Input current per channel for signal (0) typ.	0.6 mA
Input current per channel for signal (1) typ.	2.3 mA
Input current per channel for signal (1) min.	2.1 mA
Input current per channel for signal (1) max.	2.4 mA
Voltage range for signal (0)	-3 ... +5 VDC
Voltage range for signal (1)	15 ... 30 VDC
Delay time T _{on} from 0 to 1	300 µs
Delay time T _{off} from 1 to 0	400 µs
Input data width (internal) max.	16 bits
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	25 mA
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1
Rated surge voltage	1 kV
Indicators	LED (1-16) green: Status DI 1 ... DI 16
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	10 A
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (-25 ... +30 %); for -40 ... +55 °C: 24 V (-25 ... +20 %); for

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+55 ... +70 °C: 24 V (-25 ... +10 %); Lower limit in all temperature ranges: -27.5 % (including 15 % residual ripple)

Connection data

Connection technology: inputs/outputs	16 x Push-in CAGE CLAMP®
Connection type 1	Inputs/Outputs
Solid conductor	0.25 ... 1.5 mm ² / 24 ... 16 AWG
Fine-stranded conductor	0.25 ... 1.5 mm ² / 24 ... 16 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

Physical data

Width	12 mm / 0.472 inches
Height	100 mm / 3.937 inches
Depth	69 mm / 2.717 inches
Depth from upper-edge of DIN-rail	61.8 mm / 2.433 inches

Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

Material data

Color	dark gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.158 MJ
Weight	46.5 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Protection type	IP20
Pollution degree (5)	2 per IEC 61131-2
Operating altitude	without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); 5000 m (max.)
Mounting position	horizontal (standing/lying); vertical
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-

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	DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Vibration resistance	per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
EMC immunity to interference	per EN 61000-6-1, -2; EN 61131-2; marine applications; EN 50121-3-2; EN 50121-4, -5; EN 60255-26; EN 60870-2-1; EN 61850-3; IEC 61000-6-5; IEEE 1613; VDEW: 1994
EMC emission of interference	per EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5
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)
eCl@ss 10.0	27-24-26-04
eCl@ss 9.0	27-24-26-04
ETIM 8.0	EC001599
ETIM 7.0	EC001599
PU (SPU)	1 Stück
Packaging type	box
Country of origin VKOrg Germany	DE
GTIN	4050821460206
Customs tariff number VKOrg Germany	85389099990

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV 17 ATEX 193969X (II 3 G Ex ec IIC T4 Gc)
	CCCEX CQST/CNEx	CNCA-C23-01	2020312310000214 (Ex nA IIC T4 Gc)




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Ex nA IIC T4 Gc

	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02. B.00163/19 (2Ex e IIC T4 Gc X)
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 16.0046 X (Ex ec IIC T4 Gc)
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Country specific Approvals


Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C- DE.AM02. B.00087 /19
	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	-	22-2208829- PDA
	DNV DNV Germany GmbH	DNV-CG-0339, Aug.2021	TAA00000Y7
	LR Lloyds Register	-	LR22276776TA
	PRS Polski Rejestr Statków	-	TE/2215 /880590/18

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UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

Optional accessories

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
Item no.: 790-124	Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	www.wago.com/790-124
Item no.: 790-108	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

System housing

System enclosure		
Item no.: 850-814/002-000	IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate	www.wago.com/850-814/002-000
Item no.: 850-815/002-000	IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate	www.wago.com/850-815/002-000
Item no.: 850-816/002-000	IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate	www.wago.com/850-816/002-000

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Item no.: 850-817/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate	www.wago.com/850-817/002-000
Item no.: 850-825 IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20	www.wago.com/850-825
Item no.: 850-826 IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-826
Item no.: 850-827 IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-827
Item no.: 850-827/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-827/002-000
Item no.: 850-826/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-826/002-000
Item no.: 850-828/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	www.wago.com/850-828/002-000
Item no.: 850-828 IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	www.wago.com/850-828
Item no.: 850-834 IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20	www.wago.com/850-834
Item no.: 850-835 IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-835
Item no.: 850-836 IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-836

Supply module

Supply module

Item no.: 750-602/040-000 Power Supply; 24 VDC; Extreme	www.wago.com/750-602/040-000
Item no.: 750-612/040-000 Power Supply; 0 ... 230 V AC/DC; Extreme	www.wago.com/750-612/040-000

Tool

Operating tool

Item no.: 210-719 Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft	www.wago.com/210-719
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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	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

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		www.wago.com/2009-145

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

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

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



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.: 248-501/000-002

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

www.wago.com/248-501/000-002



Item no.: 248-501/000-012

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

www.wago.com/248-501/000-012

Item no.: 248-501

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

www.wago.com/248-501



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



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.: 248-501/000-023
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

www.wago.com/248-501/000-023

Group marker carrier

Item no.: 750-107
Group marker carrier

www.wago.com/750-107

Downloads

Documentation

Manual

System Manual XTR Basic conditions and recommendations for higher operational safety	V 1.3.1 2022 年7月19 日	pdf 6.4 MB	Download
16DI 24 V DC 3. ms /XTR for eXTReme environmental conditions; high-side switching	V 1.3.0 2019 年8月19 日	pdf 2.7 MB	Download

Bid Text

750-1405/040-000 X81 - Datei	2019 年2月19 日	xml 7.1 kB	Download
750-1405/040-000 doc - Datei	2015 年10月28 日	doc 35.3 kB	Download

System Description

System Manual XTR Basic conditions and recommendations for higher operational safety	V 1.3.1 2022 年7月19 日	pdf 6.4 MB	Download
750 XTR Series I/O-System – General Product Information		pdf 743.5 kB	Download
Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 789.0 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/CAE-Data

CAD data

2D/3D Models 750-1405/040-000	URL	Download
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CAE data

EPLAN Data Portal 750-1405/040-000	URL	Download
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WSCAD Universe 750-1405/040-000	URL	Download
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WSCAD Universe 750-1405/040-000	URL	Download
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EPLAN Data Portal 750-1405/040-000	URL	Download
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ZUKEN Portal 750-1405/040-000	URL	Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-1405/040-000 16-channel digital input; 24 VDC; 3 ms; Extreme	URL	Download
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Installation Notes

Product family

WAGO I/O System 750 XTR

I/O-System 750 XTR: Dort automatisieren, wo jedes andere System an seine Grenzen stößt – und das zuverlässig und wirtschaftlich! XTR – dieses Kürzel im Systemnamen steht für extremen Schutz vor klimatischen Einflüssen, Schwingungen, Erschütterungen und Überspannungen.

[Show all products from the family](#)

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