

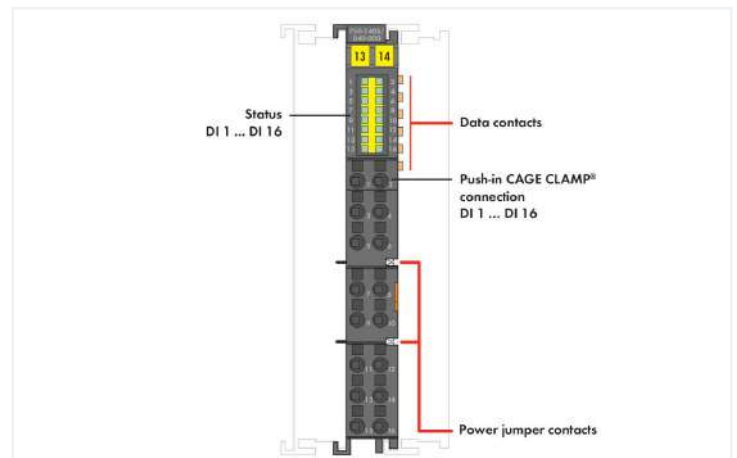
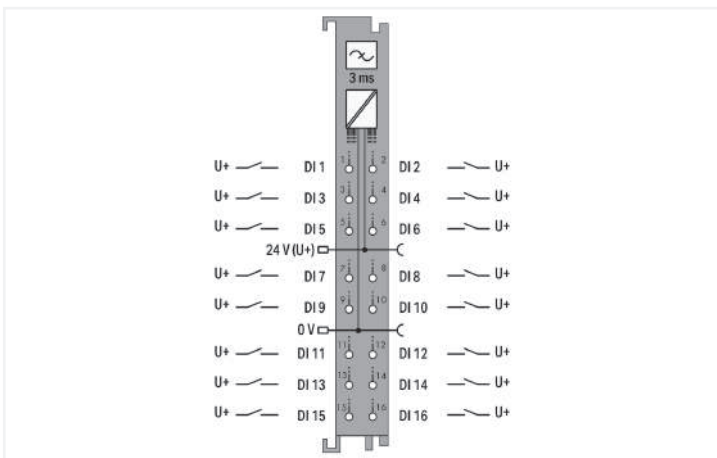
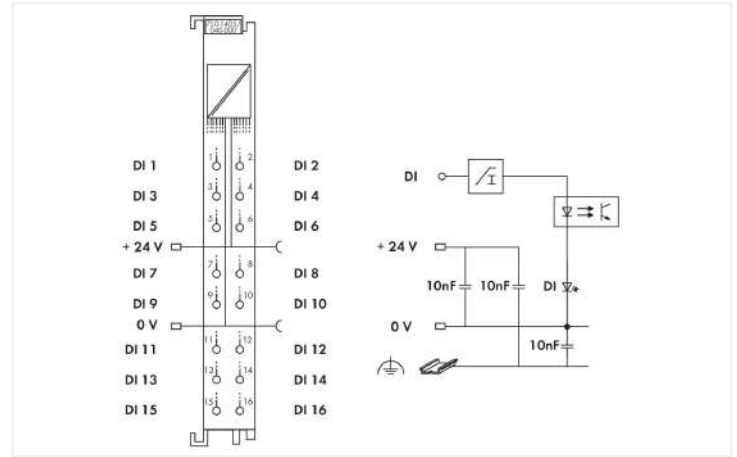
Data Sheet | Item Number: 750-1405/040-000

16-channel digital input; 24 VDC; 3 ms; Extreme

<https://www.wago.com/750-1405/040-000>



Color: ■ dark gray



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.

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

Technical data

Number of digital inputs	16
Total number of channels (module)	16
Signal type	Digital
Signal type (voltage)	24 VDC
Sensor connection	16 x (1-wire)
Input characteristic	high-side switching 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

Technical data

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 +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® (inputs)
Connection type 1	Input
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
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Material data

Color	dark gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.835 MJ
Weight	46.5 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Protection type	IP20
Pollution degree	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-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 (I/O System)
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 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821460206
Customs tariff number	85389099990

Environmental Product Compliance

CAS-No.	1317-36-8 7439-92-1
REACH Candidate List Substance	Lead Lead monoxide Perfluorobutane sulfonic acid (PFBS) and its salts
RoHS Compliance Status	Compliant, With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Bulgaria)	ba6e58a2-b424-4c71-b3ea-b127ee8646f6
SCIP notification number (Czech Republic)	3da071de-5e04-4fe3-82e3-8bd40b50aa5c

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-DIM750
UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Shipping	-	22-2208829-PDA
DNV DNV GL SE	-	TAA00000Y7
LR Lloyds Register	-	LR22276776TA
PRS Polski Rejestr Statków	-	TE/1099/880590/23

Approvals for hazardous areas



Approval	Standard	Certificate Name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV 17 ATEX 193969X (II 3 G Ex ec IIC T4 Gc)
CCC CNEX	CNCA-C23-01	2020312310000214 (Ex ec IIC T4 Gc)
IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 16.0046X (Ex ec IIC T4 Gc)
UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WA GO22UKEX005X_ec
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-1405/040-000	↓
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Documentation

Manual			
Product Manual 16DI 24 V DC 3. ms /XTR	V 1.3.0 19.08.2019	pdf 2685.21 KB	↓

System Description		
Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	↓
750 XTR Series I/O-System – General Product Information	pdf 726.09 KB	↓

Bid Text			
750-1405/040-000	19.02.2019	xml 6.97 KB	↓
750-1405/040-000	28.10.2015	doc 34.50 KB	↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 144.58 KB	↓











CAD/CAE-Data	
CAD data 2D/3D Models 750-1405/040-000 ↓	CAE data EPLAN Data Portal 750-1405/040-000 ↓ WSCAD Universe 750-1405/040-000 ↓ ZUKEN Portal 750-1405/040-000 ↓

1 Compatible Products

1.1 Optional Accessories


1.1.1 DIN-rail

1.1.1.1 Mounting accessories

 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	 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	 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	 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
 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	 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	 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	 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
 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	 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	 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	 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

1.1.2 Marking

1.1.2.1 Group marker carrier

 Item No.: 750-107 Group marker carrier

1.1.2.2 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

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

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

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

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

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

Item No.: 2009-145

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



Item No.: 248-501/000-006

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

Item No.: 248-501/000-007

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

Item No.: 248-501/000-023

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

Item No.: 248-501/000-017

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



Item No.: 248-501/000-012

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

Item No.: 248-501/000-005

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

Item No.: 248-501/000-024

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

Item No.: 248-501

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



Item No.: 248-501/000-002

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

1.1.2.3 Marker carrier



Item No.: 750-103

Group marker carrier

1.1.3 Shield termination

1.1.3.1 Shield clamping saddles



Item No.: 790-108

Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm



Item No.: 790-208

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



Item No.: 790-116

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



Item No.: 790-216

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



Item No.: 790-124

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



Item No.: 790-220

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



Item No.: 790-140

Shield clamping saddle; diameter of compatible conductor

1.1.4 Supply module

1.1.4.1 Supply module



Item No.: 750-612/040-000

Power Supply; 0 ... 230 V AC/DC; Extreme

Item No.: 750-602/040-000

Power Supply; 24 VDC; Extreme

1.1.5 System enclosure

1.1.5.1 System enclosure



Item No.: 850-825

IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20

Item No.: 850-826

IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

Item No.: 850-827

IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

Item No.: 850-828

IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



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

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

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

Item No.: 850-834

IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20



Item No.: 850-835

IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

Item No.: 850-836

IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

Item No.: 850-814/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate

Item No.: 850-815/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate



Item No.: 850-816/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate

Item No.: 850-817/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate

1.1.6 Tool

1.1.6.1 Operating tool



Item No.: 210-719

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft