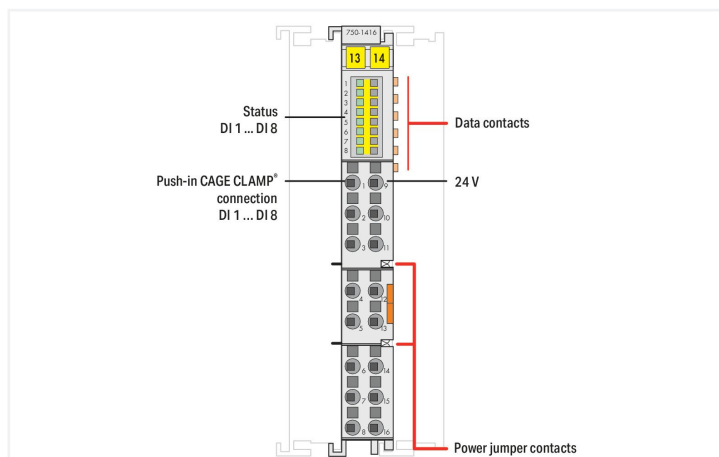
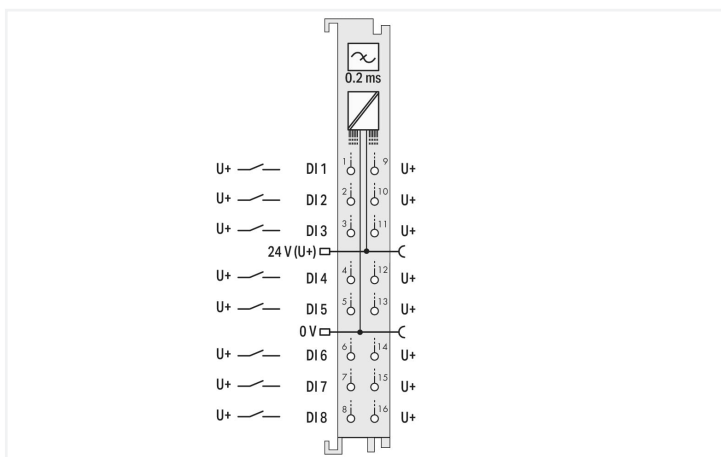
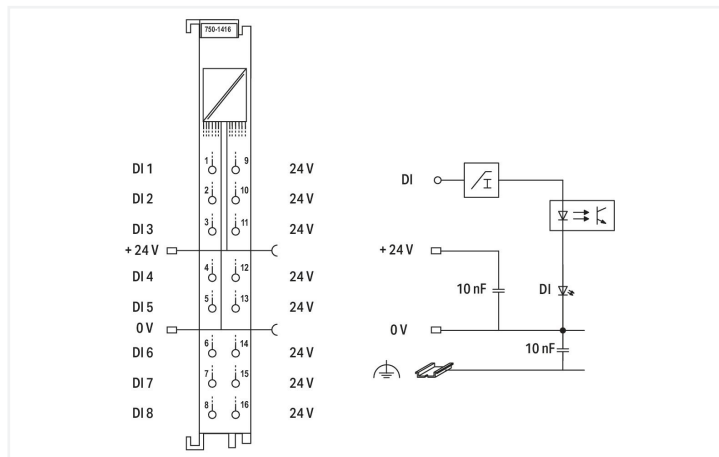


Data Sheet | Item Number: 750-1416
 8-channel digital input; 24 VDC; 0.2 ms; 2-conductor connection

<https://www.wago.com/750-1416>



This digital input module is a 2-wire device featuring eight 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 0.2 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.

Technical data	
Number of digital inputs	8
Total number of channels (module)	8
Signal type	Digital
Signal type (voltage)	24 VDC
Sensor supply	DC 24 V
Sensor connection	8 x (2-wire)
Input characteristic	high-side switching Type 3
Input filter (digital)	0.2 ms
Input current per channel for signal (0) typ.	1.6 mA
Input current per channel for signal (1) typ.	4.5 mA
Input current per channel for signal (1) min.	4.3 mA
Input current per channel for signal (1) max.	4.6 mA
Voltage range for signal (0)	-3 ... +5 VDC
Voltage range for signal (1)	11 ... 30 VDC
Input data width (internal) max.	8 bits
Supply voltage (system)	5 VDC; via data contacts

Technical data

Current consumption (5 V system supply)	6 mA
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission (supply voltage field side only) via spring contact)
Current consumption, field supply (module with no external load)	2 mA
Isolation	500 V system/field
Indicators	LED (1-8) green: Status DI 1 ... DI 8
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	10 A

Connection data

Connection technology: inputs/outputs	16 x Push-in CAGE CLAMP® (inputs)
Connection type 1	Input
Solid conductor	0.08 ... 1.5 mm ² / 28 ... 16 AWG
Fine-stranded conductor	0.25 ... 1.5 mm ² / 22 ... 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
Pluggable connector	fixed

Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	0.837 MJ
Weight	45.2 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-40 ... +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
ETIM 8.0	EC001599
ETIM 7.0	EC001599
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821085638
Customs tariff number	85389099990

Environmental Product Compliance

CAS-No.	7439-92-1
REACH Candidate List Substance	Lead
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	1d5c8447-2467-46c4-b642-a8c95f8014c9
SCIP notification number (Belgium)	213ae963-8fca-4041-9f26-e64932b8a913
SCIP notification number (Bulgaria)	40da9ab2-6acc-4b98-890e-cbeb1bd78237
SCIP notification number (Czech Republic)	c9896fa5-c2b5-4c07-936a-202354cb1c5f
SCIP notification number (Denmark)	5184804c-c7cd-49ea-8bb9-16076565841f
SCIP notification number (Finland)	8265d65d-9c64-4b5b-a022-60ea5ddcec90
SCIP notification number (France)	5dbc5ceb-69de-4b3d-90d7-919c910e60fa
SCIP notification number (Germany)	b1bc9717-2971-4f1b-9f88-1e1b1cc9c328
SCIP notification number (Hungary)	76e04e8d-6e93-4dd7-8982-d44b273ff5da
SCIP notification number (Italy)	348cf3e3-f226-4922-9179-c87a501f7498
SCIP notification number (Netherlands)	27facfe2-84a3-45b3-b696-333b62836e53
SCIP notification number (Poland)	7b747f09-b785-4327-93f8-45386f7ce82b
SCIP notification number (Romania)	64e774f7-584c-44a2-8578-77caa6d6d10c
SCIP notification number (Sweden)	b75535c8-5634-46f9-b6b6-2eafb95393b

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

Declarations of conformity and manufacturer's declarations

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

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Shipping	-	22-2219060
BSH Bundesamt fuer Seeschifffahrt und Hydrographie	-	1104
BV Bureau Veritas S.A.	-	30389/C0 BV
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/1101/880590/23
RINA RINA Germany GmbH	-	ELE343521XG001

Approvals for hazardous areas



Approval	Standard	Certificate Name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc)
CCCEX CQST/CNEx	CNCA-C23-01	2020312310000213 (Ex ec IIC T4 Gc)
IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 14.0035 X (Ex ec IIC T4 Gc)
INMETRO TUV Rheinland do Brasil Ltda.	IEC 60079-0	TUV 12.1297 X
UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WA GO22UKEX003X_ec
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-1416



Documentation

Manual

System Manual Series 750/753			pdf	953.35 KB	
Product Manual 8-channel, 24VDC, 0.2ms	V 2.0.0 06.09.2022	pdf	2980.28 KB		

System Description

750/753 Series I/O-System – General Product Information			pdf	953.35 KB	
Overview on WAGO-I/O-SYSTEM 750 approvals			pdf	770.48 KB	

Bid Text

750-1416	19.02.2019	xml	4.68 KB	
750-1416	12.07.2017	doc	26.50 KB	
ausschreiben.de 750-1416				

Instruction Leaflet

CCC Ex (Additional information)	26.04.2023		pdf	159.76 KB	
---------------------------------	------------	--	-----	-----------	--

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 750-1416	EPLAN Data Portal 750-1416
	WSCAD Universe 750-1416
	ZUKEN Portal 750-1416

Device Files

Device Driver			
WAGO USB Service Kabel Treiber / Serie 750 und 857	6.5.3.0 10.09.2014	zip 4721.96 KB	

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

<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>
<p>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</p>	<p>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</p>	<p>Item No.: 2009-145 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>	<p>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</p>
<p>Item No.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue</p>	<p>Item No.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray</p>	<p>Item No.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green</p>	<p>Item No.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green</p>
<p>Item No.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange</p>	<p>Item No.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red</p>	<p>Item No.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet</p>	<p>Item No.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white</p>
<p>Item No.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow</p>			

1.1.2.3 Marker carrier

<p>Item No.: 750-103 Group marker carrier</p>
--

1.1.3 Shield termination

1.1.3.1 Shield clamping saddles

<p>Item No.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm</p>	<p>Item No.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm</p>	<p>Item No.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm</p>	<p>Item No.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm</p>
<p>Item No.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm</p>	<p>Item No.: 790-220 Shield clamping saddle; 30 mm wide; 6 ... 20 mm</p>	<p>Item No.: 790-140 Shield clamping saddle; diameter of compatible conductor</p>	

1.1.4 Supply module

1.1.4.1 Supply module



Item No.: 750-612

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

Item No.: 750-602

Power Supply; 24 VDC

Item No.: 750-601

Power Supply; 24 VDC; fuse holder

Item No.: 750-610

Power Supply; 24 VDC; fuse holder; Diagnostics

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