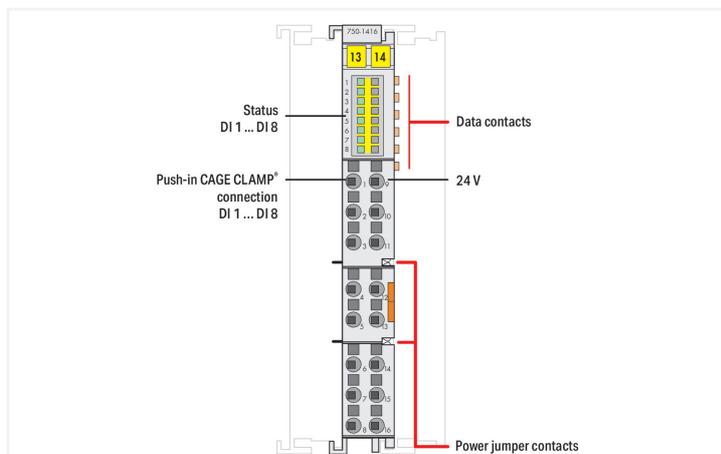
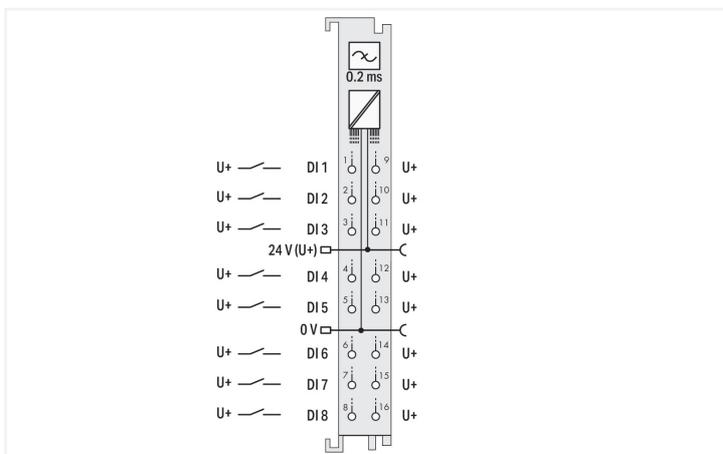
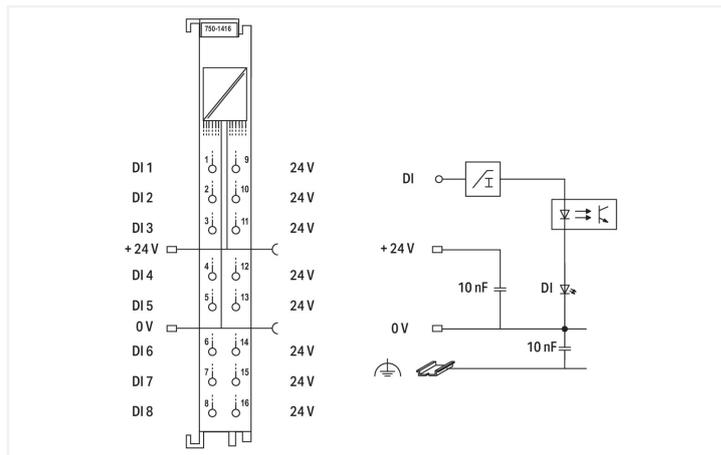


**Data Sheet | Item Number: 750-1416**  
**8-channel digital input; 24 VDC; 0.2 ms; 2-conductor connection**

<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 connection	8 x (2-wire)
Input characteristic	high-side switching
Input characteristic	Type 3
Input filter	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
Sensor supply	24 VDC
Input data width (internal) max.	8 bits

### Technical data

Supply voltage (system)	5 VDC; via data contacts
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 (field side supply voltage 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)
Connectable conductor materials	Copper
Connection type	Input
Solid conductor	0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG
Fine-stranded conductor	0.25 ... 1.5 mm <sup>2</sup> / 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 left, horizontal right, horizontal top, horizontal bottom, vertical top and vertical bottom
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 <sub>2</sub> S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO <sub>2</sub> contaminant concentration at a relative humidity 75 %	25 ppm

### Commercial data

Product Group	15 (I/O System)
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821085638
Customs tariff number	85389099990

### Product classification

UNSPSC	32151705
eCl@ss 10.0	27-24-26-04
eCl@ss 9.0	27-24-26-04
ETIM 9.0	EC001599
ETIM 8.0	EC001599
ECCN	NO US CLASSIFICATION

### Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide
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

#### General approvals

UL Underwriters Laboratories Inc. (ORDINARY LOCATI- ONS)	UL 508	E175199
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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 Ship- ping	-	22-2219060
BSH Bundesamt fuer See- schifffahrt und Hydrogra- phie	-	1104
BV Bureau Veritas S.A.	-	30389/C0 BV
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194
KR Korean Register of Ship- ping	-	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 TÜV Rheinland do Brasil Ltda.	IEC 60079-0	TÜV 12.1297 X
UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WA GO22UKEX003X_ec
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	UL 121201	E198726

## Downloads

### Environmental Product Compliance

#### Compliance Search

Environmental Product Compliance 750-1416



## Documentation

### Manual

System Manual Series 750/753



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

2D/3D Models  
750-1416



### CAE data

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**



**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**  
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