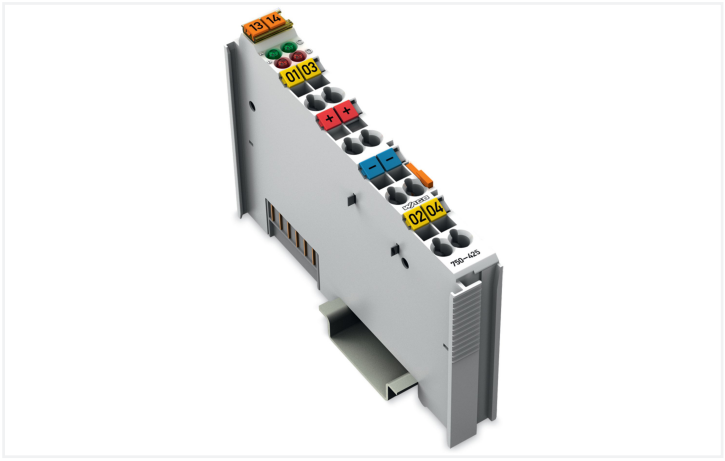
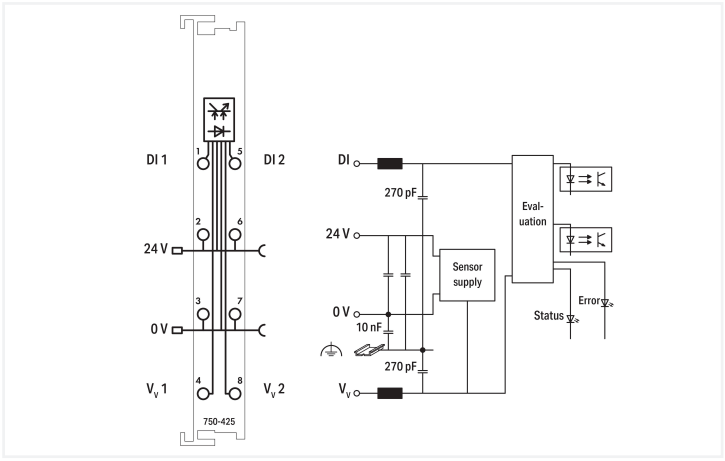
# Data Sheet | Item Number: 750-425

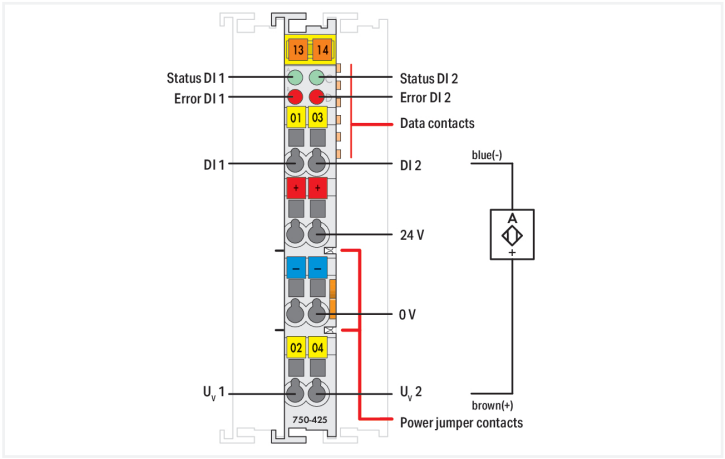
2-channel digital input; NAMUR

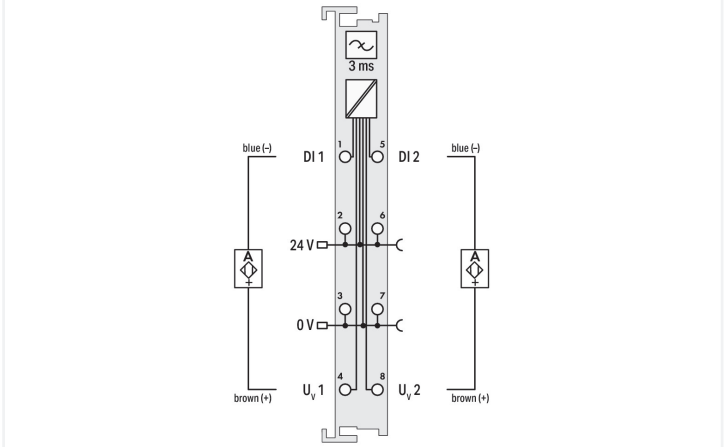
https://www.wago.com/750-425






Color: light gray




This digital input module receives control signals from NAMUR proximity sensors (per DIN EN 60947-5-6) from the field side.
Each channel of the sensors is supplied with a short-circuit-protected voltage of 8.2 V. A short circuit or a line break is indicated in the process image (1 bit) and via the red LED.
The green LED indicates the input status:

- Signal current (0): LED off
- Signal current (1): LED on

Field and system levels are electrically isolated.

| Technical data | |
|---|---|
| Number of digital inputs | 2 |
| Total number of channels (module) | 2 |
| Signal type | NAMUR |
| Sensor connection | 2 x (2-wire) |
| Input characteristic | high-side switching |
| Input filter | 3 ms |
| Signal current (0) NAMUR | ≤1.2 mA |
| Signal current (1) NAMUR | ≥2.1 mA |
| Open-circuit voltage | 8.2 V |
| Short-circuit current | ≤ 8.2 mA |
| Sensor supply | 8.2 VDC |
| Switching hysteresis | 0.2 mA |
| Input resistance | 1000 Ω |
| Input pulse length | ≥5 ms |
| Input pulse separation | ≥3 ms |

## Technical data

| | |
|---|---|
| Protection against incorrect wiring | Short circuit monitoring: > 6.5 mA<br>Wire break monitoring: < 0.2 mA |
| Diagnostics | Short circuit, wire break |
| Input data width (internal) max. | 4 bits |
| Data width | 4-bit input: 2-bit data, 2-bit error (short circuit/wire break) |
| Supply voltage (system) | 5 VDC; via data contacts |
| Current consumption (system supply) | 5 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) |
| Isolation | 500 V system/field |
| Indicators | LED (A, C) green: Status DI 1, DI 2; LED (B, D) red: Error DI 1, DI 2 |
| 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: I/O | 8 x CAGE CLAMP® (inputs) |
| Connectable conductor materials | Copper |
| Connection type | Input |
| Solid conductor | 0.08 … 2.5 mm² / 28 … 14 AWG |
| Fine-stranded conductor | 0.08 … 2.5 mm² / 28 … 14 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 | 69.8 mm / 2.748 inches |
| Depth from upper-edge of DIN-rail | 62.6 mm / 2.465 inches |

## Mechanical data

| | |
|---|---|
| Mounting type | DIN-35 rail |
| Pluggable connector | fixed |

## Material data

| | |
|---|---|
| Color | light gray |
| Housing material | Polycarbonate; polyamide 6.6 |
| Fire load | 1.141 MJ |
| Weight | 48.4 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 |


Continued on next page

## Environmental requirements

| | |
|---|---|
| EMC emission of interference | per EN 61000-6-4, marine applications |
| Exposure to pollutants | per IEC 60068-2-42 and IEC 60068-2-43 |
| Permissible $H_2S$ 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) |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4050821452805 |
| Customs tariff number | 85176200000 |

## 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 10.0 | EC001599 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

| | |
|---|---|
| CAS-No. | 1303-86-2<br>1317-36-8<br>7439-92-1 |
| REACH Candidate List Substance | Diboron trioxide<br>Lead<br>Lead monoxide |
| RoHS Compliance Status | Compliant,With Exemption |
| RoHS Exemption | 6(c)<br>7(a)<br>7(c)-I<br>7(c)-II |
| SCIP notification number (Bulgaria) | 027efc9e-336c-43bf-85a3-63d8c97149e2 |
| SCIP notification number (Czech Republic) | 2115d433-4054-45fd-a5d5-7093fcb7469f |

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| EAC<br>GZO Almaty Standart | TP TC 020/2011 | EAC CoC 03083 |
| KC<br>National Radio Research Agency | Article 58-2, Clause 3 | MSIP-REM-W43-DIM750 |
| UL<br>Underwriters Laboratories Inc. (ORDINARY LOCATIONS) | UL 508 | E175199 |

### Declarations of conformity and manufacturer's declarations

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


Continued on next page

## Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| ABS<br>American Bureau of Shipping | - | 25-0415412 |
| BSH<br>Bundesamt fuer Seeschiffahrt und Hydrographie | - | 1104 |
| BV<br>Bureau Veritas S.A. | - | 30389/C0 BV |
| DNV<br>DNV GL SE | DNV-CG-0339,Aug.2021 | TAA0000194 |
| KR<br>Korean Register of Shipping | - | KR HMB05880-AC001 |
| LR<br>Lloyds Register EMEA | - | LR22180952TA |
| PRS<br>Polski Rejestr Statków | - | TE/1101/880590/23 |
| RINA<br>RINA Germany GmbH | - | ELE343521XG001 |

## Approvals for hazardous areas

| Approval | Standard | Certificate Name |
|---|---|---|
| ATEX<br>TUEV Nord Cert GmbH | EN 60079-0 | TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc) |
| CCCEx<br>CQST/CNEx | CNCA-C23-01 | 2020312310000213 (Ex ec IIC T4 Gc) |
| IECEx<br>TUEV Nord Cert GmbH | IEC 60079-0 | IECEx TUN 14.0035 X (Ex ec IIC T4 Gc) |
| INMETRO<br>TÜV Rheinland do Brasil Ltda. | IEC 60079-0 | TÜV 12.1297 X |
| UKEx<br>WAGO GmbH & Co. KG | EN 60079-0 | UKCA_WAGO22UKEX003X_ec |
| UL<br>Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201 | E198726 |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance 750-425

### Documentation

**Manual**

| | | |
|---|---|---|
| Product Manual 2-channel, NAMUR | V 1.2.0 | pdf<br>1815.21 KB |
| System Manual Series 750/753 | | |

**System Description**

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

**Bid Text**

| | | |
|---|---|---|
| 750-425 | 19.02.2019 | xml<br>4.73 KB |
| 750-425 | 12.07.2017 | doc<br>28.00 KB |

**Instruction Leaflet**

| | | |
|---|---|---|
| CCC Ex (Additional information) | 26.04.2023 | pdf<br>159.76 KB |

## CAD/CAE-Data

| CAD data | CAE data |
|---|---|
| 2D/3D Models 750-425 | EPLAN Data Portal 750-425 |
| | WSCAD Universe 750-425 |
| | ZUKEN Portal 750-425 |

## 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.: 210-197
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



Item No.: 210-114
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.: 210-112
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.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored

### 1.1.2 Marking

#### 1.1.2.1 Group marker carrier



Item No.: 750-106
Group marker carrier

#### 1.1.2.2 Marker



Item No.: 750-100
Marker card; as a DIN A4 sheet; plain



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


Continued on next page

### 1.1.2.2 Marker



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


Continued on next page

## 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