# Data Sheet | Item Number: 750-401

## 2-channel digital input; 24 VDC; 0.2 ms

https://www.wago.com/750-401

Color: ■ light gray
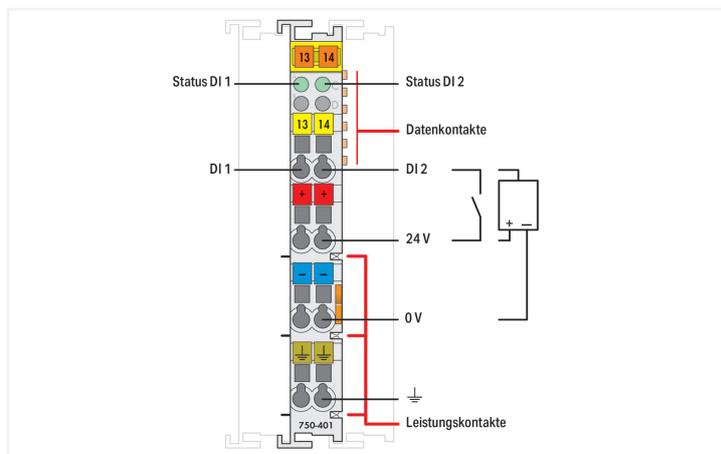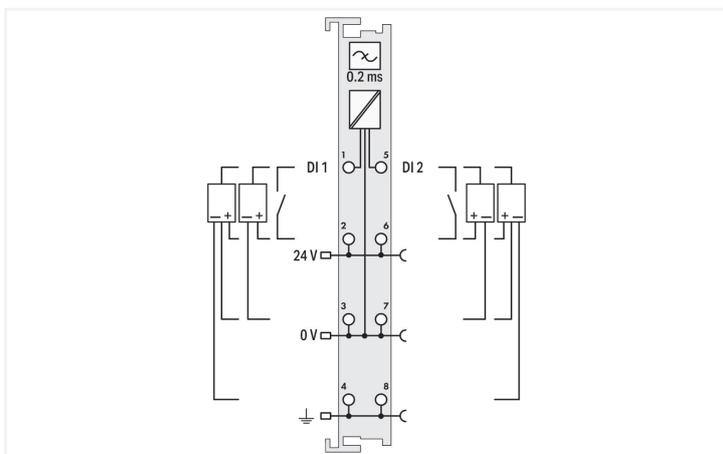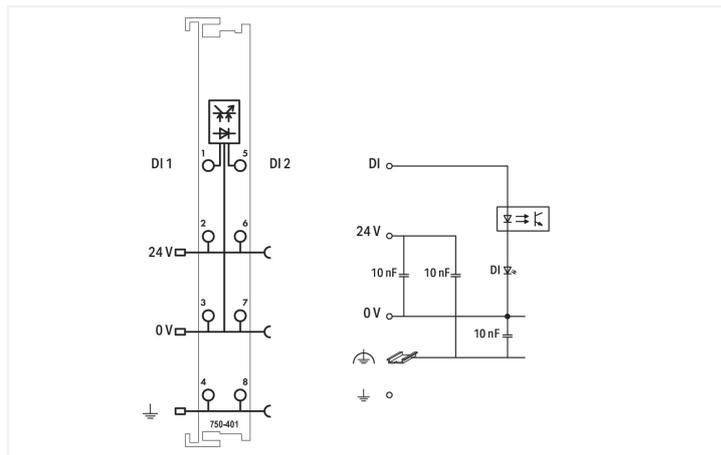
This digital input module receives control signals from field devices (e.g., sensors).

Each input module has a noise-rejection filter.

Field and system levels are electrically isolated.

## Technical data

| | |
|---|---|
| Number of digital inputs | 2 |
| Total number of channels (module) | 2 |
| Signal type | Digital |
| Signal type (voltage) | 24 VDC |
| Sensor connection | 2 x (2-wire, 3-wire, 4-wire) |
| Input characteristic | high-side switching |
| Input filter (digital) | 0.2 ms |
| Input current per channel for signal (1) typ. | 4.5 mA |
| Voltage range for signal (0) | −3 … +5 VDC |
| Voltage range for signal (1) | 15 … 30 VDC |
| Sensor supply | 24 VDC |
| Input data width (internal) max. | 2 bits |
| Supply voltage (system) | 5 VDC; via data contacts |
| Current consumption (5 V system supply) | 3.7 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 |
| Number of incoming power jumper contacts | 3 |
| Number of outgoing power jumper contacts | 3 |

## Technical data

| | |
|---|---|
| Current carrying capacity (power jumper contacts) | 10 A |

## Connection data

| | | | | |
|---|---|---|---|---|
| Connection technology: inputs/outputs | 8 x CAGE CLAMP® (inputs) | | Connection type 1 | Input |
| Connectable conductor materials | Copper | | Solid conductor | 0.08 … 2.5 mm² / 28 … 14 AWG |
| Connection type 1 | Input | | Fine-stranded conductor | 0.08 … 2.5 mm² / 28 … 14 AWG |
| Solid conductor | 0.08 … 2.5 mm² / 28 … 14 AWG | | Strip length | 8 … 9 mm / 0.31 … 0.35 inches |
| 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 | 1.211 MJ |
| Weight | 45.8 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 61000-6-4, 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) |
| eCl@ss 10.0 | 27-24-26-04 |
| eCl@ss 9.0 | 27-24-26-04 |
| ETIM 9.0 | EC001599 |
| ETIM 8.0 | EC001599 |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| Customs tariff number | 85389099990 |

## 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 (Austria) | 5dc537b6-c529-4969-88d2-da20837e5483 |
| SCIP notification number (Belgium) | e0921d88-f379-4bbe-8d47-56bde827c9e5 |
| SCIP notification number (Bulgaria) | fdc591ba-8076-461b-a415-7dafa2e06747 |
| SCIP notification number (Czech Republic) | 8743ce70-bd51-4ca0-a1d0-0f8e1b6ff0b9 |
| SCIP notification number (Denmark) | 4bcce72d-aabd-4f83-97d1-fd49f10b7ebd |
| SCIP notification number (Finland) | 606c1dc0-3048-477e-81be-62d6e511ccb3 |
| SCIP notification number (France) | 5202c575-b1be-4531-9271-aa2158161779 |
| SCIP notification number (Germany) | 58b8e99a-4c47-4d88-95eb-7609835b2f79 |
| SCIP notification number (Hungary) | a03e69ae-8f08-4a06-91f9-13f129440ae4 |
| SCIP notification number (Italy) | f97cd3c8-a93b-4299-bcc7-01c02135b729 |
| SCIP notification number (Netherlands) | b9fc84b8-8169-4bac-965f-ff1943c3be2f |
| SCIP notification number (Poland) | 85a4e4bc-4a3f-4fb2-8777-100df4858dd2 |
| SCIP notification number (Romania) | 35522434-84d1-424d-9ac9-1d6a46d0c457 |
| SCIP notification number (Sweden) | f7dc5453-024d-4d45-b416-f7d3ddb5c8e7 |

## 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 | - | - |

## 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. | - | 13453/E0 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 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 LOCATIONS) | UL 121201 | E198726 |

## Downloads

### Environmental Product Compliance

#### Compliance Search

| | |
|---|---|
| Environmental Product Compliance 750-401 | ↓ |

## Documentation

### Manual

| | | | | |
|---|---|---|---|---|
| Product Manual 2-channel, 24VDC, 0.2ms | V 2.0.1 18.12.2023 | pdf 2938.00 KB | | ↓ |
| System Manual Series 750/753 | | | | ↓ |

### 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

| | | | |
|---|---|---|---|
| 750-401 | 19.02.2019 | xml 4.04 KB | ↓ |
| 750-401 | 12.07.2017 | doc 24.50 KB | ↓ |

### Instruction Leaflet

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

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## CAD/CAE-Data

### CAD data

2D/3D Models 750-401 ↓

### CAE data

EPLAN Data Portal
750-401 ↓

WSCAD Universe
750-401 ↓

ZUKEN Portal 750-401 ↓

## 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.: 750-106
Group marker carrier

**WAGO**

## 1.1.2.2 Marker

| | | | |
|---|---|---|---|
| **Item No.: 750-100**<br>Marker card; as a DIN A4 sheet; plain | **Item No.: 2009-145/000-006**<br>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**<br>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**<br>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**<br>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**<br>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**<br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet | **Item No.: 2009-145**<br>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**<br>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**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue | **Item No.: 248-501/000-007**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray | **Item No.: 248-501/000-023**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green |
| **Item No.: 248-501/000-017**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green | **Item No.: 248-501/000-012**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange | **Item No.: 248-501/000-005**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red | **Item No.: 248-501/000-024**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet |
| **Item No.: 248-501**<br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white | **Item No.: 248-501/000-002**<br>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 Potential distribution

### 1.1.3.1 Potential distribution module

**Item No.: 750-604**
Potential Distribution; 8-way 0 V

## 1.1.4 Shield termination

### 1.1.4.1 Shield clamping saddles

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

Version 13.02.2025

## 1.1.5 Supply module

### 1.1.5.1 Supply module

| | | | |
|---|---|---|---|
| Item No.: 750-612 | Item No.: 750-602 | Item No.: 750-601 | Item No.: 750-610 |
| Power Supply; 0 … 230 V AC/DC | Power Supply; 24 VDC | Power Supply; 24 VDC; fuse holder | Power Supply; 24 VDC; fuse holder; Diagnostics |

## 1.1.6 System enclosure

### 1.1.6.1 System enclosure

| | | | |
|---|---|---|---|
| Item No.: 850-825 | Item No.: 850-826 | Item No.: 850-827 | Item No.: 850-828 |
| IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20 | IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip | IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip | 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 | Item No.: 850-827/002-000 | Item No.: 850-828/002-000 | Item No.: 850-834 |
| IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip | IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip | IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip | IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20 |
| Item No.: 850-835 | Item No.: 850-836 | Item No.: 850-814/002-000 | Item No.: 850-815/002-000 |
| IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip | IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip | IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate | IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate |
| Item No.: 850-816/002-000 | Item No.: 850-817/002-000 | | |
| IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate | IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate | | |

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

Current addresses can be found at:: www.wago.com