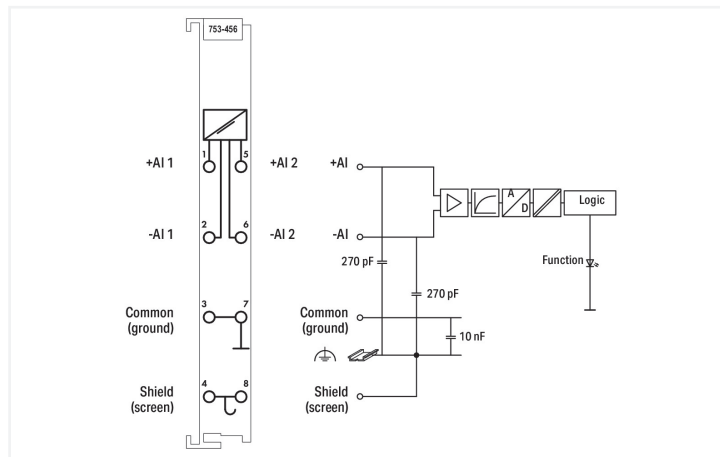
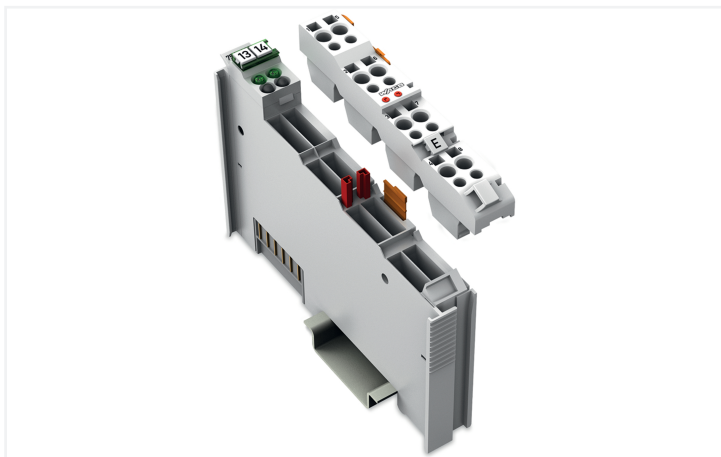
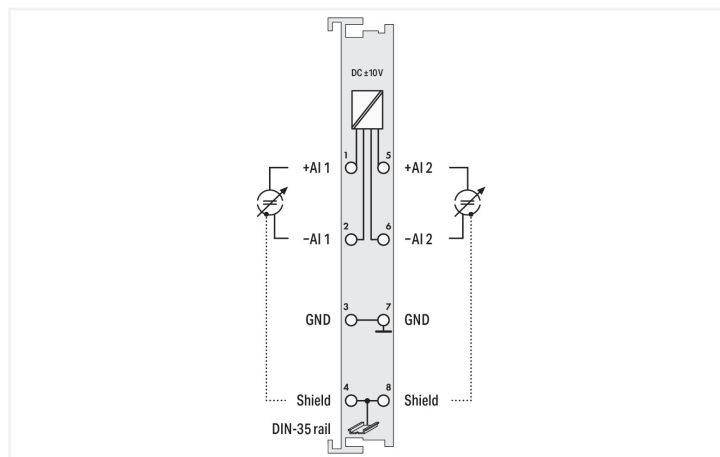
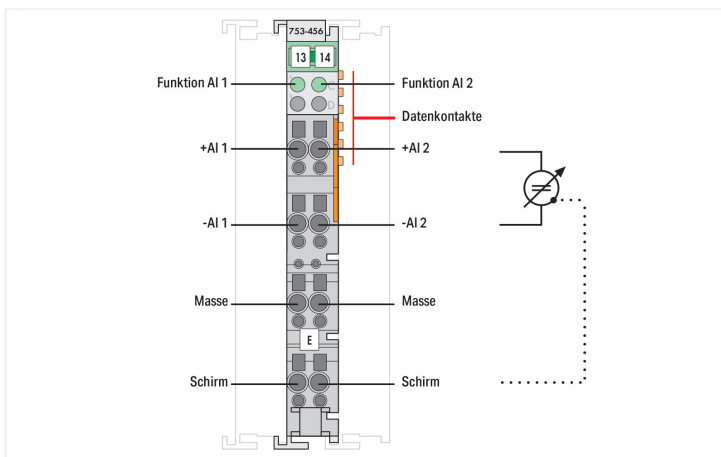


**Data Sheet | Item Number: 753-456**  
 2-channel analog input;  $\pm 10$  VDC; Differential input

<https://www.wago.com/753-456>



Color: ■ light gray



This analog input module processes standard  $\pm 10$  V signals.  
 The input signal is electrically isolated and is transmitted with a resolution of 12 bits.  
 The internal system supply powers the module.  
 The input channels of the module are differential inputs.  
 The shield directly connects to the DIN-rail.

**Notes**

Note Pluggable connectors and coding fingers (753 Series) are not included.

### Technical data

|  |  |
|--|--|
| Number of analog inputs  | 2  |
| Total number of channels (module)                              | 2  |
| Signal type  | Voltage  |
| Signal type (voltage)  | -10 ... +10 VDC                                      |
| Sensor connection  | 2 x (2-wire)   |
| Input voltage (max.)   | 35 V   |
| Signal characteristics   | Differential   |
| Resolution [bit]   | 12 bits  |
| Data width   | 2 x 16-bit data; 2 x 8-bit control/status (optional) |
| Internal resistance  | 570 kΩ   |
| Conversion time (typ.)   | 2 ms   |
| Measurement error (reference temperature)                      | 25 °C  |
| Measurement error, deviation (max.) from the upper-range value | 0.2 %  |
| Temperature error (max.) of the upper-range value              | 0.015 %/K  |
| Supply voltage (system)  | 5 VDC; via data contacts                             |
| Current consumption (5 V system supply)                        | 80 mA  |
| Isolation  | 500 V system/field                                   |
| Indicators   | LED (A, C) green: Function AI 1, AI 2                |

### Connection Data

|                                 |  |
|---------------------------------|--|
| Connection technology: I/O      | 8 x CAGE CLAMP®                              |
| Connectable conductor materials | Copper                                       |
| Connection type                 | Inputs/outputs                               |
| Solid conductor                 | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG |
| Fine-stranded conductor         | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG |
| Strip length                    | 9 ... 10 mm / 0.35 ... 0.39 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 | pluggable   |

### Material data

|                    |                              |
|--------------------|------------------------------|
| Color              | light gray                   |
| Housing material   | Polycarbonate; polyamide 6.6 |
| Fire load          | 0.616 MJ                     |
| Weight             | 41 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 <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                  | 4045454481735   |
| Customs tariff number | 85389099990     |

### Product Classification

|             |                      |
|-------------|----------------------|
| UNSPSC      | 32101602             |
| eCl@ss 10.0 | 27-24-26-01          |
| eCl@ss 9.0  | 27-24-26-01          |
| ETIM 9.0    | EC001596             |
| ETIM 10.0   | EC001596             |
| ECCN        | NO US CLASSIFICATION |

### Environmental Product Compliance

|   |   |
|---|---|
| CAS-No.                                   | 1303-86-2<br>1317-36-8<br>25550-51-0<br>7439-92-1   |
| REACH Candidate List Substance            | 4-Methyl-1,2-cyclohexanedicarboxylic anhydride<br>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)        | d7038449-5b98-4164-b247-8ee522248cc5  |
| SCIP notification number (Belgium)        | 2b8f1e38-328c-487d-b938-1aa5f81cf073  |
| SCIP notification number (Bulgaria)       | b686718d-9f4c-4dee-a706-33802c147272  |
| SCIP notification number (Czech Republic) | a2b67b75-966a-4700-a744-38a28117474e  |
| SCIP notification number (Denmark)        | 04d6f9fb-9bb6-4fc0-994d-d820a8af143d  |
| SCIP notification number (Finland)        | 9b48e4c4-dc22-4e3d-b183-ebe05aa2d5c1  |
| SCIP notification number (France)         | a10fb68e-ff31-4e1c-a8e1-11bc1dc3cd87  |
| SCIP notification number (Germany)        | ff8af56e-535d-4397-83f6-15b2eb16b97b  |
| SCIP notification number (Hungary)        | c8952d12-6e61-42f1-8466-ec8da00937e6  |
| SCIP notification number (Italy)          | 7f03e3e2-f54f-4a10-bff5-41a1e8105281  |
| SCIP notification number (Netherlands)    | e29802de-331d-497a-850b-3ed25312606e  |

### Environmental Product Compliance

|                                    |                                      |
|------------------------------------|--------------------------------------|
| SCIP notification number (Poland)  | b1c5e318-aa76-4524-84b2-65eac936a6fe |
| SCIP notification number (Romania) | 4eecf7c9-0f1c-48ae-94c7-ff6244436288 |
| SCIP notification number (Sweden)  | 1623a3a8-7d52-448d-8087-5cddccb1b640 |

### 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-AIM750 |
| 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<br>American Bureau of Shipping                    | -                      | 22-2219060        |
| BSH<br>Bundesamt fuer Seeschifffahrt und Hydrographie | -                      | 1104              |
| BV<br>Bureau Veritas S.A.                             | -                      | 13453/E0 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>TUV Rheinland do Brasil Ltda.                   | IEC 60079-0 | TUV 12.1297 X                              |
| UKEX<br>WAGO GmbH & Co. KG                                 | EN 60079-0  | UKCA_WA GO22UKEX003X_ec                    |
| UL<br>Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201   | E198726                                    |

**Downloads**

**Environmental Product Compliance**

**Compliance Search**

Environmental Product Compliance 753-456



**Documentation**

**Manual**

System Manual Series 750/753



Product Manual 2-channel, ± 10VDC, diff.

V 1.2.0

pdf  
4041.26 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**

753-456

19.02.2019

xml  
4.57 KB



753-456

17.10.2017

doc  
28.00 KB



**Instruction Leaflet**

CCC Ex (Additional information)

26.04.2023

pdf  
159.76 KB



**CAD/CAE-Data**

**CAD data**

2D/3D Models 753-456



**CAE data**

EPLAN Data Portal 753-456



WSCAD Universe 753-456



ZUKEN Portal 753-456



**1 Compatible Products**

**1.1 Required Accessories**

**1.1.1 Pluggable connector**

**1.1.1.1 Male connector/plug**



Item No.: [753-110](#)

Plug

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 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

1.2.2 Marking

1.2.2.1 Group marker carrier



**Item No.: 750-106**  
Group marker carrier

1.2.2.2 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



**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

1.2.2.3 Marker carrier



**Item No.: 750-103**  
Group marker carrier

1.2.3 Pluggable connector

1.2.3.1 Coding



**Item No.: 753-150**  
753 Series coding elements

1.2.4 Shield termination

1.2.4.1 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

1.2.5 System enclosure

1.2.5.1 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

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

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Current addresses can be found at: [www.wago.com](http://www.wago.com)