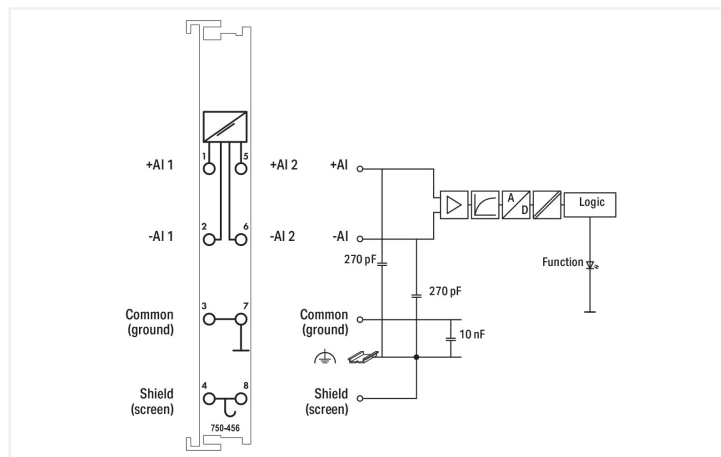
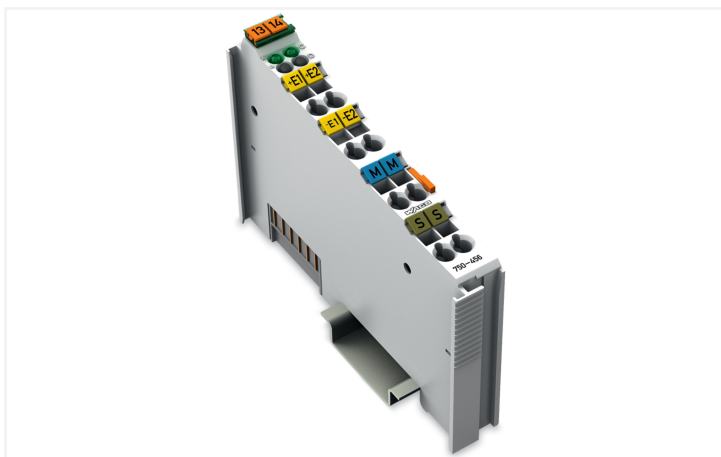
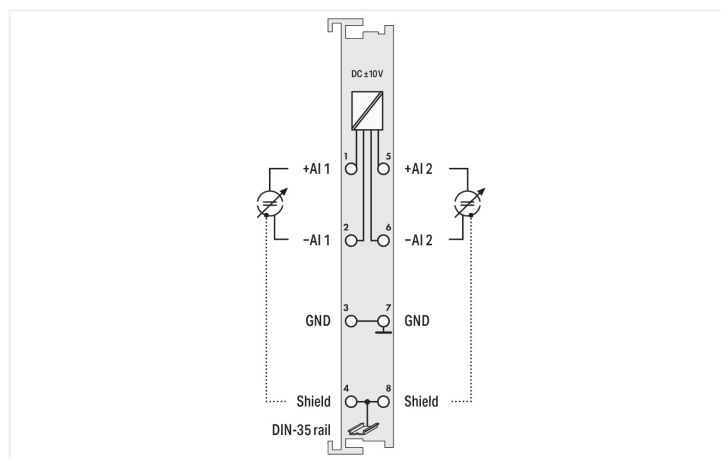
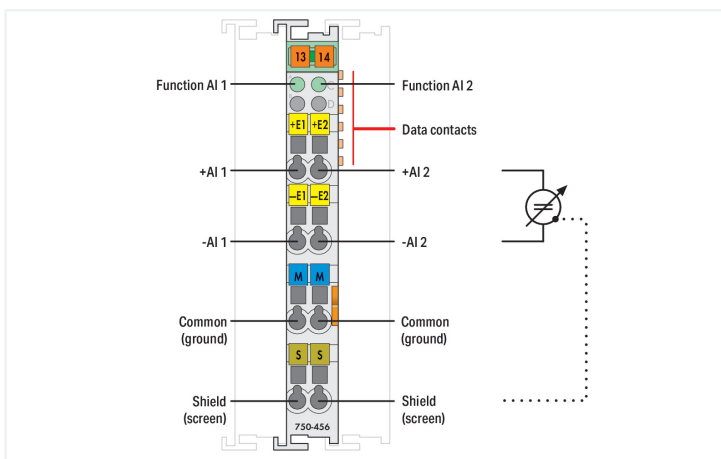


Data Sheet | Item Number: 750-456
 2-channel analog input; ± 10 VDC; Differential input

<https://www.wago.com/750-456>



Color: ■ light gray



This analog input module processes standard ± 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.

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 k Ω |
| Conversion time (typ.) | 2 ms |
| Measurement error (reference temperature) | 25 $^{\circ}$ C |
| Measurement error, deviation (max.) from the upper-range value | 0.2 % |

Technical data

| | |
|---|---------------------------------------|
| Temperature error (max.) of the upper-range value | 0.015 %/K |
| Supply voltage (system) | 5 VDC; via data contacts |
| Current consumption (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 ² / 28 ... 14 AWG |
| Fine-stranded conductor | 0.08 ... 2.5 mm ² / 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 | 0.898 MJ |
| Weight | 49 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 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) |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4045454481674 |
| Customs tariff number | 85437090990 |

Product Classification



| | |
|-------------|----------------------|
| UNSPSC | 32101502 |
| 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 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) | 0119b998-0f9c-4e1b-9f4d-9fc63519c6d5 |
| SCIP notification number (Belgium) | 122273ac-4c7c-40fc-997f-955e235537c2 |
| SCIP notification number (Bulgaria) | f2d0b1b5-7f9f-433d-9be0-0680bdaf2d39 |
| SCIP notification number (Czech Republic) | 5d5f155e-750b-4ef3-bc80-cdcc31c86e50 |
| SCIP notification number (Denmark) | 72ffba89-8edb-4e19-b264-a188b0ea60e7 |
| SCIP notification number (Finland) | d979df0c-344d-493e-816a-7b4d16d751b9 |
| SCIP notification number (France) | 10e7e5ad-9d65-457d-8fcf-51045ce19a74 |
| SCIP notification number (Germany) | 57687a5d-7d75-4c5c-bac8-a631ed21e2ac |
| SCIP notification number (Hungary) | 048c7245-9894-437d-aff0-8a2216cfbe9b |
| SCIP notification number (Italy) | 9c9e20ab-9d17-4db1-9c93-8d764929b860 |
| SCIP notification number (Netherlands) | 5aa9b272-8bb8-4200-964e-3018995be569 |
| SCIP notification number (Poland) | aaf5c2cc-2ff8-477b-ad4a-b19df2ff717f |
| SCIP notification number (Romania) | df5bd87e-34ac-4b45-85ae-7cef5323d171 |
| SCIP notification number (Sweden) | 31913f81-2286-465b-a33f-9286c12143c5 |

Approvals / Certificates

General approvals

UL

Underwriters Laboratories
Inc. (ORDINARY LOCA-
TIONS)

UL 508

E175199

| 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-AIM750 |

Declarations of conformity and manufacturer's declarations

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

Approvals for marine applications



| Approval | Standard | Certificate Name |
|--|------------------------|-------------------|
| ABS American Bureau of Shipping | - | 25-0415412 |
| BSH Bundesamt fuer Seeschiffahrt 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 750-456 | ↓ |

Documentation

| Manual | | | |
|--|---------|-------------------|-------------------|
| Product Manual 2-channel, ± 10VDC, diff. | V 1.1.0 | pdf 2013.54 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 | | | |
|----------|------------|-----------------|-------------------|
| 750-456 | 19.02.2019 | xml 4.18 KB | ↓ |
| 750-456 | 17.10.2017 | doc 27.00 KB | ↓ |

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

CAD/CAE-Data

| CAD data | |
|----------------------|-------------------|
| 2D/3D Models 750-456 | ↓ |

| CAE data | |
|---------------------------|-------------------|
| EPLAN Data Portal 750-456 | ↓ |
| WSCAD Universe 750-456 | ↓ |
| ZUKEN Portal 750-456 | ↓ |

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



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 System enclosure

1.1.4.1 System enclosure



Item No.: 850-825
IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (160x100x160 mm); 9 x M12, 4 x M20



Item No.: 850-826
IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-827
IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



Item No.: 850-828
IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



Item No.: 850-826/002-000
IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-827/002-000
IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



Item No.: 850-828/002-000
IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



Item No.: 850-834
IP65 enclosure; Polyester (RAL 7032); Wx-HxD (164x100x164 mm); 9 x M12, 4 x M20



Item No.: 850-835
IP65 enclosure; Polyester (RAL 7032); Wx-HxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-836
IP65 enclosure; Polyester (RAL 7032); Wx-HxD (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); Wx-HxD (200x120x200 mm); without flange plate



Item No.: 850-815/002-000
IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (300x120x200 mm); without flange plate



Item No.: 850-816/002-000
IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (400x120x200 mm); without flange plate



Item No.: 850-817/002-000
IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (600x120x200 mm); without flange plate

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

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