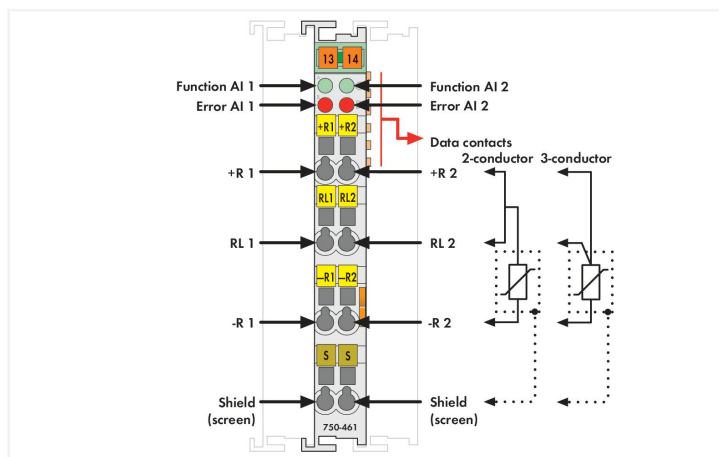
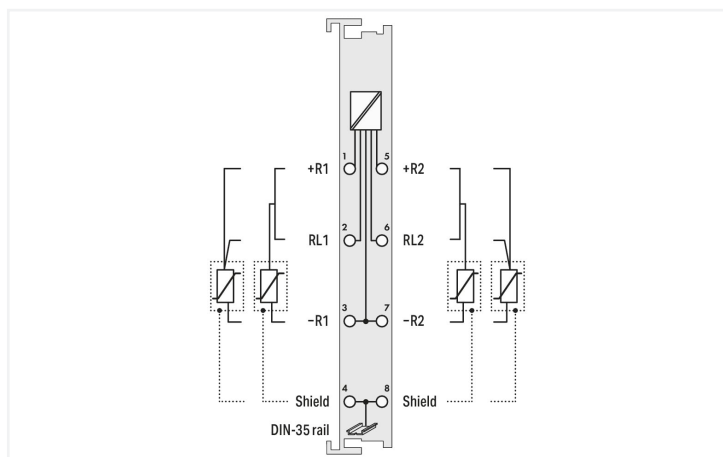
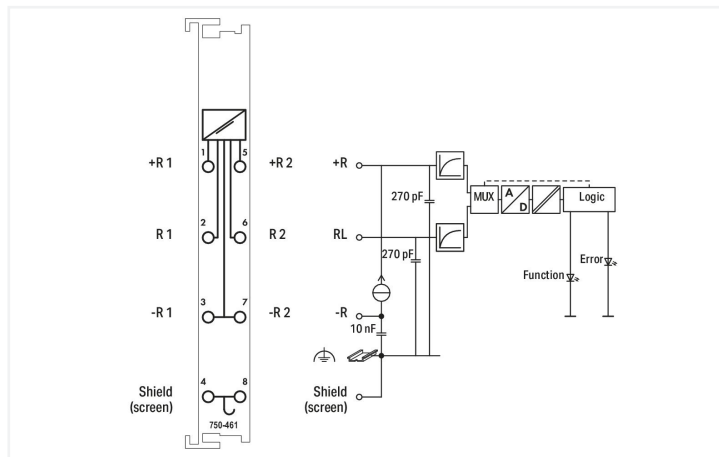


Data Sheet | Item Number: 750-461
 2-channel analog input; For Pt100/RTD resistance sensors

<https://www.wago.com/750-461>



Color: ■ light gray



This analog input module directly connects to Pt resistance sensors.

Two- or three-wire sensors can be connected.

The module automatically linearizes the entire temperature range. A sensor error (short circuit, line break or measurement range overflow) is indicated by a red LED.

A green LED indicates readiness for operation and error-free communication with the coupler.

The shield directly connects to the DIN-rail.

Technical data

| | |
|--|--|
| Number of analog inputs | 2 |
| Total number of channels (module) | 2 |
| Signal type | Resistance measurement |
| Sensor connection | 2 x (2-wire, 3-wire) |
| Data width | 2 x 16-bit data; 2 x 8-bit control/status (optional) |
| Resolution (over entire range) | 0.1 °C |
| Conversion time (typ.) | 320 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 | 0.01 %/K |
| Measuring current (typ.) | 0.5 mA |
| Response time (max.) | 4 s |
| Sensor types | Pt100 |
| Temperature range | -200 ... +850 °C |
| Supply voltage (system) | 5 VDC; via data contacts |
| Current consumption (5 V system supply) | 80 mA |
| Isolation | 500 V system/field |

Technical data

| | |
|------------|---|
| Indicators | LED (A, C) green: Function AI 1, AI 2; LED (B, D) red: Error AI 1, AI 2 |
|------------|---|

Connection data

| | |
|---------------------------------------|--|
| Connection technology: inputs/outputs | 8 x CAGE CLAMP® |
| Connection type 1 | 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 |
|---------------|-------------|

Material data

| | |
|--------------------|------------------------------|
| Color | light gray |
| Housing material | Polycarbonate; polyamide 6.6 |
| Fire load | 1.034 MJ |
| Weight | 50.7 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 (standing/lying); vertical |
| 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) |
| eCl@ss 10.0 | 27-24-26-01 |
| eCl@ss 9.0 | 27-24-26-01 |
| ETIM 8.0 | EC001596 |
| ETIM 7.0 | EC001596 |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4045454486679 |
| Customs tariff number | 85389099990 |

Environmental Product Compliance

| | |
|---|--------------------------------------|
| CAS-No. | 1317-36-8 7439-92-1 |
| REACH Candidate List Substance | 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) | 75429670-35e3-4569-a32e-8e020348f292 |
| SCIP notification number (Belgium) | bc0715bd-bcab-4da3-92dc-0865a4afe4d8 |
| SCIP notification number (Bulgaria) | e74b48b1-9cb8-41f2-8ffb-42980ae09654 |
| SCIP notification number (Czech Republic) | 606ce528-9956-410f-8b46-09b4bb84b033 |
| SCIP notification number (Denmark) | 0b1c8695-17df-469a-8d76-27e5dfedd880 |
| SCIP notification number (Finland) | e9157e84-07c5-404f-be1e-fee97dad9dd1 |
| SCIP notification number (France) | e1650623-f1de-4481-9923-0b1cfed3eda0 |
| SCIP notification number (Germany) | 3e718a18-6d86-4b76-970f-a5da6282c797 |
| SCIP notification number (Hungary) | 5f27b834-6bd0-46cf-bd12-62d975caf481 |
| SCIP notification number (Italy) | 1fca87de-4bb2-4af1-8393-eac58bcfa30e |
| SCIP notification number (Netherlands) | 62be64b0-d628-49d4-bc55-65fcd4e4702f |
| SCIP notification number (Poland) | 3ba89961-35de-4aa7-b416-65eebc778cf1 |
| SCIP notification number (Romania) | e5a6ca0d-b02c-40a5-9ac0-ce77d43350d5 |
| SCIP notification number (Sweden) | 79fbe2b1-5c4e-4fe3-9706-7fdd31324fb0 |

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|---|------------------------|---------------------------------|
| EAC Brjansker Zertifizierungs- stelle | TP TC 020/2011 | EAC RU C-DE.AM02. B.00087/19 |
| KC National Radio Research Agency | Article 58-2, Clause 3 | MSIP-REM-W43-AIM750 |
| UL Underwriters Laboratories Inc. (ORDINARY LOCATI- ONS) | UL 508 | E175199 Sec.1 |

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 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/2236/880590/19 |
| 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) |
| EAC Brjansker Zertifizierungsstelle | TP TC 012/2011 | EAC RU C-DE.AM02. B.00163/19 (2Ex nA IIC T4 Gc X) |
| IECEX TUEV Nord Cert GmbH | IEC 60079-0 | IECEX TUN 14.0035 X (Ex ec IIC T4 Gc) |
| INMETRO TUV Rheinland do Brasil Ltda. | IEC 60079-0 | BR-Ex_TUV 12.1297 X |
| UKEx WAGO GmbH & Co. KG | EN 60079-0 | UKCA_WA GO22UKEX003X_ec |
| UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201 | E198726 Sec.1 |

Downloads

Environmental Product Compliance

| Compliance Search |
|--|
| Environmental Product Compliance 750-461 ↓ |

Documentation

| Manual | | | |
|--|-----------------------|-------------------|-------------------|
| Product Manual 2-channel Analog Input for Resistance Sensors | V 1.4.1 | pdf 2916.84 KB | ↓ |
| System Manual WAGO I/O System 750/753 | V 3.3.3 29.08.2023 | pdf 8512.61 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 | | | |
|-------------------------|------------|-----------------|-------------------|
| 750-461 | 19.02.2019 | xml 4.58 KB | ↓ |
| 750-461 | 20.10.2017 | doc 28.00 KB | ↓ |
| ausschreiben.de 750-461 | | | ↓ |

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

CAD/CAE-Data

| CAD data | CAE data |
|----------------------|---------------------------|
| 2D/3D Models 750-461 | EPLAN Data Portal 750-461 |
| | WSCAD Universe 750-461 |
| | ZUKEN Portal 750-461 |

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

1.1.2.2 Marker

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

1.1.2.3 Marker carrier

| |
|--|
|  <p>Item No.: 750-103 Group marker carrier</p> |
|--|

1.1.3 Shield termination

1.1.3.1 Shield clamping saddles

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

1.1.4 System enclosure

1.1.4.1 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