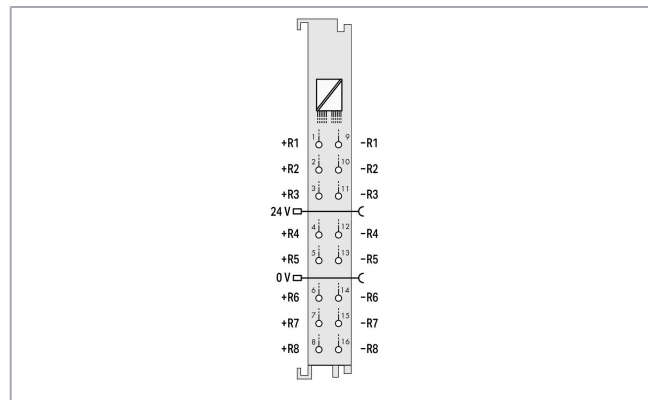
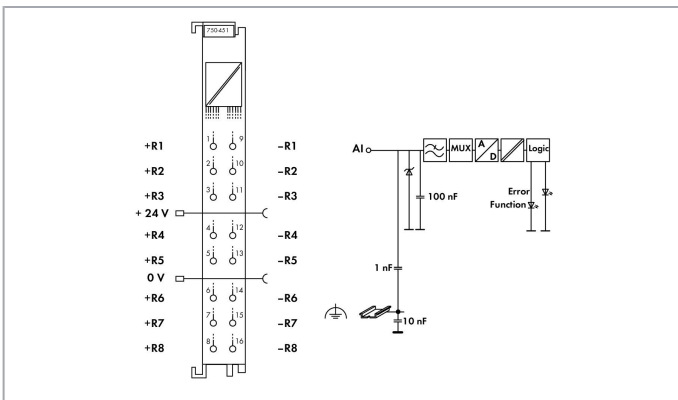
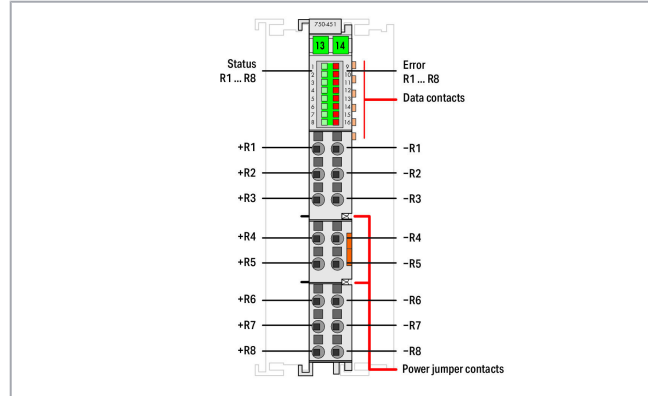
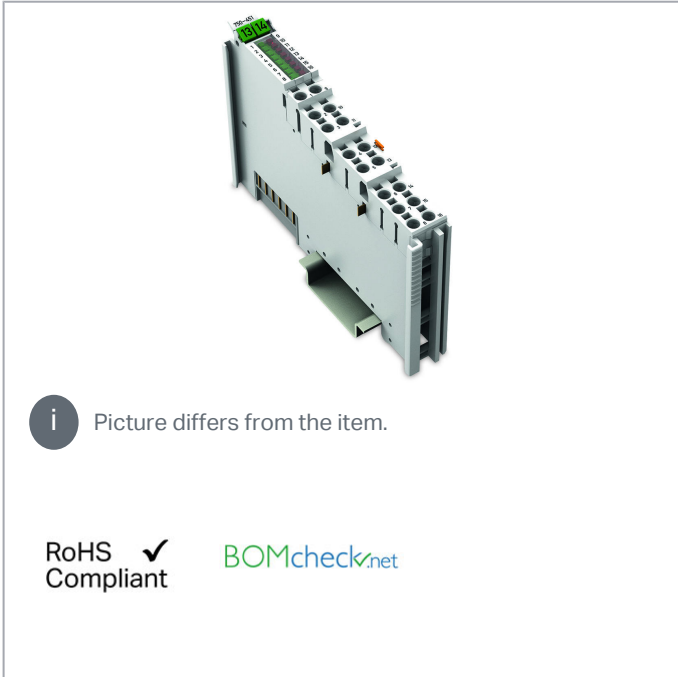


Data sheet | Item number: 750-451/025-000

8-channel analog input; Resistance measurement; Adjustable; Ext. Temperature; -

www.wago.com/750-451/025-000



Item description

This analog input module directly connects to Pt or Ni resistance sensors.

Two-wire sensors can be connected.

The module automatically linearizes the entire temperature range. A sensor error (short circuit, wire break or out-of-measurement range) is indicated by a red LED. Unused channels can be deactivated.

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

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Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



The module can be configured via WAGO-I/O-CHECK or GSD files.

It features multiple setting options and high accuracy.

Data

Technical data

| | |
|--|--|
| Number of analog inputs | 8 |
| Total number of channels (module) | 8 |
| Signal type | Resistance measurement Potentiometer positions |
| Signal type (configurable) | yes |
| Sensor connection | 8 x (2-wire) |
| Data width | 8 x 16-bit data; 8 x 8-bit control/status (optional) |
| Resolution (over entire range) | 0.1 °C (over the entire range); 0.01 °C (-50 ... 150 °C; Pt1000, Ni1000) |
| Conversion time (typ.) | 100 ms |
| Measurement error (25 °C) | ≤ ±0.6 K (Pt100, Pt200, Pt500, Ni100, Ni120); ≤ ±0.2 K (Pt1000, Ni1000); ≤ ±0.3 Ω for resistance measurement |
| Measured current (typ.) | ≤ 350 µA |
| Response time (max.) | 3 s |
| Sensor types | Pt100; Configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000 (TK6180 + TK5000), Potentiometer: 10R ... 1k2, 10R ... 5k0 |
| Temperature range | -200 ... +850 °C (Pt100, Pt200, Pt500, Pt1000), -60 ... +250 °C (Ni100, Ni1000), -80 ... +260 °C (Ni120) |
| Supply voltage (system) | 5 VDC; via data contacts |
| Power consumption (5 V system supply) | 110 mA |
| Supply voltage (field) | 24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact) |
| Isolation | 500 V system/field |
| Number of incoming power jumper contacts | 2 |
| Number of outgoing power jumper contacts | 2 |

Connection data

| | |
|---------------------------------------|--|
| Connection technology: inputs/outputs | 16 x Push-in CAGE CLAMP® |
| Connection type (1) | Inputs/Outputs |
| Solid conductor | 0.08 ... 1.5 mm ² / 28 ... 16 AWG |
| Fine-stranded conductor | 0.25 ... 1.5 mm ² / 22 ... 16 AWG |
| Strip length | 8 ... 9 mm / 0.31 ... 0.35 inch |

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



Physical data

| | |
|-----------------------------------|----------------------|
| Width | 12 mm / 0.472 inch |
| Height | 100 mm / 3.937 inch |
| Depth | 69 mm / 2.717 inch |
| Depth from upper edge of DIN-rail | 61.8 mm / 2.433 inch |

Mechanical data

| | |
|---------------|-------------|
| Mounting type | DIN-35 rail |
|---------------|-------------|

Material data

| | |
|--------------------|------------------------------|
| Housing material | Polycarbonate; polyamide 6.6 |
| Fire load | 0.819 MJ |
| Weight | 49 g |
| Conformity marking | CE |

Environmental requirements

| | |
|--|---|
| Surrounding air temperature (operation) | -20 ... 60 °C |
| Surrounding air temperature (storage) | -40 ... 85 °C |
| Protection type | IP20 |
| Pollution degree (5) | 2 per IEC 61131-2 |
| Operating altitude | 0 ... 2000 m |
| Mounting position | horizontal (standing/lying); vertical |
| Relative humidity (without condensation) | 95 % |
| Relative humidity (with condensation) | Short-term condensation per Class 3K6/IEC EN 60721-3-3 and E-DIN 40046-721-3, accounting for a temperature range of -20 to +60 °C (except for wind-driven precipitation, water and ice formation) |
| Vibration resistance | 4g per IEC 60068-2-6 |
| Shock resistance | 15g per IEC 60068-2-27 |
| EMC immunity to interference | per EN 61000-6-1; EN 61000-6-2 |
| EMC emission of interference | per EN 61000-6-3 |
| 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 |

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

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Commercial data

| | |
|-----------------------|---------------|
| Packaging type | BOX |
| Country of origin | DE |
| GTIN | 4055143603966 |
| Customs tariff number | 85389099990 |








Approvals / Certificates

Country specific Approvals

















| Logo | Approval | Additional Approval Text | Certificate name |
|--|--------------------------------------|--------------------------|-----------------------------|
|  | KC National Radio Research Agency | Article 58-2, Clause 3 | MSIP- REM-W43- AIM750 |

Compatible products

system box

| | | |
|--|---|--|
|  | Item no.: 850-804 IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip | www.wago.com/850-804 |
|  | Item no.: 850-804/000-001 IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip | www.wago.com/850-804/000-001 |
|  | Item no.: 850-805 IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip | www.wago.com/850-805 |
|  | Item no.: 850-814/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate | www.wago.com/850-814/002-000 |
|  | Item no.: 850-815/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate | www.wago.com/850-815/002-000 |
|  | Item no.: 850-816/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate | www.wago.com/850-816/002-000 |
|  | Item no.: 850-817/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate | www.wago.com/850-817/002-000 |

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

| | | |
|--|--|--|
|  | Item no.: 850-825 IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20 | www.wago.com/850-825 |
|  | Item no.: 850-826 IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip | www.wago.com/850-826 |
|  | 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 | www.wago.com/850-826/002-000 |
|  | Item no.: 850-827 IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip | www.wago.com/850-827 |
|  | 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 | www.wago.com/850-827/002-000 |
|  | Item no.: 850-828 IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip | www.wago.com/850-828 |
|  | 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 | www.wago.com/850-828/002-000 |
|  | Item no.: 850-834 IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20 | www.wago.com/850-834 |
|  | Item no.: 850-835 IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip | www.wago.com/850-835 |
|  | Item no.: 850-836 IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip | www.wago.com/850-836 |
| shield connection | | |
|  | Item no.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm | www.wago.com/790-108 |
|  | Item no.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm | www.wago.com/790-116 |
|  | Item no.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm | www.wago.com/790-124 |
|  | Item no.: 790-140 Shield clamping saddle; diameter of compatible conductor | www.wago.com/790-140 |
|  | Item no.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm | www.wago.com/790-208 |
|  | Item no.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm | www.wago.com/790-216 |

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



Item no.: 790-220


Shield clamping saddle; 30 mm wide; 6 ... 20 mm

www.wago.com/790-220



Carrier rail

| | | |
|--|--|--|
|  | 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 | www.wago.com/210-112 |
|  | 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 | www.wago.com/210-113 |
|  | 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 | www.wago.com/210-114 |
|  | 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 | www.wago.com/210-115 |
|  | 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 | www.wago.com/210-118 |
|  | 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 | www.wago.com/210-196 |
|  | 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 | www.wago.com/210-197 |
|  | 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 | www.wago.com/210-198 |
|  | 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 | www.wago.com/210-504 |
|  | 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 | www.wago.com/210-505 |
|  | 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 | www.wago.com/210-506 |
|  | 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 | www.wago.com/210-508 |

tools














| | | |
|--|---|--|
|  | Item no.: 210-719 Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft | www.wago.com/210-719 |
|--|---|--|

Marking accessories

| | | |
|--|--|--|
|  | Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | www.wago.com/2009-145 |
|  | 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; | www.wago.com/2009-145/000-002 |

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

yellow

| | | |
|--|---|--|
|  | 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 | www.wago.com/2009-145/000-005 |
|  | 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 | www.wago.com/2009-145/000-006 |
|  | 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 | www.wago.com/2009-145/000-007 |
|  | 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 | www.wago.com/2009-145/000-012 |
|  | 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 | www.wago.com/2009-145/000-023 |
|  | 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 | www.wago.com/2009-145/000-024 |
|  | Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card | www.wago.com/248-501 |
|  | Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow | www.wago.com/248-501/000-002 |
|  | Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red | www.wago.com/248-501/000-005 |
|  | Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue | www.wago.com/248-501/000-006 |
|  | Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray | www.wago.com/248-501/000-007 |
|  | Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange | www.wago.com/248-501/000-012 |
|  | Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green | www.wago.com/248-501/000-017 |

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



Item no.: 248-501/000-023
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

www.wago.com/248-501/000-023



Item no.: 248-501/000-024
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

www.wago.com/248-501/000-024



Item no.: 750-103
Group marker carrier; transparent

www.wago.com/750-103



Item no.: 750-107
Group marker carrier; transparent

www.wago.com/750-107

Downloads

Documentation

Manual

| | | | |
|--|-----------------------|---------------|----------|
| 8 AI RTD, Configurable 8-Channel Analog Input Module for Resistance Sensors, Configurable | V 1.2.0 | pdf 4.0 MB | Download |
| Systemhandbuch WAGO I/O System 750 / 753 Dezentrale Automatisierungstechnik | V 3.0.0 4. 3. 2021 | pdf 6.6 MB | Download |

System Description

| | | | |
|---|--|-----------------|----------|
| 750/753 Series I/O-System – General Product Information | | pdf 1.7 MB | Download |
| Overview on WAGO-I/O-SYSTEM 750 approvals | | pdf 780.2 kB | Download |

Additional Information

| | | | |
|--|---------|-----------------|----------|
| Disposal; Electrical and electronic equipment, Packaging | V 1.0.0 | pdf 265.8 kB | Download |
|--|---------|-----------------|----------|

Environmental Product Compliance

Compliance Search

| | | | |
|---|--|-----|----------|
| Environmental Product Compliance 750-451/025-000 8-channel analog input; Resistance measurement; Adjustable; Ext. Temperature; - | | URL | Download |
|---|--|-----|----------|

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



Installation Notes

Product family

750/753 Series I/O System

Show all products from the family

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

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