

Data sheet | Item number: 750-479

2-channel analog input; ± 10 VDC; Differential input

www.wago.com/750-479



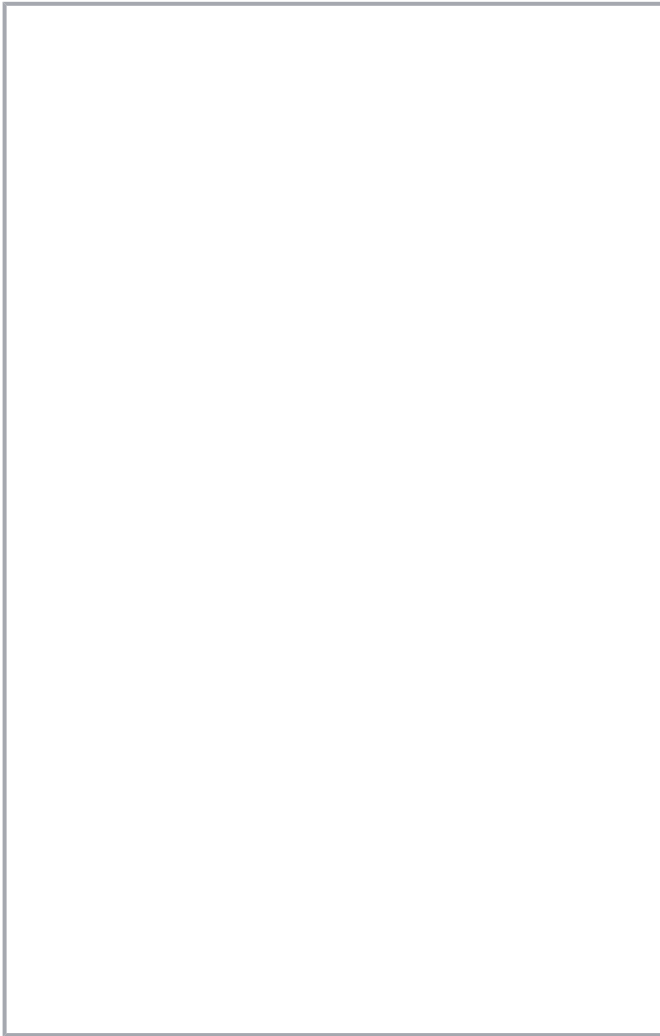
Color:



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

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Email: info.de@wago.com | Web: www.wago.com

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Item description

This analog input module processes differential ± 10 VDC signals.

The input signal of each channel is electrically isolated and is transmitted with a resolution of 13 bits.

The system supply powers the module.

The shield directly connects to the DIN-rail.

- Measured value acquisition: Time synchronous within the module
- Measurement range overflow/underflow: Status byte and LED
- Conversion method: SAR (Successive Approximation Register)
- Operating mode: Continuously sampling (default)
- Protection: RC circuit

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Data

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 filter | Low pass (1st order), $f_G = 5$ kHz |
| Signal characteristics | Differential |
| Resolution [bit] | 14 bits |
| Operating mode | Continuously sampling (default) |
| Data width | 2 x 16-bit data; 2 x 8-bit control/status (optional) |
| Protection | RC circuit |
| Admissible continuous overload | 60 V |
| Crosstalk attenuation | 80 dB |
| Monotonicity without error code | yes |
| Internal resistance | 1000 k Ω |
| Measurement error (reference temperature) | 25 °C |
| Measurement error, deviation (max.) from the upper-range value | 0.05 % |
| Measurement error over entire temperature range | ≤ 0.4 % |
| Temperature error (max.) of the upper-range value | 0.01 %/K |
| Sampling duration | 5 μ s |
| Sampling delay (channel/channel) | 1 μ s |
| Sampling delay (module) | 1 ms |
| Sampling repetition time | 1 ms |
| Measurement range overflow/underflow | Status byte and LED |
| Measured value acquisition | Time synchronous within the module |
| Value of the least significant bit (LSB) | 1.2 mV |
| Conversion method | SAR (Successive Approximation Register) |
| Supply voltage (system) | 5 VDC; via data contacts |
| Current consumption (5 V system supply) | 100 mA |
| Isolation | 500 V system/field or channel/channel |
| Indicators | LED (A, C) green: Function AI 1, AI 2; LED (B, D) red: Error AI 1, AI 2 |

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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 | 49.6 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 |

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| | |
|--|---------------------------------------|
| 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 |
| Recupel Type | |
| PU (SPU) | 1 pcs |
| Packaging type | box |
| Country of origin | DE |
| GTIN | 4045454510237 |
| Customs tariff number | 8538909990 |

Environmental Product Compliance

| | |
|---|--------------------------------------|
| CAS-No. | 7439-92-1 |
| REACH Candidate List Substance | Lead |
| RoHS Compliance Status | Compliant, With Exemption |
| RoHS Exemption | 6(c) 7(a) 7(c)-I 7(c)-II |
| SCIP notification number (Austria) | 02f6a6aa-3fe1-453a-b931-7ebd9af910c5 |
| SCIP notification number (Belgium) | 2ed53dde-cdf6-4fd3-9364-dfa45eeba796 |
| SCIP notification number (Bulgaria) | 6527ae40-28ff-4e6c-a9a3-384d0d9fa413 |
| SCIP notification number (Czech Republic) | b5df8ac8-d901-48a4-9a18-b7011a876218 |
| SCIP notification number (Denmark) | 23f4ec6b-587d-4839-9274-8c3c62216666 |
| SCIP notification number (Finland) | c751e229-9550-485d-9490-fa0bb21edf05 |
| SCIP notification number (France) | 935f37c9-916f-46ca-8e17-7123db0ccea0 |
| SCIP notification number (Germany) | 68e2a886-0541-4aa4-a51c-351347ea478a |
| SCIP notification number (Hungary) | 8d402b6a-5eb2-43bc-94fa-0d2d9b9100db |
| SCIP notification number (Italy) | 3e3584ba-d8ef-4d40-ae54-6e58ae017f9f |

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| | |
|--|--------------------------------------|
| SCIP notification number (Netherlands) | 3b2f0f49-86f7-47c2-8f5f-2050095e1a65 |
| SCIP notification number (Poland) | 5b0131db-9cb4-4391-8c6c-a70a0d78c102 |
| SCIP notification number (Romania) | 5ca1287a-a10c-4e4b-9f81-1e8e3733bb58 |
| SCIP notification number (Sweden) | cca9294f-316d-412b-a803-6582e4253655 |

Approvals / Certificates

General approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|------|--|--------------------------|-----------------------------|
| | EAC Brjansker Zertifizierungsstelle | 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 LOCATIONS) | UL 508 | E175199 Sec.1 |

Declarations of conformity and manufacturer's declarations

| Logo | Approval | Additional Approval Text | Certificate name |
|------|---|--------------------------|------------------|
| | EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |
| | UK-Declaration of Conformity WAGO GmbH & Co. KG | - | - |

Approvals for marine applications

| Logo | Approval | Additional Approval Text | 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 | - | TE/2236/880590 |

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RINA

-

ELE343521XG001

RINA Germany GmbH

Approvals for hazardous areas

| Logo | Approval | Additional Approval Text | 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 TÜV Rheinland do Brasil Ltda. | IEC 60079-0 | BR-Ex_TÜV 12.1297 X |
| | UKEx WAGO GmbH & Co. KG | EN 60079-0 | UKCA_WAGO22UKEX003X_ec |
| | UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201 | E198726 Sec.1 |

Optional accessories**System housing**

System enclosure

| | |
|--|--|
| 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 |
| 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 | |

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| | |
|--|--|
| 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.: 850-827 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.: 850-826/002-000 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.: 850-828/002-000 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.: 850-828 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.: 850-834 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 |

Carrier rail

Mounting accessories

| | |
|---|--|
| 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 |

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| | |
|--|--|
| 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.: 210-118 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.: 210-112 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.: 210-114 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.: 210-196 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 |
| Marking accessories | |
| Marker carrier | |
| Item no.: 750-103 Group marker carrier | www.wago.com/750-103 |
| Marker | |
| 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 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; yellow | www.wago.com/2009-145/000-002 |
| 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.: 2009-145/000-005 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.: 2009-145/000-012 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 |

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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.: 248-501/000-006

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.: 248-501/000-002

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

www.wago.com/248-501/000-002

Item no.: 248-501/000-012

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

www.wago.com/248-501/000-012

Item no.: 248-501

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

www.wago.com/248-501

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

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.: 248-501/000-024

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

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

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.: 750-100

Marker card; as a DIN A4 sheet; plain

www.wago.com/750-100

Group marker carrier

Item no.: 750-106

Group marker carrier

www.wago.com/750-106

Shield termination

Shield clamping saddles

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

www.wago.com/790-124

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Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm

Item no.: 790-108

Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm

www.wago.com/790-108**Item no.: 790-140**

Shield clamping saddle; diameter of compatible conductor

www.wago.com/790-140**Item no.: 790-216**

Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm

www.wago.com/790-216**Item no.: 790-220**

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

www.wago.com/790-220**Item no.: 790-208**

Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

www.wago.com/790-208**Downloads****Documentation****Manual**

| | | | |
|--|-------------------------|---------------|----------|
| System Manual WAGO I/O System 750/753 Decentralized Automation Technology | V 3.3.3 2023 年8月29 日 | pdf 8.7 MB | Download |
| Product Manual 2-channel, ± 10VDC Differential measuring input | V 1.1.0 | pdf 2.0 MB | Download |
| System Manual Series 750/753 Online HTML | | URL | Download |

Bid Text

| | | | |
|------------------------|---------------|----------------|----------|
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Instruction Leaflet

| | | | |
|--|--------------|-----------------|----------|
| CCC Ex (Additional information) WAGO-I/O-SYSTEM *750-****/* | 2023 年4月26 日 | pdf 163.6 kB | Download |
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System Description

| | | | |
|---|--|-----------------|----------|
| 750/753 Series I/O-System – General Product Information | | pdf 976.2 kB | Download |
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Overview on WAGO-I/O-SYSTEM 750 approvals

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2-channel analog input; ± 10 VDC; Differential input

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Product family

WAGO I/O System 750/753

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