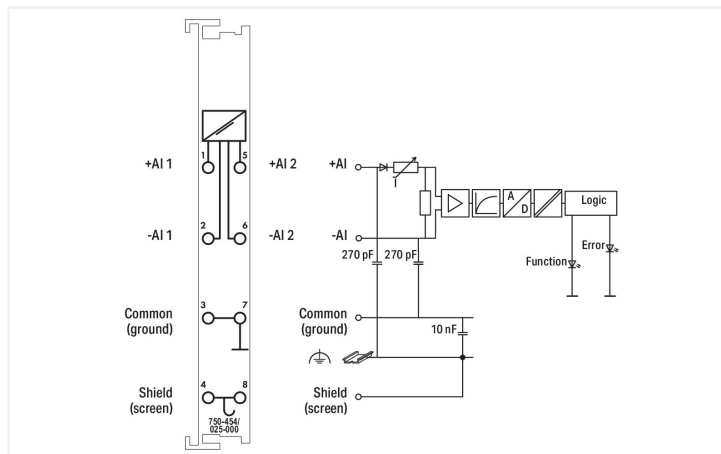


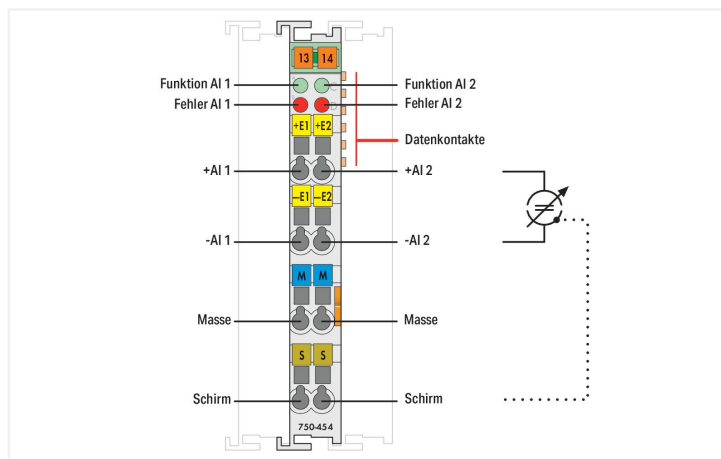
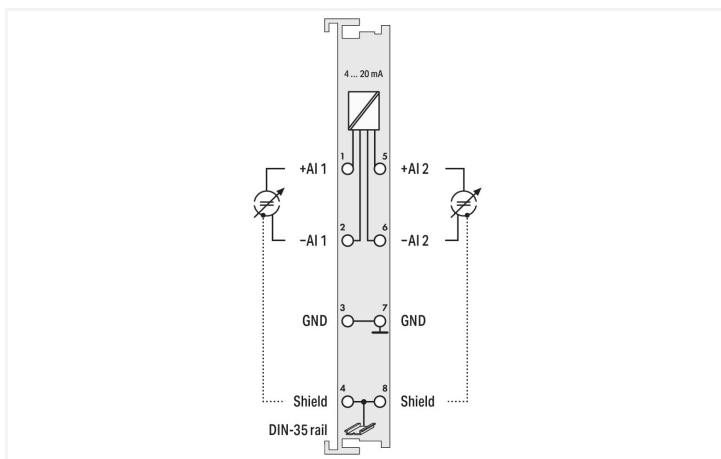
# Data Sheet | Item Number: 750-454/025-003

2-channel analog input; 4 ... 20 mA; Differential input; Extend. measurement range;  
Ext. Temperature

<https://www.wago.com/750-454/025-003>



Similar to illustration



This analog input module processes standard 4–20 mA 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  | Current  |
| Signal type (current)  | 3.8 ... 20.5 mADC                                    |
| Sensor connection  | 2 x (2-wire)   |
| Input voltage (max.)   | 35 V   |
| Signal characteristics   | Differential   |
| Resolution [bit]   | 12 bits  |
| Input resistance (max.)  | 220 Ω  |
| Data width   | 2 x 16-bit data; 2 x 8-bit control/status (optional) |
| 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              | 0.01 %/K   |
| Supply voltage (system)  | 5 VDC; via data contacts                             |
| Current consumption (5 V system supply)                        | 70 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 <sup>2</sup> / 28 ... 14 AWG |
| Fine-stranded conductor               | 0.08 ... 2.5 mm <sup>2</sup> / 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

|                    |                              |
|--------------------|------------------------------|
| Housing material   | Polycarbonate; polyamide 6.6 |
| Fire load          | 0.998 MJ                     |
| Weight             | 51 g                         |
| Conformity marking | CE                           |

### Environmental requirements

|  |   |
|--|---|
| Ambient temperature (operation)  | -20 ... +60 °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 %  |
| 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 61000-6-2, 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) |
| 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                  | 4050821701866   |
| Customs tariff number | 85389099990     |

### 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)        | f254c191-3c10-468b-a68c-fbcba6eebadc  |
| SCIP notification number (Belgium)        | 9fd6b1f9-2783-437f-95f0-6df51ec12415  |
| SCIP notification number (Bulgaria)       | 3ffc70c1-ef7c-4c8a-a797-acf9be821146  |
| SCIP notification number (Czech Republic) | 80841cad-de7b-4d38-96f8-509bc241a905  |
| SCIP notification number (Denmark)        | 52117fe2-3036-4a67-91a5-a7f860e6bf66  |
| SCIP notification number (Finland)        | 353f4d70-5cc7-4e25-b96f-1dbdda2e3a8c  |
| SCIP notification number (France)         | 6afa6a3a-028f-446a-b182-4ab586e208f1  |
| SCIP notification number (Germany)        | 949123ba-bfee-4535-8490-5adc69cb0fda  |
| SCIP notification number (Hungary)        | 25e617f3-5b2e-48af-b632-671678567ef8  |
| SCIP notification number (Italy)          | 222d4c1f-62b1-4d44-841d-922c8af6f973  |
| SCIP notification number (Netherlands)    | 07f26a2f-68d1-4cbb-b37f-83423a87f3ac  |
| SCIP notification number (Poland)         | 7e0d03e3-d93c-4074-9e5b-2dbddeb9784f  |
| SCIP notification number (Romania)        | c62e0eda-e273-4b0b-a97e-7c36a2167cd9  |
| SCIP notification number (Sweden)         | ac560b56-6fea-4322-8829-92bf4a1a6af7  |

### Approvals / Certificates

#### General approvals



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

#### Declarations of conformity and manufacturer's declarations

| Approval  | Standard | Certificate Name |
|---|----------|------------------|
| EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG | -        | -                |
| UK-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG | -        | -                |

Approvals for marine applications



| Approval  | Standard | Certificate Name |
|---|----------|------------------|
| BSH<br>Bundesamt fuer See-<br>schifffahrt und Hydrogra-<br>phie | -        | 1104             |

Approvals for hazardous areas

PTB  
0102



ERC  
Ex

IECEX



| Approval   | Standard       | Certificate Name  |
|--|----------------|---|
| ATEX<br>TUEV Nord Cert GmbH  | EN 60079-0     | TUEV14ATEX148929X (II<br>3 G Ex ec IIC T4 Gc)           |
| CCCEX<br>CQST/CNEx   | CNCA-C23-01    | 2020312310000213 (Ex<br>ec IIC T4 Gc)                   |
| EAC<br>Brjansker Zertifizierungs-<br>stelle                        | TP TC 012/2011 | EAC RU C-DE.AM02.<br>B.00163/19 (2Ex nA IIC T4<br>Gc X) |
| IECEX<br>TUEV Nord Cert GmbH                                       | IEC 60079-0    | IECEX TUN 14.0035 X (Ex<br>ec IIC T4 Gc)                |
| INMETRO<br>TUV Rheinland do Brasil<br>Ltda.                        | IEC 60079-0    | BR-Ex_TUV 12.1297 X                                     |
| UKEx<br>WAGO GmbH & Co. KG   | EN 60079-0     | UKCA_WA<br>GO22UKEX003X_ec                              |
| UL<br>Underwriters Laboratories<br>Inc. (HAZARDOUS LOCA-<br>TIONS) | UL 121201      | E198726 Sec.1   |

Downloads

Environmental Product Compliance

| Compliance Search  |
|--|
| Environmental Product<br>Compliance<br>750-454/025-003 <a href="#">↓</a> |

Documentation

| Manual                                      |                       |                   |                   |
|---|-----------------------|-------------------|-------------------|
| System Manual WAGO<br>I/O System 750/753    | V 3.3.3<br>29.08.2023 | pdf<br>8512.61 KB | <a href="#">↓</a> |
| System Manual Series<br>750/753             |                       |                   | <a href="#">↓</a> |
| Product Manual 2-<br>channel, 4-20mA, diff. | V 1.2.0               | pdf<br>2029.37 KB | <a href="#">↓</a> |

| System Description   |                  |                   |
|--|------------------|-------------------|
| 750/753 Series I/O-<br>System – General Pro-<br>duct Information | pdf<br>953.35 KB | <a href="#">↓</a> |
| Overview on WAGO-I/<br>O-SYSTEM 750 appro-<br>vals               | pdf<br>770.48 KB | <a href="#">↓</a> |

| Bid Text        |            |                  |                   |
|-----------------|------------|------------------|-------------------|
| 750-454/025-003 | 19.02.2019 | xml<br>4.38 KB   | <a href="#">↓</a> |
| 750-454/025-003 | 17.10.2017 | doc<br>28.50 KB  | <a href="#">↓</a> |
| 750-454/025-003 | 17.10.2017 | docx<br>16.91 KB | <a href="#">↓</a> |

| Instruction Leaflet                  |            |                  |                   |
|--------------------------------------|------------|------------------|-------------------|
| CCC Ex (Additional in-<br>formation) | 26.04.2023 | pdf<br>159.76 KB | <a href="#">↓</a> |

CAD/CAE-Data

**CAD data**

2D/3D Models  
750-454/025-003

**CAE data**

EPLAN Data Portal  
750-454/025-003

WSCAD Universe  
750-454/025-003

ZUKEN Portal  
750-454/025-003

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



**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

1.1.2.2 Marker



**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); 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

### 1.1.4.1 System enclosure



**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