

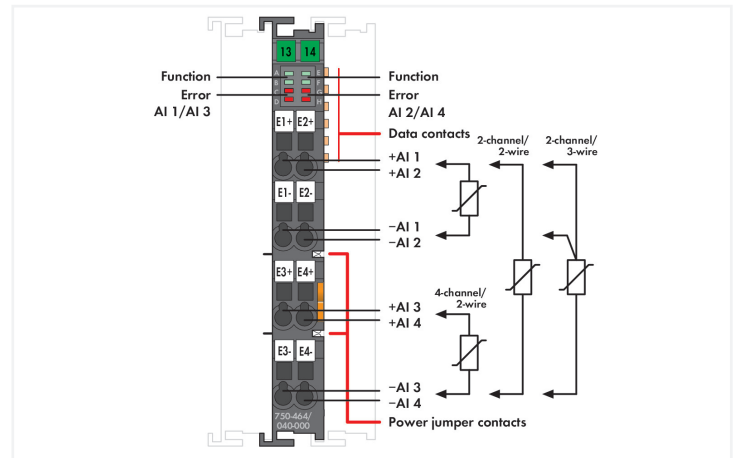
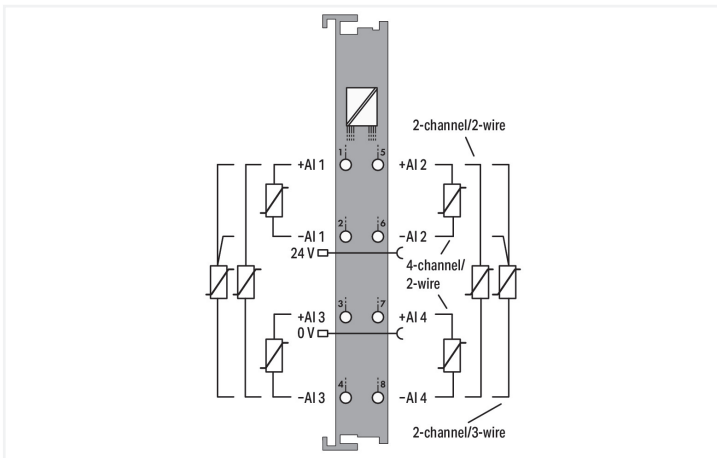
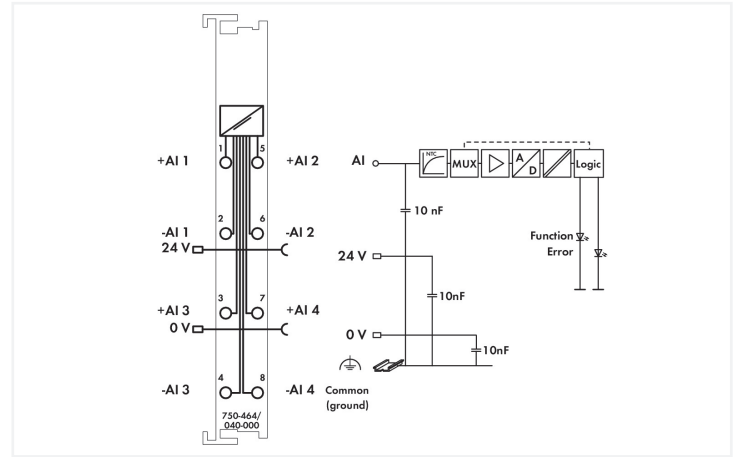
Data Sheet | Item Number: 750-464/040-000

2/4-channel analog input; Resistance measurement; Adjustable; Extreme

<https://www.wago.com/750-464/040-000>



Color: ■ dark gray



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

It can be operated as a 2-channel (2- and 3-wire) or 4-channel (2-wire) module.

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.

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

It features multiple setting options and high accuracy.

The device is ideal for operation in extreme environments thanks to:

- An extended temperature range
- Greater immunity to impulse voltages and electromagnetic interference
- Higher vibration and shock resistance

Technical data

Number of analog inputs	4
Total number of channels (module)	4
Signal type	Resistance measurement Potentiometer positions
Signal type (configurable)	Yes
Sensor connection	4 x (2-wire); 2 x (3-wire)
Data width	4 (2) x 16-bit data; 4 (2) x 8-bit control/status (optional)
Resolution (over entire range)	0.1 °C
Conversion time (typ.)	320 ms
Measurement error (25 °C)	≤ 1 K over entire temperature range, ≤ 0.5 K over limited temperature range (-30 °C ... +120 °C)
Temperature coefficient	≤ 20 ppm/K; typ. ≤ 15 ppm/K
Accuracy (+25 °C)	≤ ± 0.2 % of full scale value; typ.: ≤ ± 0.1 % of full scale value
Measuring current (typ.)	≤ 350 µA per measurement circuit

Technical data

Measurement repetition rate (standard)	1.1 s
Measurement repetition rate (2-channel/2-conductor)	0.63 s
Response time (max.)	4 s
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000 (IEC 751), Ni100, Ni1000 (DIN 43760), Ni120 (Minco), Ni1000 (TK 5000), Potentiometer (2-channel operation only): 10R ... 1k2, 10R ... 5k0
Temperature range	-200 ... +850 °C (Pt), -60 ... +300 °C (Ni 100, Ni 1000), -60 ... +250 °C (Ni 1000 TK5000), -80 ... +260 °C (Ni 120)
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	50 mA
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Dielectric strength	510 VAC / 775 VDC; per EN 60870-2-1
Rated surge voltage	1 kV
Indicators	LED (A, E, B, F) green: Function AI 1 ... AI 4; LED (C, G, D, H) red: Error AI 1 ... AI 4
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	10 A
Derating	Derating (supply voltage): Ambient temperatures under laboratory conditions: (-25 ... +30 %); for -40 ... +55 °C: 24 V (-25 ... +20 %); for +55 ... +70 °C: 24 V (-25 ... +10 %); Lower limit in all temperature ranges: -27.5 % (including 15 % residual ripple)

Connection data

Connection technology: inputs/outputs	8 x CAGE CLAMP®
Connection type 1	Inputs/outputs
Solid conductor	0.25 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.25 ... 2.5 mm ² / 24 ... 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	67.8 mm / 2.669 inches
Depth from upper-edge of DIN-rail	60.6 mm / 2.386 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Color	dark gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.958 MJ
Weight	49.2 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Protection type	IP20
Pollution degree	2 per IEC 61131-2
Operating altitude	without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); 5000 m (max.)
Mounting position	Horizontal left, horizontal up, vertical top and vertical bottom
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Vibration resistance	per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
EMC immunity to interference	per EN 61000-6-1, -2; EN 61131-2; marine applications; EN 50121-3-2; EN 50121-4, -5; EN 60255-26; EN 60870-2-1; EN 61850-3; IEC 61000-6-5; IEEE 1613; VDEW: 1994
EMC emission of interference	per EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5
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	4050821460329
Customs tariff number	85389099990

Environmental Product Compliance

CAS-No.	11120-22-2 1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide Lead silicate Perfluorobutane sulfonic acid (PFBS) and its salts
RoHS Compliance Status	Compliant, With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	bab220f3-b49b-441a-8fd7-48e5982bcd23
SCIP notification number (Belgium)	a161140f-3c02-4860-8be3-4a918e3e9c76
SCIP notification number (Bulgaria)	d91bb5a7-aed1-4363-a08e-c172555b75e5
SCIP notification number (Czech Republic)	e4a9f6a4-6f7a-4061-ae2d-3ffdcfa87f5e
SCIP notification number (Denmark)	97ac303c-0b68-4a0a-b773-1e0b597ba505
SCIP notification number (Finland)	bc8a2508-d83f-494a-9b77-891c17d679d9
SCIP notification number (France)	92c6ffd5-683f-47c9-9303-04f1eb11d07e
SCIP notification number (Germany)	4cafb702-c987-4248-97f9-958392ef1696
SCIP notification number (Hungary)	accee52-5fff-42ed-8c7a-5dd17ddcc41f
SCIP notification number (Italy)	716885ac-4b76-49bb-b148-de234d459afb

Environmental Product Compliance

SCIP notification number (Netherlands)	97a7ba7b-1381-468f-aad2-ef48b5efe4f1
SCIP notification number (Poland)	46ac5db4-0c81-48de-83e4-8ba05ad159b2
SCIP notification number (Romania)	ff97a74b-3b6e-4da5-ad3c-ea4c8bfff58c
SCIP notification number (Sweden)	54824380-7890-40fd-8ea7-ca890161656d

Approvals / Certificates

General approvals **Declarations of conformity and manufacturer's declarations**



Approval	Standard	Certificate Name
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-AIM750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199

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	-	22-2208829-PDA
DNV DNV GL SE	-	TAA00000Y7
LR Lloyds Register	-	LR22276776TA
PRS Polski Rejestr Statków	-	TE/1099/880590/23

Approvals for hazardous areas



Approval	Standard	Certificate Name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV 17 ATEX 193969X (II 3 G Ex ec IIC T4 Gc)
CCC CNEX	CNCA-C23-01	2020312310000214 (Ex ec IIC T4 Gc)
IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 16.0046X (Ex ec IIC T4 Gc)
UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WA GO22UKEX005X_ec
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 750-464/040-000

Documentation

Manual			
Product Manual 2/4AI RTD freely configurable /XTR	V 1.3.1 20.04.2023	pdf 3012.88 KB	↓

System Description		
Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	↓
750 XTR Series I/O-System – General Product Information	pdf 726.09 KB	↓

Bid Text			
750-464/040-000	19.02.2019	xml 7.74 KB	↓
750-464/040-000	28.10.2015	doc 31.50 KB	↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 144.58 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 750-464/040-000	↓

CAE data	
EPLAN Data Portal 750-464/040-000	↓
WSCAD Universe 750-464/040-000	↓
ZUKEN Portal 750-464/040-000	↓

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.: 750-107
Group marker carrier

1.1.2.2 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

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); 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