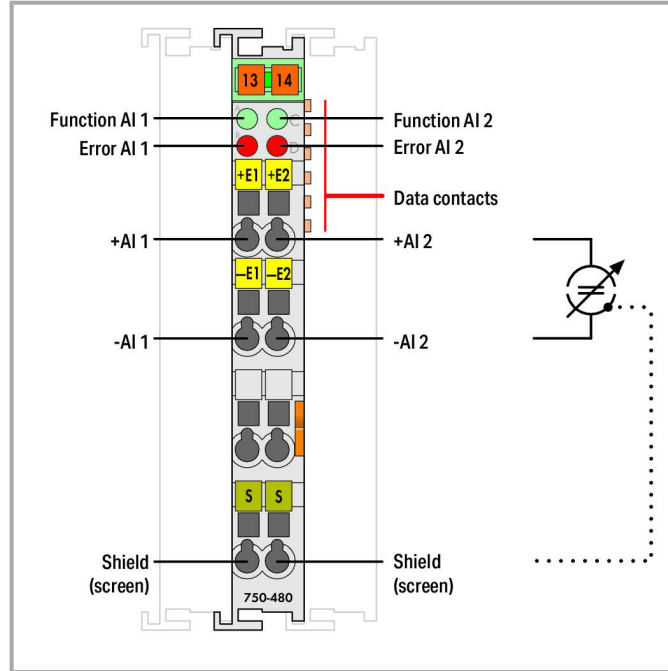# Data sheet | Item number: 750-480

2-channel analog input; 0 … 20 mA; Differential input
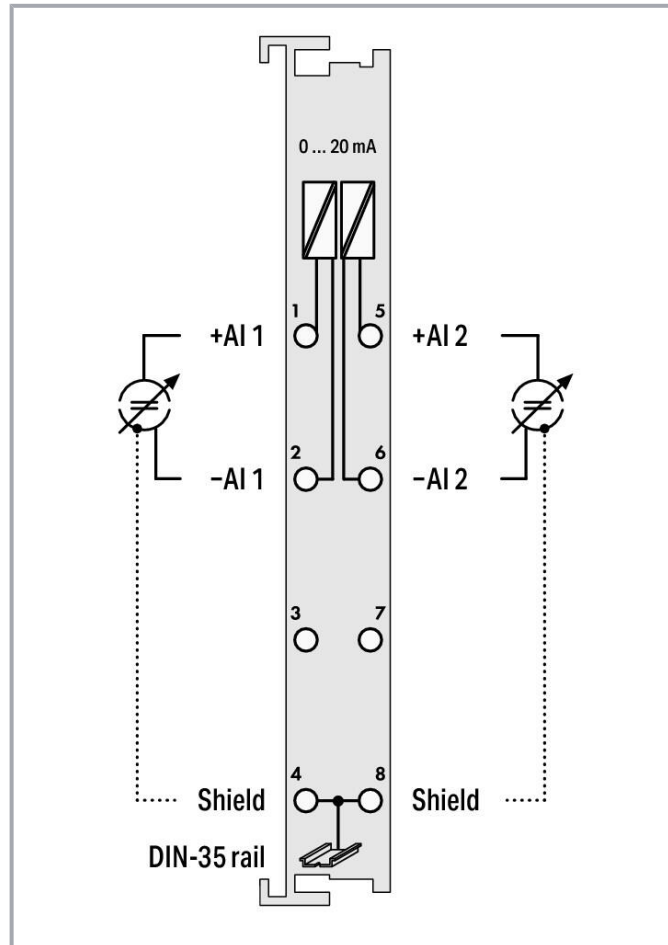
www.wago.com/750-480
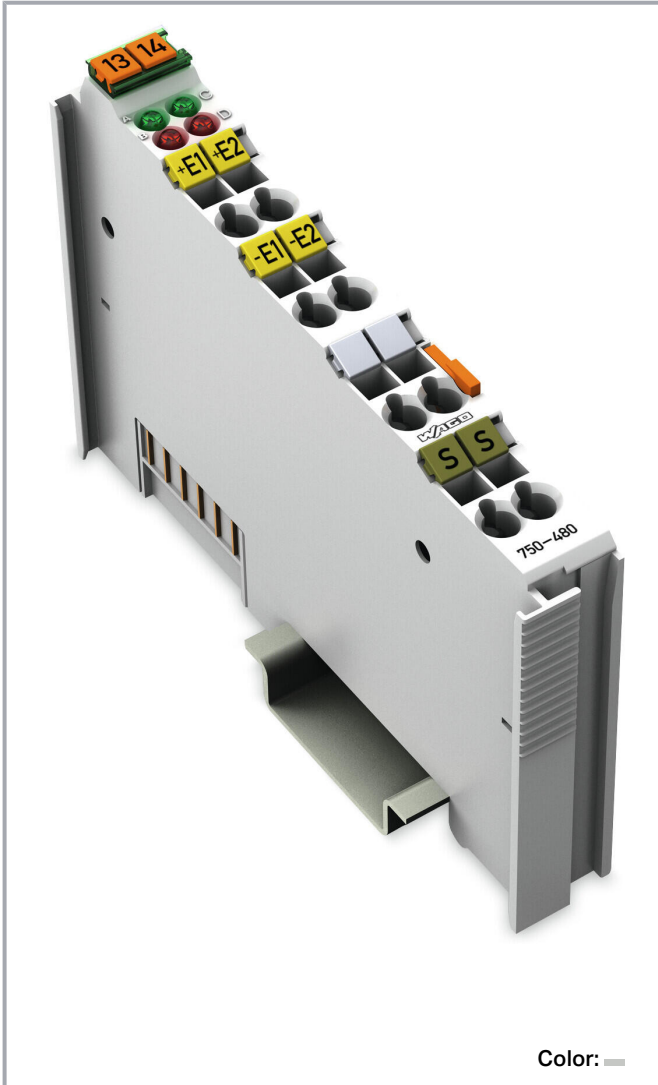
Color: ▬

Function AI 1
Error AI 1
+E1 +E2
+AI 1
−E1 −E2
-AI 1
S S
Shield (screen)

Function AI 2
Error AI 2
Data contacts
+AI 2
-AI 2
Shield (screen)

13 14
750-480

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

Do you have any questions about our products?
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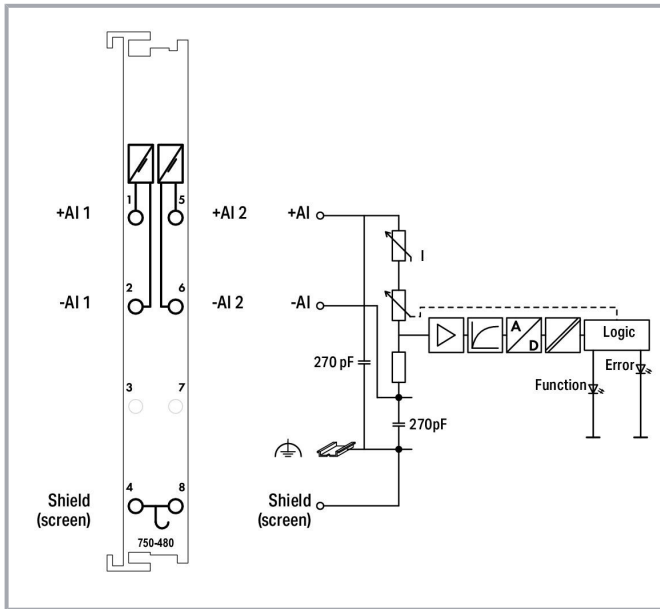
Item description

This 2-channel analog input module processes differential signals ranging from 0 to 20 mA.

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: Non-linear limiting

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

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![WAGO logo]

Data
Technical data

Number of analog inputs	2
Total number of channels (module)	2
Signal type	Current
Signal type (current)	0 … 20 mADC
Sensor connection	2 x (2-wire)
Input filter	Low pass (1st order), f_G = 5 kHz
Signal characteristics	Differential
Resolution [bit]	13 bits
Operating mode	Continuously sampling (default)
Input resistance (max.)	270 Ω
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Protection	Non-linear limiting
Admissible continuous overload	30 V
Crosstalk attenuation	80 dB
Monotonicity without error code	yes
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 µs
Sampling delay (channel/channel)	1 µs
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)	2.4 µA
Conversion method	SAR (Successive Approximation Register)
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	80 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

Connection data

Connection technology: inputs/outputs	8 x CAGE CLAMP®

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Connection type 1	Inputs/Outputs
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 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 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 … +55 °C
Ambient temperature (storage)	-25 … +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	per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2
EMC emission of interference	per EN 61000-6-4
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm

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

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	4045454905293
Customs tariff number	85389099990

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)	252fbcd5-eac0-418e-94f6-ea20e9d3e592
SCIP notification number (Belgium)	c08eae6d-158b-40b2-ac7f-c513421b940e
SCIP notification number (Bulgaria)	1e57d1a1-9112-44ce-a603-9816db89cfb9
SCIP notification number (Czech Republic)	351019e9-af6b-43be-a6d3-df7c39a1ed4e
SCIP notification number (Denmark)	965dd23c-2d03-4f6e-839a-bf4af832cd65
SCIP notification number (Finland)	64fdffae-e9eb-4d61-a141-0c90a65c4a2f
SCIP notification number (France)	349ee65f-aaa9-45b2-80d1-38c116508d43
SCIP notification number (Germany)	dde83db4-fb9c-4b5e-b96e-6143376666b5
SCIP notification number (Hungary)	24de62d0-a0a8-40fb-bf9f-fb26338ca468
SCIP notification number (Italy)	e15055c4-bbb9-452c-a52c-86316816ca1c
SCIP notification number (Netherlands)	c7f49d23-ae13-4a9b-bf25-cb4febdb2bc6
SCIP notification number (Poland)	4fa006be-d4af-4238-9aa3-515e7ca68da8
SCIP notification number (Romania)	4e0475d5-a94c-4230-b54f-85017a5febd4
SCIP notification number (Sweden)	38c7d6ae-e62b-4bf4-8910-2b6dbd70e913

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

Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCC CNEX	CNCA-C23-01	2020312310000213 (Ex ec IIC T4 Gc)
	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 hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV_14_ATEX_148929_X (II 3 G Ex ec IIC T4 Gc)
	CCC 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)

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05.06.2023   Page 6/13
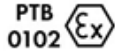
EAC Ex

	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
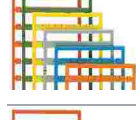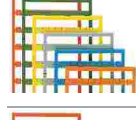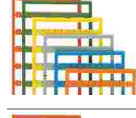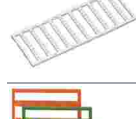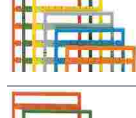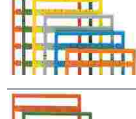
Marking accessories

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
	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

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.: 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

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
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

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| | 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

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
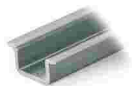Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored — www.wago.com/210-118

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

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

	Item no.: 210-114	www.wago.com/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.: 210-115	www.wago.com/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	
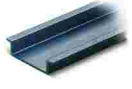
	Item no.: 210-196	www.wago.com/210-196
	Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	

Shield termination

Shield clamping saddles

	Item no.: 790-116	www.wago.com/790-116
	Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 … 16 mm	

	Item no.: 790-124	www.wago.com/790-124
	Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 … 24 mm	

	Item no.: 790-108	www.wago.com/790-108
	Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 … 8 mm	

	Item no.: 790-140	www.wago.com/790-140
	Shield clamping saddle; diameter of compatible conductor	

	Item no.: 790-216	www.wago.com/790-216
	Shield clamping saddle; 21.8 mm wide; 6 … 16 mm	

	Item no.: 790-220	www.wago.com/790-220
	Shield clamping saddle; 30 mm wide; 6 … 20 mm	

	Item no.: 790-208	www.wago.com/790-208
	Shield clamping saddle; 12.4 mm wide; 3 … 8 mm	

Downloads
Documentation

Manual

System Manual WAGO I/O System 750/753	V 3.3.0	pdf	Download
Decentralized Automation Technology	2023 May 4	8.8 MB	

Product Manual 2-channel, 0-20mA	V 1.1.0	pdf	Download
Differential measuring input		2.0 MB	

System Manual Series 750/753		URL	Download
Online HTML			

Bid Text

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| 750-480 | 2019 Feb 19 | xml | Download |
| X81 - Datei | | 4.9 kB | |

| 750-480 | 2017 Oct 17 | doc | Download |
| doc - Datei | | 29.2 kB | |

Instruction Leaflet

| CCC Ex (Additional information) | 2023 Apr 26 | pdf | Download |
| WAGO-I/O-SYSTEM *750-****/* | | 163.6 kB | |

System Description

| Overview on WAGO-I/O-SYSTEM 750 approvals | | pdf | Download |
| | | 789.0 kB | |

| 750/753 Series I/O-System – General Product Information | | pdf | Download |
| | | 1.7 MB | |

Additional Information

| Disposal and Recycling | V 1.1.0 | pdf | Download |
| Electrical and electronic equipment, Batteries, Packaging | 2022 Aug 18 | 2.2 MB | |

CAD/CAE-Data

CAD data

| 2D/3D Models 750-480 | | URL | Download |

CAE data

| EPLAN Data Portal 750-480 | | URL | Download |

| WSCAD Universe 750-480 | | URL | Download |

| ZUKEN Portal 750-480 | | URL | Download |

Device Files

Device Driver

| WAGO USB Service Kabel Treiber / Serie 750 und 857 | 6.5.3.0 | zip | Download |
| | 2014 Sep 10 | 4.8 MB | |

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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-480	URL	Download
2-channel analog input; 0 … 20 mA; Differential input		

Installation Notes

Product family

WAGO I/O System 750/753

Show all products from the family

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