

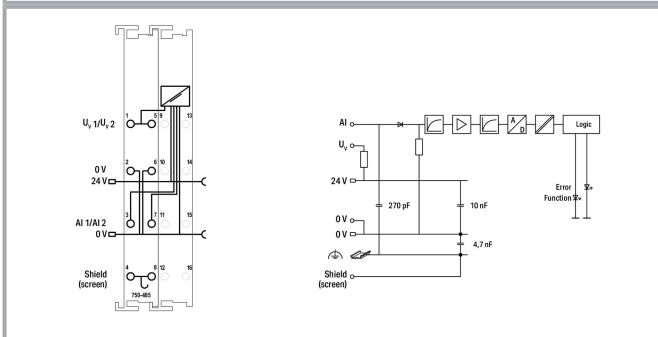
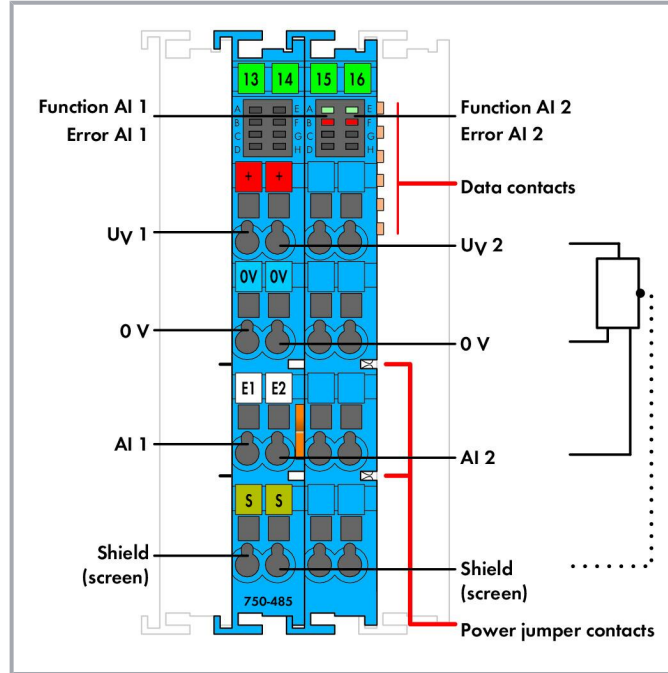
Data sheet | Item number: 750-485

2-channel analog input; 4 ... 20 mA; Single-ended; Intrinsically safe

[www.wago.com/750-485](http://www.wago.com/750-485)



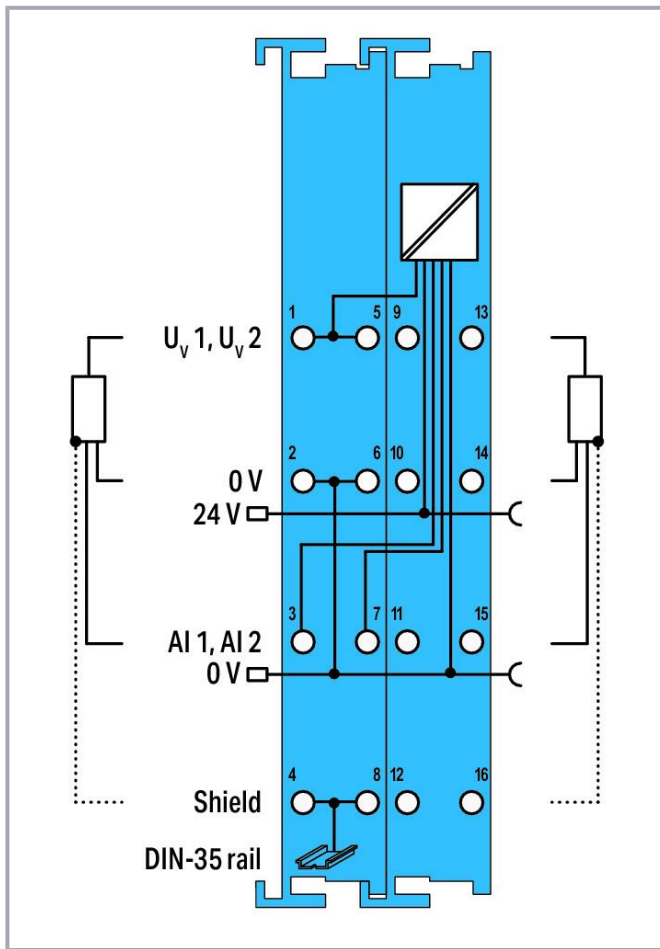
Color: ■



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

WAGO GmbH & Co. KG  
 Hansastr. 27  
 32423 Minden  
 Phone: +49571 887-0 | Fax: +49571 887-169  
 Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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



## Item description

This analog input module powers the intrinsically safe signal conditioners located in the hazardous areas of Zone 0+1 and processes their analog signals.

The WAGO I/O System 750 must be installed either in Zone 2 or in a non-hazardous area.

The 24 V supply is derived from the module's power jumper contacts.

The transmitter supply is non-inherently electronically short-circuit-protected.

The shield directly connects to the DIN-rail.

Indicators:

- Green LED (signal current on/off)
- Red LED (wire breakage, measurement range overflow/underflow)

Field and system levels are electrically isolated.

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

**Data****Notes**

## Note

The analog input module must only be operated via 24 VDC Ex i!

General information (e.g., installation regulations) on explosion protection is available in the WAGO I/O System 750 manuals!

**Technical data**

Number of analog inputs	2
Total number of channels (module)	2
Signal type	Current
Signal type (current)	4 ... 20 mA DC
Supply voltage (sensor)	16 VDC; Transmitter supply $U_V$ at 20 mA
Sensor connection	2 x (3-wire)
Signal characteristics	Single-ended
Resolution [bit]	12 bits
Input resistance (max.)	100 $\Omega$
Power consumption $P_{max}$	1.3 W
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
Intrinsic safety Ex i	yes
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	31 mA
Supply voltage (field)	24 VDC; (Ex i power supply: $U_O = \text{max. } 27.3 \text{ V}$ ); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	11 mA
Power loss $P_I$	0.75 W
Isolation	300 VAC system/field
Indicators	LED (A, E) green: Function AI 1, AI 2; LED (B, F) red: Error AI 1, AI 2
Number of incoming power jumper contacts	2

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

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.



Number of outgoing power jumper contacts	2
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I

### Explosion protection

Ex standard	EN IEC 60079-0, -7, -11
Safety-relevant data (circuit)	$U_o = 27.3 \text{ V}$ ; $I_o = 90 \text{ mA}$ ; $P_o = 0.61 \text{ W}$ ; Linear characteristic curve
Reactances Ex ia IIC	$L_o = 5 \text{ mH}$ ; $C_o = 88 \text{ nF}$
Reactances Ex ia IIB	$L_o = 18 \text{ mH}$ ; $C_o = 680 \text{ nF}$
Reactances Ex ia IIA	$L_o = 40 \text{ mH}$ ; $C_o = 2.2 \text{ }\mu\text{F}$
Reactances Ex ia I	$L_o = 100 \text{ mH}$ ; $C_o = 3.5 \text{ }\mu\text{F}$
Reactances (note)	Reactances without accounting for the concurrence of capacitance ( $C_o$ ) and inductance ( $L_o$ )

### Connection data

Connection technology: inputs/outputs	16 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	24 mm / 0.945 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
---------------	-------------

### Material Data

Color	blue
Housing material	Polycarbonate; polyamide 6.6
Fire load	2.379 MJ

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



Weight	97.6 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	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 61000-6-3, 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	4045454725556
Customs tariff number	85389099990

### Environmental Product Compliance

CAS-No.	11120-22-2 1303-86-2
---------	-------------------------

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

WAGO GmbH & Co. KG  
 Hansastr. 27  
 32423 Minden  
 Phone: +49571 887-0 | Fax: +49571 887-169  
 Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)



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

1317-36-8  
7439-92-1

REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide Lead silicate
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Bulgaria)	5065582b-f270-43af-9e74-f9e23017a7b1
SCIP notification number (Czech Republic)	0170611b-8bdf-4c42-9ac1-72bd32bec088

## Approvals / Certificates



### General approvals

Logo	Approval	Additional Approval Text	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 Sec.1

### Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Ex-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
	BV Bureau Veritas S.A.	-	13453/E0 BV
	DNV	DNV-CG-0339, Aug. 2021	TAA0000194

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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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



DNV GL SE



KR  
Korean Register of Shipping

-

KR HMB05880-  
AC001



LR  
Lloyds Register EMEA

-

LR22180952TA



PRS  
Polski Rejestr Statków

-

TE/2236/880590  
/19


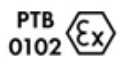





RINA  
RINA Germany GmbH

-

ELE343521XG001

## Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	AEx UL International Germany GmbH	UL 60079	E480271
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV_12_ATEX_106032X (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
	CCC CNEX	CNCA-C23-01	2020312310000211 (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B. 00163/19 ([ExiaMa] I X,2Ex e[iaGa] IIC T4Gc X,[ExiaDa] IIIC X)
	INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV_14.1911_X
	KTL	KOSHA Article 34, IEC60079-0	20-KA4BO-0643X

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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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



Korea Testing Laboratory

TUEV Nord  
TUEV Nord Cert GmbH

IEC 60079

IECEX TUN 12.0039X (Ex ec[iaGa] IIC T4 Gc, [Ex iaDa] IIIC, [Ex iaMa] I)

UL  
Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)

UL 121201

E198726 Sec.1

## Optional accessories

### 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](http://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](http://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](http://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](http://www.wago.com/210-505)
**Item no.: 210-506**

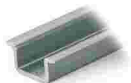
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored

[www.wago.com/210-506](http://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](http://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](http://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](http://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](http://www.wago.com/210-112)

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

WAGO GmbH &amp; Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.





**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](http://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](http://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](http://www.wago.com/210-196)

### 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](http://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](http://www.wago.com/790-124)



**Item no.: 790-108**

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

[www.wago.com/790-108](http://www.wago.com/790-108)



**Item no.: 790-140**

Shield clamping saddle; diameter of compatible conductor

[www.wago.com/790-140](http://www.wago.com/790-140)



**Item no.: 790-216**

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

[www.wago.com/790-216](http://www.wago.com/790-216)



**Item no.: 790-220**

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

[www.wago.com/790-220](http://www.wago.com/790-220)



**Item no.: 790-208**

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

[www.wago.com/790-208](http://www.wago.com/790-208)

### Supply module

#### Supply module



**Item no.: 750-625/000-001**

Power Supply; 24 VDC; Intrinsically safe

[www.wago.com/750-625/000-001](http://www.wago.com/750-625/000-001)



**Item no.: 750-606**

Power Supply; 24 VDC; Diagnostics; Intrinsically safe

[www.wago.com/750-606](http://www.wago.com/750-606)

### Marking accessories

#### Marker carrier



**Item no.: 750-103**

Group marker carrier

[www.wago.com/750-103](http://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](http://www.wago.com/2009-145/000-006)

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

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.

	<p><b>Item no.: 2009-145</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>	<p><a href="http://www.wago.com/2009-145">www.wago.com/2009-145</a></p>
	<p><b>Item no.: 2009-145/000-002</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow</p>	<p><a href="http://www.wago.com/2009-145/000-002">www.wago.com/2009-145/000-002</a></p>
	<p><b>Item no.: 2009-145/000-007</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray</p>	<p><a href="http://www.wago.com/2009-145/000-007">www.wago.com/2009-145/000-007</a></p>
	<p><b>Item no.: 2009-145/000-005</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red</p>	<p><a href="http://www.wago.com/2009-145/000-005">www.wago.com/2009-145/000-005</a></p>
	<p><b>Item no.: 2009-145/000-012</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange</p>	<p><a href="http://www.wago.com/2009-145/000-012">www.wago.com/2009-145/000-012</a></p>
	<p><b>Item no.: 2009-145/000-023</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green</p>	<p><a href="http://www.wago.com/2009-145/000-023">www.wago.com/2009-145/000-023</a></p>
	<p><b>Item no.: 2009-145/000-024</b> Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet</p>	<p><a href="http://www.wago.com/2009-145/000-024">www.wago.com/2009-145/000-024</a></p>
	<p><b>Item no.: 248-501/000-006</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue</p>	<p><a href="http://www.wago.com/248-501/000-006">www.wago.com/248-501/000-006</a></p>
	<p><b>Item no.: 248-501/000-007</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray</p>	<p><a href="http://www.wago.com/248-501/000-007">www.wago.com/248-501/000-007</a></p>
	<p><b>Item no.: 248-501/000-002</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow</p>	<p><a href="http://www.wago.com/248-501/000-002">www.wago.com/248-501/000-002</a></p>
	<p><b>Item no.: 248-501/000-012</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange</p>	<p><a href="http://www.wago.com/248-501/000-012">www.wago.com/248-501/000-012</a></p>
	<p><b>Item no.: 248-501</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white</p>	<p><a href="http://www.wago.com/248-501">www.wago.com/248-501</a></p>

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



**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](http://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](http://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](http://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](http://www.wago.com/248-501/000-023)

Group marker carrier



**Item no.: 750-107**  
Group marker carrier

[www.wago.com/750-107](http://www.wago.com/750-107)

## Downloads

### Documentation

#### Data sheet

750-485, 2AI 4-20mA Ex i, data sheet	pdf	Download
	247.2 kB	

#### Manual

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

Product Manual 2-channel, 4-20mA, Ex i, single-ended	V 1.3.0	pdf	Download
		2.1 MB	

#### Bid Text

750-485 X81 - Datei	2019 Feb 19	xml	Download
		6.3 kB	

750-485 doc - Datei	2017 Oct 6	doc	Download
		32.3 kB	

#### Instruction Leaflet

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



CCC Ex (Additional information) WAGO-I/O-SYSTEM 750-*** Ex i	2023 Apr 26	pdf 147.4 kB	Download
---	-------------	-----------------	----------

**System Description**

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

Ex i Overview		pdf 452.7 kB	Download
---------------	--	-----------------	----------

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

**Additional Information**

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

**CAD/CAE-Data****CAD data**

2D/3D Models 750-485		URL	Download
----------------------	--	-----	----------

**CAE data**

EPLAN Data Portal 750-485		URL	Download
---------------------------	--	-----	----------

WSCAD Universe 750-485		URL	Download
------------------------	--	-----	----------

ZUKEN Portal 750-485		URL	Download
----------------------	--	-----	----------

**Device Files****Device Driver**

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

**Installation Notes**

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

Data sheet | Item number: 750-485

[www.wago.com/750-485](http://www.wago.com/750-485)



## Product family

**WAGO I/O System 750/753**

[Show all products from the family](#)

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

---

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.