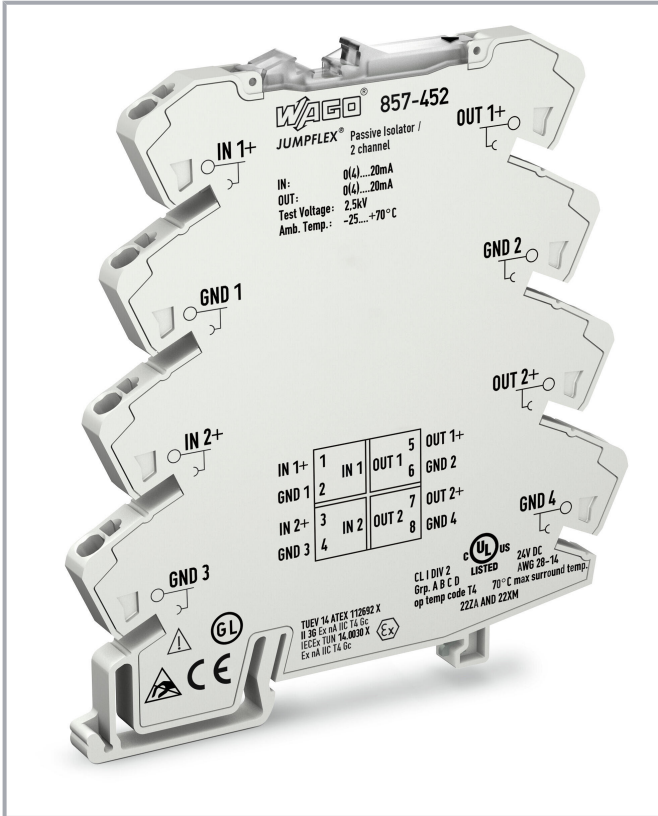


Data sheet | Item number: 857-452

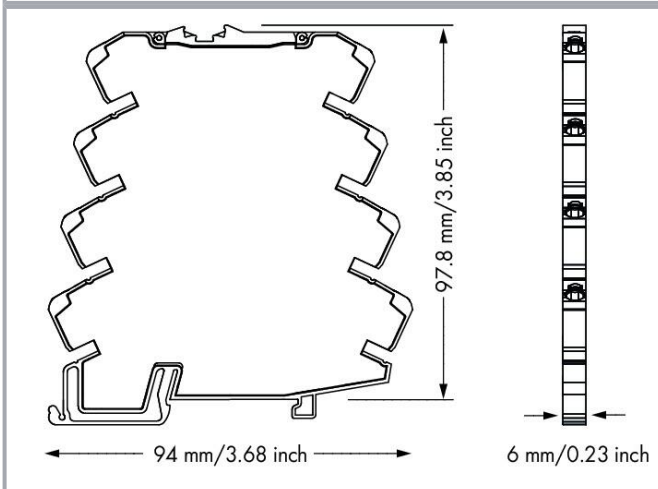
Passive isolator, 2-channel; Current input signal; 2 x current output signal;  
Power via input; 6 mm module width; 2,50 mm<sup>2</sup>



[www.wago.com/857-452](http://www.wago.com/857-452)



IN 1+	1	IN 1	5	OUT 1+
GND 1	2		6	GND 2
IN 2+	3	IN 2	7	OUT 2+
GND 3	4		8	GND 4



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

### Short description:

WAGO's passive isolator (2-channel) electrically isolates and filters 0(4)–20 mA standard analog signals, while drawing power for signal transmission from the input circuit. The connected sensor supplies the passive isolator with the required power to energize the connected load.

### Features:

- No additional supply voltage required
- Safe 4-way isolation with 3 kV test voltage per EN 61010-1

## Data

### Notes

Safety information	Outputs must not be left open!
Note	<b>Use shielded signal lines!</b> Only use shielded signal lines for analog input and output signals. Only then can you ensure that the accuracy and interference immunity specified for the device can be achieved, even in the presence of interference acting on the signal cable.

## Technical data

### Configuration

Configuration options	Pre-configured
-----------------------	----------------

### Input

Input signal type	Current Current
Input signal (current)	0 ... 20 mA; 4 ... 20 mA
Voltage drop at input	≤ 2.5 V (at 20 mA (output))
Input current (max.)	40 mA
Input voltage (max.)	20 V
Response threshold	200 µA

### Output (analog)

Output signal type	Current Current
Output signal (current)	0 ... 20 mA; 4 ... 20 mA
Load impedance (current output)	≤ 600 Ω Temperature range restrictions may occur.

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.

## Signal Processing

Limit frequency	100 Hz
Step response (typ.)	3.5 ms

## Measurement Error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Load error	≤ 0.05 % (of upper-range value; per 100 Ω load)
Temperature coefficient	≤ 0.01 %/K

## Supply

Power supply type	Passive (via input)
-------------------	---------------------

## Safety and protection

Rated voltage	300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Overvoltage category	II
Pollution degree	2
Protection type	IP20

## Test voltage

Test voltage (input/output)	AC 3 kV; 50 Hz; 1 min
-----------------------------	-----------------------

## Insulation parameters(UL)

Insulation type (input/analog output)	Reinforced insulation (safe isolation)
---------------------------------------	--

## Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Cable type	Shielded cable

## Physical data

Width	6 mm / 0.236 inches
-------	---------------------

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



Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches

### Mechanical Data

Mounting type	DIN-35 rail DIN-35 rail
---------------	----------------------------

### Material Data

Fire load	0.598 MJ
Weight	62 g

### Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Temperature range of connection cable	$\geq (T_{\text{ambient}} + 15 \text{ K})$
Temperature range of connection cable (UL)	70 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

### Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/specifications	EN 61010-1 DNV EN 61010-1

### Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-21-01-20
eCl@ss 9.0	27-21-01-20
ETIM 8.0	EC002653
ETIM 7.0	EC002653
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE

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



GTIN	4045454471354
Customs tariff number	85437090300

## Environmental Product Compliance



RoHS Compliance Status	Compliant, No Exemption
------------------------	-------------------------

## Approvals / Certificates



### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19

### 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
	BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0
	DNV DNV Germany GmbH	DNV-CG-0339, Aug. 2021	TAA00001D1
	PRS	-	TE/2186

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)

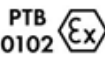





Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.



Polski Rejestr Statków

/880590/18

## Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X (II 3 G Ex nA IIC T4 Gc)
	CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B. 00144/19 (2 Ex nA IIC T4 Gc X)
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0030_X
	UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

## Optional accessories

## Mounting

## Mounting accessories



Item no.: 249-116

Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

[www.wago.com/249-116](http://www.wago.com/249-116)

Item no.: 249-117

Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

[www.wago.com/249-117](http://www.wago.com/249-117)

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.: 249-197**

Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

[www.wago.com/249-197](http://www.wago.com/249-197)

**Jumpers**

Jumper



**Item no.: 859-408**

Jumper; for jumper slot; 8-way; insulated; light gray

[www.wago.com/859-408](http://www.wago.com/859-408)



**Item no.: 281-482**

Jumper; 2-way; insulated; gray

[www.wago.com/281-482](http://www.wago.com/281-482)



**Item no.: 859-404/000-005**

Jumper; for jumper slot; 4-way; insulated; red

[www.wago.com/859-404/000-005](http://www.wago.com/859-404/000-005)



**Item no.: 859-404/000-006**

Jumper; for jumper slot; 4-way; insulated; blue

[www.wago.com/859-404/000-006](http://www.wago.com/859-404/000-006)



**Item no.: 859-405/000-005**

Jumper; for jumper slot; 5-way; insulated; red

[www.wago.com/859-405/000-005](http://www.wago.com/859-405/000-005)



**Item no.: 859-405/000-029**

Jumper; for jumper slot; 5-way; insulated; yellow

[www.wago.com/859-405/000-029](http://www.wago.com/859-405/000-029)



**Item no.: 859-405**

Jumper; for jumper slot; 5-way; insulated; light gray

[www.wago.com/859-405](http://www.wago.com/859-405)



**Item no.: 859-404/000-029**

Jumper; for jumper slot; 4-way; insulated; yellow

[www.wago.com/859-404/000-029](http://www.wago.com/859-404/000-029)



**Item no.: 859-406**

Jumper; for jumper slot; 6-way; insulated; light gray

[www.wago.com/859-406](http://www.wago.com/859-406)



**Item no.: 859-405/000-006**

Jumper; for jumper slot; 5-way; insulated; blue

[www.wago.com/859-405/000-006](http://www.wago.com/859-405/000-006)



**Item no.: 859-406/000-005**

Jumper; for jumper slot; 6-way; insulated; red

[www.wago.com/859-406/000-005](http://www.wago.com/859-406/000-005)



**Item no.: 859-409/000-029**

Jumper; for jumper slot; 9-way; insulated; yellow

[www.wago.com/859-409/000-029](http://www.wago.com/859-409/000-029)

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.



	<b>Item no.: 859-410/000-005</b> Jumper; for jumper slot; 10-way; insulated; red	<a href="http://www.wago.com/859-410/000-005">www.wago.com/859-410/000-005</a>
	<b>Item no.: 859-410/000-029</b> Jumper; for jumper slot; 10-way; insulated; yellow	<a href="http://www.wago.com/859-410/000-029">www.wago.com/859-410/000-029</a>
	<b>Item no.: 859-410</b> Jumper; for jumper slot; 10-way; insulated; light gray	<a href="http://www.wago.com/859-410">www.wago.com/859-410</a>
	<b>Item no.: 859-410/000-006</b> Jumper; for jumper slot; 10-way; insulated; blue	<a href="http://www.wago.com/859-410/000-006">www.wago.com/859-410/000-006</a>
	<b>Item no.: 859-403/000-005</b> Jumper; for jumper slot; 3-way; insulated; red	<a href="http://www.wago.com/859-403/000-005">www.wago.com/859-403/000-005</a>
	<b>Item no.: 859-402/000-029</b> Jumper; for jumper slot; 2-way; insulated; yellow	<a href="http://www.wago.com/859-402/000-029">www.wago.com/859-402/000-029</a>
	<b>Item no.: 859-403/000-029</b> Jumper; for jumper slot; 3-way; insulated; yellow	<a href="http://www.wago.com/859-403/000-029">www.wago.com/859-403/000-029</a>
	<b>Item no.: 859-403/000-006</b> Jumper; for jumper slot; 3-way; insulated; blue	<a href="http://www.wago.com/859-403/000-006">www.wago.com/859-403/000-006</a>
	<b>Item no.: 859-408/000-005</b> Jumper; for jumper slot; 8-way; insulated; red	<a href="http://www.wago.com/859-408/000-005">www.wago.com/859-408/000-005</a>
	<b>Item no.: 859-408/000-029</b> Jumper; for jumper slot; 8-way; insulated; yellow	<a href="http://www.wago.com/859-408/000-029">www.wago.com/859-408/000-029</a>
	<b>Item no.: 859-409</b> Jumper; for jumper slot; 9-way; insulated; light gray	<a href="http://www.wago.com/859-409">www.wago.com/859-409</a>
	<b>Item no.: 859-408/000-006</b> Jumper; for jumper slot; 8-way; insulated; blue	<a href="http://www.wago.com/859-408/000-006">www.wago.com/859-408/000-006</a>
	<b>Item no.: 859-403</b> Jumper; for jumper slot; 3-way; insulated; light gray	<a href="http://www.wago.com/859-403">www.wago.com/859-403</a>
	<b>Item no.: 859-409/000-005</b> Jumper; for jumper slot; 9-way; insulated; red	<a href="http://www.wago.com/859-409/000-005">www.wago.com/859-409/000-005</a>

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











	<b>Item no.: 859-404</b> Jumper; for jumper slot; 4-way; insulated; light gray	<a href="http://www.wago.com/859-404">www.wago.com/859-404</a>
	<b>Item no.: 859-409/000-006</b> Jumper; for jumper slot; 9-way; insulated; blue	<a href="http://www.wago.com/859-409/000-006">www.wago.com/859-409/000-006</a>
	<b>Item no.: 859-402/000-006</b> Jumper; for jumper slot; 2-way; insulated; blue	<a href="http://www.wago.com/859-402/000-006">www.wago.com/859-402/000-006</a>
	<b>Item no.: 859-402</b> Jumper; for jumper slot; 2-way; insulated; light gray	<a href="http://www.wago.com/859-402">www.wago.com/859-402</a>
	<b>Item no.: 859-402/000-005</b> Jumper; for jumper slot; 2-way; insulated; red	<a href="http://www.wago.com/859-402/000-005">www.wago.com/859-402/000-005</a>
	<b>Item no.: 859-406/000-006</b> Jumper; for jumper slot; 6-way; insulated; blue	<a href="http://www.wago.com/859-406/000-006">www.wago.com/859-406/000-006</a>
	<b>Item no.: 859-406/000-029</b> Jumper; for jumper slot; 6-way; insulated; signal yellow	<a href="http://www.wago.com/859-406/000-029">www.wago.com/859-406/000-029</a>
	<b>Item no.: 859-407/000-006</b> Jumper; for jumper slot; 7-way; insulated; blue	<a href="http://www.wago.com/859-407/000-006">www.wago.com/859-407/000-006</a>
	<b>Item no.: 859-407/000-005</b> Jumper; for jumper slot; 7-way; insulated; red	<a href="http://www.wago.com/859-407/000-005">www.wago.com/859-407/000-005</a>
	<b>Item no.: 859-407/000-029</b> Jumper; for jumper slot; 7-way; insulated; yellow	<a href="http://www.wago.com/859-407/000-029">www.wago.com/859-407/000-029</a>
	<b>Item no.: 859-407</b> Jumper; for jumper slot; 7-way; insulated; light gray	<a href="http://www.wago.com/859-407">www.wago.com/859-407</a>

**Marking accessories**

Marking strip		
	<b>Item no.: 2009-110</b> Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/2009-110">www.wago.com/2009-110</a>
Marker		
	<b>Item no.: 2009-115</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/2009-115">www.wago.com/2009-115</a>

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

	<b>Item no.: 793-501</b> WMB marking card; as card; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/793-501">www.wago.com/793-501</a>
	<b>Item no.: 793-502</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white	<a href="http://www.wago.com/793-502">www.wago.com/793-502</a>
	<b>Item no.: 793-503</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white	<a href="http://www.wago.com/793-503">www.wago.com/793-503</a>
	<b>Item no.: 793-504</b> WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white	<a href="http://www.wago.com/793-504">www.wago.com/793-504</a>
	<b>Item no.: 793-505</b> WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white	<a href="http://www.wago.com/793-505">www.wago.com/793-505</a>
	<b>Item no.: 793-506</b> WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white	<a href="http://www.wago.com/793-506">www.wago.com/793-506</a>
	<b>Item no.: 793-566</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white	<a href="http://www.wago.com/793-566">www.wago.com/793-566</a>
	<b>Item no.: 793-5501</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/793-5501">www.wago.com/793-5501</a>


**Interface module**

Interface adapters

	<b>Item no.: 857-980</b> Interface adapter; 16-pole; analog	<a href="http://www.wago.com/857-980">www.wago.com/857-980</a>
---	--	--


**Tool**

Operating tool

	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>
--	--	--

**Power supplies**

Power supply unit

	<b>Item no.: 787-2852</b> Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current	<a href="http://www.wago.com/787-2852">www.wago.com/787-2852</a>
---	---	--

**Terminal blocks**

Supply module

	<b>Item no.: 857-979</b> Supply and through module	<a href="http://www.wago.com/857-979">www.wago.com/857-979</a>
---	---	--

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



## Downloads

### Documentation

#### Bid Text

857-452 docx - Datei	2019 Feb 20	docx 18.1 kB	Download
-------------------------	-------------	-----------------	----------

857-452 X81 - Datei	2019 Feb 19	xml 5.0 kB	Download
------------------------	-------------	---------------	----------

#### Instruction Leaflet

CCC Ex (Additional information) 857-***	2023 Apr 26	pdf 144.4 kB	Download
--	-------------	-----------------	----------

Messumformer und Trennverstärker Passivtrenner 1-kanalig / 2-kanalig	V 2.0.0 2021 Jul 7	pdf 2.5 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

### CAE data

EPLAN Data Portal 857-452		URL	Download
---------------------------	--	-----	----------

WSCAD Universe 857-452		URL	Download
------------------------	--	-----	----------

ZUKEN Portal 857-452		URL	Download
----------------------	--	-----	----------

### CAD data

2D/3D Models 857-452		URL	Download
----------------------	--	-----	----------

## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 857-452		URL	Download
--	--	-----	----------

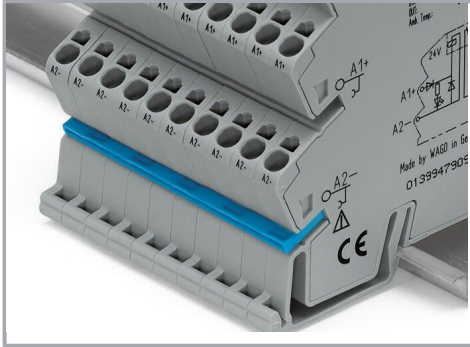
Subject to changes. Please also observe the further product documentation!

Passive isolator, 2-channel; Current input signal; 2 x current output signal; Power via input; 6 mm module width; 2,50 mm<sup>2</sup>

---

## Installation Notes

### Commoning



Commoning, not discrete wiring – Same outline allows use of a single in-line, push-in jumper.

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.