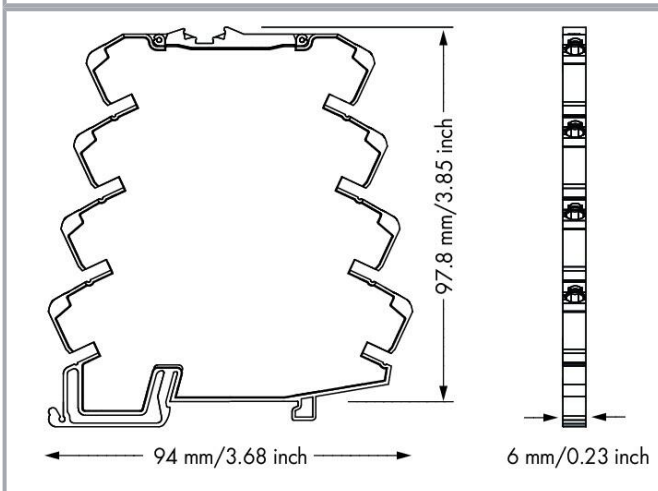
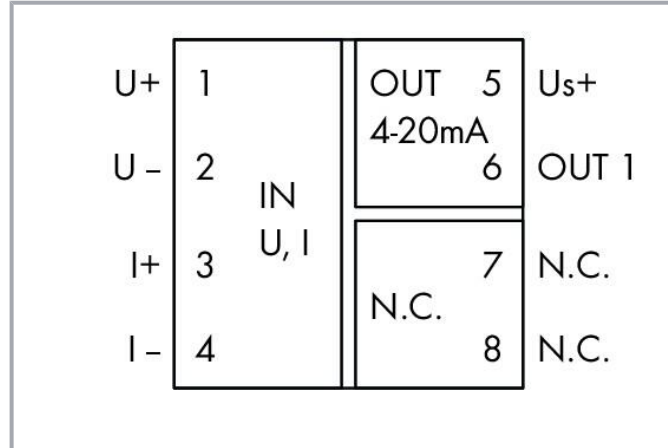
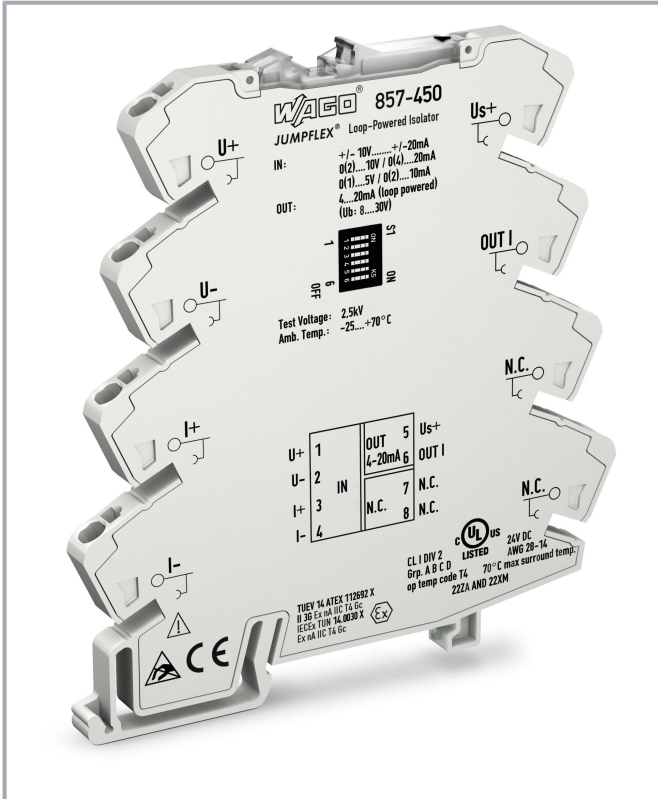


Data sheet | Item number: 857-450



Loop-powered isolation amplifier; Bipolar current and voltage input signal;  
 Current output signal; Configuration via DIP switch; Power supply via output;  
 6 mm module width; 2,50 mm<sup>2</sup>

[www.wago.com/857-450](http://www.wago.com/857-450)



857-450  
 DIP Switch Adjustability

• ON Default

DIP switch (6 positions)					Output Signal	Max. Operating Frequency
1	2	3	4	5	6	8
					4... 20 mA	100 Hz
					0... 20 mA	30 Hz
					±20 mA	
					2... 10 mA	
					0... 10 mA	
					±10 mA	
					0... 5 mA	
					±5 mA	
					0... 20 V	
					±20 V	
					2... 10 V	
					0... 10 V	
					±10 V	
					1... 5 V	
					0... 5 V	
					±5 V	
					0... 2 V	
					±2 V	
					0... 1 V	
					±1 V	

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

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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 loop-powered isolator converts, amplifies, filters and electrically isolates standard unipolar/bipolar analog signals.

### Features:

- No additional supply voltage required
- Zero/span adjustment
- Standard unipolar/bipolar analog signals at input
- Calibrated measurement range switching
- Switchable limit frequency
- 3-way electrical isolation with 2.5 kV test voltage

## Data

### Technical data

### Configuration

Configuration options	DIP switch
-----------------------	------------

### Input

Input signal type	Voltage Current
Input signal (voltage)	$\pm 1$ V; 0 ... 1 V; $\pm 2$ V; 0 ... 2 V; $\pm 5$ V; 0 ... 5 V; 1 ... 5 V; $\pm 10$ V; 0 ... 10 V; 2 ... 10 V; $\pm 20$ V; 0 ... 20 V
Input signal (current)	$\pm 5$ mA; 0 ... 5 mA; $\pm 10$ mA; 0 ... 10 mA; 2 ... 10 mA; $\pm 20$ mA; 0 ... 20 mA; 4 ... 20 mA
Input resistance (current input)	$\leq 50 \Omega$
Input resistance (voltage input)	$\geq 1 \text{ M}\Omega$
Input current (max.)	50 mA
Input voltage (max.)	30 V
Zero/span adjustment	$\pm 5$ % of upper-range value

### Output (analog)

Output signal type	Current
Output signal (current)	4 ... 20 mA
Load impedance (current output)	$\leq 600 \Omega$

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

## Signal Processing

Limit frequency	100 Hz / 30 Hz (configurable via DIP switch)
Step response (typ.)	3.5 ms

## Measurement Error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01 %/K

## Supply

Power supply type	Loop-powered (via output)
Supply voltage	DC 8 ... 30 V (Power is derived from the output circuit.)

## Safety and protection

Protection type	IP20
-----------------	------

## Test voltage

Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min
------------------------------------	-------------------------

## 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

## Physical data

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

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



## Material Data

Fire load	0.418 MJ
Weight	37.9 g

## Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °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

## 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
GTIN	4045454828479
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)

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




EAC  
Brjansker Zertifizierungsstelle

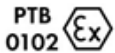



TP TC 020/2011

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	-	-

#### 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

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## Optional accessories

### Marking accessories

#### Marking strip



**Item no.: 2009-110**

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

[www.wago.com/2009-110](http://www.wago.com/2009-110)

#### Marker



**Item no.: 2009-115**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

[www.wago.com/2009-115](http://www.wago.com/2009-115)



**Item no.: 793-501**

WMB marking card; as card; not stretchable; plain; snap-on type; white

[www.wago.com/793-501](http://www.wago.com/793-501)



**Item no.: 793-502**

WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white

[www.wago.com/793-502](http://www.wago.com/793-502)



**Item no.: 793-503**

WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white

[www.wago.com/793-503](http://www.wago.com/793-503)



**Item no.: 793-504**

WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white

[www.wago.com/793-504](http://www.wago.com/793-504)



**Item no.: 793-505**

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white

[www.wago.com/793-505](http://www.wago.com/793-505)



**Item no.: 793-506**

WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white

[www.wago.com/793-506](http://www.wago.com/793-506)



**Item no.: 793-566**

WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white

[www.wago.com/793-566](http://www.wago.com/793-566)



**Item no.: 793-5501**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

[www.wago.com/793-5501](http://www.wago.com/793-5501)

### 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)

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

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**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)



**Item no.: 859-410/000-005**  
Jumper; for jumper slot; 10-way; insulated; red

[www.wago.com/859-410/000-005](http://www.wago.com/859-410/000-005)



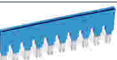
**Item no.: 859-410/000-029**  
Jumper; for jumper slot; 10-way; insulated; yellow

[www.wago.com/859-410/000-029](http://www.wago.com/859-410/000-029)



**Item no.: 859-410**  
Jumper; for jumper slot; 10-way; insulated; light gray

[www.wago.com/859-410](http://www.wago.com/859-410)

















**Item no.: 859-410/000-006**  
Jumper; for jumper slot; 10-way; insulated; blue

[www.wago.com/859-410/000-006](http://www.wago.com/859-410/000-006)







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

	<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>
	<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>

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



	<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>


#### 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>
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#### 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>
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#### 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>
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#### 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>
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#### Mounting

##### Mounting accessories

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



**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)



**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)

## Downloads

### Documentation

#### Bid Text

857-450 docx - Datei	2019 Feb 20	docx 17.4 kB	Download
857-450 X81 - Datei	2019 Feb 19	xml 5.6 kB	Download

#### Instruction Leaflet

CCC Ex (Additional information) 857-***	2023 Apr 26	pdf 144.4 kB	Download
Loop-Powered-Trennverstärker		pdf 1.8 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
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## CAD/CAE-Data

### CAD data

2D/3D Models 857-450		URL	Download
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### CAE data

WSCAD Universe 857-450		URL	Download
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Subject to changes. Please also observe the further product documentation!

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ZUKEN Portal 857-450	<a href="#">URL</a>	<a href="#">Download</a>
EPLAN Data Portal 857-450	<a href="#">URL</a>	<a href="#">Download</a>

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## Environmental Product Compliance

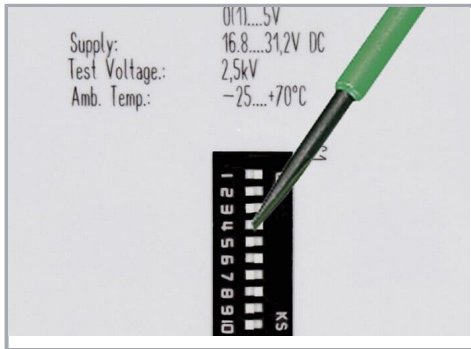
### Compliance Search

Environmental Product Compliance 857-450	<a href="#">URL</a>	<a href="#">Download</a>
Loop-powered isolation amplifier; Bipolar current and voltage input signal; Current output signal; Configuration via DIP switch; Power supply via output; 6 mm module width; 2,50 mm <sup>2</sup>		

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## Installation Notes

### Configuring



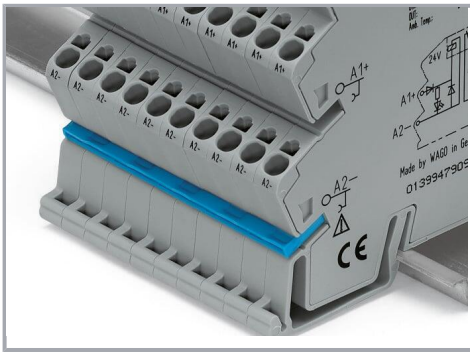
Configuration via DIP switch

### Commoning

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

Data sheet | Item number: 857-450

[www.wago.com/857-450](http://www.wago.com/857-450)



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!

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