

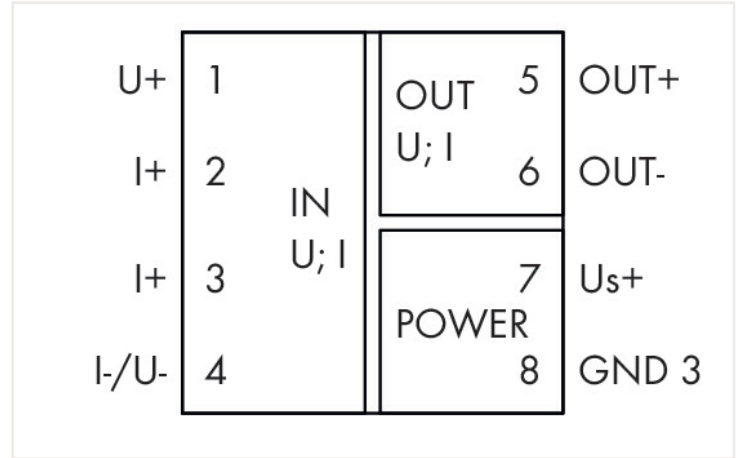
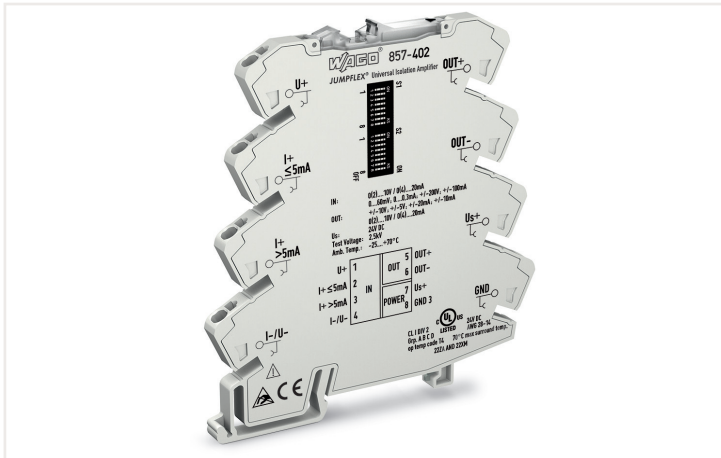
**Data sheet | Item number: 857-402**

Isolation amplifier; Current and voltage input signal; Bipolar current and voltage output signal; Zero/span adjustment; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm<sup>2</sup>

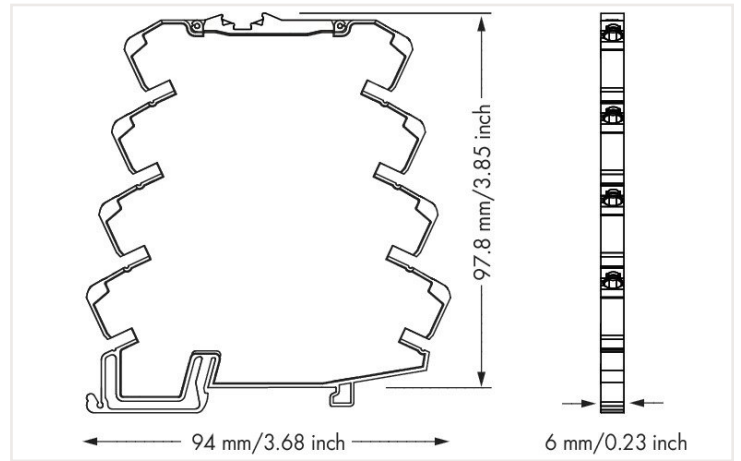
**DISCONTINUED:  
31.12.2020**



<https://www.wago.com/857-402>



Input Signal Ranges		Zero/Span Adjustment	Max. Operating Frequency	Input Signal Ranges	
1	2	3	4	5	6
0...100mV	0...100mV	Active	100Hz	0...0.3mA	0...0.3mA
0...100mV	0...100mV			0...1mA	0...1mA
0...100mV	0...100mV			0...20mA	0...20mA
0...100mV	0...100mV			0...50mA	0...50mA
0...10V	0...10V			0...100mA	0...100mA
0...10V	0...10V			0...100mA	0...100mA
0...10V	0...10V			0...100mA	0...100mA
0...100V	0...100V			0...100mA	0...100mA
0...100V	0...100V			0...100mA	0...100mA
0...200V	0...200V			0...100mA	0...100mA
0...200V	0...200V			0...100mA	0...100mA



Dimensions in mm

For this item, a successor is available: [857-403](#)

**Short description:**

WAGO's signal conditioner converts standard unipolar/bipolar signals, as well as amplifies, filters and electrically isolates standard analog signals.

**Features:**

- Overload protection of current input via resettable fuse
- Zero/span adjustment across the entire measurement range (via push/slide switch)
- Calibrated measurement range switching for all 456 signals
- Unipolar/bipolar standard analog signals at both input/output
- Switchable limit frequency
- Clipping capability
- For analog signal limitation to output end values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

**Technical data**

Configuration		Input	
Configuration options	DIP switch Push/slide switch	Input signal type	Voltage Current
		Input signal (voltage)	±60 mV; 0 ... 60 mV; ±100 mV; 0 ... 100 mV; ±150 mV; 0 ... 150 mV; ±300 mV; 0 ... 300 mV; ±500 mV; 0 ... 500 mV; ±1 V; 0 ... 1 V; ±5 V; 0 ... 5 V; 1 ... 5 V; ±10 V; 0 ... 10 V; 2 ... 10 V; ±100 V; 0 ... 100 V; ±200 V; 0 ... 200 V

### Input

Input signal (current)	$\pm 0.3 \text{ mA}$ ; 0 ... 0.3 mA; $\pm 1 \text{ mA}$ ; 0 ... 1 mA; $\pm 5 \text{ mA}$ ; 0 ... 5 mA; $\pm 10 \text{ mA}$ ; 0 ... 10 mA; 2 ... 10 mA; $\pm 20 \text{ mA}$ ; 0 ... 20 mA; 4 ... 20 mA; $\pm 50 \text{ mA}$ ; 0 ... 50 mA; $\pm 100 \text{ mA}$ ; 0 ... 100 mA
Input resistance (current input)	10 $\Omega$ ( $\geq 5 \text{ mA}$ ); 100 $\Omega$ ( $\leq 5 \text{ mA}$ )
Input resistance (voltage input)	1 M $\Omega$
Zero/span adjustment	adjustable via push/slide switch

### Output – analog

Output signal type	Current Voltage
Output signal (voltage)	$\pm 5 \text{ V}$ ; 0 ... 5 V; 1 ... 5 V; $\pm 10 \text{ V}$ ; 0 ... 10 V; 2 ... 10 V
Output signal (current)	$\pm 10 \text{ mA}$ ; 0 ... 10 mA; 2 ... 10 mA; $\pm 20 \text{ mA}$ ; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	$\geq 2 \text{ k}\Omega$
Load impedance (current output)	$\leq 600 \Omega$

### Signal processing

Limit frequency	100 Hz / 5 kHz (configurable via DIP switch)
Step response (typ.)	3.5 ms (100 Hz); 100 $\mu\text{s}$ (5 kHz)

### Measurement error

Transmission error (typ.)	$\leq 0.08 \%$ of upper-range value
Temperature coefficient	$\leq 0.01 \%/K$

### Supply

Power supply type	24 VDC
Nominal supply voltage $U_s$	DC 24 V
Supply voltage range	$\pm 30 \%$
Current consumption at nominal supply voltage	$\leq 40 \text{ mA}$

### Safety and protection

#### Test voltage

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

### 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
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### Material data

Fire load	0.585 MJ
Weight	38.4 g

### Environmental requirements

Ambient temperature (operation at U <sub>N</sub> )	-25 ... 70 °C
Surrounding air 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 61000-6-4

### Commercial data

Product Group	6 (Interface Electronics)
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 Stück
Packaging type	Bag
Country of origin VKOrg Germany	DE
GTIN	4050821099772
Customs tariff number VKOrg Germany	85437090300

### Approvals and certificates

#### General approvals



Approval	Standard	Certificate name
EAC Brjansker Zertifizierungs- stelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19
EAC Brjansker Zertifizierungs- stelle	TP TC 004/2011	EAC RU C-DE.AM02. B.00122/19
UL UL International Nether- lands B.V. (ORDINARY LO- CATIONS)	UL 508	E175199 Sec.4

#### Approvals for hazardous areas



Approval	Standard	Certificate name
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	ANSI/ISA 12.12.01	E198726

## Downloads




## Environmental Product Compliance

## Compliance Search

Environmental Product  
Compliance 857-402

## Documentation

## Bid Text

857-402	18.07.2019	xml 6.82 KB	
857-402	18.07.2019	docx 18.71 KB	
857-402	18.07.2019	pdf 75.55 KB	

## Instruction Leaflet




Messumformer und Trennverstärker	pdf 1747.71 KB	
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## CAD/CAE-Data

## CAD data

2D/3D Models 857-402	
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## CAE data

EPLAN Data Portal 857-402	
WSCAD Universe 857-402	
ZUKEN Portal 857-402	

## 1 Compatible products

## 1.1 Optional accessories

## 1.1.1 Installation

## 1.1.1.1 Mounting accessories

**Item no.: 249-117**Screwless end stop; 10 mm wide; for DIN-  
rail 35 x 15 and 35 x 7.5; gray**Item no.: 249-197**Screwless end stop; 14 mm wide; for DIN-  
rail 35 x 15 and 35 x 7.5; gray**Item no.: 249-116**Screwless end stop; 6 mm wide; for DIN-  
rail 35 x 15 and 35 x 7.5; gray

## 1.1.2 Interface module

## 1.1.2.1 Interface adapters

**Item no.: 857-980**

Interface adapter; 16-pole; analog

1.1.3 Jumper

1.1.3.1 Jumper



**Item no.: 281-482**

Jumper; 2-way; insulated; gray



**Item no.: 859-410/000-006**

Jumper; for jumper slot; 10-way; insulated; blue



**Item no.: 859-410**

Jumper; for jumper slot; 10-way; insulated; light gray



**Item no.: 859-410/000-005**

Jumper; for jumper slot; 10-way; insulated; red



**Item no.: 859-410/000-029**

Jumper; for jumper slot; 10-way; insulated; yellow



**Item no.: 859-402/000-006**

Jumper; for jumper slot; 2-way; insulated; blue



**Item no.: 859-402**

Jumper; for jumper slot; 2-way; insulated; light gray



**Item no.: 859-402/000-005**

Jumper; for jumper slot; 2-way; insulated; red



**Item no.: 859-402/000-029**

Jumper; for jumper slot; 2-way; insulated; yellow



**Item no.: 859-403/000-006**

Jumper; for jumper slot; 3-way; insulated; blue



**Item no.: 859-403**

Jumper; for jumper slot; 3-way; insulated; light gray



**Item no.: 859-403/000-005**

Jumper; for jumper slot; 3-way; insulated; red



**Item no.: 859-403/000-029**

Jumper; for jumper slot; 3-way; insulated; yellow



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

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



**Item no.: 859-404**

Jumper; for jumper slot; 4-way; insulated; light gray



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

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



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

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



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

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



**Item no.: 859-405**

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



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

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



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

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



**Item no.: 859-406/000-006**

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



**Item no.: 859-406**

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



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

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



**Item no.: 859-406/000-029**

Jumper; for jumper slot; 6-way; insulated; signal yellow



**Item no.: 859-407/000-006**

Jumper; for jumper slot; 7-way; insulated; blue



**Item no.: 859-407**

Jumper; for jumper slot; 7-way; insulated; light gray



**Item no.: 859-407/000-005**

Jumper; for jumper slot; 7-way; insulated; red



**Item no.: 859-407/000-029**

Jumper; for jumper slot; 7-way; insulated; yellow



**Item no.: 859-408/000-006**

Jumper; for jumper slot; 8-way; insulated; blue



**Item no.: 859-408**

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



**Item no.: 859-408/000-005**

Jumper; for jumper slot; 8-way; insulated; red



**Item no.: 859-408/000-029**

Jumper; for jumper slot; 8-way; insulated; yellow



**Item no.: 859-409/000-006**

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



**Item no.: 859-409**

Jumper; for jumper slot; 9-way; insulated; light gray



**Item no.: 859-409/000-005**

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



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

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

1.1.4 Marking

1.1.4.1 Marker



**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



**Item no.: 793-502**

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



**Item no.: 793-566**

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



**Item no.: 793-503**

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

### 1.1.4.1 Marker



**Item no.: 793-504**

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



**Item no.: 793-505**

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



**Item no.: 793-506**

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



**Item no.: 793-501**

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



**Item no.: 2009-115**

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

### 1.1.4.2 Marking strip



**Item no.: 2009-110**

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

### 1.1.5 Power supply

#### 1.1.5.1 Power supply unit



**Item no.: 787-2852**

Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

### 1.1.6 Terminal blocks

#### 1.1.6.1 Supply module



**Item no.: 857-979**

Supply and through module

#### 1.1.6.2 Through terminal block



**Item no.: 857-979**

Supply and through module

### 1.1.7 Tool

#### 1.1.7.1 Operating tool

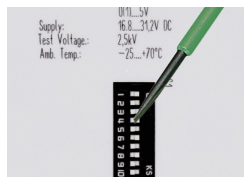


**Item no.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

## Installation notes

### Configuring

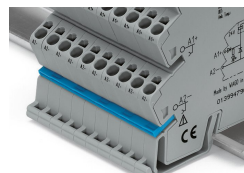


Configuration via DIP switch



Configuration via push/slide switch

### Commoning



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