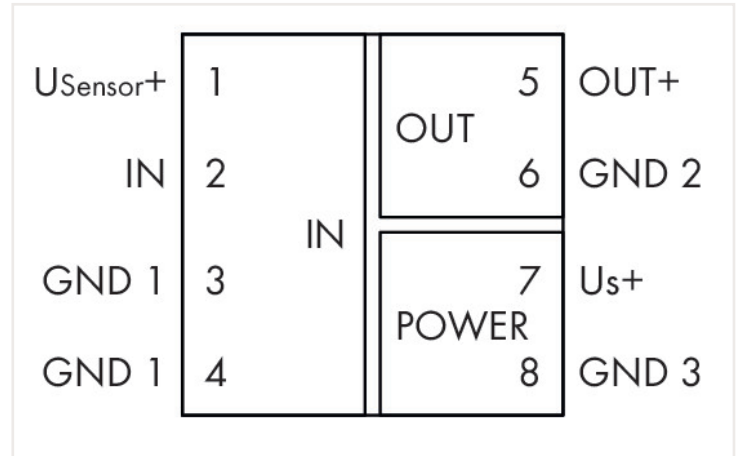


# Data sheet | Item number: 857-420

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

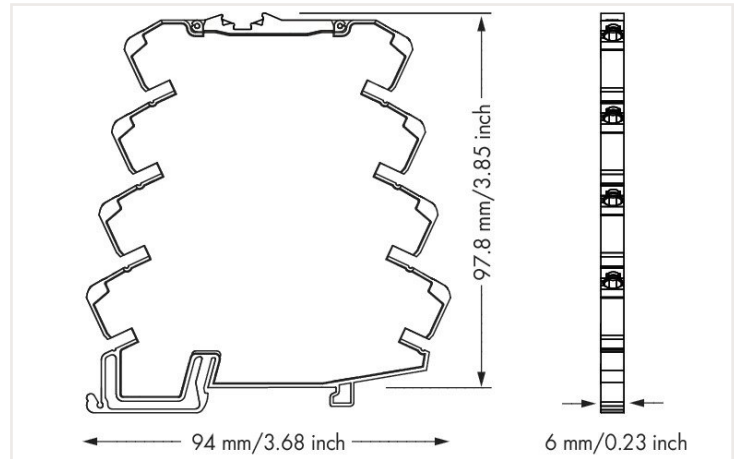
<https://www.wago.com/857-420>



857-420  
DIP Switch Adjustability

• = ON    Default

DIP Switch S1 (6-fold)						Input Signal	Output Signal
1	2	3	4	5	6		
						n.c.	0 ... 20 mA
•						n.c.	4 ... 20 mA
•	•					n.c.	0 ... 10 V
•	•	•				n.c.	2 ... 10 V
•	•	•	•			n.c.	0 ... 20 mA
•	•	•	•	•		n.c.	0 ... 20 mA
•	•	•	•	•	•	n.c.	0 ... 5 V
•	•	•	•	•	•	n.c.	1 ... 5 V
•	•	•	•	•	•	n.c.	4 ... 20 mA
•	•	•	•	•	•	n.c.	0 ... 20 mA
•	•	•	•	•	•	n.c.	4 ... 20 mA
•	•	•	•	•	•	n.c.	0 ... 10 V
•	•	•	•	•	•	n.c.	2 ... 10 V
•	•	•	•	•	•	n.c.	4 ... 20 mA
•	•	•	•	•	•	n.c.	0 ... 5 V
•	•	•	•	•	•	n.c.	1 ... 5 V



Dimensions in mm

## Short description:

WAGO's isolation amplifier provides the power required for 2- or 3-wire field transmitters and electrically isolates analog signals.

## Features:

- Power supply to SMART transmitters
- Calibrated measurement range switching
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Technical data	
<b>Configuration</b>	
Configuration options	DIP switch
<b>Input</b>	
Input signal type	Current
Input signal (current)	0 ... 20 mA; 4 ... 20 mA (calibrated switching)
Input resistance (current input)	≤ 50 Ω
Sensor supply	U <sub>v</sub> = 18 V; 30 mA
Input current (max.)	50 mA

### Output – analog

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

### Signal processing

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

### Measurement error

Transmission error (typ.)	$\leq 0.1 \%$ 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	$\leq 45 \text{ mA}$

## 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	37 g

## Environmental requirements

Ambient temperature (operation at $U_N$ )	-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
Standards/specifications	DNV

### 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	4045454471330
Customs tariff number VKOrg Germany	85437090300

### Approvals and certificates

#### General approvals



Approval	Standard	Certificate name
EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19
UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.4

#### Approvals for marine applications



Approval	Standard	Certificate name
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA00001D1

#### Approvals for hazardous areas



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

## Downloads

## Environmental Product Compliance

## Compliance Search

Environmental Product  
Compliance 857-420

## Documentation

## Bid Text

857-420	19.02.2019	xml 5.33 KB	
857-420	20.02.2019	docx 16.65 KB	

## Instruction Leaflet

Messumformer und Trennverstärker	pdf 1415.25 KB	
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## CAD/CAE-Data

## CAD data

2D/3D Models 857-420	
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## CAE data

EPLAN Data Portal 857-420	
WSCAD Universe 857-420	
ZUKEN Portal 857-420	

## 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

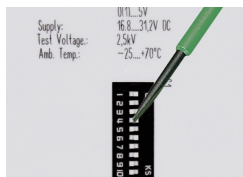


**Item no.: 210-720**

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

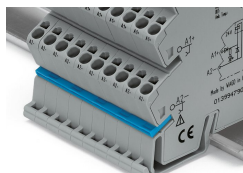
## Installation notes

### Configuring



Configuration via DIP switch

### Commoning



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