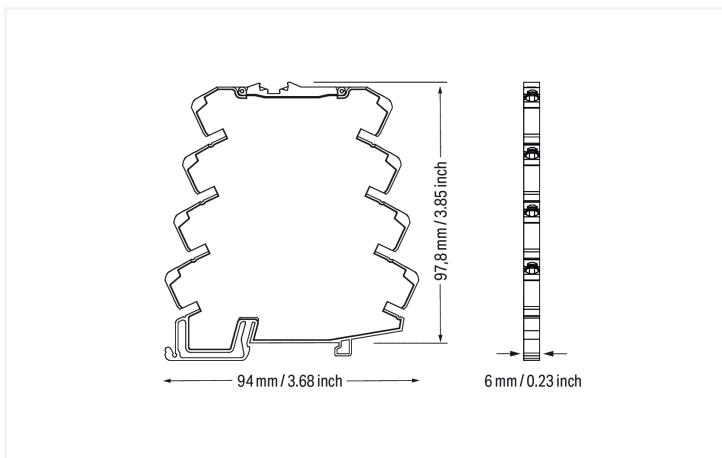
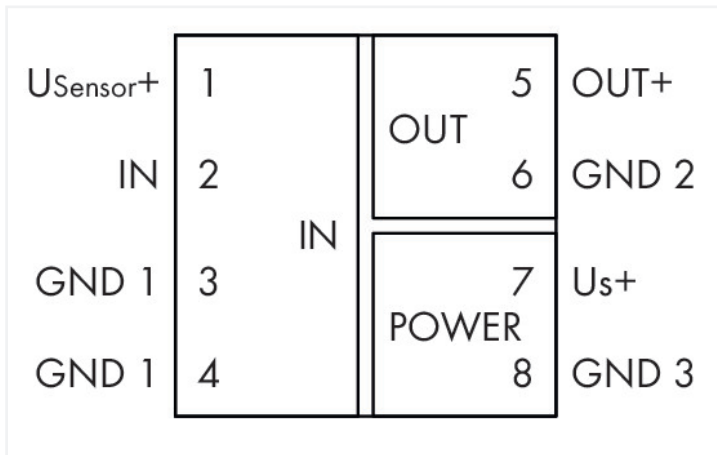


# Data Sheet | Item Number: 857-420

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 (8-fold)

1	2	3	4	5	6	Input Signal	Output Signal
						n.c.	0...20 mA
						n.c.	0...20 mA
						n.c.	0...10 V
						n.c.	0...20 mA
						n.c.	2...10 V
						n.c.	0...5 V
						n.c.	0...20 mA
						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.	4...20 mA
						n.c.	2...10 V
						n.c.	0...5 V
						n.c.	4...20 mA
						n.c.	1...5 V

## 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
- 3-way electrical isolation with 2.5 kV test voltage

## Technical data

### Configuration

Configuration options      DIP switch

### Input

Input signal type	Current
Input signal (current)	0 ... 20 mA 4 ... 20 mA (calibrated, switchable)
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, switchable)
Output signal (current)	0 ... 20 mA 4 ... 20 mA (calibrated, switchable)
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Offset	≤ 20 μA
Residual ripple	≤ 10 mV (rms)

### Signal Processing

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

### Measurement Error

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

### Power Supply

Power supply type	24 VDC
Nominal supply voltage $U_S$	24 VDC
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 45 mA

### Safety and protection

Protection type	IP20	<b>Test voltage</b>	
		Test voltage (input/output/supply)	2.5 kVAC; 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
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### Material data

Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.489 MJ
Weight	37 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
Standards/specifications	DNV

### Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4045454471330
Customs tariff number	85437090300

### Product Classification

UNSPSC	39121008
eCl@ss 10.0	27-21-01-20
eCl@ss 9.0	27-21-01-20
ETIM 9.0	EC002653
ETIM 10.0	EC002653
ECCN	NO US CLASSIFICATION

### Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant, With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	47593164-c4bd-4ccc-a4b1-02255ba1b769
SCIP notification number (Belgium)	45855355-0f1b-4c01-b8f3-b149d72a420f
SCIP notification number (Bulgaria)	d43a9b05-a8b7-4ef7-80dd-e2efca7e95c1
SCIP notification number (Czech Republic)	425b7eca-3492-436c-95af-5799c6c41572
SCIP notification number (Denmark)	8de4bab4-8162-41ba-8861-d43ecc914994
SCIP notification number (Finland)	8f7a5e13-6852-41de-863e-78c9a289130f
SCIP notification number (France)	bda94e16-8a03-4402-aa8e-d55ee9091c70
SCIP notification number (Germany)	b822bbec-8555-4354-a97a-7f2f11cfcfda
SCIP notification number (Hungary)	41bf7e6b-f8ec-412f-9d54-28407803d56e
SCIP notification number (Italy)	b9660c43-5cf3-4c7e-8d86-9df3263a64f3
SCIP notification number (Netherlands)	0458d684-8c64-4839-8eb2-d3294e4930b7
SCIP notification number (Poland)	658b5e51-6300-4938-a3f6-cc1d085898b9
SCIP notification number (Romania)	66fd79cb-9d5b-4eb6-8763-01185619c07b
SCIP notification number (Sweden)	ac690304-f0b1-4d15-8d80-e050a9c76b65

**Approvals / Certificates**

**General approvals**



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081

**Declarations of conformity and manufacturer's declarations**

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

**Approvals for marine applications**



Approval	Standard	Certificate Name
DNV DNV Germany GmbH	DNV-CG-0339, Aug. 2021	TAA00001D1
PRS Polski Rejestr Statków	-	TE/1098/880590/23

**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	↓
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**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	↓

**CAD/CAE-Data**

CAD data
2D/3D Models 857-420

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; 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

1.1.3.1 Jumper



**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; blue

**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



**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



**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 and through module



Item No.: 857-979

Supply and through module

## 1.1.7 Tool

### 1.1.7.1 Operating tool

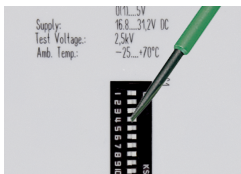


Item No.: 210-720

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

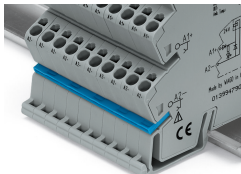
## Installation Notes

### Configuring



Configuration via DIP switch

### Commoning



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