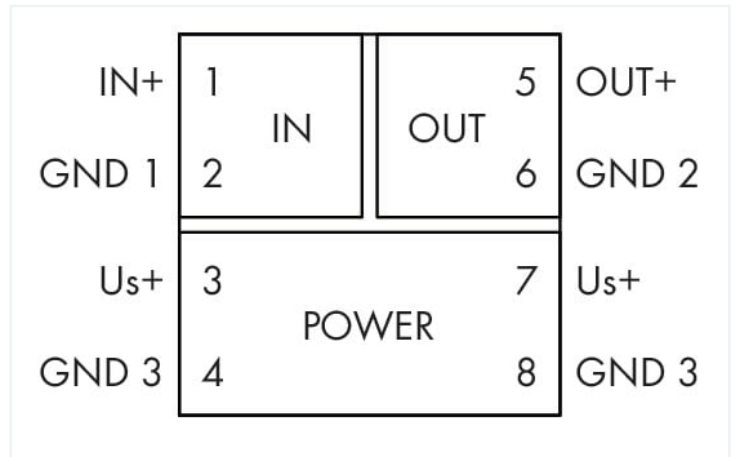
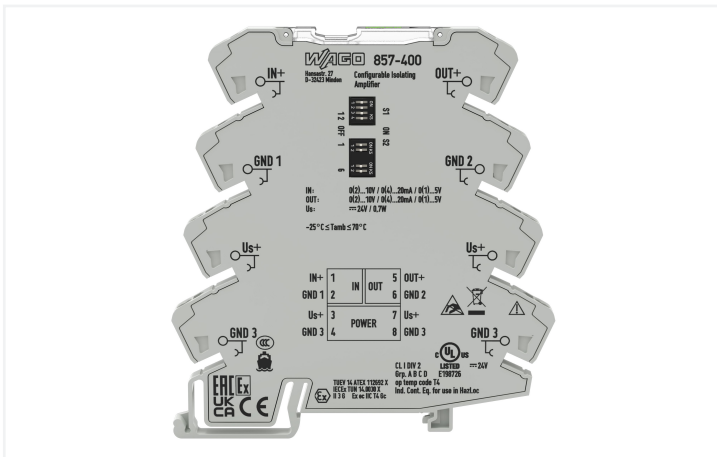
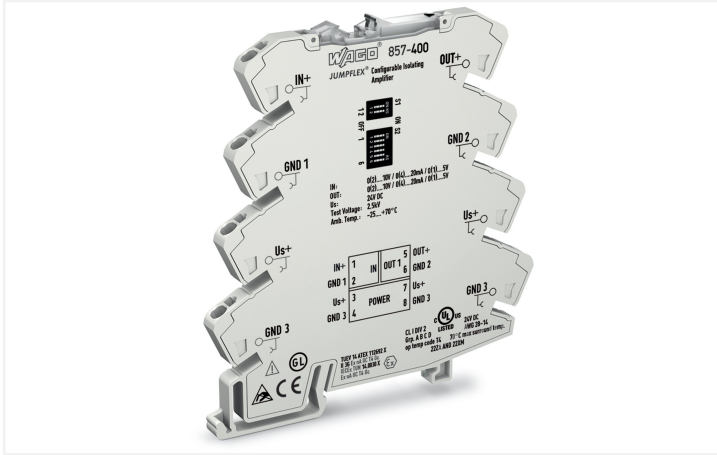


Data Sheet | Item Number: 857-400

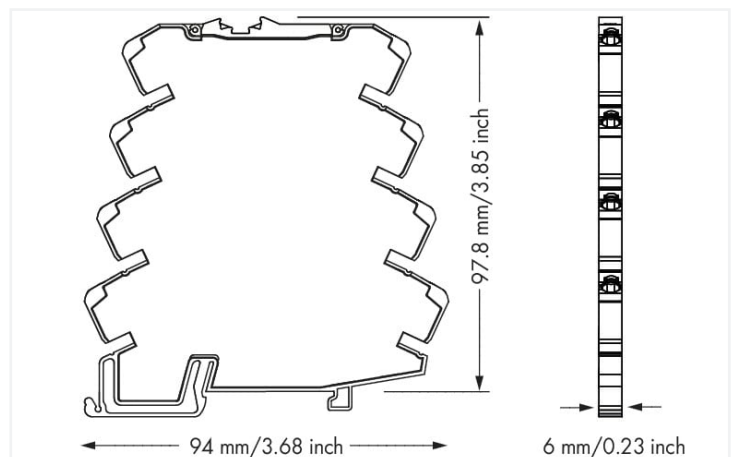
Isolation amplifier; Current and voltage input signal; Current and voltage output signal; Zero/span adjustment; Configuration via DIP switch; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm²



<https://www.wago.com/857-400>



Input Signal	Output Signal	Max. Operating Frequency
0...20 mA	0...20 mA	100 Hz
0...10 V	0...10 V	
2...10 V	2...10 V	
0...5 V	0...5 V	
1...5 V	1...5 V	



Dimensions in mm

Short description:

WAGO's configurable signal conditioner converts, amplifies, filters and electrically isolates standard analog signals.

Features:

- Calibrated measurement range switching
- Switchable limit frequency

Notes

Safety Information

Input and output must be safely isolated from any hazardous live parts!

Note

The 3 (Us+), 7 (Us+), 4 (GND 3) and 8 (GND 3) connections are internally commoned.
Current carrying capacity between 3/4 and 7/8 connections: 1 A (max.)

Use shielded signal lines!

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	DIP switch Potentiometer
-----------------------	-----------------------------

Input

Input signal type	Voltage Current
Input signal (voltage)	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V (calibrated, switchable)
Input signal (current)	0 ... 20 mA 4 ... 20 mA (calibrated, switchable)
Input resistance (current input)	$\leq 50 \Omega$
Input resistance (voltage input)	$\geq 100 \text{ k}\Omega$
Input current (max.)	50 mA
Input voltage (max.)	30 V
Zero/span adjustment	$\pm 3\%$ of upper-range value

Output (analog)

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V (calibrated (as delivered), switchable)
Output signal (current)	0 ... 20 mA 4 ... 20 mA 0 ... 10 mA 2 ... 10 mA (kalibriert (im Auslieferungszustand), umschaltbar)
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 μs (5 kHz)

Measurement error

Transmission error (typ.)	$\leq 0.1\%$ of upper-range value
Transmission error (max.)	$\leq 0.2\%$ of upper-range value
Transmission error (under interference)	$\leq 15\%$ of upper-range value
Temperature coefficient	$\leq 0.01\%$ /K

Power supply

Power supply type	24 VDC (SELV)
Nominal supply voltage U_S	DC 24 V
Supply voltage range	$\pm 30\%$
Current consumption (default)	$\leq 30 \text{ mA}$
Current consumption (max.)	$\leq 40 \text{ mA}$ (I_{out} : 20 mA; Load impedance: 600 Ω ; U_S : 16.8 V)

Safety and protection

Rated Voltage	300 V	Test voltage	
Protection type	IP20	Test voltage (input/output/supply)	AC 3 kV; 50 Hz; 1 min

Insulation coordination

Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply)	Functional insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 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
---------------	-------------

Material data

Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.363 MJ
Weight	43 g

Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Temperature range of connection cable	≥ (T _{ambient} + 25 K)
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
Standards/specifications	EN 61010-1 DNV UL 508

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-21-01-20
eCl@ss 9.0	27-21-01-20
ETIM 9.0	EC002653
ETIM 8.0	EC002653
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4045454471293
Customs tariff number	85437090300

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)	61dc3753-5e53-4bb5-9a50-f5aa17855efd
SCIP notification number (Belgium)	c0cac427-821b-4fee-853d-e625623f7640
SCIP notification number (Bulgaria)	b870ee7e-96a6-4693-a71e-ca604ee0becd
SCIP notification number (Czech Republic)	e7e38323-7816-4bca-823d-3b7279f03a44
SCIP notification number (Denmark)	6601305f-f71c-49d0-b0a8-1bb00e9b10a9
SCIP notification number (Finland)	f0f87a08-b417-4804-bef3-c3544e6ec13a
SCIP notification number (France)	7fece020-0230-4fff-8cee-bf52a792d4d6
SCIP notification number (Germany)	197024b5-9ab4-47ce-ad91-4e9856e8eff0
SCIP notification number (Hungary)	32b8cc06-78ff-4b21-86dd-dbc709b88954
SCIP notification number (Italy)	1a3b35dc-ce7d-420c-9c23-318120ddc4e0
SCIP notification number (Netherlands)	b772c60e-9cbe-49e9-8f7d-522704ecfa81
SCIP notification number (Poland)	dd653e15-62aa-4136-bfb4-6c245822ff06
SCIP notification number (Romania)	7347c6f8-21e0-4fd4-ab8f-e32d7983d5cc
SCIP notification number (Sweden)	dd90bd68-e44b-432d-98d3-fe7c80da2930

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.4

Declarations of conformity and manufacturer's declarations

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

Approvals for marine applications



Approval	Standard	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 Polski Rejestr Statków	-	TE/1098/880590/23

Approvals for hazardous areas



Approval	Standard	Certificate Name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV14ATEX112692X (II 3G Ex ec IIC T4 Gc)
CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
IECEx TUEV Nord Cert GmbH	-	IECEX TUN14.0030X
UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 857-400	↓
--	---

Documentation

Manual

WAGO Isolating Amplifiers	↓
---------------------------	---

Bid Text

Item	Date	File Name	Size	Action
857-400	18.07.2019	xml	6.10 KB	↓
857-400	18.07.2019	docx	19.31 KB	↓
857-400	18.07.2019	pdf	75.55 KB	↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 140.99 KB	↓
Messumformer und Trennverstärker	V 2.0.0 16.08.2022	pdf 2246.01 KB	↓

CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 857-400 ↓	EPLAN Data Portal 857-400 ↓
	WSCAD Universe 857-400 ↓
	ZUKEN Portal 857-400 ↓

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

1.1.3.1 Jumper

 <p>Item No.: 859-403/000-029 Jumper; for jumper slot; 3-way; insulated; yellow</p>	 <p>Item No.: 859-404/000-006 Jumper; for jumper slot; 4-way; insulated; blue</p>	 <p>Item No.: 859-404 Jumper; for jumper slot; 4-way; insulated; light gray</p>	 <p>Item No.: 859-404/000-005 Jumper; for jumper slot; 4-way; insulated; red</p>
 <p>Item No.: 859-404/000-029 Jumper; for jumper slot; 4-way; insulated; yellow</p>	 <p>Item No.: 859-405/000-006 Jumper; for jumper slot; 5-way; insulated; blue</p>	 <p>Item No.: 859-405 Jumper; for jumper slot; 5-way; insulated; light gray</p>	 <p>Item No.: 859-405/000-005 Jumper; for jumper slot; 5-way; insulated; red</p>
 <p>Item No.: 859-405/000-029 Jumper; for jumper slot; 5-way; insulated; yellow</p>	 <p>Item No.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue</p>	 <p>Item No.: 859-406 Jumper; for jumper slot; 6-way; insulated; light gray</p>	 <p>Item No.: 859-406/000-005 Jumper; for jumper slot; 6-way; insulated; red</p>
 <p>Item No.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; yellow</p>	 <p>Item No.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue</p>	 <p>Item No.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray</p>	 <p>Item No.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red</p>
 <p>Item No.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow</p>	 <p>Item No.: 859-408/000-006 Jumper; for jumper slot; 8-way; insulated; blue</p>	 <p>Item No.: 859-408 Jumper; for jumper slot; 8-way; insulated; light gray</p>	 <p>Item No.: 859-408/000-005 Jumper; for jumper slot; 8-way; insulated; red</p>
 <p>Item No.: 859-408/000-029 Jumper; for jumper slot; 8-way; insulated; yellow</p>	 <p>Item No.: 859-409/000-006 Jumper; for jumper slot; 9-way; insulated; blue</p>	 <p>Item No.: 859-409 Jumper; for jumper slot; 9-way; insulated; light gray</p>	 <p>Item No.: 859-409/000-005 Jumper; for jumper slot; 9-way; insulated; red</p>
 <p>Item No.: 859-409/000-029 Jumper; for jumper slot; 9-way; insulated; yellow</p>			

1.1.4 Marking

1.1.4.1 Marker

 <p>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</p>	 <p>Item No.: 793-502 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-566 WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-503 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white</p>
 <p>Item No.: 793-504 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-505 WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-506 WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white</p>
 <p>Item No.: 2009-115 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>			

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 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

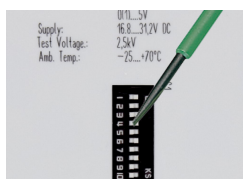


Item No.: 210-720

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

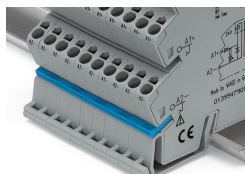
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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