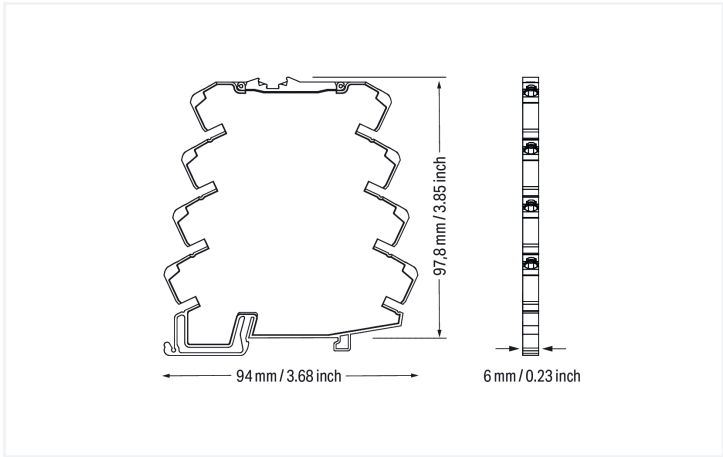
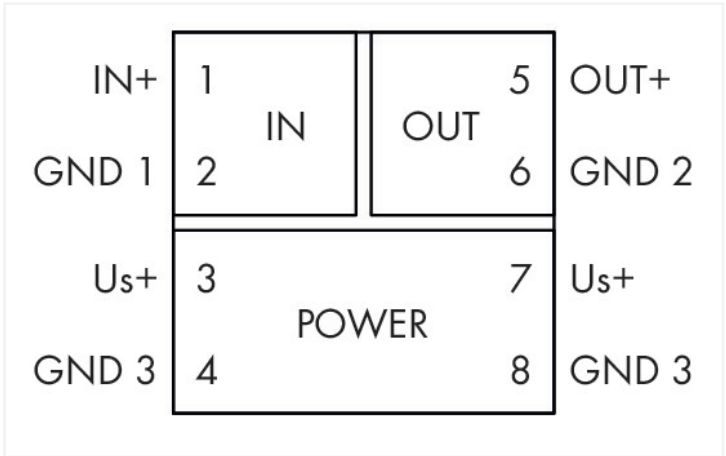
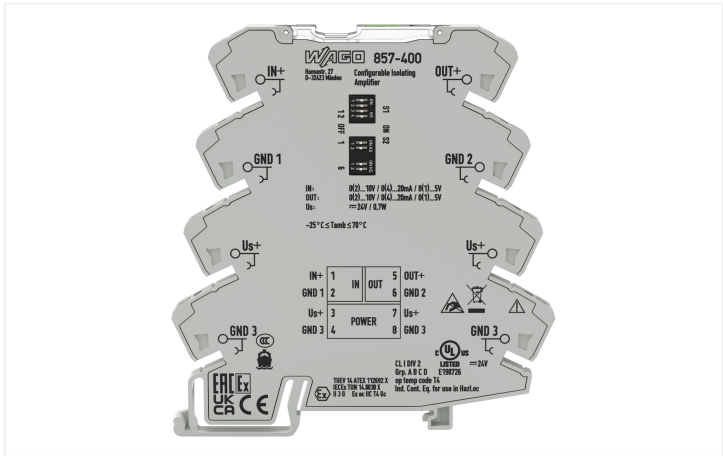
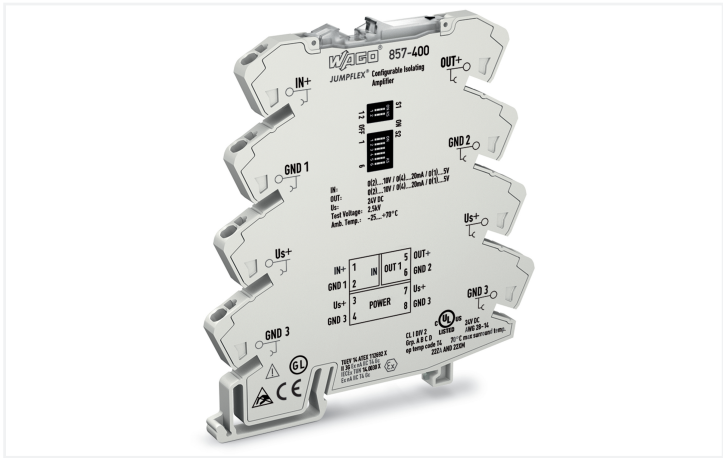


Data Sheet | Item Number: 857-400

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>



857-400

DIP Switch Adjustability

• ON

Default

DIP Switch S1 (2-fold)		DIP Switch S2 (8-fold)						Max. Operating Frequency	
Input Signal		Output Signal						Hz	
1	2	1	2	3	4	5	6	7	8
■	0 ... 20 mA	■	■	■	■	■	■	■	5 kHz
		■	■	■	■	■	■	■	100 Hz
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
■	4 ... 20 mA	■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
■	0 ... 10 V	■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
■	2 ... 10 V	■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
■	0 ... 5 V	■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
■	1 ... 5 V	■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	
		■	■	■	■	■	■	■	

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	Use shielded signal cables! Only use shielded signal cables for analog input and output signals. This ensures the device maintains its specified accuracy and immunity to interference, even when external disturbances affect the signal cable. 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.)

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)	≤ 50 Ω
Input resistance (voltage input)	≥ 100 kΩ
Input current (max.)	50 mA
Input voltage (max.)	30 V
Zero/span adjustment	±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 (calibrated (as delivered), switchable)
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

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

Power Supply	
Power supply type	24 VDC (SELV)
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Current consumption (default)	≤ 30 mA
Current consumption (max.)	≤ 40 mA (I _{out} 20 mA; Load impedance: 600 Ω; U _s : 16.8 V)

Safety and protection	
Rated Voltage	300 V
Protection type	IP20
Test voltage	
Test voltage (input/output/supply)	3 kVAC; 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 mm² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm² / 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	0.489 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)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4045454471293
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)	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		Declarations of conformity and manufacturer's declarations
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
Approval	Standard	Certificate Name
EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
UK-Declaration of Confor- mity 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			
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
2D/3D Models 857-400 

CAE data
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
			
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 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

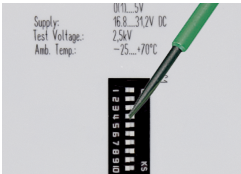
1.1.7.1 Operating tool



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

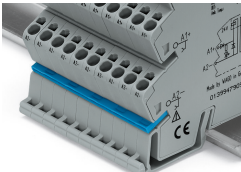
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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