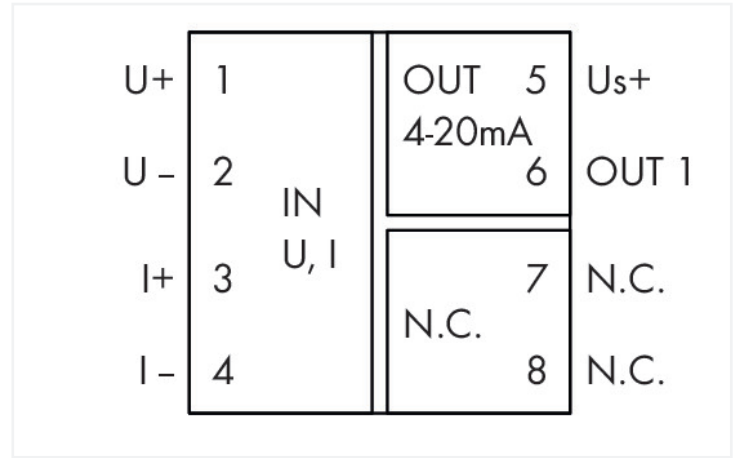


Data Sheet | Item Number: 857-450

Loop-powered isolation amplifier; Bipolar current and voltage input signal; Current output signal; Configuration via DIP switch; Power supply via output; 6 mm module width; 2,50 mm²



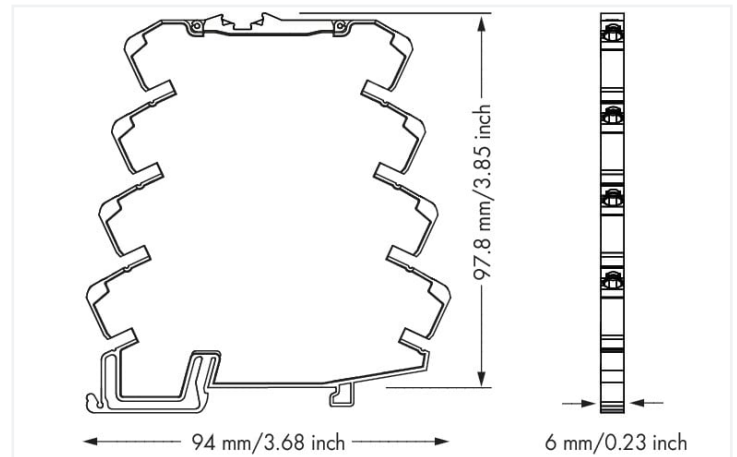
<https://www.wago.com/857-450>



857-450
DIP Switch Adjustability

ON Default

DIP switch (6 positions)					Output Signal	Max. Operating Frequency
1	2	3	4	5		6
					4 ... 20 mA	100 Hz
•	•	•	•	•	0 ... 20 mA	30 Hz
•	•	•	•	•	±20 mA	
•	•	•	•	•	2 ... 10 mA	
•	•	•	•	•	0 ... 10 mA	
•	•	•	•	•	±10 mA	
•	•	•	•	•	0 ... 5 mA	
•	•	•	•	•	±5 mA	
•	•	•	•	•	0 ... 20 V	
•	•	•	•	•	±20 V	
•	•	•	•	•	2 ... 10 V	
•	•	•	•	•	0 ... 10 V	
•	•	•	•	•	±10 V	
•	•	•	•	•	1 ... 5 V	
•	•	•	•	•	0 ... 5 V	
•	•	•	•	•	±5 V	
•	•	•	•	•	0 ... 2 V	
•	•	•	•	•	±2 V	
•	•	•	•	•	0 ... 1 V	
•	•	•	•	•	±1 V	



Dimensions in mm

Short description:

WAGO's loop-powered isolator converts, amplifies, filters and electrically isolates standard unipolar/bipolar analog signals. **Features:**

- No additional supply voltage required
- Zero/span adjustment
- Standard unipolar/bipolar analog signals at input
- Calibrated measurement range switching
- Switchable limit frequency
- 3-way electrical isolation with 2.5 kV test voltage

Technical data

Configuration		Input
Configuration options	DIP switch	Input signal type
		Input signal (voltage)
		Input signal (current)
		Input resistance (current input)
		Input resistance (voltage input)
		Input current (max.)
		Input voltage (max.)

Input

Zero/span adjustment	± 5 % of upper-range value
----------------------	----------------------------

Output (analog)

Output signal type	Current
Output signal (current)	4 ... 20 mA
Load impedance (current output)	≤ 600 Ω

Signal processing

Limit frequency	100 Hz / 30 Hz (configurable via DIP switch)
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	Loop-powered (via output)
Supply voltage	DC 8 ... 30 V (Power is derived from the output circuit.)

Safety and protection

Protection type	IP20
-----------------	------

Test voltage

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

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	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.363 MJ
Weight	37.9 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
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
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 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4045454828479
Customs tariff number	85437090300

Environmental Product Compliance

CAS-No.	7439-92-1 1303-86-2 1317-36-8
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide
RoHS Compliance Status	Compliant, With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	e16f64f5-6ced-40e1-83dc-3485ebbaa281
SCIP notification number (Belgium)	fdb208e6-e00a-417a-9b1e-23385c79c3e7
SCIP notification number (Bulgaria)	71c2721c-96ec-483c-8d59-3298d2cadbe4
SCIP notification number (Czech Republic)	5c16d30b-bcb6-4c91-bbd3-2673166dad86
SCIP notification number (Denmark)	2231a6fe-a693-4d2b-a733-142cc7198e54
SCIP notification number (Finland)	371ca545-e559-439b-b2dd-4f01fa577e55
SCIP notification number (France)	fccbb7f1-dfa2-4b72-b77d-1a08dd836ab4
SCIP notification number (Germany)	29c84369-2afb-4dbd-9b11-2d5004b8865a
SCIP notification number (Hungary)	8a5d8371-ae0-49ae-8bce-d4531298978b
SCIP notification number (Italy)	1559b561-ca2e-4be9-a1ce-809f6fe13e83
SCIP notification number (Netherlands)	2d6da5de-e5f0-4b55-b880-8a97605296d3
SCIP notification number (Poland)	e605d2da-b4f1-4136-8fee-0882afb24ea4
SCIP notification number (Romania)	a6879cf5-7e37-44c6-86a2-fe89bbdf8182
SCIP notification number (Sweden)	45198689-2995-41e0-a972-5410394c26c8

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	-	-

Approvals for hazardous areas



Approval	Standard	Certificate Name
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 857-450	↓
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Documentation

Bid Text			
857-450	19.02.2019	xml 5.43 KB	↓
857-450	20.02.2019	docx 16.97 KB	↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 140.99 KB	↓
Loop-Powered-Trennverstärker		pdf 1745.01 KB	↓

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 857-450	EPLAN Data Portal 857-450
	WSCAD Universe 857-450
	ZUKEN Portal 857-450

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

1.1.3.1 Jumper



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



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

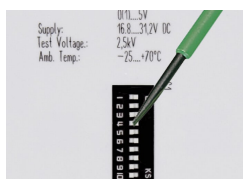


Item No.: 210-720

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

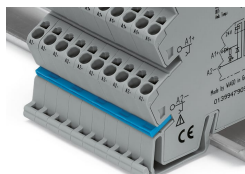
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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