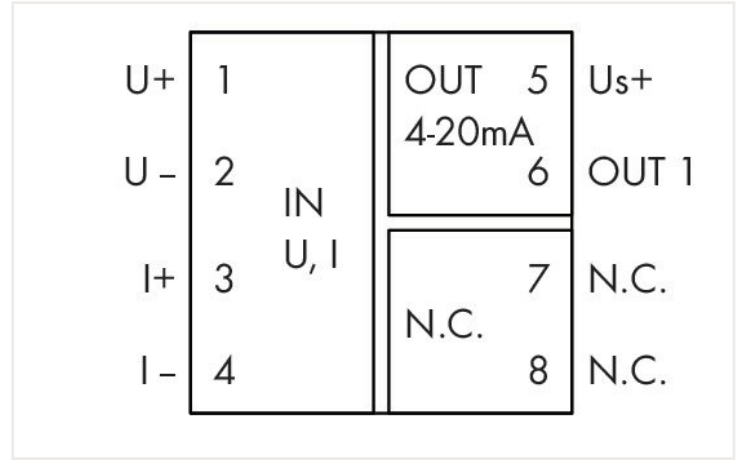
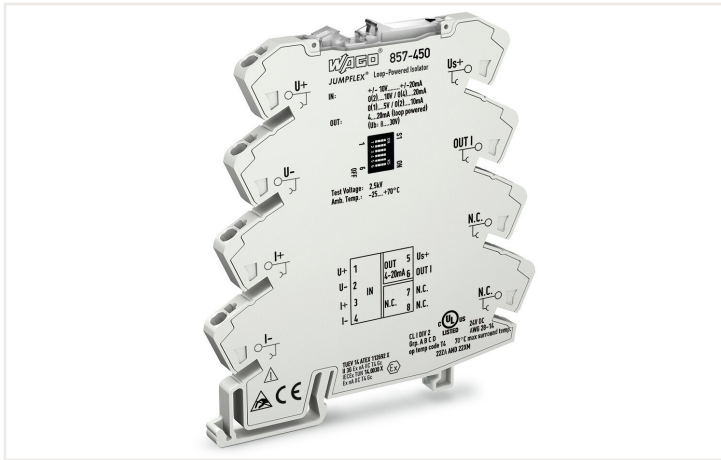


Data sheet | Item number: 857-450

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



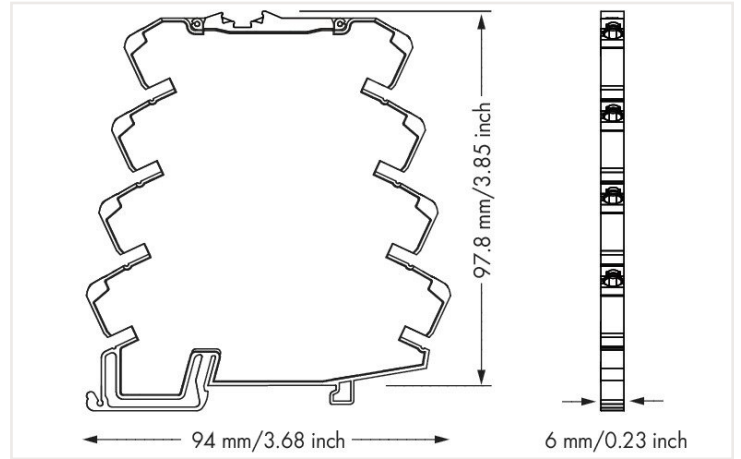
<https://www.wago.com/857-450>



857-450
DIP Switch Adjustability

• = ON Default

Input Signal					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
- Safe 2-way isolation with 2.5 kV test voltage per EN 61140

Technical data

Configuration		Input	
Configuration options	DIP switch	Input signal type	Voltage Current
		Input signal (voltage)	±1 V; 0 ... 1 V; ±2 V; 0 ... 2 V; ±5 V; 0 ... 5 V; 1 ... 5 V; ±10 V; 0 ... 10 V; 2 ... 10 V; ±20 V; 0 ... 20 V
		Input signal (current)	±5 mA; 0 ... 5 mA; ±10 mA; 0 ... 10 mA; 2 ... 10 mA; ±20 mA; 0 ... 20 mA; 4 ... 20 mA
		Input resistance (current input)	≤ 50 Ω
		Input resistance (voltage input)	≥ 1 MΩ
		Input current (max.)	50 mA
		Input voltage (max.)	30 V

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

Supply

Power supply type	loop-powered (via output)
Supply voltage	DC 8 ... 30 V (Power is derived from the output circuit.)

Safety and protection

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

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

Fire load	0.405 MJ
Weight	37.9 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
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3

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	4045454828479
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 hazardous areas



Approval	Standard	Certificate name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X (II 3 G Ex nA IIC T4 Gc)
CCCEX CQST/CNEx	CNCA-C23-01	2020312310000210 (Ex nA IIC T4 Gc)
EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B.00144/19 (2 Ex nA IIC T4 Gc X)
IECEx TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0030_X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 857-450



Documentation

Bid Text				Instruction Leaflet		
857-450	19.02.2019	xml 5.43 KB		Loop-Powered-Trenn- verstärker	pdf 1745.01 KB	
857-450	20.02.2019	docx 16.97 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

1.1.3.1 Jumper

 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
 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

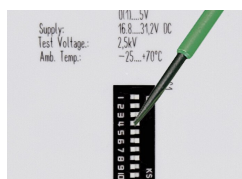


Item no.: [210-720](#)

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

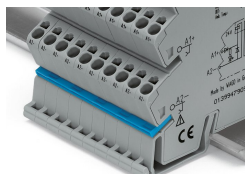
Installation notes

Configuring



Configuration via DIP switch

Commoning



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