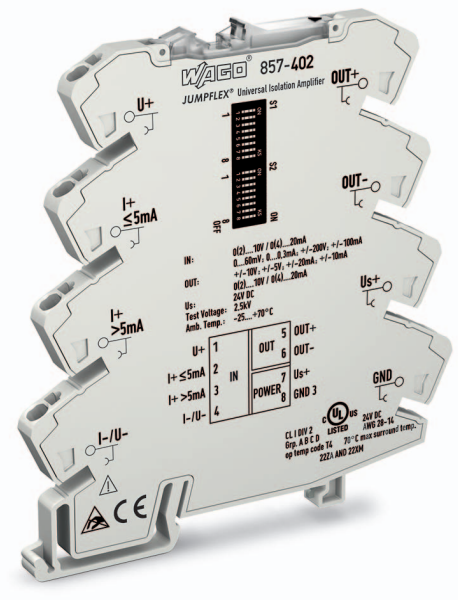
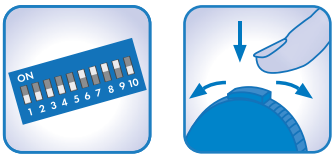
JUMPFLEX® Signal Conditioners

Universal Isolation Amplifier

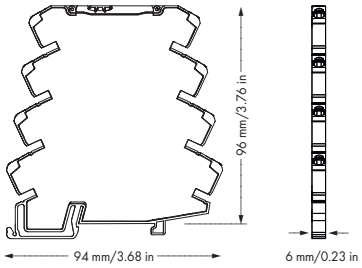


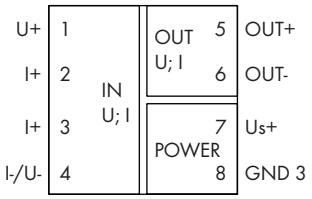
Configuration via:



DIP switch

Push/Slide Switch





Short description:
The universal Isolation Amplifier converts unipolar and bipolar standard signals and amplifies, filters and electrically isolates analog standard signals.

Characteristics:
- Overload protection of current input using reversible fuse
- Zero/span adjustment across the entire measuring range (slide switch)
- Calibrated scale switching for all 456 signals
- Standard analog unipolar and bipolar signals, input/output
- Switchable max. operating frequency
- Clipping capability allows analog standard signal limitation to upper range values.
- Safe 3-way isolation with 2.5kV test voltage acc. to EN 61140

Description	Item No.	Pack. Unit
***JUMPFLEX*® Signal Conditioner, for DIN 35 rail**	**857-402**	1
Universal Isolation Amplifier		

Technical Data

Configuration:	
Configuration	DIP switch, push/slide switch
Input:	
Input signal	**Voltage:**
	± 60 mV, 0 ... 60 mV, ± 100 mV,
	0 ... 100 mV, ± 150 mV, 0 ... 150 mV,
	± 300 mV, 0 ... 300 mV, ± 500 mV,
	0 ... 500 mV, ± 1 V, 0 ... 1 V, ± 5 V,
	0 ... 5 V, 1 ... 5 V, ± 10 V, 0 ... 10 V,
	2 ... 10 V, ± 100 V, 0 ... 100 V,
	± 200 V, 0 ... 200 V
	Current:
	± 0.3 mA, 0 ... 0.3 mA, ± 1 mA,
	0 ... 1 mA, ± 5 mA, 0 ... 5 mA,
	± 10 mA, 0 ... 10 mA, 2 ... 10 mA,
	± 20 mA, 0 ... 20 mA, 4 ... 20 mA,
	± 50 mA, 0 ... 50 mA,
	± 100 mA, 0 ... 100 mA
Input resistance	approx. 1 MΩ (U input)
	≤ 5 mA approx. 100 Ω;
	> 5 mA approx. 10 Ω (I input)
Output:	
Output signal	**Voltage:**
	± 5 V, 0 ... 5 V, 1 ... 5 V,
	± 10 V, 0 ... 10 V, 2 ... 10 V
	Current:
	± 10 mA, 0 ... 10 mA, 2 ... 10 mA,
	± 20 mA, 0 ... 20 mA, 4 ... 20 mA
Load impedance	≤ 600 Ω (I output), ≥ 1 kΩ (U output)
Residual ripple	< 10 mV
General specifications:	
Nominal supply voltage V_S	24 VDC
Supply voltage range	V_S -30 % ... +30 %
Current consumption at 24 VDC	≤ 40 mA

Technical Data

General specifications:	
Max. operating frequency	100 Hz / 5 kHz
	(switchable via DIP switch)
Response time (T_{10-90})	< 3.5 ms / < 100 µs
Transmission error	≤ 0.08 % of the full scale value
Temperature coefficient	≤ 0.01 % /K
Zero/span adjustment	Adjustable via push/slide switch
Environmental requirements:	
Ambient operating temperature	-25 °C ... +70 °C
Storage temperature	-40 °C ... +85 °C
Safety and protection:	
Test voltage (input/output/supply)	2.5 kV AC, 50 Hz, 1 min.
Connection and type of mounting:	
Wire connection	Push-in CAGE CLAMP®
Cross sections	Ssolid:
	0.08 mm² ... 2.5 mm² / 28 ... 14 AWG
	Fine-stranded:
	0.34 mm² ... 2.5 mm² / 22 ... 14 AWG
Strip lengths	9 ... 10 mm / 0.35 ... 0.39 in.
Dimensions and weight:	
Dimensions (mm) W x H x L	6 x 96 x 94
	Height from upper-edge of DIN 35 rail
Weight	54.3 g
Standards and approvals:	
Conformity marking	CE
cULus UL 508	
cULus ANSI/ISA 12.12.01	Class I, Div. 2, Grp. ABCD, T4
TÜV 14 ATEX 112692 X	II 3 G Ex nA IIC T4 Gc
IECEx TUN 14.0030 X	Ex nA IIC T4 Gc
EMC immunity of interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Accessories:	see page 226
	Marking strip: 2009-110

DIP Switch Adjustability

● = ON

857–402

DIP Switch S1

Input Signal Ranges							Zero/Span Adjustment		Max. Operating Frequency	
1	2	3	4	5	6		7		8	
						Default setting*		Inactive		5 kHz
				●		0 ... 60 mV	●	Active	●	100 Hz
				●	●	± 60 mV				
			●			0 ... 100 mV				
			●		●	± 100 mV				
			●	●		0 ... 150 mV				
			●	●	●	± 150 mV				
		●				0 ... 300 mV				
		●			●	± 300 mV				
		●		●		0 ... 500 mV				
		●		●	●	± 500 mV				
		●	●			0 ... 1 V				
		●	●		●	± 1 V				
		●	●	●		0 ... 5 V				
		●	●	●	●	± 5 V				
	●					0 ... 10 V				
	●				●	± 10 V				
	●			●		0 ... 50 V				
	●			●	●	± 50 V				
	●		●			0 ... 100 V				
	●		●		●	± 100 V				
	●		●	●		0 ... 200 V				
	●		●	●	●	± 200 V				

More information on measurement range setting is available in 857-402 instruction leaflet.

DIP Switch S1

Input Signal Ranges						
1	2	3	4	5	6	
	●	●				0 ... 0.3 mA
	●	●			●	± 0.3 mA
	●	●		●		0 ... 1 mA
	●	●		●	●	± 1 mA
	●	●	●			0 ... 5 mA
	●	●	●		●	± 5mA
	●	●	●	●		0 ... 10 mA
	●	●	●	●	●	± 10 mA
●						0 ... 20 mA
●					●	± 20 mA
●				●		0 ... 50 mA
●				●	●	± 50 mA
●			●			0 ... 100 mA
●			●		●	± 100 mA
●		●				1 ... 5 V
●		●		●		2 ... 10 V
●		●	●			2 ... 10 mA
●		●	●	●		4 ... 20 mA

DIP Switch S2

Output Signal Ranges						Reserve	Clipping		Rocker Switch Lock	
1	2	3	4	5		6	7		8	
					Default setting*			inactive (analog response)		switched off
		●			0 ... 10 V		●	active (limiting response)	●	switched on
		●		●	± 10 V					
		●	●		2 ... 10 V					
	●				0 ... 5 V					
	●			●	± 5 V					
	●		●		1 ... 5 V					
	●	●			0 ... 20 mA					
	●	●		●	± 20 mA					
	●	●	●		4 ... 20 mA					
●					0 ... 10 mA					
●				●	± 10 mA					
●			●		2 ... 10 mA					

***Default setting**

Input	± 10 V
Output	± 10 V
Max. operating frequency	5 kHz
*The input and output range DIP switches must be readjusted when changing the default setting.	