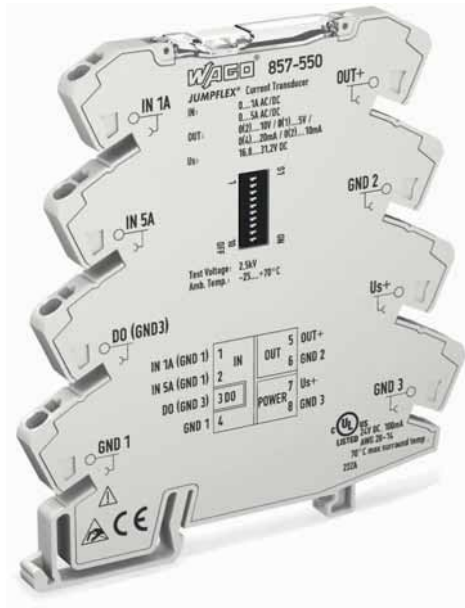
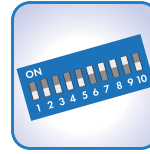


JUMPFLEX® Transducers

Current transducer AC/DC 0 ... 1 A, 0 ... 5 A



Configuration via:



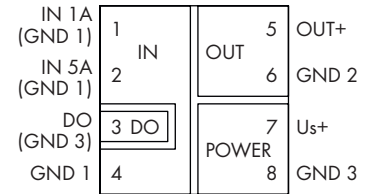
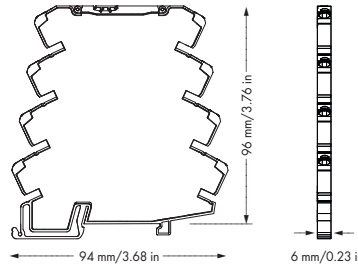
DIP Switches



PC Configuration Software



Smartphone App



Short description:

The current transducer measures both 0-1 A and 0-5 A AC/DC currents, while converting the input signal to a standard analog signal at the output.

Features:

- PC configuration interface
- True RMS measurement or arithmetic mean value
- Digital switching output (configurable switching thresholds)
- Switchable filter function
- Switching between measuring ranges is calibrated
- Safe 3-way isolation with 2.5 kV test voltage acc. to EN 61140
- Extremely fast response times
- Measuring range overflow indication

Technical Data

Configuration:	
Configuration	DIP switches, PC configuration software, smartphone app
Input:	
Input signal	0 ... 1 A AC/DC; 0 ... 5 A AC/DC *
Input resistance	10 mΩ (5 A); 47 mΩ (1 A)
Frequency range	16 Hz ... 400 Hz
Response threshold	< 0.5 % (of measuring range nominal)
Current carrying capacity	2 x I _N (continuous)
Output:	
Output signal	Voltage: 0 ... 5 V, 1 ... 5 V, 0 ... 10 V, 2 ... 10 V *
	Current: 0 ... 10 mA, 2 ... 10 mA, 0 ... 20 mA, 4 ... 20 mA *
Load impedance	≤ 600 Ω (I output) ** ≥ 2 kΩ (U output) ** Temperature range restrictions may occur.
Filter (T ₁₀₋₉₀)	260 ms (DC), 600 ms (AC 50 Hz)
Output - Digital	
Max. switching voltage	Supply voltage applied
Max. continuous current	500 mA (up to 60 °C) 100 mA (60 °C ... 70 °C)
General specifications:	
Voltage supply V _s	24 VDC
Supply voltage range	16.8 V ... 31.2 V
Current consumption at 24 V DC	≤ 40 mA
Measuring procedure	Arithmetic mean value * True RMS measurement (TRMS)
Response time	1.5 ms + signal cycle duration
Max. response time	60 ms
Min. measuring span	2 mA ... 1 A; 4 mA ... 5 A

Description	Item No.	Pack. Unit
JUMPFLEX® Transducer, for DIN 35 rail	857-550	1
Current transducer		
Technical Data		
General specifications:		
Transmission error	≤ 0.1 % typ. (≤ 0.4 % max.)	
Temperature coefficient	≤ 0.01 % /K	
Linearity error	< 0,5 % (of measuring range nominal)	
Environmental requirements:		
Ambient operating temperature	-25 °C ... +70 °C (at nominal current)	
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	CAGE CLAMP® S	
Cross sections	solid: 0.08 mm ² ... 2.5 mm ² / AWG 28 ... 14 fine-stranded: 0.34 mm ² ... 2.5 mm ² / AWG 22 ... 14	
Strip lengths	9 ... 10 mm / 0.37 in	
Dimensions and weight:		
Dimensions (mm) W x H x L	6 x 96 x 94	
Weight	Height from upper-edge of DIN 35 rail 50 g	
Standards and approvals:		
Conformity marking	CE	
UL 508	Ⓢ	
ANSI/ISA 12.12.01	(pending)	
Shipbuilding	Ⓢ	
Accessories	Plug-in current transformers: 855 Series see pages 268 ... 271	
(* Additional setting options via PC configuration software or smartphone app)		

DIP Switch S1

Input Signal		Measuring Method		Filter	Output Signal		
1	2	3	4	5	6		
	5 A	Mean square value	off			0 ... 20 mA	
●	1 A	Arithmetic mean value	active		●	4 ... 20 mA	
				●		0 ... 10 V	
				●	●	2 ... 10 V	
						0 ... 10 mA	
					●	2 ... 10 mA	
				●		0 ... 5 V	
				●	●	1 ... 5 V	

Filter

The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

DIP Switch S1

Measuring Range Underflow		Measuring Range Overflow		Overcurrent (Input Signal - End Value + 20%)		Digit Output DO Signaling
7	8	9	10			
	Lower limit of measuring range -5 %*	Upper limit of measuring range +2.5 %*	Upper limit of measuring range +5 %*		DO not active	
●	Lower limit of measuring range	Upper limit of measuring range +2.5 %	Upper limit of measuring range +5 %	●	DO U _s + switching	
	Lower limit of measuring range	Upper limit of measuring range	Lower limit of measuring range	●	DO GND switching	
●	Lower limit of measuring range	Upper limit of measuring range	Upper limit of measuring range			

*acc. to NAMUR NE 43

Digital Output DO/Signaling

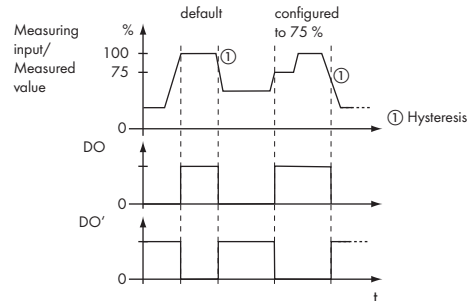
The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

In order to increase the switching current of the DO, the latter may be expanded by a relay. Thanks to the contour uniformity of Series 857, for example, a 857-304 Relay can be snapped in next to it. This output can be quickly and easily expanded to a switching current of 6A by simply using an adjacent jumper (859-402).

Default Setting

All DIP switches are in "OFF" position for delivery.	
Input	
Input Signal	0 ... 5 A
Measuring Method	Mean square value
Filter	not active
Output	
Output Signal	0 ... 20 mA
Measuring Range Underflow	0 mA
Measuring Range Overflow	20.5 mA
Overcurrent	21 mA
Digital Output DO	not active

Switching Behavior, Digital Output (DO)



Application example:

