

Configuration Using DIP Switches

Use the switches to configure the device. The following options are available:

Switch	S1			
	1	2	3	4
Input				
PC setting				
0 ... 20 mA	ON			
4 ... 20 mA		ON		
-20 ... 20 mA	ON	ON		
ABS (-20 ... 20 mA)			ON	
0 ... 10 mA	ON		ON	
2 ... 10 mA		ON	ON	
-10 ... 10 mA	ON	ON	ON	
4 ... 20 mA (NE 43)				ON
0 ... 10 V	ON			ON
2 ... 10 V		ON		ON
-10 ... 10 V	ON	ON		ON
ABS (-10 ... 10 V)			ON	ON
0 ... 5 V	ON		ON	ON
1 ... 5 V		ON	ON	ON
-5 ... 5 V	ON	ON	ON	ON

Switch	S1					
	5	6	7	8	9	10
Output						
MIN alarm						
MAX alarm	ON					
Mode of operation active						
Mode of operation passive		ON				
Time function						
Off						
On delay				ON		
Off delay			ON			
One-shot function			ON	ON		
0.5 s						
1 s						ON
5 s					ON	
10 s					ON	ON

Switch	S2		
	1	2	3
Hysteresis			
0.1 %			
1 %		ON	
2 %		ON	ON
5 %	ON		
10 %	ON		ON
20 %	ON	ON	
30 %	ON	ON	ON

Brief Instructions

Trip Amplifier S1SD-1AI-1R

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Switch		S2						
Unipolar limit value	Bipolar limit value	4	5	6	7	8	9	10
-5 %	-110 %							
-4 %	-108 %							ON
-3 %	-106 %						ON	
-2 %	-104 %						ON	ON
-1 %	-102 %					ON		
0 %	-100 %					ON		ON
1 %	-98 %					ON	ON	
2 %	-96 %					ON	ON	ON
3 %	-94 %				ON			
4 %	-92 %				ON			ON
5 %	-90 %				ON		ON	
6 %	-88 %				ON		ON	ON
7 %	-86 %				ON	ON		
8 %	-84 %				ON	ON		ON
9 %	-82 %				ON	ON	ON	
10 %	-80 %				ON	ON	ON	ON
11 %	-78 %			ON				
12 %	-76 %			ON				ON
13 %	-74 %			ON			ON	
14 %	-72 %			ON			ON	ON
15 %	-70 %			ON		ON		
16 %	-68 %			ON		ON		ON
17 %	-66 %			ON		ON	ON	
18 %	-64 %			ON		ON	ON	ON
19 %	-62 %			ON	ON			
20 %	-60 %			ON	ON			ON
21 %	-58 %			ON	ON		ON	
22 %	-56 %			ON	ON		ON	ON
23 %	-54 %			ON	ON	ON		
24 %	-52 %			ON	ON	ON		ON
25 %	-50 %			ON	ON	ON	ON	
26 %	-48 %			ON	ON	ON	ON	ON
27 %	-46 %		ON					
28 %	-44 %		ON					ON
29 %	-42 %		ON				ON	
30 %	-40 %		ON				ON	ON
31 %	-38 %		ON			ON		
32 %	-36 %		ON			ON		ON
33 %	-34 %		ON			ON	ON	
34 %	-32 %		ON			ON	ON	ON
35 %	-30 %		ON		ON			
36 %	-28 %		ON		ON			ON
37 %	-26 %		ON		ON		ON	
38 %	-24 %		ON		ON		ON	ON
39 %	-22 %		ON		ON	ON		
40 %	-20 %		ON		ON	ON		ON
41 %	-18 %		ON		ON	ON	ON	
42 %	-16 %		ON		ON	ON	ON	ON
43 %	-14 %		ON	ON				
44 %	-12 %		ON	ON				ON

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Brief Instructions

Trip Amplifier S1SD-1AI-1R

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Switch		S2						
Unipolar limit value	Bipolar limit value	4	5	6	7	8	9	10
45 %	-10 %		ON	ON			ON	
46 %	-8 %		ON	ON			ON	ON
47 %	-6 %		ON	ON		ON		
48 %	-4 %		ON	ON		ON		ON
49 %	-2 %		ON	ON		ON	ON	
50 %	0 %		ON	ON		ON	ON	ON
51 %	2 %		ON	ON	ON			
52 %	4 %		ON	ON	ON			ON
53 %	6 %		ON	ON	ON		ON	
54 %	8 %		ON	ON	ON		ON	ON
55 %	10 %		ON	ON	ON	ON		
56 %	12 %		ON	ON	ON	ON		ON
57 %	14 %		ON	ON	ON	ON	ON	
58 %	16 %		ON	ON	ON	ON	ON	ON
59 %	18 %	ON						
60 %	20 %	ON						ON
61 %	22 %	ON					ON	
62 %	24 %	ON					ON	ON
63 %	26 %	ON				ON		
64 %	28 %	ON				ON		ON
65 %	30 %	ON				ON	ON	
66 %	32 %	ON				ON	ON	ON
67 %	34 %	ON			ON			
68 %	36 %	ON			ON			ON
69 %	38 %	ON			ON		ON	
70 %	40 %	ON			ON		ON	ON
71 %	42 %	ON			ON	ON		
72 %	44 %	ON			ON	ON		ON
73 %	46 %	ON			ON	ON	ON	
74 %	48 %	ON			ON	ON	ON	ON
75 %	50 %	ON		ON				
76 %	52 %	ON		ON				ON
77 %	54 %	ON		ON			ON	
78 %	56 %	ON		ON			ON	ON
79 %	58 %	ON		ON		ON		
80 %	60 %	ON		ON		ON		ON
81 %	62 %	ON		ON		ON	ON	
82 %	64 %	ON		ON		ON	ON	ON
83 %	66 %	ON		ON	ON			
84 %	68 %	ON		ON	ON			ON
85 %	70 %	ON		ON	ON		ON	
86 %	72 %	ON		ON	ON		ON	ON
87 %	74 %	ON		ON	ON	ON		
88 %	76 %	ON		ON	ON	ON		ON
89 %	78 %	ON		ON	ON	ON	ON	
90 %	80 %	ON		ON	ON	ON	ON	ON
91 %	82 %	ON	ON					
92 %	84 %	ON	ON					ON
93 %	86 %	ON	ON				ON	
94 %	88 %	ON	ON				ON	ON
95 %	90 %	ON	ON			ON		

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Switch		S2						
Unipolar limit value	Bipolar limit value	4	5	6	7	8	9	10
96 %	92 %	ON	ON			ON		ON
97 %	94 %	ON	ON			ON	ON	
98 %	96 %	ON	ON			ON	ON	ON
99 %	98 %	ON	ON		ON			
100 %	100 %	ON	ON		ON			ON
101 %	102 %	ON	ON		ON		ON	
102 %	104 %	ON	ON		ON		ON	ON
103 %	106 %	ON	ON		ON	ON		
104 %	108 %	ON	ON		ON	ON		ON
105 %	110 %	ON	ON		ON	ON	ON	
106 %	112 %	ON	ON		ON	ON	ON	ON
107 %	114 %	ON	ON	ON				
108 %	116 %	ON	ON	ON				ON
109 %	118 %	ON	ON	ON			ON	
110 %	120 %	ON	ON	ON			ON	ON
Teach-in (limit value)		ON	ON	ON	ON	ON	ON	

Configuration Using Software

Use software to configure the device. Enable the configuration by setting the DIP switches S1.1 to S1.4 to OFF.

The device is equipped with a programming socket on the front. A corresponding adapter is available as an accessory. This adapter can be used to configure the device. The software is available to download from www.pepperl-fuchs.com.

Factory Setting

In the delivery state the DIP switches on the device side are in the OFF position. This setting corresponds to the **PC setting** option. The following values are preset with this setting.

Function	Settings
Input	0 ... 20 mA
Trip mode	MIN alarm
Mode of operation	active
Limit value	50 %
Hysteresis	1 %
Time function	Off

LED Indicators

The following status displays are provided on the front of the device.

LED	Status	Description
Green LED	Off	Insufficient power supply, device not functioning
	On	Power supply OK
Yellow LED	Off	Relay de-energized
	On	Relay energized
Red LED	Flashing	Line fault
	On	Internal device fault, replace device
Blue LEDs	Upper LED on	Positive correction value active
	Lower LED on	Negative correction value active
	One LED flashing briefly	Correction value stored
	Both LEDs flashing briefly	Teach-in value stored

Teach-In Function

> Teaching-In the Limit Value

The limit value can be taught-in via the buttons on the front panel.

- (1) Activate the teach-in function via DIP switches S2.4 to S2.9.
- (1) The output functions MIN/MAX alarm, hysteresis and active/passive mode can remain unchanged.
- (2) Teach-in the limit value with one of the buttons. Press the button for more than 3 seconds.

↳ Both blue LEDs flash briefly. The value is stored.

The new limit value can be read or changed via the software.

> Shifting the Limit Value

The limit value can be shifted manually via the buttons on the front panel.

- (1) Use the upper button to shift up the limit value. Press the button for about 1 second. The limit value is shifted upwards by 0.5 %.
↳ The upper blue LED flashes briefly. The value is stored. Then the upper blue LED lights up.
- (2) Use the lower button to shift down the limit value. Press the button for about 1 second. The limit value is shifted downwards by 0.5 %.
↳ The lower blue LED flashes briefly. The value is stored. Then the lower blue LED lights up.

The new limit value can be read or changed via the software.

Restart Inhibit

The restart inhibit is used to prevent the momentary exceedance of a switch point or faults from not being noticed by operating personnel. Faults can be caused by a lead breakage, lead short circuit, or insufficient supply voltage.

If the restart inhibit is active, the new status is retained after an output has been switched until one of the following events occurs.

- The device is restarted
- There is a reset signal on terminals 8 and 5

If one of these events occurs, the output is reset. The status is retained only in the following exceptional cases:

- The switch point continues to be exceeded.
- The fault continues to be present.

The restart inhibit cannot be used for 2-wire and 3-wire sensors.