

Double limit value switch

Safety warnings



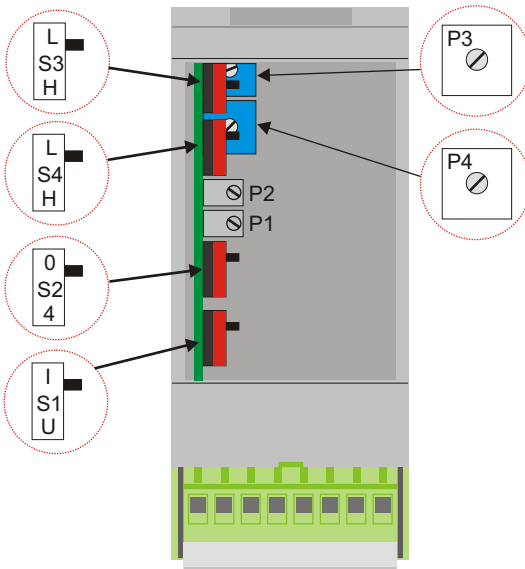
General: When mounting, initiating and operating this double limit value switch the safety precautions and regulations have to be observed. Only staff with a corresponding qualification should work with the double limit value switch. A non-observance of the safety regulations may cause serious injuries and / or damages. Check before initial operation the suitability of the double limit value switch for this area of application. The technical data of this manual have to be followed.

Characteristics



Input: 0...20 mA / 4...20 mA / 0...10 V (selectable)
 Output: 2 relays with changeover contact (maximum 250V/3A AC)
 Supply: 24 VAC / 115 VAC / 230 VAC / 24 VDC
 Setting limit value: with coding switch
 Switching function: minimum / maximum (selectable)
 State of relay: LED red
 Accuracy: 0,2% of end scale value / Resolution: 1%
 Sensor supply: approx. 20 VDC / 24 mA maximum
 Hysteresis: 0,5...10% (adjustable)
 Protection: IP20
 Mounting: DIN top hat rail

Settings

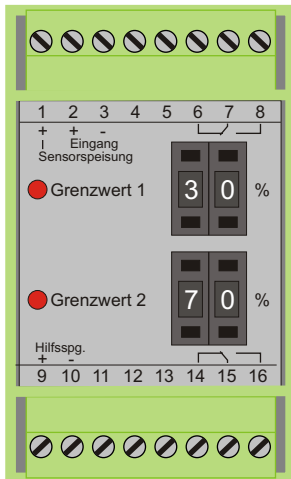


Potentiometer and selector switch

S1	Input signal	I = current	U = voltage
S2	Current input	0 = 0...20 mA	4 = 4...20 mA
S3	Limit value 2 (function relay)	L = minimum	H = maximum
S4	Limit value 1 (function relay)	L = minimum	H = maximum
P1	Zero adjust	!! do not change !!	
P2	Gain adjust	!! do not change !!	
P3	Hysteresis 2 (for limit value 2)	0,5...10 %	
P4	Hysteresis 1 (for limit value 1)	0,5...10 %	

(For settings please open cover of enclosure)

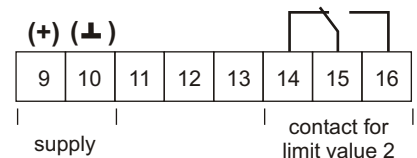
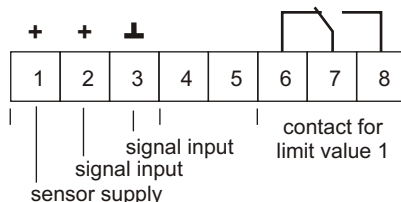
Putting into operation



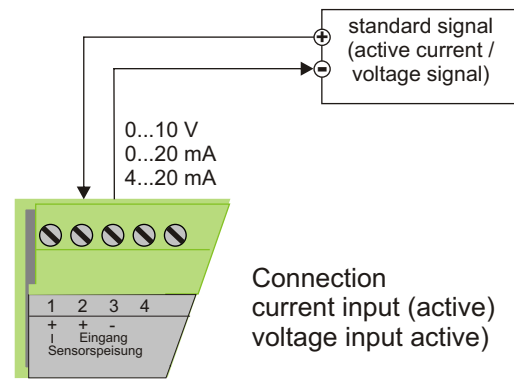
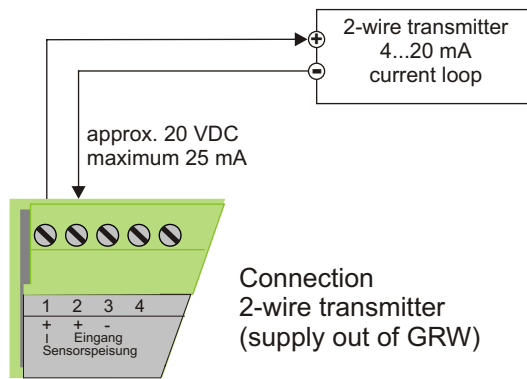
Adjustment and startup

1. Set selector switch S1 and S2 to the required input signal
2. Set selector switch S3 and S4 to the required function of relay (see diagrams page 2)
3. Connect a supply point (0...10 V) or power source (0...20 mA / 4...20 mA) to signal input (terminal 2 and 3)
4. Connect voltage supply (terminal 9 and 10) and switch on
5. Set setpoint for limit value with coding switch (eg 50 %)
6. Decrease / increase input signal (slowly) to setpoint to check function of relay
7. Adjust the required hysteresis with potentiometer P3 (hysteresis limit value 2) and / or P4 (hysteresis limit value 1). Then check by means of changing the input signal.

Details for signal input see page 2



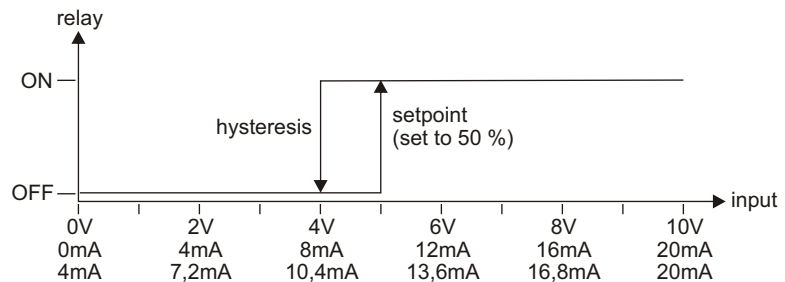
Details input signal



Diagrams

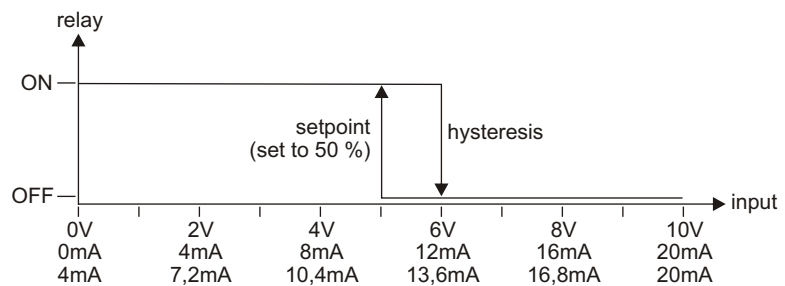
Function: Limit value maximum

Selector switch S3 / S4: maximum
Setpoint: 50 %
Hysteresis: 10 %



Function: Limit value minimum

Selector switch S3 / S4: minimum
Setpoint: 50 %
Hysteresis: 10 %



Technical Data

Input

Current: 0...20 mA / 4...20 mA (Ri: 50 ohms)
Voltage: 0...10 V (Ri: 50 kohms)
Selection: with switch

Output

Relay: 2x changeover contact, max. 250 V / 3 A (AC)
Delay: approx. 0,5 s
Switching function: minimum/maximum (for each relay selectable)

Adjustment

Hysteresis: 0,5...10 % (with potentiometer)
Limit value: with coding switch

Accuracy

Error: 0,2% FS
Linearity: 0,1% FS
Drift temperature: 0,01% / K
Error adjustment: $\pm 0,2\%$ FS
Resolution adjustment: $\pm 1\%$ FS

Ambient conditions

Operating temperature: -10...+55°C
Storing temperature: -20...+70°C
Air humidity: 0...95 % relative

Power supply

Supply AC: 24 / 115 / 230 V, 47...63 Hz, 3 VA
Supply DC: 24 V, maximum 80 mA, -10% / +15%
Sensor supply: approx. 20 VDC, maximum 25 mA

Mechanics

Enclosure: plastics ABS
Dimensions: W45 x D75 x H105
Mounting: top hat rail
Color: grey / green
Protection: IP 20
Weight: approx. 200 g
Connection: 2x 8-pole pin and socket connector,
up to 2,5 mm², (protected)

Dimensions (in mm)

