

Product Information

Temperature

Safety Temperature Limiter STL50

(acc. to DIN EN 14597, SIL 2)



- Useful as Temperature Limiter/-Guard and Exhaust gas Temperature Limiter
- Certified according to DIN EN 14597 SIL 2
- Inputs RTD Pt100 or double-thermocouple
- Alarm output 1 relay SPDT
- Programming via backlit LCD-graphic-Display

Characteristics

The STL50 safety temperature limiter is used where ever thermal processes must be monitored and the system must be transferred into a safe operational state in case of fault. If the permissible temperature limit value is reached, or if a fault occurs within the permissible temperature range on the monitoring equipment (sensor open, sensor short-circuit, failure of a component part in the device, fault in the software, failure or inadmissible value of the supply voltage etc.), the STL50 switches off without delay.

The alarm contact is activated, the LED ALARM on the front panel and the back-lighting of the display light up, and the error cause is indicated as plain text on the display. In addition, there is a 24 V DC signal present on the terminals 17-18 for an external alarm signal.

Description

Programming

The device is programmable via front side buttons in connection with the graphic display.

Operating modes

The device can be used as:

STB → Maximum- or minimum-monitoring with hold. Reset possible after omission of the fault with the external or internal button.

ASTB → as before, but monitoring the exhaust gas temperature

STW → Maximum- or minimum-monitoring without hold.

Automatic reset after leaving the dangerous range

Switching hysteresis always acts in the direction of safe range.

The last fault is stored as plain text and can be called up in the working level and deleted.

Temperature sensor

The device may be operate only with temperature probes which are certified according to DIN EN 14597!

Technical data

Power supply

Supply voltage : 230 V AC ±10 %
 115 V AC ±10 %
 24 V DC ±15 %

Power consumption : < 4 VA

CE-conformity : EN 61326-1: 2013
 EN 61326-2-2: 2013

Ambient conditions

Operating temperature : -10..+55 °C
 Storage temperature : -30..+60 °C
 Relative humidity : < 95 %
 Condensation : not permitted
 operation only in vibration less ambient

Approvals

EN 14597:2011 : Temperature control devices and temperature limiters for heat-generating systems
 EN 61508:2011 SIL2 : Functional security safety-related electrical/electronic/programmable electronic systems

Input

Pt100 : in the range -100.0..+600.0 °C
 3-wire, max. line resistance 4 Ω
 each line
 sensor current < 1 mA
 (non self heating)

Thermocouple

Type J : Fe-CuNi, -100.0..+800.0 °C
 Type K : NiCr-Ni, -150..+1200 °C
 Type N : NiCrSi-NiSi, -150..+1200 °C
 Type S : Pt10Rh-Pt, 0..+1600 °C
 cold junction compensation integrated

Accuracy

< 0.5 %, ±2 Digit

Temperature coefficient

Display

: graphic-LCD-display 28 x 64 Pixel, with white LCD-backlight

Output

Relay : SPDT
 <250 V AC <200 VA <2 A
 cos Phi ≥ 0.7
 <250 VDC <80 W <2 A,
 internal fused 2 A (slow-blow)

Case

: Polyamide (PA) 6.6, UL94V-0, TS35 acc. to DIN EN 60715

Weight

: approx. 450 g

Connection

: screw terminals 0.14..2.5 mm² (AWG 26 .. 14)

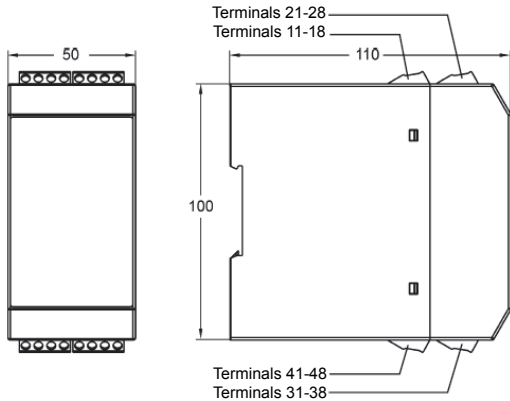
Protection class

: IP20, DIN EN 60529, BGV A3

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Product Information

Dimensions



Ordering code

STL50 - 1. - 2. - 3. - 4.

1. Device type/input	
1	Pt100, 3-wire, -100.0..+600.0 °C
5	Thermocouple J (Fe-CuNi), -100.0..+800.0 °C K (NiCr-Ni), -150..+1200 °C N (NiCrSi-NiSi), -150..+1200 °C S (Pt10Rh-Pt), 0..1600 °C
2. Output	
1R	1 alarm output, relay SPDT
3. Supply voltage	
0	230 V AC, ± 10 % 50-60 Hz
1	115 V AC, ± 10 % 50-60 Hz
5	24 V DC, ± 15 %
4. Options	
00	without option

Connection diagrams

