

# Temperature threshold relay RTD and thermocouple Industrial thermostat SIL2 option

THL36

LOREME

- **Suitable for heating and cooling mode.**  
Application : protection relay, thermostat, threshold relay, .....
- **Temperature input**  
PT100 - 3 wires / Thermocouples J,K,T
- **Fully configurable via front face**  
With push button under the cover
- **Relay output (changeover contact)**  
10A switching current
- **1000 pts LED display for the measure**
- **DIN Rail mounting**
- **Option : EN 14597 conformity**  
Temperature regulating and limiting devices for heat generating systems.
- **Option : SIL2** According to IEC 61508



The THL36 is a compact digital thermostat, designed for simple temperature control, or for protection and safe keeping of more complex systems. Measuring input can be either RTDs or thermocouples.

## DESCRIPTION:

### Temperature measurement:

- Thermocouples : J ,K ,T
- RTD 100 ohms sensor

### Front face:

- Measure display: 7 segments 3 digits (1100 pts). green LED , digits height: 10 mm. resolution : 0.1 °C from -9.9 °C to +99.9 °C. resolution 1 °C for greater temperature with automatic decimal point display.
- Sensor break detection or scale overflow (display: LO, HI or Err).
- 1 green LED for the alarm status.
- 2 push buttons under the cover for the device configuration.

### Relay:

- Dry changeover contacts usable in alarm, regulation, thermostat, ...
- Threshold, direction (hot, cold), hysteresis, adjustable by push buttons on the front face.

### Performance / Environment

- Long-term stability 0.1% / year.
- Operating temperature up to 65 °C.
- Excellent EMC performance.
- Resistant, protected against shock and vibration.

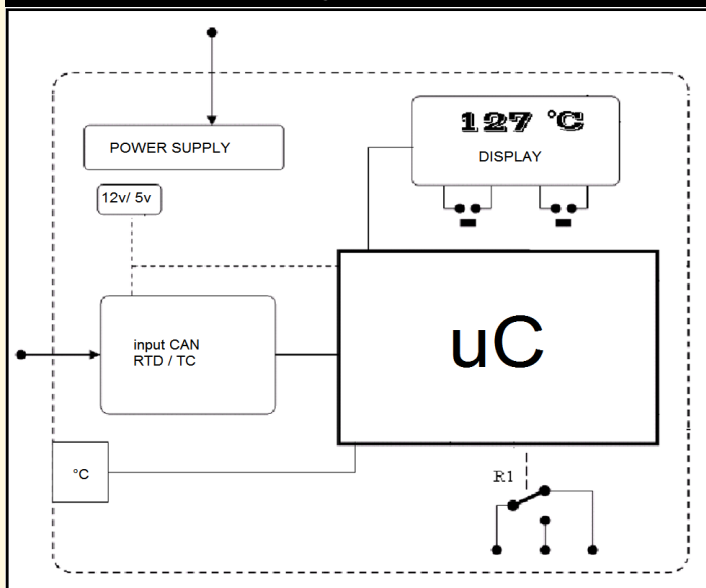
### Installation

- DIN rail mounting according to EN50022.
- Connection by spring terminals max : 1 mm <sup>2</sup>.
- Insulation : power / input / relay.
- IP20 protection + conformal coating.
- Firmware update is possible via serial link.

**Operational safety data :**  
component type B , HFT = 0  
λf = 247 fit (1/MTBF)  
DC = 89.1 % (diagnostic coverage)  
SFF = 90.9 % (probability of failure fraction)  
PFH = 27 fit (probability of failure per hour)



## Synoptic:



## Version and order code:

[Request a quote](#)

- THL36:** - Standard model with 10 A electromechanical relay option  
option /SIL2 SIL2 version according to IEC61508
- THL36/Rs:** - Version with asynchronous static relay 60V 0.5A (for the drive of static power unit)

**INPUT**

TYPE	RANGE	PRECISION
Tc J	- 99...600 °C	± 0.4 °C
Tc K	- 99...1000 °C	± 0.4 °C
Tc T	- 99...400 °C	± 0.7 °C
Compensation T°	-20 to 85 °C	± 0.3 °C
Input impedance:	> 1 MOhms	
Breaking current detection:	0.25 uA	
3 wires PT100	-50.....600 °C	± 0.3 °C
Polarization current:	300 uA	
Line influence:	< 0.03 °C / Ohms	
Maximum line resistance :	10 Ohms	

**RELAY**

Changeover contact  
 Load 10 A / 250 Vac  
 Typical response time of the threshold outputs: 750 ms  
 Repeatability: +/- 0.2°C

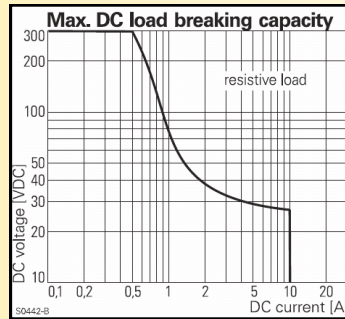
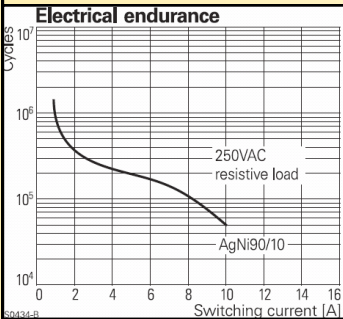
**POWER SUPPLY**

(must be defined at order)

230 Vac 50-60 Hz +/- 15 %, consumption < 1.5 VA  
 115 Vac 50-60 Hz +/- 15 %, consumption < 1.5 VA  
 24Vdc +/- 15% (not polarized), consumption < 100mA

**ENVIRONMENT**

Operating temperature: -20 à 65 °C  
 Storage temperature: -40 à +85 °C  
 drift (% of full scale) < 0.02 % / °C  
 humidity: 85 % not condensed  
 protection: IP 20  
 weight: 150 g  
 Dielectric strength 2500 Vrms : power (230V) / input  
 2500 Vrms : relay / input  
 MTBF (MIL HDBK 217F) > 4 000 000 Hrs @ 25°C  
 Life time > 200 000 Hrs @ 30°C  
 Shock IEC 60068-2-27 (operating) 15 G / 11 ms  
 Bump IEC 60068-2-29 (transportation) 30 G / 6 ms  
 Vibration IEC 60068-2-6 (operating) 1 G / 10 - 150 Hz  
 Vibration CEI 60068-2-6 (transportation) 2 G / 10 - 150 Hz



**Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE**

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	EN 55011 group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC dips	



**WIRING AND OUTLINE DIMENSIONS:**

