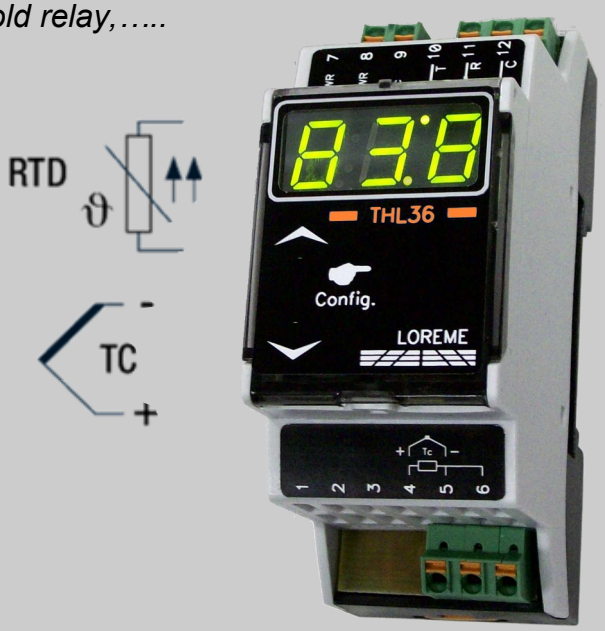
Temperature threshold relay RTD and thermocouple
Industrial thermostat SIL2 option THL36

- ***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.

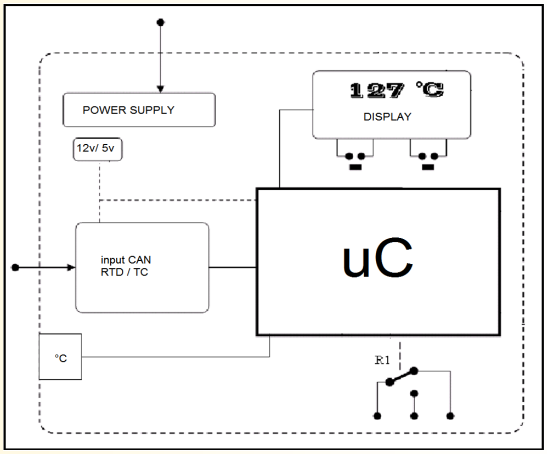
Performance / Environment
- Long-term stability 0.1% / year.
- Operating temperature up to 65 °C.
- Excellent EMC performance.
- Resistant, protected against shock and vibration.

Installation
- DIN rail mounting according to EN50022.
- Connection by spring terminals max : 1 mm ².
- 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)

SIL2 IEC 61508 / IEC 61511

Synoptic:



Version and order code: Request a quote

THL36: - Standard model with 10 A electromechanical relay
option **/SIL2** SIL2 version according to IEC61508

THL36-HLD: - Version with alarm memorization and reset button on the front panel.

Power supply to be determined when ordering
- **Standard : 230 Vac 50-60 Hz +/- 15 %**
- Universal : 20....à.....265Vac/dc
- Low voltage : 9 Vdc....à.....30Vdc

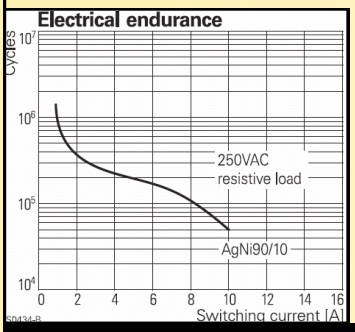
90 days accuracy (20 °C +/- 2 °C) ***DATA SHEET CAN BE DOWNLOADED ON WWW.LOREME.FR*** **TECHNICAL SPECIFICATIONS**

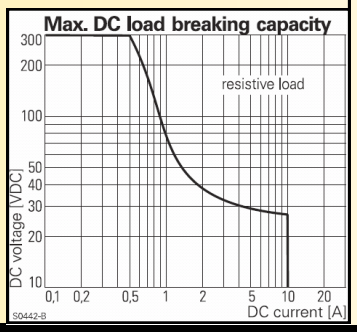
INPUT

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 µA
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) consumption < 1.5 VA

- Standard : 230 Vac 50-60 Hz +/- 15 %
- Universal : 20....à.....265Vac/dc
- Low voltage : 9 Vdc....à.....30Vdc

ENVIRONMENT

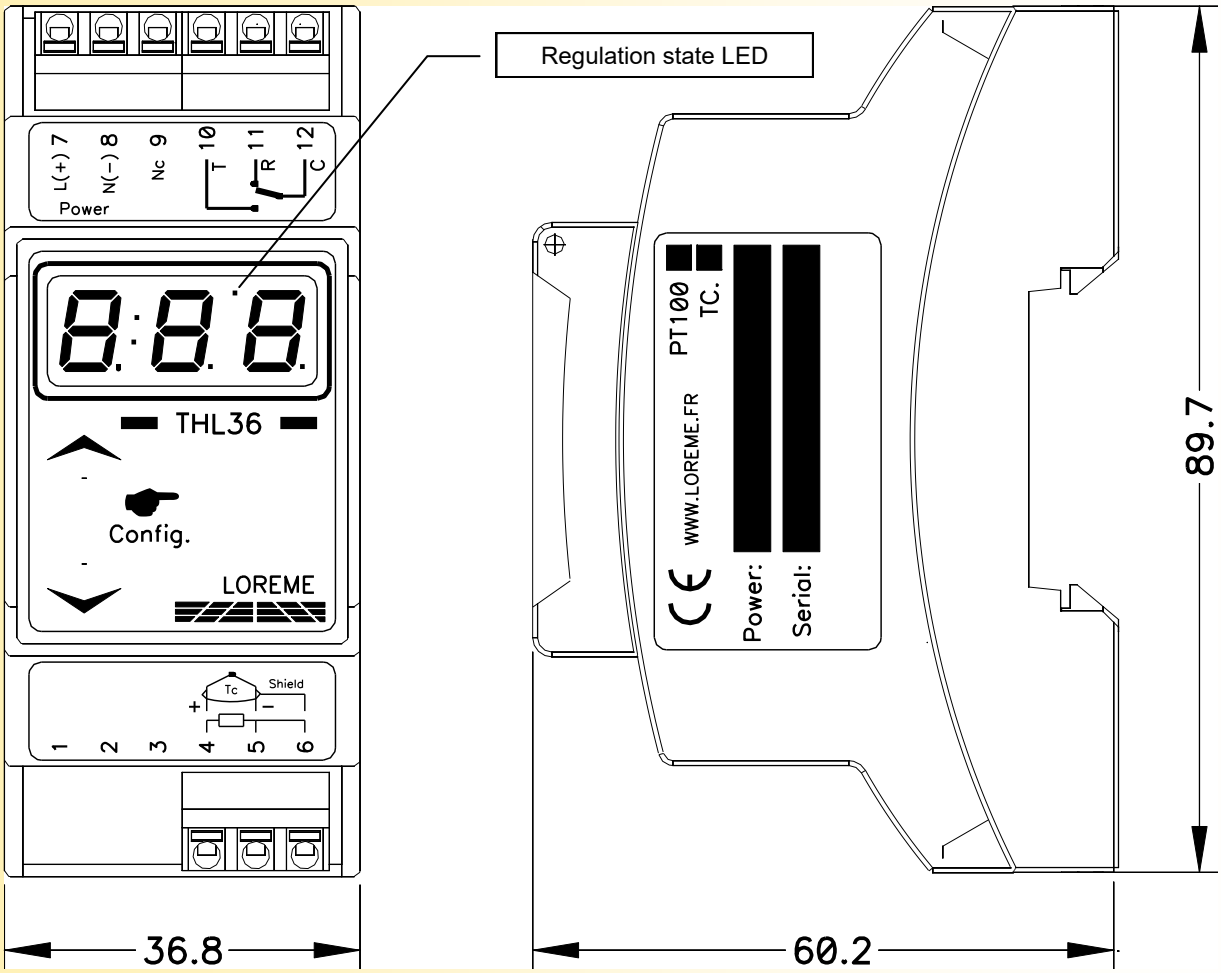
Operating temperature:	-20 à 65 °C
Storage temperature:	-40 à +85 °C
drift (% of full scale)	< 0.02 % / °C
humidity:	85 % not condensed
protection:	IP 20
weight:	150 g
Dielectric strength	2500 Vrms : power (230V) / input 2500 Vrms : relay / input
MTBF (MIL HDBK 217F)	> 4 000 000 Hrs @ 25°C
Life time	> 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*
EN 61000-4-3 RF	*EN 61000-4-9 pulse MF*	*group 1*
EN 61000-4-4 EFT	*EN 61000-4-11 AC dips*	*class A*
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:



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