Thermostat regulator for heating cables and ribbons.

THL105

LOREME

- ## • Temperature display
  LCD 2 lines of 16 characters
  (temperature , set point , output state)

- ## • Temperature input
  Pt100 - 2 wires (-50 °C ……+ 250 °C)

- ## • Fully configurable
  with pushbuttons

- ## • Breaking capacity 16 A resistive

- ## • Mounting in IP66 waterproof enclosure
  Transparent cover

The THL105 is a compact field mount thermostat for regulating heating cables and ribbons, allowing control of resistive load up to 3.5 Kilowatts. The digital regulation allows to combine precision and ease of use. Temperature and set point are displayed on a large LCD display.

DESCRIPTION:

Temperature measurement:
- Rtd platinium sensor. PT100 in 2 wires mounting.

Sensor correction:
- Linearization.
- Line compensation for long sensors cables
  (adjustable offset).

Front face:
- Wide temperature liquid crystal display,
  2 lines of 16 characters (backlight),
  resolution of 1 °C from -50 °C to +250 °C.
- Sensor break or over range detection
  display "Err LO" if the sensor is short-circuited,
  display "Err HI" if the sensor is open / broken.
- Display of relay state,
- 3 push buttons on the front:
  - Direct access to the set point (up, down),
  - Advanced configuration (hysteresis, delay).

Relay:
- output heating element switched on both lines (phase, neutral) to
  completely isolate the load,
- "hot mode" regulation with load powered for a measured
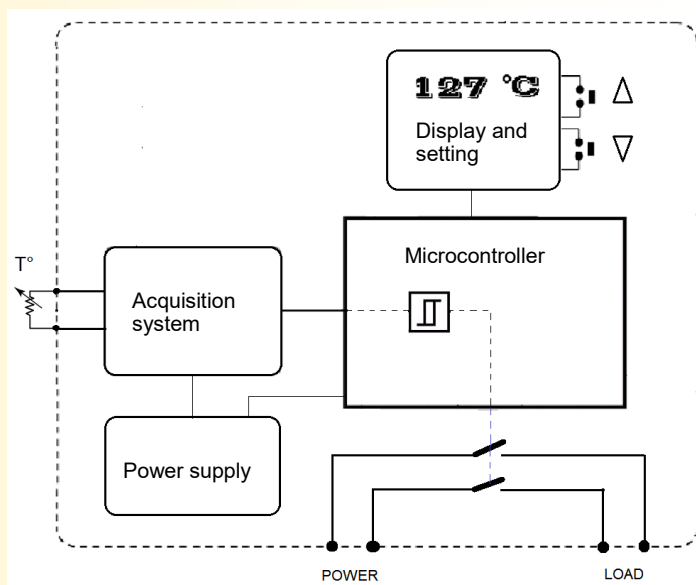 temperature less than the adjusted threshold.

Features:
- Conformal coating,
- mounting in IP66 polycarbonate waterproof enclosure
  (THL105-ip), transparent cover,
- wiring:
  - temperature sensor connection by spring terminals
    max : 1 mm^2
  - heating element connection on pluggable spring
    terminal block. max: 2.5 mm^2
- input through cable gland.
- isolation : power / input / relay.
- firmware update is possible via serial link for special applications

Characteristics:
- Long-term stability better than 0.1 % / year.
- Operating temperature up to 75 °C.
- Excellent EMC performance.
- Resistant, protected against shock and vibration.

Synoptic:

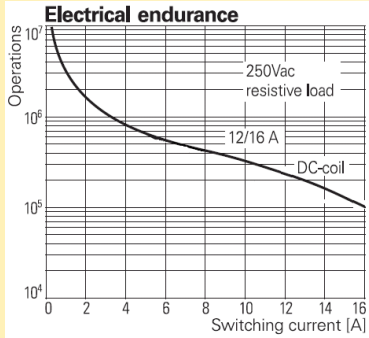## Version and order code:

Request a quote ✉

THL105: - Thermostat alone.
THL105-ip - Thermostat mounted in IP66 waterproof case.

INPUT

TYPE	RANGE	PRECISION
2 wires PT100	-50…..+250 °C	+/- 0.3 °C
Measure current		10 mA
line influence		not applicable

RELAY

Two closing contacts connected to the power supply.

Breaking capacity	16 A / 250 V
Typical response time	2000mS
of the thresholds outputs (filtering of measurement cycles)	
Repeatability of the triggering	+/- 0,2 °C

Electrical endurance

POWER
(To define at order)

230 Vac 50-60 Hz +/- 15 %,
115 Vac 50-60 Hz +/- 15 %,
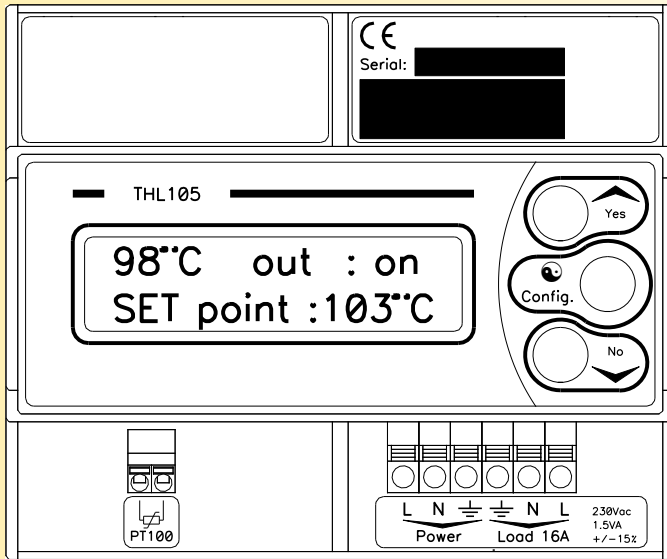Other on demand.
consumption < 1.5 VA.

ENVIRONMENT

Operating temperature	-25 to 65 °C
Storage temperature	-40 to 85 °C
Thermal drift (% of full scale)	< 0.02 % / °C
Humidity	85 % not condensed
Protection rating (according to EN 60529)	
electronic alone	IP 20
Protection enclosure	IP 66
Weight	300g

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*		
EN 61000-4-4 EFT	*EN 61000-4-11 AC dips*	*group 1*	CE
EN 61000-4-5 CWG	*EN 61000-4-12 ring wave*	*class A*	
EN 61000-4-6 RF	*EN 61000-4-29 DC dips*		

WIRING AND OUTLINE DIMENSIONS:

THL105

98°C   out : on
SET point :103°C

PT100   L N ⏚ ⏚ N L   230Vac
         Power Load 16A   1.5VA
                          +/−15%

Thermostat without enclosure
Weatherproof enclosure dimensions: 130 x 130 x 75 mm.

107.6

60.7

89.7