Threshold relay, threshold detection for analog signals protection relay for PTC (CTP)   DSL35L

LOREME

- ## *Process and temperature inputs*
  Volt ,mA, potentiometer, NTC
  PTC for thermic protection of machines according to DIN 44082

- ## *1000 pts LED display for measurement*

- ## *Internal or external threshold*
  setting with push buttons (under the cover) or with analog signal (4...20mA/0...10V)

- ## *1 or 2 output relays, 10A changeover contact*

- ## *Application*
  thermal protection relay, thermostat threshold relay for 4 ... 20mA current loop

RTD

R

mA

V

3 PTC sensors; one in each phase

PTC sensors

The DSL35L is a compact relay, allowing from an analog input, to define one or two independent thresholds to implement a simple regulation or a protection process. The measured value is readable on a 3 digits LED display.
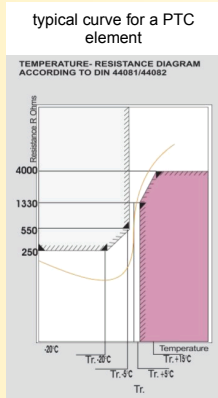
DESCRIPTION :

standard inputs :
- voltage : Volt DC
- current : mA, A DC
- resistance 2 wires mounting
- potentiometer 3 wires (3.3V potentiometer ref.)
- NTC,
- PTC (1 à 9 PTC in series), stator winding,
- frequency

Special inputs : (mA, V, resistance)
- sum of two not-isolated inputs,
- difference of two not-isolated inputs,
- average of two not-isolated inputs,
- two inputs, maximum value selection,
- two inputs, minimum value selection,
- Humidity and temperature probe SHL18 with supply

digital input : (option)
- lock or rearming,

Front panel :
- measure display : 7 segments 3 digits (1000 pts) green LED, 10 mm height.
- sensor breaking or over range detection (display : LO ; HI)
- 2 green LED for the alarm status
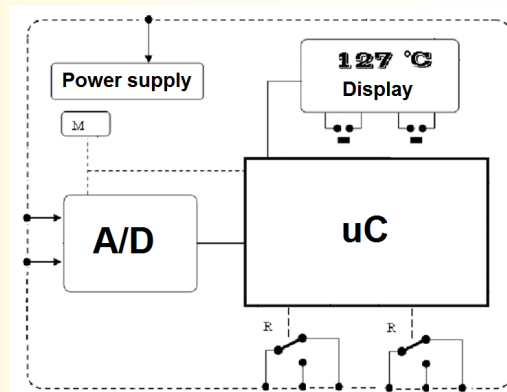- 2 push buttons under the hinged front face for device setting

Relay :
- output potential-free changeover contact can be used in alarm, ON/OFF regulation, thermostat, …
- threshold, direction (hot, cold), hysteresis and delay are adjustable with the front panel push buttons.

Feature :
- Symmetrical DIN rail mounting according to EN50022
- Connection on spring terminals blocks max : 1 mm ²
- Isolation : power / input / relay
- IP20 protection + electronic conformal coating
- Firmware update possible via rs232 link

typical curve for a PTC element

TEMPERATURE- RESISTANCE DIAGRAM ACCORDING TO DIN 44081/44082

Synoptic :

Power supply

M

127 °C Display

A/D

uC

R   R

Version and order code:

Request a quote ✉

DSL35L/R1:	- 1 electromechanical relay, 10A
DSL35L/R2:	- 2 electromechanical relays, 10A

input type and range to be defined

DSL35L-Cext:	- external setpoint option

• Option /Ts: fast version < 3ms static relay 1 NO
                   (300Vac-dc 0.1A or 60Vdc 0.5A to be defined)

Special versions : (available with 1 or 2 thresholds)

DSL35L-SVL	2 inputs, mini or maxi value selector *(selection type and input type to be defined)*
DSL35L-DiF	difference from 2 inputs *(signed, unsigned, absolute : to be defined)*
DSL35L-SOM	summation or average from 2 inputs

INPUT

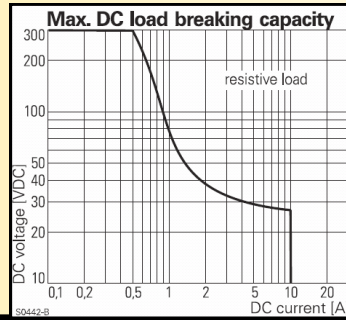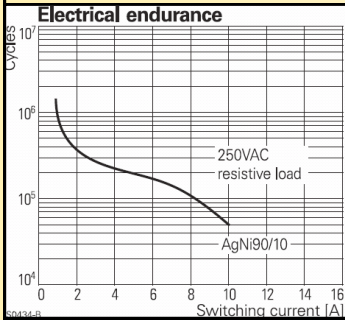| TYPE	RANGE	PRECISION
Dc voltage	1V ... 1000 V	+/- 0.5% of range
Dc current mA, A	1 mA …. 1 A	+/- 0.5% of range
Resistance	100ohms....10Kohms	+/- 0.5% of range
Frequency	1Hz 1KHz	+/- 1% of value

RELAYS

Changeover contact. Isolation:	1500 Vac
Switching capacity:	10 A / 250 V
Typical response time:	50ms
Repeatability of tripping:	+/- 0.3%

Electrical endurance

Max. DC load breaking capacity

POWER SUPPLY

(must be defined at order)
230 Vac 50-60 Hz +/- 15 %, 1.5VA
115 Vac 50-60 Hz +/- 15 %, 1.5VA
20 à 70 Vac-dc, 2 VA
80 à 265 Vac-dc, 2 VA
9 à 30 Vdc, 2 W

ENVIRONMENT

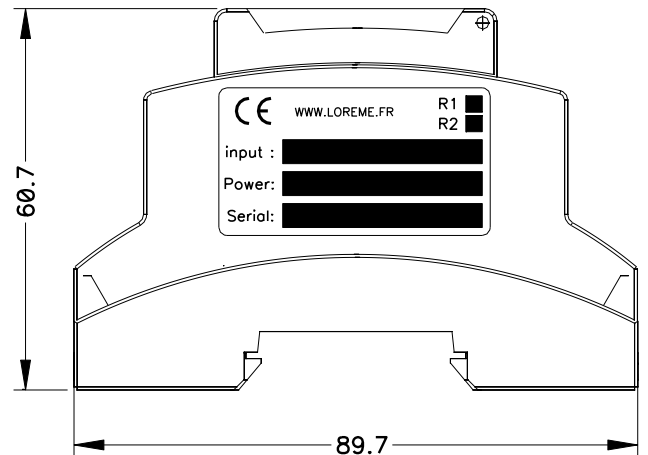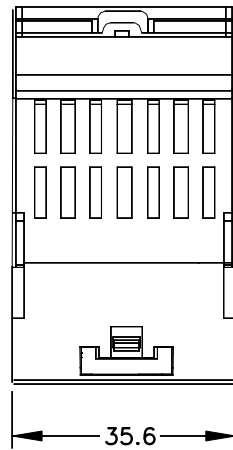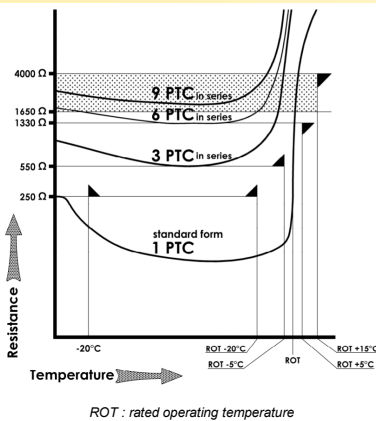|	
Operating temperature:	-40 to 65 °C
Storage temperature:	-40 to +85 °C
Thermal drift (% of full scale):	< 0.02 % / °C
Humidity:	85 % not condensed
Protection rating (according to EN 60529):	IP 20
Weight:	150 g
MTBF (MIL HDBK 217F)	> 2 000 000 Hrs @ 25°C
Life time	> 150 000 Hrs @ 30°C

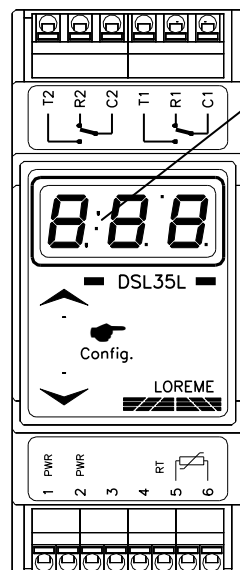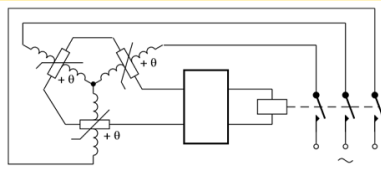| Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE		
Immunity standard for industrial environments EN 61000-6-2		**Emission standard for industrial environments EN 61000-6-4**
EN 61000-4-2 ESD	*EN 61000-4-8* AC MF	*EN 55011*
EN 61000-4-3 RF	*EN 61000-4-9* pulse MF	
EN 61000-4-4 EFT	*EN 61000-4-11* AC dips	group 1
EN 61000-4-5 CWG	*EN 61000-4-12* ring wave	class A
EN 61000-4-6 RF	*EN 61000-4-29* DC dips	CE

WIRING AND OUTLINE DIMENSIONS:

Threshold value (resistance) function of number of PTC in series wired on DSL35L relay

ROT : rated operating temperature

Typical application for PTC motor protection

relay state LED indicators