

Threshold relay, threshold detection for analog signals 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



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

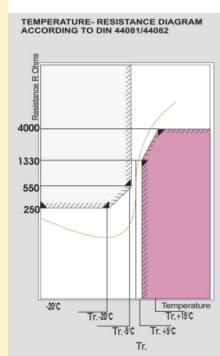
Relay :

- 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.

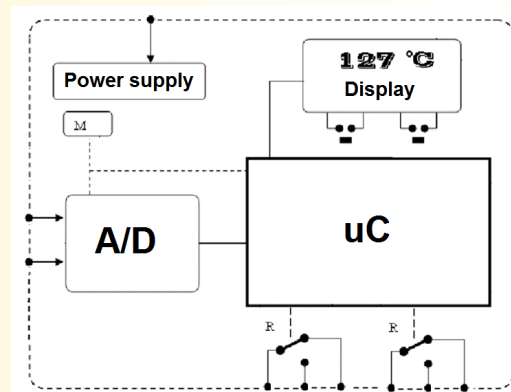
Feature :

- Symmetrical DIN rail mounting according to EN50022
- Connection on spring terminals blocks max : 1 mm²
- Isolation : power / input / relay
- IP20 protection + electronic conformal coating
- Firmware update possible via rs232 link

typical curve for a PTC element



Synoptic :



Version and order code:

- 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	1Hz1KHz	+/- 1% of value

RELAYS

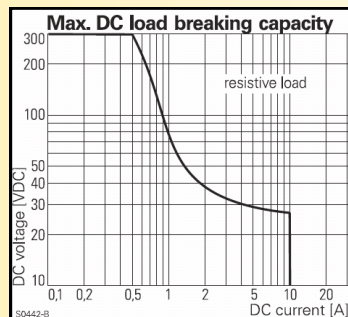
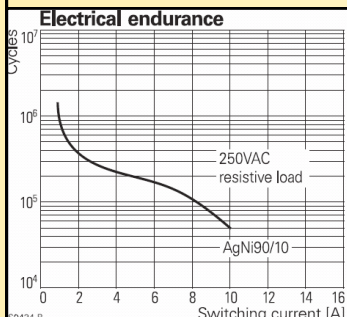
Changeover contact. Isolation:	1500 Vac
Switching capacity:	10 A / 250 V
Typical response time:	50ms
Repeatability of tripping:	+/- 0.3%

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



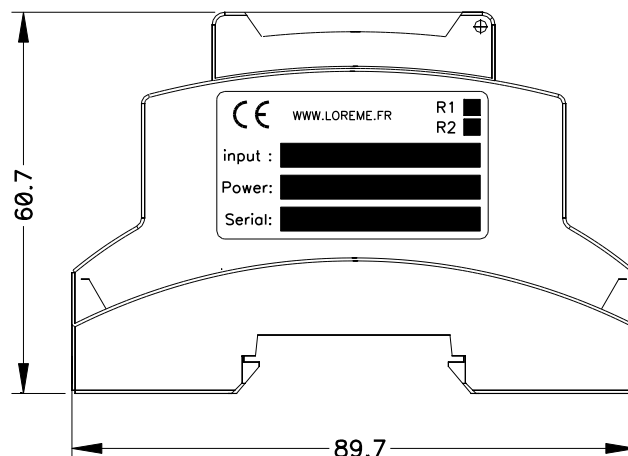
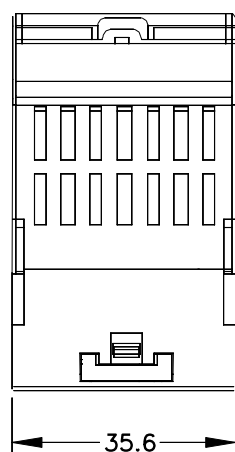
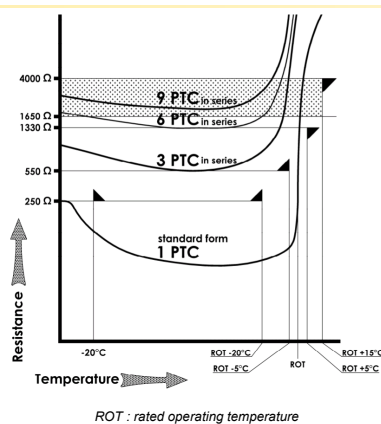
Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

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 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	

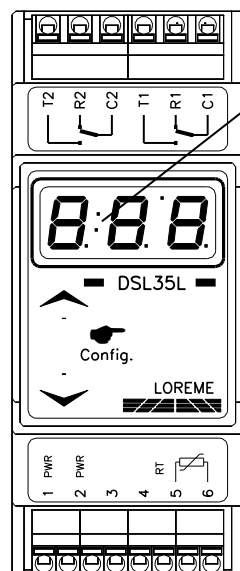
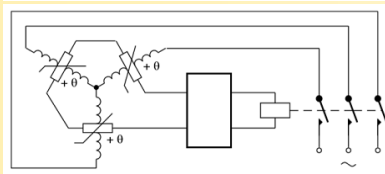


WIRING AND OUTLINE DIMENSIONS:

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



Typical application for PTC motor protection



relay state LED indicators

