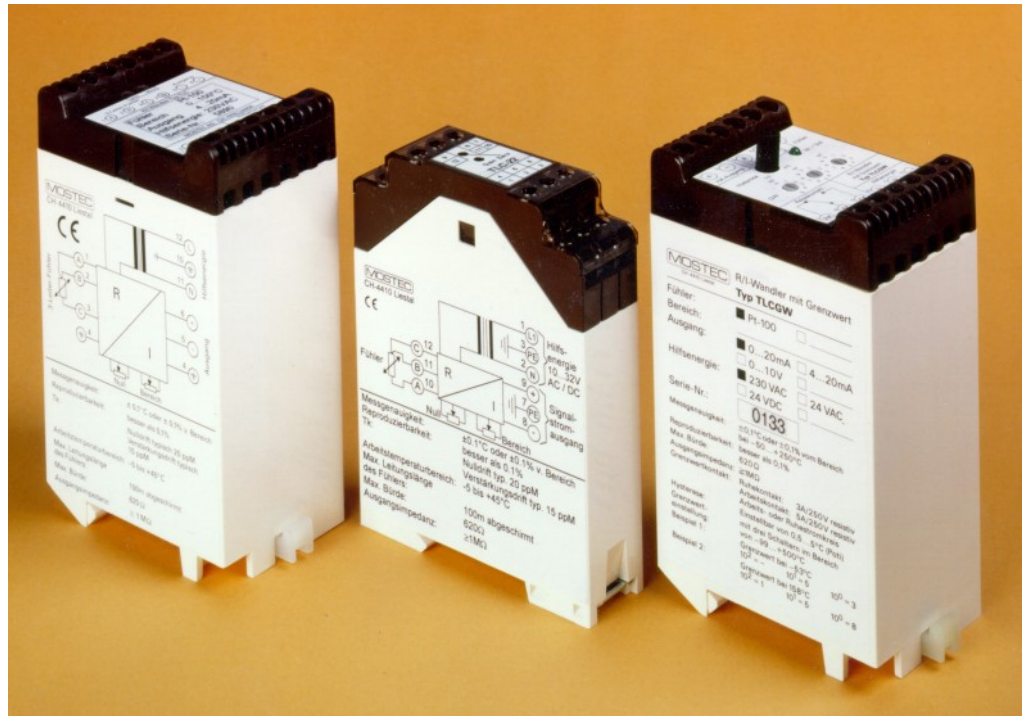


# MOSTEC

## Temperature Transmitter Type TLC, TLC-22 and TLC-Thermostat



### Technical description

This "Snap-On" interface module is a temperature transmitter for platinum or nickel probes which achieves an accuracy of  $\pm 0.1\%$ . The module is designed for 3-wire probe technology, however, it can be wired as a 2-wire transmitter. The probe signal is linearized and converted into a current or voltage signal. The temperature range to be converted can be freely chosen but must be specified at ordering time.

Example:  $-30.0$  to  $+70.0^{\circ}\text{C} = 4\dots 20\text{mA}$  signal current.

The output signal is used as an input signal for remote displays, chart recorders, controllers, process control computers, etc.

Small zero and gain adjustments are done by 2 20-turn trimmers. This adjustment is for fine calibration in the field only, not to change the measuring range.

Beside the basic temperature transmitter type TLC, Mostec delivers the TLC-22, a transmitter with a 22mm only case with and the TLC-Thermostat, a transmitter with one controllable alarm relay. The relay set point is adjustable over the entire range, the relay switches 250VAC at 3 amp. and it can be field-set as normally open or normally closed contact. Three decade switches on the front panel are used to set the alarm temperature.

Example 1: Set the alarm value to  $123^{\circ}\text{C}$

- Switch  $10^2$  is set to 1
- Switch  $10^1$  is set to 2
- Switch  $10^0$  is set to 3

Example 2: Set the alarm value to  $-68^{\circ}\text{C}$

- Switch  $10^2$  is set to -
- Switch  $10^1$  is set to 6
- Switch  $10^0$  is set to 8

A single turn potentiometer - also on the front panel - controls the hysteresis in range of 0.5 to  $5^{\circ}\text{C}$ . The LED-lamp displays the status of the alarm relay.

The low cost high accuracy unit uses platinum or nickel sensors. The accuracy of the temperature measurement is maintained when the sensor is changed or has to be replaced, recalibration of the instrument is not necessary.

The module is ideal for applications where costs have to be low and yet high accuracy is required.

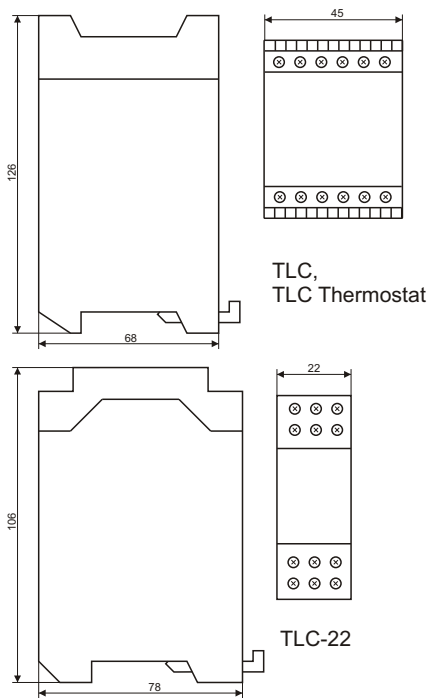
Applications: Heating and air conditioning, biology, ecology, chemical and non hazardous areas, building and construction, water resources, machinery, etc.

# Technical Data:

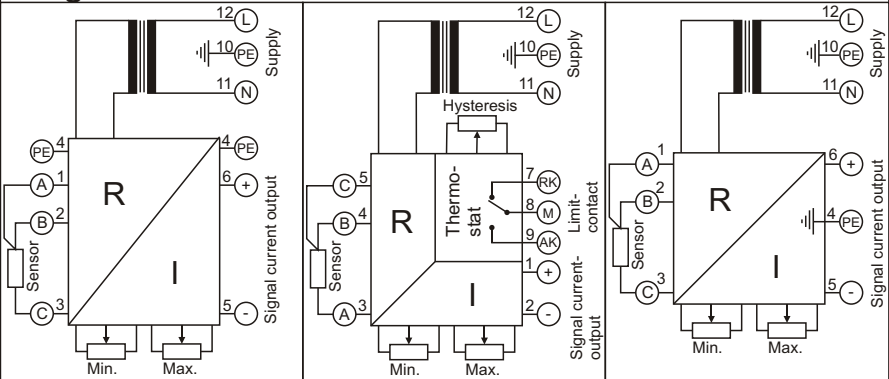
Probes :	Platinum or nickel with 100, 200, 500 or 1000 $\Omega$ at 0°C (DIN 43760) in 2- or 3-wire circuit
Signal Output:	0...20mA, 4...20mA, 0...1V, 0...10V in range of -100...+500°C for platinum, resp. -40...+180°C for nickel
Accuracy at 23°C ambient:	+/- 0.1% in the range of -50...+300°C for platinum, -40...+180°C for nickel
Reproducibility:	Better than 0.1%
Temperature coefficient:	Zero drift typ. 20ppm/°C, gain drift typ. 15ppm/°C
Long-term stability:	0.15% after 3 months
Working temperature range:	-5 to 45°C
Max. humidity:	95%, non-condensing
Max. length of sensor cable:	300 meters, 3-wire shielded
Max. length of output signal cable:	2000 meters, 2-wire shielded
Max. current signal loading:	620
Output current signal impedance:	1M
Zero / gain adjustment:	The zero and gain can be adjusted by potentiometers. This adjustment can only be used for line adjustment and not to change the range.
Warranty:	2 years
Terminals:	Screw terminals, 12-pole
Mounting:	Snap on to 35mm mounting rail (DIN 46 277)
CE-conformity:	fulfilled

Specific data:	TLC	TLC-Thermostat	TLC22
Limit contact:		In range -99...+500°C adjustable	
Hysteresis:		0.5...5°C, adjustable	
Contact rating:		norm. open : 3A/250V resistive norm. closed: 5A/250V resistive. norm. open/closed: adjustable	
Contact debouncing (on request):		RC-filter (0.033 F/100 $\Omega$ ) on the norm. open contact	
Power supply:	230VAC, 50-60Hz at 1.2VA optional: 24VAC, 115VAC 50-60Hz, 24VDC		24VAC/DC
Terminal description:	1 = (A) sense-, 2 = (B) sensor-, 3 = (C) sensor+, 4 = PE, 5 = mA-, 6 = mA+, 10 = PE, 11 = N, 12 = L1	1 = mA+, 2 = mA-, 3 = (A) sensor+ 4 = (B) sensor-, 5 = (C) sense- 7 = norm. open contact 8 = change over 9 = norm. closed contact 10 = PE, 11 = N, 12 = L1	1 = (A) sense-, 2 = (B) sensor-, 3 = (C) sensor+, 4 = PE, 5 = mA-, 6 = mA+, 10 = PE, 11 = 24V, 12 = 24V
Weight	240g	280g	150g

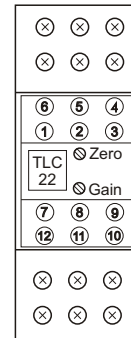
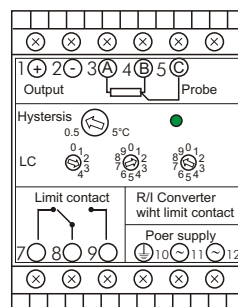
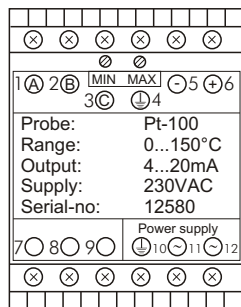
## Dimensions:



## Diagram:



## Terminal description:



Wiring instructions:  
- Install into metallic panels only  
- Shields: All signal lines must be grounded on both ends of the cable



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