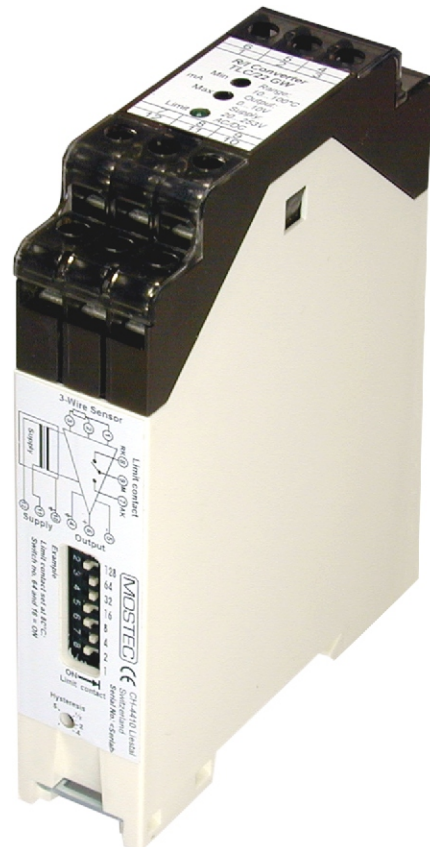


## Temperature Transmitter Type TLC/22(GW)



### Technical description

This 22mm wide "Snap-On" interface module is a temperature transmitter for platinum or nickel sensors which achieves an accuracy of  $\pm 0.1\%$ . An integrated limit contact is optionally available. The module is designed for 3-wire sensor technology, however, it can be wired in 2-wire connection. The probe signal is linearized and converted to 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  $+70.0^{\circ}\text{C} = 4...20\text{mA}$

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.

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

The galvanically isolated power supply works from 20 to 253VAC/DC.

The optional limit contact is adjustable over the

entire range. The relay switches 250VAC and it can be factory set as normally open or normally closed contact. The limit contact can be set on the side panel.

A single turn potentiometer, also on the side panel, controls the hysteresis in a range of 0.5 to  $5^{\circ}\text{C}$ . The LED-lamp displays a status of the limit contact.

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

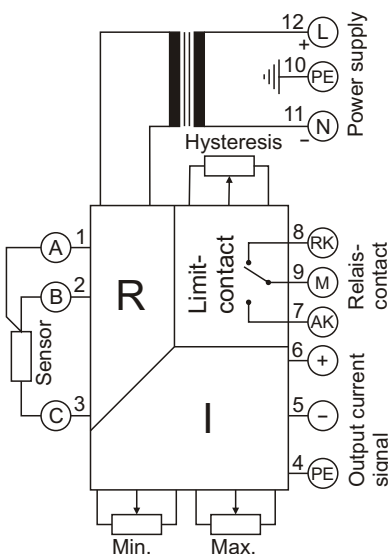
The module is ideal for applications where costs have to be low and yet high accuracy is required.

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

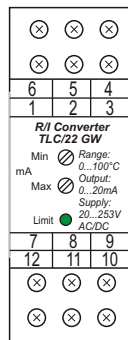
## Technical Data:

|                                     |                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensors:                            | Platinum or nickel with 100, 200, 500 or 1000 at 0°C (DIN 43760) in 2- or 3-wire circuit                                                                                                                                                                                                                                                                                   |
| Signal output:                      | 0...20mA, 4...20mA, 0...1V, 0...10V in a range of -100...+500°C for platinum, resp. - 40...+180°C for nickel                                                                                                                                                                                                                                                               |
| Accuracy at 23°C ambient:           | 0.1% in a 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:        | 3-wire shielded, up to 20 cable resistor, symertically ( 300m)                                                                                                                                                                                                                                                                                                             |
| Max. length of output signal cable: | 2-wire shielded, error depends on cable resistance                                                                                                                                                                                                                                                                                                                         |
| Max. current signal loading:        | 700                                                                                                                                                                                                                                                                                                                                                                        |
| Output current signal impedance:    | 1M                                                                                                                                                                                                                                                                                                                                                                         |
| Zero / gain adjustment:             | The zero and gain can be adjusted by potentiometers.                                                                                                                                                                                                                                                                                                                       |
| Terminals:                          | Screw terminals, 12-pole                                                                                                                                                                                                                                                                                                                                                   |
| Mounting:                           | 35mm mounting rail, EN50022-35                                                                                                                                                                                                                                                                                                                                             |
| Weight:                             | 30g                                                                                                                                                                                                                                                                                                                                                                        |
| CE-conformity:                      | fulfilled                                                                                                                                                                                                                                                                                                                                                                  |
| Power supply:                       | 20 to 253VAC or DC                                                                                                                                                                                                                                                                                                                                                         |
| Power supply load:                  | 2.0W                                                                                                                                                                                                                                                                                                                                                                       |
| Limit contact (optional):           | In the range 0...+255°C , set at the side panel, others on request                                                                                                                                                                                                                                                                                                         |
| Adjustable Hysteresis:              | 0.5...5°C, adjustable at the side panel                                                                                                                                                                                                                                                                                                                                    |
| Contact rating:                     | 1A/250V resistive, norm. open/closed contact                                                                                                                                                                                                                                                                                                                               |
| Contact debouncing (optional):      | RC-filter (0.033 F/100 ) on the norm. open contact                                                                                                                                                                                                                                                                                                                         |
| Warranty:                           | 2 years                                                                                                                                                                                                                                                                                                                                                                    |
| Terminal description:               | 1 = (A) Sense-                      2 = (B) Sensor-                      3 = (C) Sensor+<br>4 = PE                                      5 = mA-                                      6 = mA+<br>10 = PE                                      11 = AC(N)/DC(-)                      12 = AC(L)/DC(+)<br>7 = Norm. open c. (AK) 8 = Norm. closed c. (RK) 9 = Change over (M) |
| Options:                            | - Other sensors<br>- customer specific modifications                                                                                                                                                                                                                                                                                                                       |

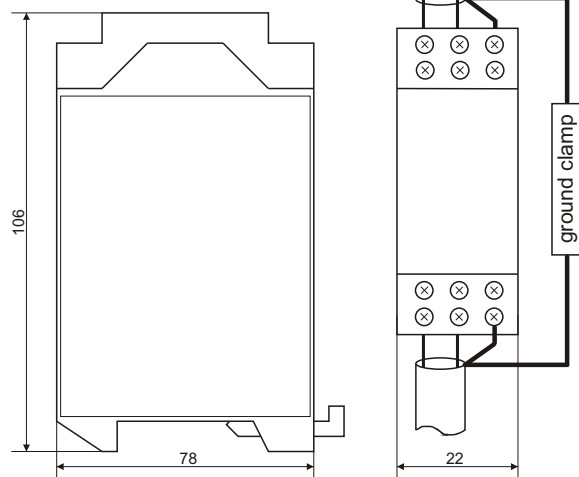
### Diagram:



### Terminal-description:



### Dimensions:



#### Wiring instructions:

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

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### Adjust limit contact:

**Example:**  
Limit contact 80°C, Hysteresis 4°C  
(Relais ON at 80°C, Relais OFF at 76°C)

1. DIP Switch no. 64 and 16 = ON (Add values)
2. Set Hysteresis to 4 (is equal to 4°C)

### Side label:

