The RTD transducer type MC32-121Ex0-LRP is designed to evaluate temperature dependent changes from PT100 RTDs and to convert them into standard signals. A four digit display on the front of the device indicates the actual temperature, independent of the preset range.

The input circuit of the transducer can process signals from 2, 3 or 4-wire PT100 RTDs; the input device type is selected during programming.

Line compensation for 2-wire circuits can be done through the transducer. To do this, a 100 Ω resistor must be connected prior to parameter adjustment to close the input circuit of the instrument.

The current signal output (0/4...20 mA) and the voltage signal output (0...10 V) may be used at the same time. Two set-point outputs, each with relay and pnp short-circuit protected transistor, provide status indication.

The two setpoints are independently adjustable. The MC32 transducer offers the possibility to change functions from over-range to underrange monitoring.
The input circuit is monitored for wire-break and short-circuit condition. The alarm outputs will de-activate during a malfunction (relay contacts open, transistor not conducting), an “Err” (Error) message will flash on the four digit display and the green Power LED turns red.

The current output during a malfunction (wire-break, short-circuit condition) can be programmed to automatically either go to 0 mA or ≥ 22 mA, or to follow the direction of the input signal (0 mA for wire-break, ≥ 22 mA for short-circuit condition).

All functions are programmed by two toggle switches on the front panel, or with personal computer (PC). The following parameters can be preselected:
- Low value of analogue range
- High value of analogue range
- Setpoint 1
- Setpoint 2
- Current output: 0/4...20 mA
- Function of preset outputs (overrange/underrange)
- Switching hysteresis (1...30 % of preset output)
- Analogue output characteristics during a malfunction: linear/0 mA/ ≥ 22 mA
- Input: 2-/3-/4-wire circuits

The four digit LED character display on the front of the device indicates which parameter has been selected and shows the predefined parameter value.

The temperature for the full input range is adjustable from -100°...+650 °C (the smallest measuring span is 20 K).