

# Programmable Process Indicator



## PI990

PI990 devices are devices that can be configured as fully modular and each module is self-contained, designed to measure many process variables in industrial settings and to transmit the measured values to other units. Compliance with international standards, reliability and ease of use were taken during the design phase. For this reason, they are ergonomic devices that can be used for many different controls in many sectors.

### Device Features

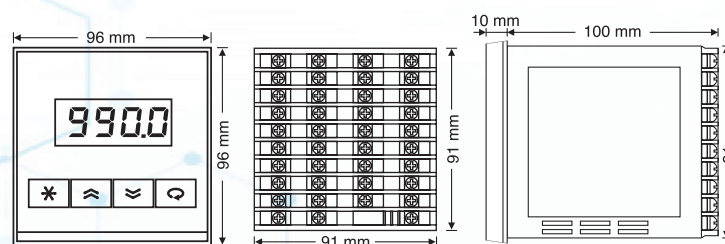
- 1 pcs 4 Digit Numeric Display
- 1 pcs Transmitter Supply Output (24VDC)
- 1 pcs Universal Sensor Input (TC, RT, mA, mV, V)
- 1 pcs Analog Output (0/4-20mA, 0/2-10V)
- 1 pcs RS485 Communication Unit
- 100-240V AC/DC Universal or 24V AC/DC Supply Voltage
- Isolation between Input/Output modules

- Sensor Error Detection
- 100ms Sampling
- Standard MODBUS RTU communication protocol
- Configuration via Computer

### Input Types

| Sensor Type               | Standard  | Min.    | Max.    |
|---------------------------|-----------|---------|---------|
| Type-T ( Cu-Const )       | IEC60584  | -200 °C | 300 °C  |
| Type-U ( Cu-Const )       | IEC60584  | -200 °C | 600 °C  |
| Type-J ( Fe-Const )       | IEC60584  | -200 °C | 800 °C  |
| Type-L ( Fe-Const )       | IEC60584  | -200 °C | 900 °C  |
| Type-K ( NiCr-Ni )        | IEC60584  | -200 °C | 1200 °C |
| Type-E ( Cr-Const )       | IEC60584  | -200 °C | 1200 °C |
| Type-N ( Nicrosil-Nisil ) | IEC60584  | 0 °C    | 1200 °C |
| Type-S ( Pt%10Rh-Pt )     | IEC60584  | 0 °C    | 1500 °C |
| Type-R ( Pt%13Rh-Pt )     | IEC60584  | 0 °C    | 1600 °C |
| Type-B ( Pt%18Rh-Pt )     | IEC60584  | 0 °C    | 1800 °C |
| Pt-100                    | DIN 43760 | -200 °C | 850 °C  |
| 0 / 4-20 mA               |           | 0 mA    | 20 mA   |
| 0 / 2-10 VDC              |           | 0 VDC   | 10 VDC  |

### Device Dimensions

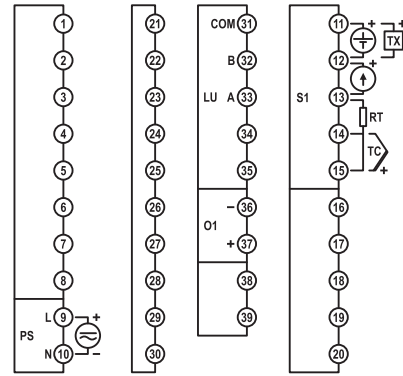


Panel Cutting Dimensions = 92 ± 0,5 mm x 92 ± 0,5 mm

## Technical Specifications

|                                      |   |
|--------------------------------------|---|
| <b>Power Supply ( PS )</b>           | 100-240 Vac/dc +10%-15%<br>24 Vac/dc +10%-20%   |
| <b>Power Consumption</b>             | 5W, 10VA  |
| <b>Universal Sensor Input ( S1 )</b> | Thermocouple = B ,E, J, K, L, N, R, S, T, U<br>Two Wired Transmitter = 4-20mA<br>Resistance Thermometer = Pt-100<br>Current = 0/4-20mA<br>Voltage = 0-50mV, 0/2-10V |
| <b>Transmitter Supply ( TX )</b>     | 24Vdc ( I <sub>sc</sub> = 30mA )  |
| <b>Analog Input Impedance</b>        | Thermocouple, mV = 10MΩ<br>Current = 10Ω<br>Voltage = 1MΩ   |
| <b>Analog Output ( O1 )</b>          | Current = 0/4-20mA ( R <sub>L</sub> ≥500Ω )<br>Voltage = 0/2-10V ( R <sub>L</sub> ≥1MΩ )  |
| <b>Memory</b>                        | 100 Years, 100.000 Renewals   |
| <b>Accuracy</b>                      | +/- 0,2%  |
| <b>Sampling Time</b>                 | 100 ms  |
| <b>Environment Temperature</b>       | Working = -10...+55°C<br>Storage = -20...+65°C  |
| <b>Protection Class</b>              | Front Panel = IP54    Trunk = IP20  |
| <b>Dimensions</b>                    | Width    = 96 mm<br>Height   = 96 mm<br>Depth    = 110 mm   |
| <b>Panel Cutting Dimensions</b>      | 92 +/- 0,5 mm x 92 +/- 0,5 mm   |
| <b>Weight</b>                        | 430 gr  |

## Modular Structure and Connection Diagram



| Module    | Description   |
|-----------|---|
| <b>S1</b> | Universal sensor input module (the sensor used to measure process value should be connected to the terminals with appropriate symbol on this module).     |
| <b>LU</b> | This module is RS485 communication unit (The content of this module is determined by the product code, function is selected from the configuration page). |
| <b>O1</b> | Analog output (The content of this module is determined by the product code, function is selected from the configuration page).                           |
| <b>PS</b> | Supply voltage input (Supply voltage is determined by product code).  |

## Product Code

