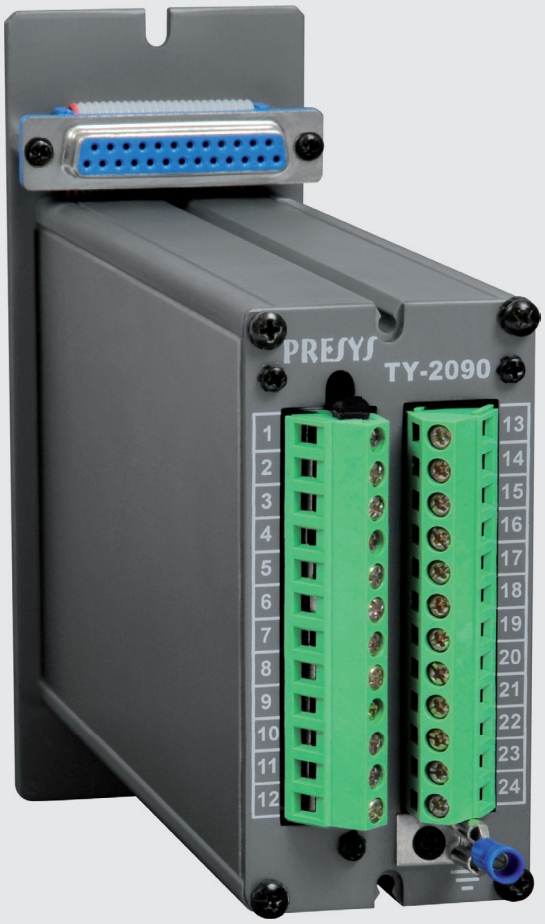

Universal Smart Transmitter TY-2090 / TY-2090-F

- Transmitter and / or Alarm Monitor in one instrument, it may have up to four alarm modules.
- TY-2090: Two universal standard inputs for RTD, TC, 0-55 mVdc, 4-20 mA, 1-5 Vdc and 0-10 Vdc.
- TY-2090-F: Two frequency inputs, up to 30 kHz, from 300 mVpp to 30 Vpp.
- One or two universal output for 4-20 mA, 1-5 Vdc, 0-10 Vdc, isolated from inputs.
- Programmable via serial communication or through portable configurator.
- Linearization for RTD and TC. Square root extraction.
- Configuration stored in non-volatile memory.
- DIN rail or surface assembly.
- RS-232 or RS-422/485 Communication (optional).

PRESYS®

MANAGEMENT SYSTEM TÜVRheinland Brasil NBR ISO 9001 QUALITY

Order Code TY - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Model
2090: Universal Inputs
2090-F: Frequency Inputs

Output 1
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2
Same code as Output 1

Output 3
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4
Same code as Output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Other, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place, surface assembly
1 - General usage, protected place, DIN rail assembly
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), without display*
4 - Dust-proof

* Explosion-proof box:

Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs
TY-2090: Configurable inputs for thermocouple (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD Pt-100 under DIN 43760, 4-20 mA, 1-5 Vdc and 0-10 Vdc. 250 Ω input impedance for mA, >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.
TY-2090-F: Frequency inputs for signals up to 30 kHz, from 300 mVpp to 30 Vpp. DIN-19234 compliance for intrinsically safe NAMUR sensors.

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Up to 2 galvanically isolated module to 300 Vac from power supply and inputs. Up to 2 SPST relay modules and up to 2 SPDT relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Configuration
Via serial communication or MCY-20 configuration module.

Sampling Rate
120 ms standard.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc inputs, with acquisition via RS-232 or RS-422/485 communication.
± 0.2 % of full scale for analog output and maximum load of 750Ω.
± 1 display resolution for frequency input.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for inputs above 10 % of span. Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C at range from 0-60 °C ambient temperature.

2-wire transmitter Power Supply
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature for acquisition by RS-232 or RS-422/485.
± 0.015 % of span / °C using 25 °C as the reference temperature for analog output.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity) (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
(140 x 53 x 175 mm) HxWxD.

Weight
0.5 kg nominal.

Warranty
One year.