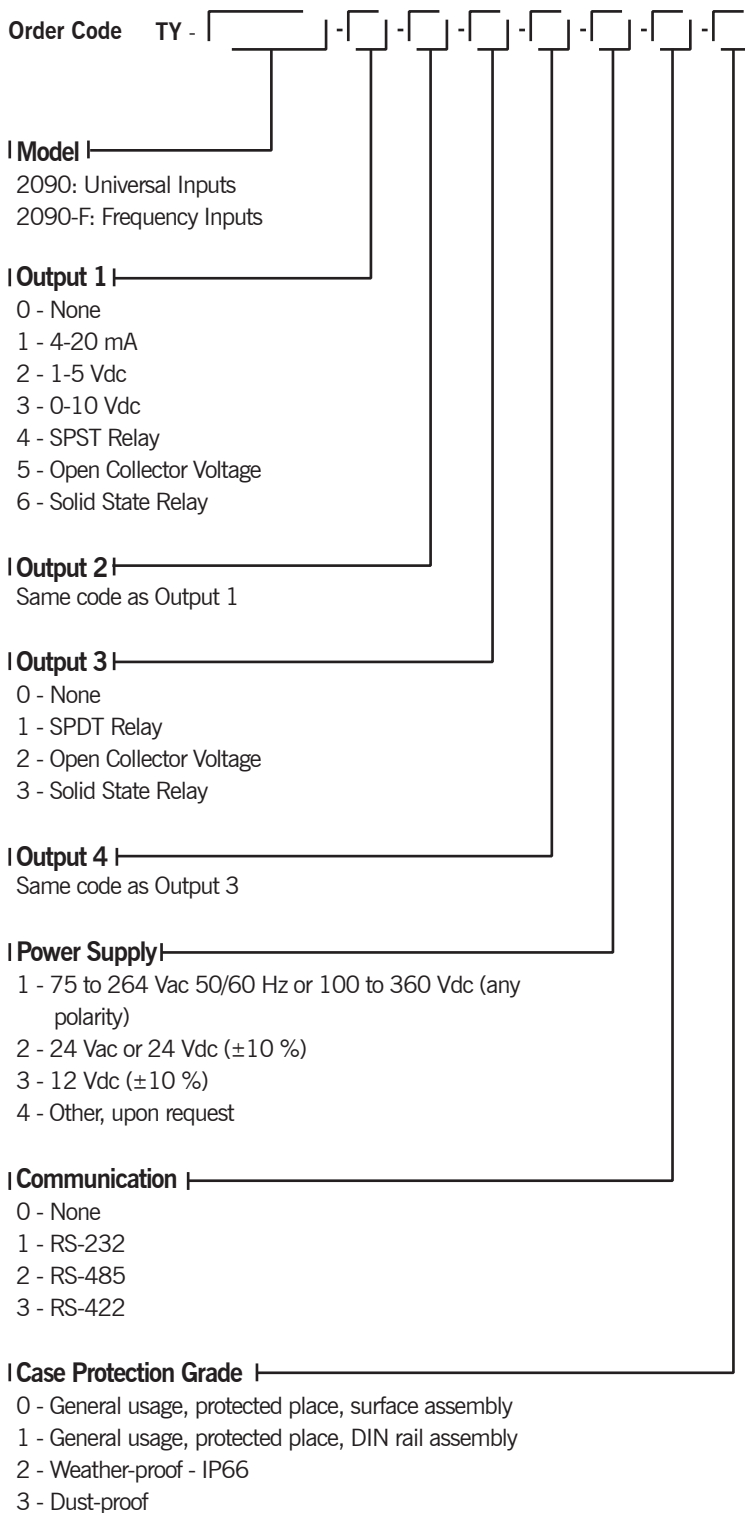




Universal Smart Transmitter TY-2090 / TY-2090-F

- 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).



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 M Ω up to 5 Vdc and 2 M Ω 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

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

Linearization

$\pm 0.1\text{ }^\circ\text{C}$ for RTD and $\pm 0.2\text{ }^\circ\text{C}$ for TC.

Square Root Extraction

$\pm 0.5\%$ of reading, for inputs above 10% of span.
 Programmable Cut-off from 0 to 5%.

Cold Junction Compensation

$\pm 2.0\text{ }^\circ\text{C}$ at range from 0-60 $^\circ\text{C}$ ambient temperature.

2-wire transmitter Power Supply

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

Span Temperature Coefficient

$\pm 0.005\%$ of span / $^\circ\text{C}$ using 25 $^\circ\text{C}$ as the reference temperature for acquisition by RS-232 or RS-422/485.
 $\pm 0.015\%$ of span / $^\circ\text{C}$ using 25 $^\circ\text{C}$ 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 ($\pm 10\%$); 12 Vdc ($\pm 10\%$).

Operating Range

0 to 60 $^\circ\text{C}$ temperature and 90% maximum relative humidity.

Dimensions

(140 x 53 x 175 mm) HxWxD.

Weight

0.5 kg nominal.

Warranty

One year.