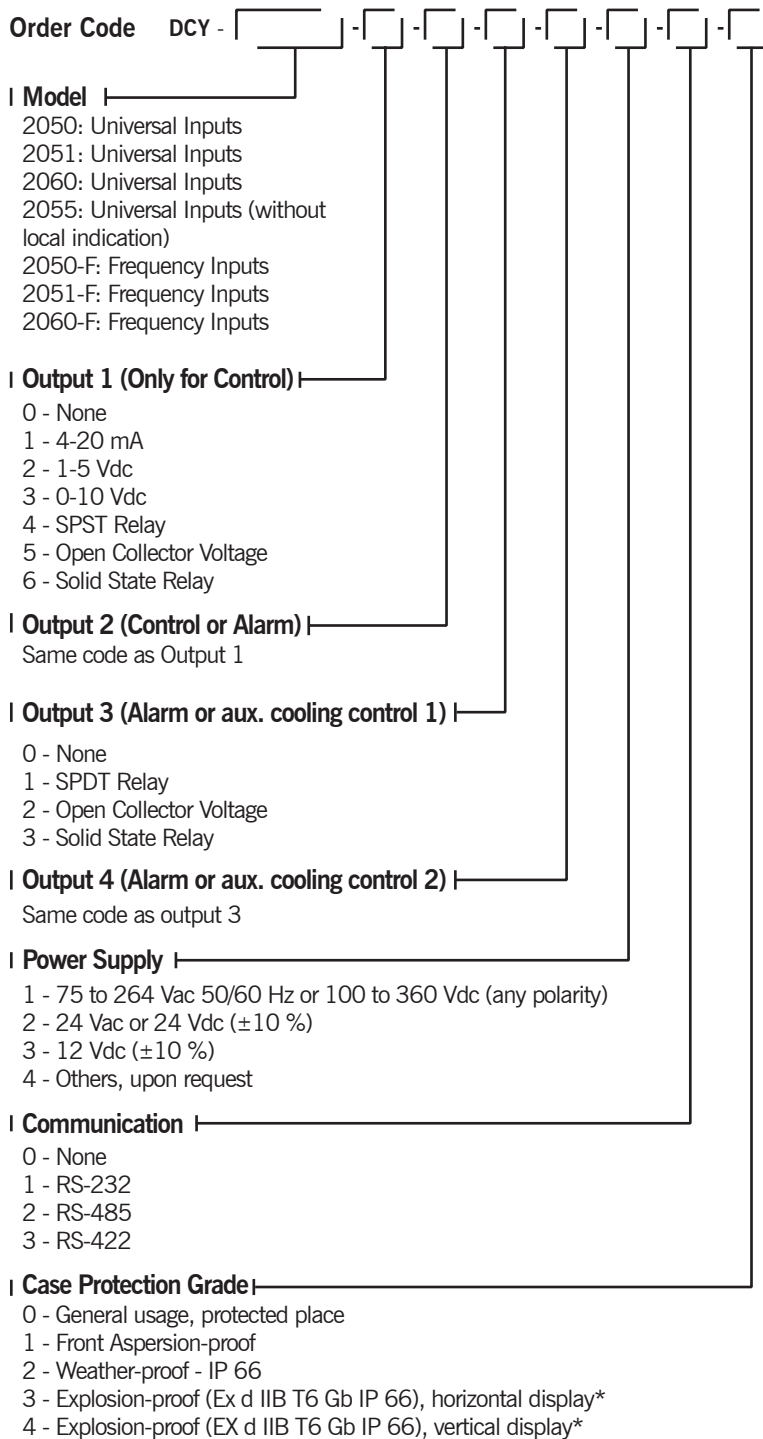




Universal Process Controllers - Dual Loop

- Two standard universal inputs for RTD, thermocouples, 0-55 mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc.
- F versions for frequency inputs up to 30 kHz, from 300 mVpp to 30 Vpp.
- Up to 2 universal output modules for 4-20 mA, 1-5 Vdc and 0-10 Vdc, one for control and one for retransmission, relay, solid state relay and open collector voltage isolated from inputs and power supply.
- Reduced dimensions and high control capacity, performing the functions of:
 - Auto-Tune.
 - ON-OFF, P-PI-PD-PID, ratio, cascade control.
 - Heating-cooling, time-proportional.
 - Remote setpoint, programmable setpoint up to ten segments.
 - Auto/manual station.
- Several optional:
 - Up to 3 SPDT and SPST relay alarm modules;
 - RS-232 or RS-422/485 Communication;
- Linearization for RTD and TC and also square root extraction.
- Configuration stored in non-volatile memory.
- Also available in the model DCY-2055, without local indication, configurable via serial communication or through portable programmer.



* Explosion-proof box:

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

Specifications

Entradas

DCY-2050 / 2051 / 2060 / 2055: Configurable inputs for thermocouple (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD Pt-100 under DIN43760, 4-20 mA, 1-5 Vdc and 0-10 Vdc. Input for remote setpoint configurable for 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.

DCY-2050-F / 2051-F / 2060-F:

Frequency inputs for signals up to 30 kHz, from 300 mVpp to 30 Vpp. DIN-19234 compliance for intrinsically safe NAMUR sensors.

Control Functions

ON-OFF, PID, PID with AUTO-TUNE, Heating-cooling, Ratio, Cascade, Remote Set point and programmable set point.

Control Outputs

Analog 4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc. Up to two optional module galvanically isolated to 300 Vac from power supply and inputs. SPST relay rated for 3A/220 Vac. Open collector transistor (24 Vdc/40 mA maximum with isolation). Solid state relay (2A/250 Vac with isolation).

Alarm Outputs

SPDT relay rated for 3A/220 Vac. 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.

Indication

DCY-2050 / 2050-F: Two 4-digit displays (9 mm).
DCY-2051 / 2051-F: Two 4-digit displays (14 mm / 9 mm).
DCY-2060 / 2060-F: Two 4-digit displays (14 mm).
DCY-2055: Without local indication.
Can be configured together with the decimal point.

Configuration

DCY-2050 / DCY-2051 / DCY-2060: By front-panel push-buttons and internal jumpers. DCY-2055: Via serial communication or MCY-25 configuration module.

Sampling Rate

130 ms standard. Half second display update rate.

Accuracy

$\pm 0.1\%$ of full scale for TC, RTD, mA, mV and Vdc inputs.
 $\pm 0.5\%$ of full scale for analog retransmitter output.
 ± 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

24 Vdc/50 mA maximum, isolated from output, with short circuit protection.

Span Temperature Coefficient

$\pm 0.005\%$ of span / $^\circ\text{C}$ for auxiliary input. Reference temperature: 25 $^\circ\text{C}$.

Power Supply

75 to 264 Vac 50/60 Hz or 100 to 360 Vdc
(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

DCY-2050 / 2050-F: 1/8 DIN (96 x 48 x 187 mm) HxWxD, (92 x 45 mm) HxW panel cutout.
DCY-2051 / 2051-F: 1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.
DCY-2060 / 2060-F: 1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.
DCY-2055: (140 x 53 x 175 mm) HxWxD.

Weight

0.5 kg nominal (DCY-2050/2051)
0.6 kg nominal (DCY-2060/2055)

Warranty

One year.