Pressure Controller DCY-2057

- Direct input for pressure, gases and liquids.
  Ranges: 0 to 250 mmH$_2$O, 1 psi, 5 psi, 15 psi, 30 psi, 100 psi, 250 psi, 500 psi and 1000 psi.
  Gauge or absolute pressure and vacuum.

- Auxiliar universal input for RTD, thermocouple, 0-55 mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc.

- Mounting options in weather-proof box.

- High control capacity, performing the functions of:
  - Auto-tune.
  - ON-OFF, P-PI-PD-PID, ratio, cascade control.
  - Remote Setpoint, programmable set point up to 10 segments
  - Auto/manual station.

- Several options available:
  - Up to 2 analog output modules 4-20 mA, 1-5 Vdc and 0-10 Vdc.
  - Up to 3 alarm modules with SPDT and SPST relays.
  - Front Aspersion-proof.
  - RS-232 or RS-422/485 Communication.

- Robust construction in order to support the harshest conditions of industrial use.
  75 to 264 Vac, 50/60 Hz or 100 to 360 Vdc; 24 Vac/dc and 12 Vdc power supply,
  as ordered.

- High level of accuracy, also performs square root extraction.

- Fully programmable from the front panel. Configuration stored in non-volatile memory.

Ideal for
Pressure and
Temperature
Control
in
Reactors

PRESYS®

MANAGEMENT SYSTEM
TÜVRheinland®
Brasil
NBR ISO 9001
QUALITY

Order Code   DCY-2057 - ☐-☐-☐-☐-☐-☐-☐-☐-☐-☐

Input

Range

1 - 0 to 250 mmH₂O $\big\}$ *
2 - 0 to 1 psi
3 - 0 to 5 psi
4 - 0 to 15 psi
5 - 0 to 30 psi
6 - 0 to 100 psi $\big\}$ **
7 - 0 to 250 psi
8 - 0 to 500 psi
9 - 0 to 1000 psi

Pressure Type

1 - Gauge
2 - Absolute
3 - Vacuum (0 to 1 atm)

Sensor Type

1 - For air or non-corrosive gases
2 - For fluids compatible with
    316 Stainless Steel (sealed)

  * air or non-corrosive gases
  ** sealed

Output 1 (Control)

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

Output 2 (Alarm)

Same code as Output 1

Output 3 (Alarm)

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

Output 4 (Alarm)

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 - Others, upon request

Communication

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

Case Protection Grade

0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66

Specifications

Inputs
Input for vacuum, gauge or absolute pressure.
Ranges from 250 mmH₂O to 1000 psi (Gauge Pressure).
Ranges from 15 psi to 1000 psi (Absolute Pressure). Range up to
1 atm (Vacuum). Use with compressed air and non-corrosive /
condutive gases, up to 5 psi. Above 5 psi, use with liquids and
fluids compatible with 316 stainless steel. Auxiliar analog input for TC
(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.

Control Functions
ON-OFF, PID, PID with AUTO-TUNE, Ratio, Cascade and Remote
Set point.

Control Output
Analog 4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc.
Up to 2 optional module galvanically isolated to 300 Vac from power
supply and inputs. SPST Relay rated for 3A/220 Vca. Open collector
transistor (24 Vdc/40 mA maximum with isolation). Solid state relay
(2A/250 Vac maximum 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
Two 4-digit red leds displays (14 mm) which can be configured together
with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
130 ms standard. Half second display update rate.

Accuracy
± 1 % of full scale for the range of 250 mmH₂O.
± 0.1 % of full scale for the other pressure ranges.
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc inputs.
± 0.5 % of full scale for analog retransmitter output, 750 Ω maximum load .

Linearization
± 0.1 ℃ for RTD and ± 0.2 ℃ 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 ℃ at range from 0-60 ℃ ambient temperature.

2-wire transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output, with short circuit
protection.

Span Temperature Coefficient
± 0.005 % of span / ℃ for auxiliar analog input.
± 0.01 % of span / ℃ for pressure inputs.
Reference temperature: 25 ℃

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

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

Dimensions
1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.

Weight
1.0 kg nominal.

Warranty
One year.