

6170

1/16 DIN Valve Motor Controller



The 6170 is a process controller designed specifically to drive valve motors, with a unique VMD tuning algorithm.

- Motorised Valve Control
- Two process alarms
- Loop alarm
- RS485 comms
- Ramping setpoint
- Auto/manual tuning
- Dual setpoint selection
- PC configuration



Technical Data

Features

Control Types
Valve Control
Auto/Manual
Output Configuration
Alarm 1 & 2 Types
Human Interface
PC Configuration

Input

Thermocouple
RTD
DC Linear

Impedance
Accuracy
Sampling
Sensor Break Detection

Outputs & Options

Control Relays

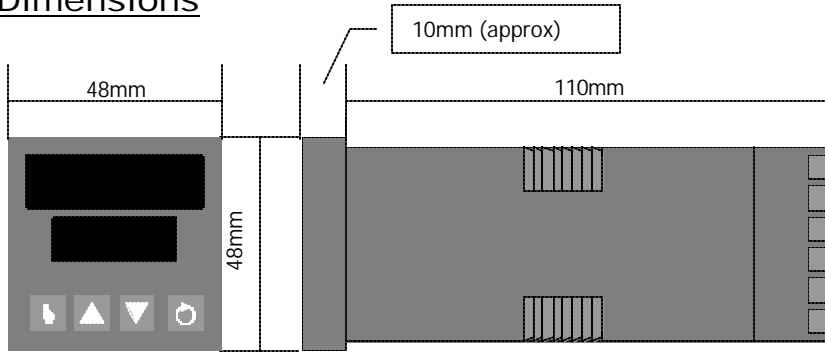
Solid State (Triac)
Outputs
Alarm Relay
Retransmit Outputs
Communications
Dual Setpoint Selection

Operating & Environmental

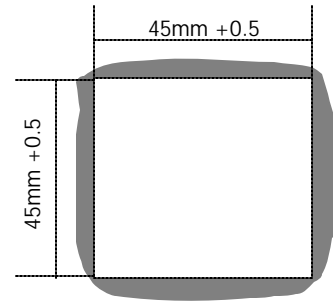
Temperature & RH
Power Supply
Front Panel Protection
Approvals and Certification

Full PID with Pre-tune, Self-tune, Manual Tuning, or On-Off control
Open loop Valve Motor Drive. Slide-wire feedback from valve is not required
Selectable from front panel, with bumpless transfer
Up to 3 total. 2 for control (Open/Close Valve), 1 for Alarm or retransmit PV or SP (optional)
Process high, process low, SP deviation, band, logical OR and hysteresis. Also 1 loop alarm
4 button operation, dual 4 digit 10mm & 8mm high LED displays, plus 3 LED indicators
Off-line configuration from serial port to dedicated config socket (comms option not required)
J, K, R, S, T, B, L, & N.
3 Wire PT100, 50Ω per lead maximum (balanced)
0-20/4-20mA, 0-50/10-50mV, 0-5/1-5/0-10/2-10V. Scaleable -1999 to 9999, dec point available
>100MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 4.7Ω for mA ranges
+/- 0.25% of input span +/- 1 LSD (T/C CJC better than 0.7°C)
4 per second, 14 bit resolution approximately
<2 secs (except zero based DC ranges), control O/P's turn off, *high alarms activate (*low for RTD, mA or V).
Contacts SPDT 2Amp resistive at 120V AC (motor drive) or 240V AC (via contactor), >500,000 operations
0.01 to 1 Amp AC 20 to 280V, 47 to 63Hz
Contacts SPDT 2Amp resistive at 240V AC , >500,000 operations
0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.25%
2 Wire RS485, 1200 to 9600 Baud, ASCII
Selects between 2 SP's using volt free or TTL input (SP1 = -0.6 to 0.8V, SP2 = 2 to 24V)
0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing
100 to 240V 50/60Hz (optional 20 to 55V AC/22 to 65V DC), approx 4 Watts
IEC IP66 (Behind panel protection is IP20)
CE, UL & ULc

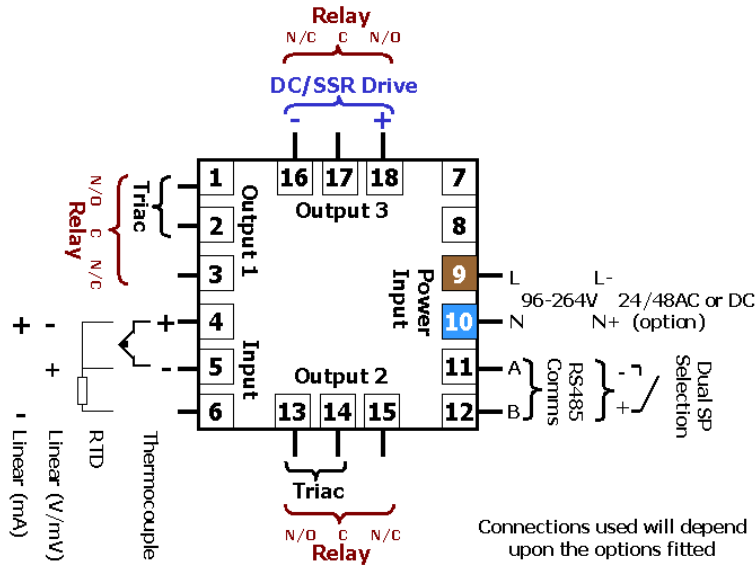
Dimensions



Panel Cut-out



Connection Details



Field Reconfiguration

Input

Configurable to any type, no extra parts required

Output 1

Type is fixed as ordered. Relay or Triac (Valve Open)

Output 2

Type is fixed as ordered. Relay or Triac (Valve Close)

Output 3

Configurable as Alarm via plug-in Relay or SSR modules, or retransmit PV or SP using DC Linear module

Option Slot

Configurable as RS485 comms or dual setpoint selection, via plug-in modules

Order Code



Input type

3 Wire RTD or DC mV	1
Thermocouple	2
DC mA	3
DC Voltage	4

Output 1

Relay Control (Valve Open)	1
Triac Control (Valve Open)	8

Output 2

Relay Control (Valve Close)	1
Triac Control (Valve Close)	8

Options and Power Supply

00	No Options/100-240V AC line supply
02	No Options/24-48V AC or DC line supply
10	RS485 Comms/100-240V AC line supply
12	RS485 Comms/24-48V AC or DC supply
30	Dual Setpoint/100-240V AC line supply
32	Dual Setpoint/24-48V AC or DC supply

Output 3

0	Not fitted
1	Relay Alarm 1 output
2	DC for SSR Alarm 1 output
3	DC 0-10V Re-Transmit PV or SP
4	DC 0-20mA Re-Transmit PV or SP
5	DC 0-5V Re-Transmit PV or SP
7	DC 4-20mA Re-Transmit PV or SP

In accordance with our policy of continuous improvement, we reserve the right to change specifications from those shown in this document.