

West 8170 1/8 DIN Valve Motor Controller



The West 8170 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, West ASCII

Selects between 2 SP's using volt free or TTL input (SP1 = -0.6 to 0.8V, SP2 = 2 to 24V)

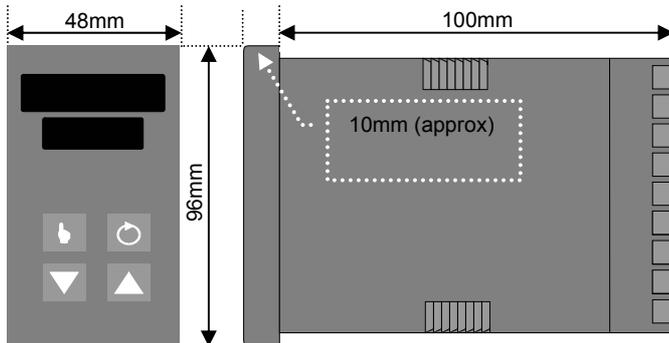
0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing

100 to 240V 50/60Hz 7.5VA (optional 20 to 50V AC 7.5VA/22 to 65V DC 4W)

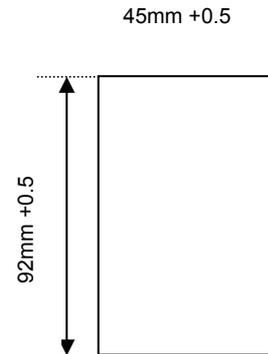
IEC IP66 (Behind panel protection is IP20)

CE, UL & ULc

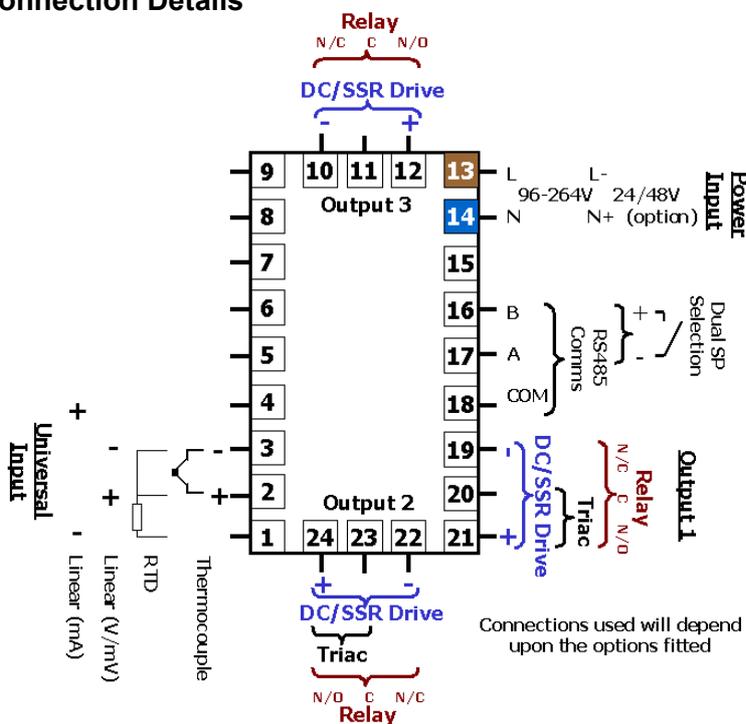
Dimensions



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 & Power Supply

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