The 6170+, 4170+ & 8170+ Valve Motor Drive Controllers...

The 6170+, 4170+ and 8170+ from West are a new improved range of Valve Motor Drive (VMD) controllers. The new + Series VMD controllers have been specifically designed for open loop valve motor drive applications and feature an improved + Series interface and greater field flexibility.

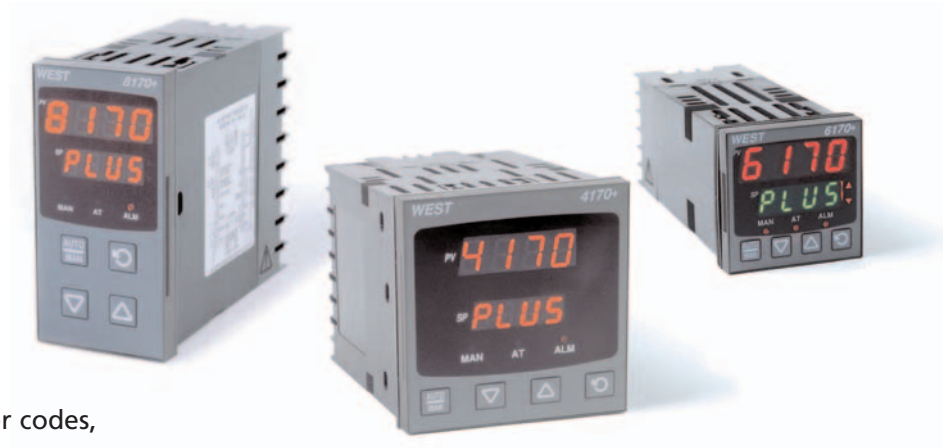
A unique VMD tuning algorithm continuously monitors the process to provide stable control at all times. In addition to the VMD outputs, further output options exist which can be designated as outputs for alarms, 24VDC transmitter power supply or retransmit of process value or setpoint.

Our new 6170+, 4170+ and 8170+ Valve Motor Drive controllers use the proven reliability of existing models, PLUS great new features that makes them more versatile and even easier to set up and use.

The VMD controllers share the same distinct styling as existing West + Series models, ensuring that the 'family' approach is maintained throughout the entire product range.

Some of their new improved features include:

- **Auto Detected Hardware - to reduce set up times**
- **Jumperless Configuration**
- **Process & Loop Alarms**
- **Auto or Manual Tuning**
- **Motorised Valve Control**
- **Ramping Setpoint**
- **Remote/Dual Setpoint Options**
- **Modbus Communications**



For the full specifications and order codes, please see overleaf.

...so **adaptable**, you won't need **anything else**

WEST
Temperature Control Solutions

Technical Data

Features	
Control Types	Full PID with Pre-tune, Self-tune, manual tuning modes
Valve Control	Open Loop Valve Motor Drive.
Auto/Manual	Selectable from front panel or via digital input, with bumpless transfer
Output Configuration	Up to 5 possible **(P8170/P4170)**, Up to 4 possible **(P6170)**, two required for valve control, additional outputs for alarms, 24VDC transmitter power supply or retransmit of process value or setpoint
Alarm 1 & 2 Types	Alarm 1 & 2 Types. Process high, process low, SP deviation, band, logical OR / AND. Also 1 loop alarm for process control security. Process alarms have adjustable hysteresis
Human Interface	4 button operation, dual 4 digit 10mm & 8mm high LED displays, optional choice of colours (Red/Red, Red/Green, Green/Red or Green/Green), plus 5 LED indicators
PC Configuration	Off-line configuration from PC serial port to dedicated configuration socket (communications option not required) Configuration Software for Windows 98 or higher. West Part Number: PS1-CON
Input	
Thermocouple	J, K, C, R, S, T, B, L, N & PtRh20%vsPtRh40%
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
DC Linear	0 to 20mA, 4 to 20mA, 0 to 50mV, 10 to 50mV, 0 to 5V, 1 to 5V, 0 to 10V, 2 to 10V Scaleable -1999 to 9999, with adjustable decimal point
Impedance	>10MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 5Ω for mA ranges
Accuracy	±0.1% of input range ±1 LSD (T/C CJC better than 1°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor Break Detection	<2 seconds (except zero based DC ranges), control O/P's turn off, high alarms activate for T/C and mV ranges, low alarms activate for RTD, mA or V ranges
Outputs & Options	
Control & Alarm Relays	Contacts SPDT 2 Amp resistive at 240V AC, >500,000 operations
Control SSR Driver Outputs	Drive capability >10V DC in 500Ω minimum
Triac Outputs	0.01 to 1 Amp AC, 20 to 280Vrms, 47 to 63Hz
DC Linear Outputs	DC Linear Outputs 0 to 20mA, 4 to 20mA into 500Ω max, 0 to 10V, 2 to 10V, 0 to 5V into 500Ω min Control outputs have 2% over/under drive applied. Accuracy ±0.25% at 250Ω (degrades linearly to 0.5% for increasing burden to specified limits)
Transmitter Power Supply	Output 24VDC (nominal) into 910Ω minimum to power external devices
Serial Communications	2 Wire RS485, 1200 to 19200 Baud, Modbus protocol
Digital Input	Selects between 2 setpoints or Auto/Manual control. Volt free or TTL input
Remote Setpoint / Valve Position Input	0 to 20mA, 4 to 20mA, 0 to 100mV, 0 to 5V, 1 to 5V, 0 to 10V, 2 to 10V or >2KΩ Potentiometer Scaleable -1999 to 9999 Local/Remote setpoint selected from digital input (supplied as part of Full RSP) or front panel Valve Position Indication mode using Remote Setpoint Input
Operating & Environmental	
Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95% RH non-condensing
Power Supply	100 to 240V 50/60Hz 7.5VA (optional 20 to 48V AC 7.5VA/22 to 65V DC 5 watts)
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Standards	CE, UL & ULC recognised

P6170	– X	– X	– X	– X	– X	– X	– X		
P4170	– X	– X	– X	– X	– X	– X	– X	– X	
P8170	– X	– X	– X	– X	– X	– X	– X	– X	

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

Option Slot 1	
Not Fitted	0
Relay	1
DC for SSR	2
DC 0-10V	3
DC 0-20mA	4
DC 0-5V	5
DC 2-10V	6
DC 4-20mA	7
Triac	8

Option Slot 2	
Not Fitted	0
Relay	1
DC Driver for SSR	2
DC 0-10V	3
DC 0-20mA	4
DC 0-5V	5
DC 2-10V	6
DC 4-20mA	7
Triac	8
Dual Relay	9

Option Slot B (Not P6170)	
0	Not Fitted
R	Remote Setpoint Input *(Full)*

Display Colour	
0	Red Upper & Lower
1	Green Upper & Lower
2	Red Upper, Green Lower
3	Green Upper, Red Lower

Power Supply	
0	100-240V AC
2	24-48V AC or DC

Option Slot A	
0	Not Fitted
1	RS485 Communications
3	Digital Input
4	Remote Setpoint Input *(Basic)*

Option Slot 3	
0	Not Fitted
1	Relay
2	DC Driver for SSR
3	DC 0-10V
4	DC 0-20mA
5	DC 0-5V
6	DC 2-10V
7	DC 4-20mA
8	Transmitter Power Supply
9	*Dual Relay

*Option is only available on P8170 & P4170, not available on P6170

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