# West 8200

## 1/ 8 DIN Controller With Fuzzy Logic

The West 8200 PID controller’s fuzzy logic algorithm works in the background to reduce overshoot and improve settling times on start-up, setpoint changes and load disturbances.

- **Heat/ Cool operation**
- **Ramping setpoint**
- **Two process alarms**
- **Auto-tuning & fuzzy logic**
- **Loop alarm**
- **Remote setpoint input**
- **RS485 comms**
- **PC configuration**

## Technical Data

### Features
- **Control Types**
  - PID with fuzzy logic. Pre-tune, Self-tune, Manual Tuning, or On-Off control. Heat only or heat/cool
- **Auto/Manual**
  - Selectable from front panel, with bumpless transfer
- **Output**
  - Up to 3 total. Max 2 for control (Heat & Cool), max 2 for Alarms, max 1 for retransmit Process value or Setpoint
- **Configuration**
  - Process high, process low, SP deviation, band, logical OR and hysteresis. Also 1 loop alarm
- **Alarm 1 & 2 Types**
  - 4 button operation, dual 4 digit 10mm & 8mm high LED displays, plus 3 LED indicators
- **Human Interface**
  - Off-line configuration from serial port to dedicated config socket (comms option not required)

### Input
- **Thermocouple**
- **RTD**
  - 3 Wire PT100, 50Ω per lead maximum (balanced)
- **DC Linear**
  - 0-20/4-20mA, 0-50/10-50mV, 0-5/1-5/0-10/2-10V. Scaleable -1999 to 9999, dec point available
- **Impedance**
  - >100MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 4.7Ω for mA ranges
- **Accuracy**
  - +/- 0.25% of input span +/- 1 LSD (T/C CJC better than 0.7°C)
- **Sampling**
  - 4 per second, 14 bit resolution approximately
- **Sensor Break Detection**
  - <2 secs (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 2Amp resistive at 240V AC, >500,000 operations
- **Control SSR Outputs**
  - Drive capability >4.3V DC in 250Ω (10V 500Ω version available)
  - 0.01 to 1 Amp AC 20 to 280V, 47 to 63Hz
- **Solid State (Triac) Outputs**
  - 0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.5%
- **Retransmit Outputs**
  - 0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.25%
- **Communications**
  - 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)
- **Dual Setpoint Selection**
  - 0-20/4-20mA, 0-50/0-100mV, 0-5/0-10V or Potentiometer (2KΩ min), scaleable, with external volt free or TTL remote/local setpoint selection input

### Operating & Environmental
- **Temperature & RH**
  - 0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing
- **Power Supply**
  - 90 to 264V 50/60Hz (optional 20 to 55V AC/22 to 65V DC), approx 4 Watts
- **Front Panel Protection**
  - IEC IP66 (Behind panel protection is IP20)
- **Approvals and Certification**
  - CE, UL & ULc
Connection Details

Input
- Configurable to any type, no extra parts required
- 3 Wire RTD or DC mV
- Thermocouple
- DC mA
- DC Voltage

Output 1
- Relay Control
- DC for SSR Control
- DC 0-10V Control
- DC 0-20mA Control
- DC 0.5V SP Control
- DC 4-20mA Control
- Triac Control

Output 2
- Not fitted
- Relay Control or Alarm 2
- DC for SSR Control or Alarm 2
- DC 0-10V Control
- DC 0-20mA Control
- DC 0-5V Control
- DC 4-20mA Control
- Triac Control

Secondary Input
- Remote Setpoint not required
- 0-50/0-100mV Remote Setpoint Input
- 0-20/4-20mA Remote Setpoint Input
- 0-5/0-10V Remote Setpoint Input
- Potentiometer Remote Setpoint Input

Options and Power Supply
- No Options
- No Options/24-48V AC or DC line supply
- *RS485 Comms/90-264V AC line supply
- *RS485 Comms/24-48V AC or DC supply
- *Dual Setpoint/90-264V AC line supply
- *Dual Setpoint/24-48V AC or DC line supply

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

Order Code

Field Reconfiguration

Input
Type is fixed as ordered. Either Relay/SSR (selectable), Triac or DC Linear (selectable for mV, mA, Volts)

Output 2
Configurable as Cool O/P or Alarm via plug-in Relay, SSR, Triac or DC Linear modules

Output 3
Configurable as Alarm via plug-in Relay or SSR modules, or retransmit using DC Linear module

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

Secondary Input
If fitted, can be configured to any input range. Cannot be retro-fitted.

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