

West 8100

1/8 DIN Process Controller



The West 8100 combine's technical functionality, field flexibility and ease of use to give you the best in comprehensive process control.

- **Heat/Cool operation**
- **Two process alarms**
- **Loop alarm**
- **RS485 comms**
- **Ramping setpoint**
- **Auto/manual tuning**
- **Dual setpoint selection**
- **PC configuration**



Technical Data

Features

Control Types
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

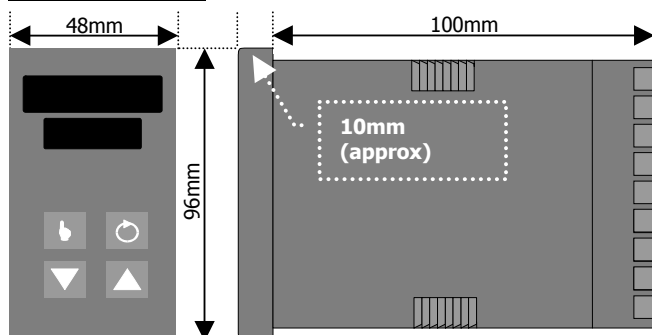
Control & Alarm Relays
Control SSR Outputs
Solid State (Triac)
Outputs
Control DC Outputs
Retransmit Outputs
Communications
Dual Setpoint Selection

Operating & Environmental

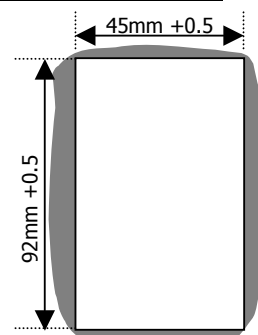
Temperature & RH
Power Supply
Front Panel Protection
Approvals and Certification

Full PID with Pre-tune, Self-tune, Manual Tuning, or On-Off control. Heat only or heat & cool
Selectable from front panel, with bumpless transfer
Up to 3 total. Max 2 for control (Heat & Cool), max 2 for Alarms, max 1 for retransmit Process value or Setpoint
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 for T/C and mV ranges, low alarms activate for RTD, mA or V ranges
Contacts SPDT 2Amp resistive at 240V AC, >500,000 operations
Drive capability >4.2V DC in 1KΩ (10V 500Ω version available)
0.01 to 1 Amp AC 20 to 280V, 47 to 63Hz
0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.5%
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 (Modbus Optional)
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
90 to 264V 50/60Hz (optional 20 to 55V AC/22 to 65V DC), approx 4 Watts
IEC IP66 (Behind panel protection is IP20)
CE, UL & ULc

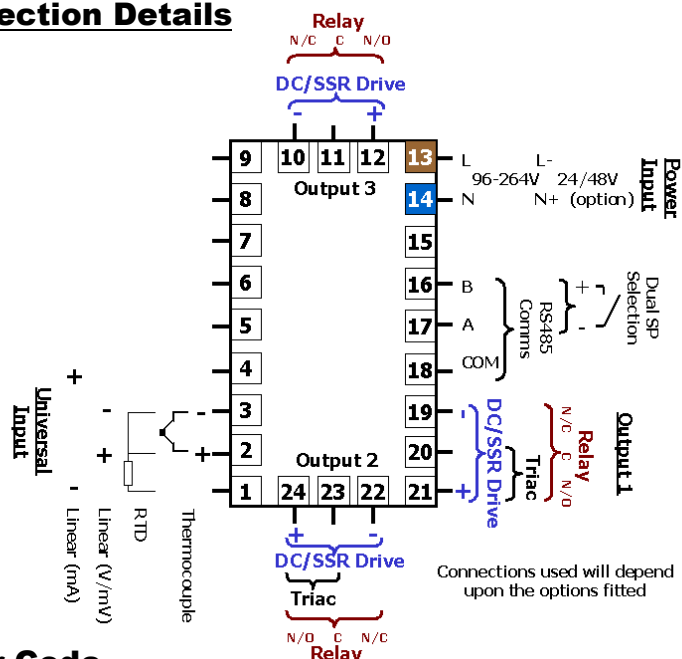
Dimensions



Panel Cut-out



Connection Details



Field Reconfiguration

Input

Configurable to any type, no extra parts required

Output 1

Type is fixed as ordered. 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

Order Code

N8100 - **x** - **x** - **x** - **x** - **xx**

Input type

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

Output 1

Relay Control	1
DC for SSR Control	2
DC 0-10V Control	3
DC 0-20mA Control	4
DC 0-5V SP Control	5
DC 4-20mA Control	7
Triac Control	8

Output 2

Not fitted	0
Relay Control or Alarm 2	1
DC for SSR Control or Alarm 2	2
DC 0-10V Control	3
DC 0-20mA Control	4
DC 0-5V Control	5
DC 4-20mA Control	7
Triac Control	8

Special Variants

Blank	Special variant not required
S09	MODBUS instead of West ASCII comms (requires RS485 option)
S14	10V DC SSR outputs (requires SSR output codes)

Options and Power Supply

00	No Options/90-264V AC line supply
02	No Options/24-48V AC or DC line supply
10	RS485 Comms/90-264V AC line supply
12	RS485 Comms/24-48V AC or DC supply
30	Dual Setpoint/90-264V 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.

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INSTRUMENTS