

The 8100+ updates our popular 8100 controller. With its improved interface, technical functionality and field flexibility, the West 8100+ is not only backwards compatible with the 8100, but provides a range of new features.



- 1/8 DIN Size
- Jumperless Configuration
- Auto Detected Hardware
- Auto or Manual Tuning
- Heat/Cool Operation Option
- Process & Loop Alarms Options
- Ramping setpoint
- Modbus & ASCII Comms Options
- Dual Setpoint Selection Options
- Two process alarms Options
- Configuration via PC Option
- Replaceable Output & Option Modules
- Remote Setpoint Option

### Features

**Control Types** - Full PID with Pre-tune, Self-tune, Manual Tuning, or On-Off control. Heat only or heat & cool.

**Auto/Manual** - Selectable from front panel or external selection via digital input, with bumpless transfer.

**Output Configuration** - Up to 3 possible, for control (Heat & Cool), Alarm or retransmit of Process Value or Setpoint.

**Alarm 1 & 2 Types** - Process high, process low, SP deviation, band, logical OR with adjustable hysteresis. Also 1 loop alarm for process security.

**Human Interface** - 4 button operation, dual 4 digit 10mm & 8mm high LED displays with choice of Red/Red, Green/Green or Red/Green plus 5 LED indicators.

**Manual or PC Configuration** - Off-line configuration from serial port to dedicated config socket (comms option not required).

**Transmitter Power Supply (Option)** - 24VDC (910 Ohm minimum load resistance)

### Inputs

**Thermocouple** - J, K, C, R, S, T, B, L, N & PtRh20%vsPtRh40%. Scalable within selected range.

**RTD** - 3 Wire PT100, 50ohm per lead maximum (balanced). Scalable within selected range.

**DC Linear** - 0-20/4-20mA, 0-50/10-50mV, 0-5/1-5/0-10/2-10V. Scaleable -1999 to 9999, decimal point selectable.

**Impedance** - >10Mohm for Thermocouple and mV ranges, 47Kohm for V ranges and 5ohm 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 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.

**Remote Setpoint (Option)** - 0-20mA, 4-20mA, 0-100mV, 0-5V, 1-5V, 0-10V, 2-10V or Potentiometer (2Kohm minimum) Scaleable - 1999-9999. Local/Remote setpoint selected from digital input (supplied as part of Full RSP) or front panel.

### Outputs & Options

**Control & Alarm Relays** - Contacts SPDT 2 Amp resistive at 240V AC, >500,000 operations. Output #1 module is now field replaceable

**Control SSR Outputs** - Drive capability >10V DC in 500ohm min

**Solid State (Triac) Outputs** - 0.01 to 1 Amp AC 20 to 280V, 47 to 63Hz.

**Control DC Outputs** - 0-20/4-20mA into 500ohm max, 0-10/2-10/0-5V into 500ohm min. with 2% over and underdrive applied to control outputs. Accuracy typically +/- 0.25%.

**Communications** - 2 Wire RS485, 1200 to 19200 Baud, Modbus & ASCII protocol (selectable).

**Digital Input** - Selects between 2 Setpoints or Auto/Manual control using volt free or TTL input

### Operating & Environmental

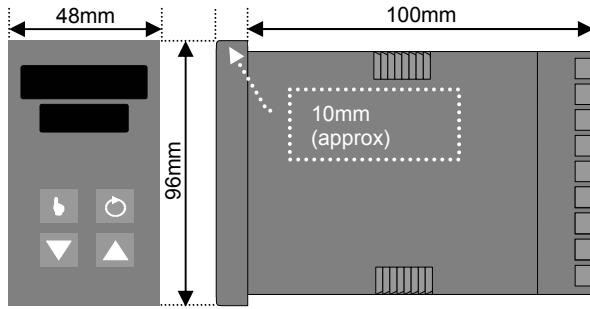
**Temperature & RH** - 0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing.

**Power Supply** - 100-240Vac 50/60Hz (standard) 7.5VA ; 20-48Vac 50/60Hz (option) 7.5VA & 22-65Vdc (option) 4W.

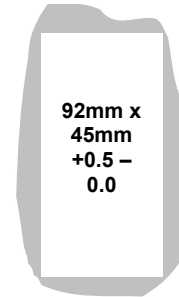
**Front Panel Protection** - IEC IP66 (Behind panel protection is IP20).

**Standards** - CE, UL & ULc. recognized.

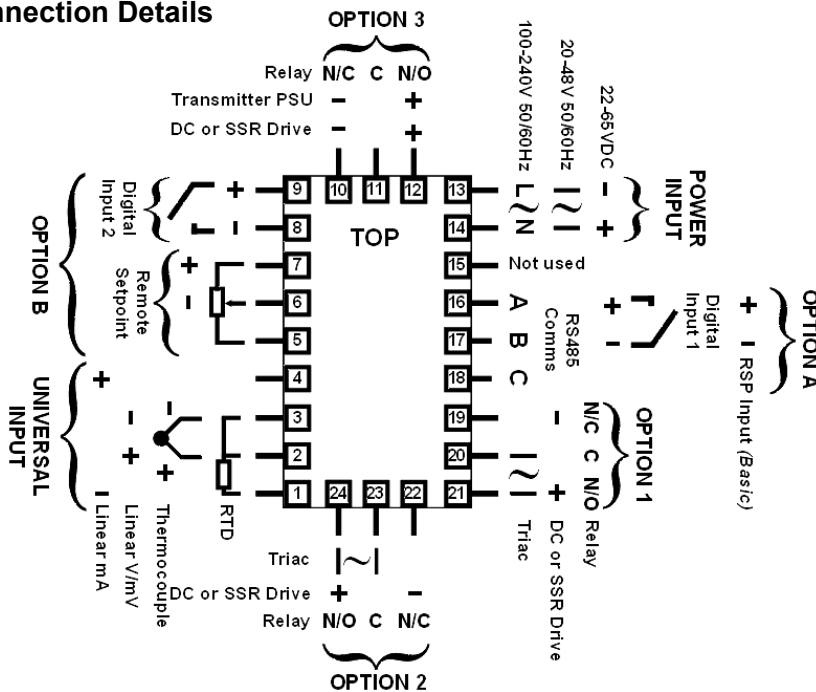
### Dimensions



### Cut out



### Connection Details



### Field Reconfiguration

#### Input

Jumper-free configuration for any type (no extra parts required)

- Option Slot 1** Part Number
  - Relay Output ..... PO1-C10
  - Linear mA/V DC Output ..... PO1-C21
  - SSR Driver Output ..... PO1-C50
  - Triac Output ..... PO1-C80
- Option Slot 2** Part Number
  - Relay Output ..... PO2-C10
  - Linear mA/V DC Output ..... PO2-C21
  - SSR Driver Output ..... PO2-C50
  - Triac Output ..... PO2-C80
- Option Slot 3** Part Number
  - Relay Output ..... PO2-C10
  - Linear mA/V DC Output ..... PO2-C21
  - SSR Driver Output ..... PO2-C50
  - 24VDC Transmitter PSU ..... PO2-W08
- Option Slot A** Part Number
  - Digital Input ..... PA1-W03
  - Remote Setpoint Input (Basic) PA1-W04
  - RS485 Comms ..... PA1-W06
- Option Slot B** Part Number
  - Remote Setpoint Input (Full) ..PB1-W0R

### Order Code



- 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

- Option Slot B**
  - 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