

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

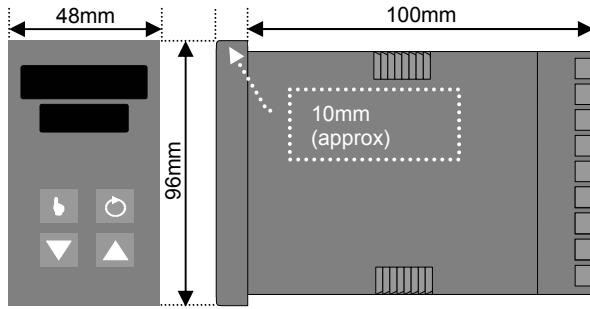
Temperature & RH - 0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing.

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

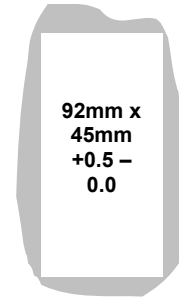
Front Panel Protection - IEC IP66 (Behind panel protection is IP20).

Standards - CE, UL & ULc. recognized.

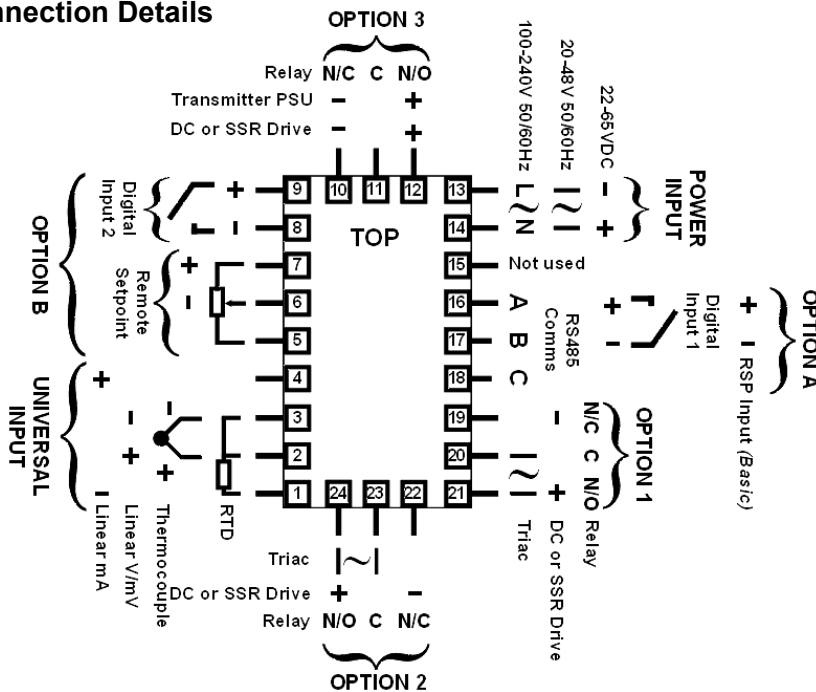
Dimensions



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