

## 6100+, 8100+ & 4100+ Temperature & Process Controllers



- Jumperless Configuration
- Auto Detected Hardware
- Process & Loop Alarms
- Modbus & ASCII Comms
- Auto or Manual Tuning
- Heat/Cool Operation
- Ramping Setpoint
- Remote/Dual Setpoint Options
- Available in 1/16, 1/8 & 1/4 DIN Formats



With their improved interface, technical functionality and field flexibility, the West 6100+, 8100+ and 4100+ give you the best in comprehensive control for most temperature and process control loops.

### Specification

#### 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 via digital input, with bumpless transfer  |
| Output Configuration | Up to 3 possible, for control, alarm, 24VDC transmitter power supply or retransmit of process value or setpoint   |
| 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 (6100+, 8100+) and 13mm & 10mm high (4100+) 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 config socket (comms 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 & Operations

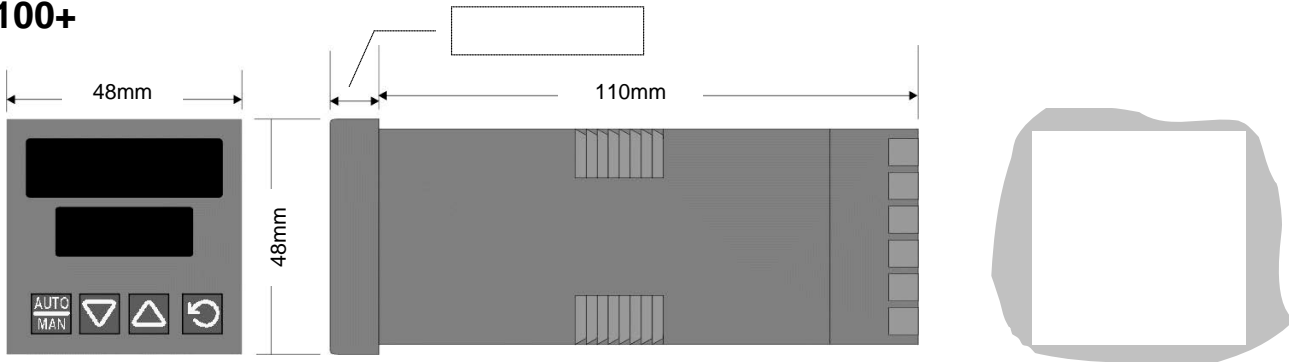
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|----------------------------|--|
| Control & Alarm Relays     | Contacts SPDT 2 Amp resistive at 240V AC, >500,000 operations  |
| Control SSR Driver Outputs | Drive capability >10V DC in 500Ω minimum   |
| Triac Outputs              | 0.01 to 1 Amp AC, 20 to 280Vrms, 47 to 63Hz  |
| DC Linear Outputs          | 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   |
| Communications             | 2 Wire RS485, 1200 to 19200 Baud, Modbus and ASCII protocol (selectable)   |
| Digital Input              | Selects between 2 setpoints or Auto/Manual control. Volt free or TTL input   |
| Remote Setpoint Input      | 0 to 20mA, 4 to 20mA, 0 to 5V, 1 to 5V, 0 to 10V or 2 to 10V. Scaleable -1999 to 9999. Local/Remote setpoint selected from front panel   |

### Operating & Environmental

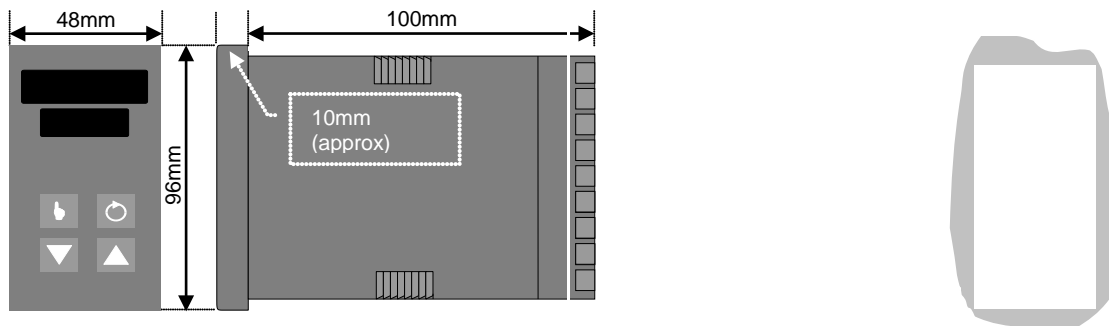
|                                  |  |
|----------------------------------|--|
| Temperature & RH                 | 0 to 55°C (-20 to 80°C storage), 20% to 95% RH non-condensing                |
| Power Supply                     | 100 to 240V 50/60Hz 7.5VA (optional 20 to 48V AC 7.5VA/22 to 65V DC 5 watts) |
| Front Panel Protection Standards | IEC IP66 (Behind panel protection is IP20), NEMA4X                           |
| Standards                        | CE, UL & ULC recognised  |

### Dimensions

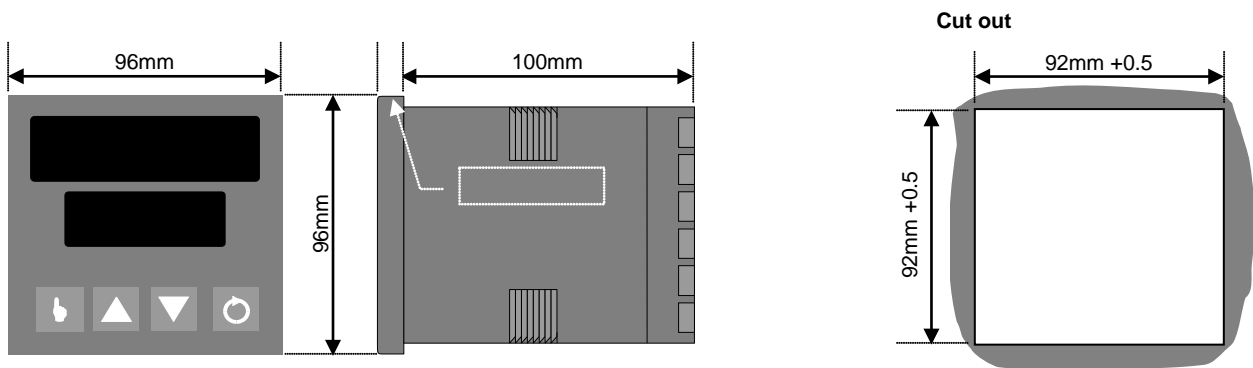
#### 6100+



#### 8100+

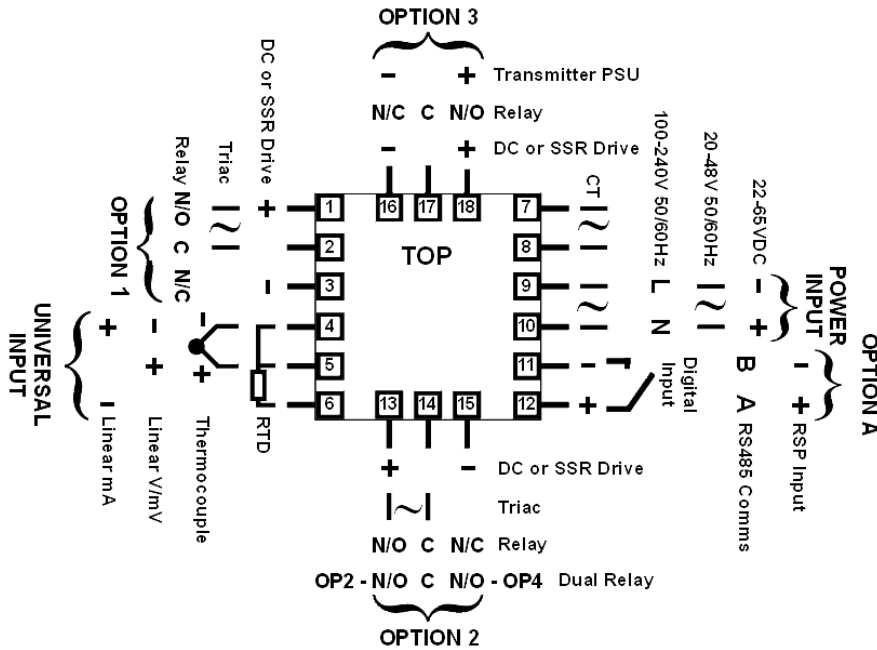


#### 4100+

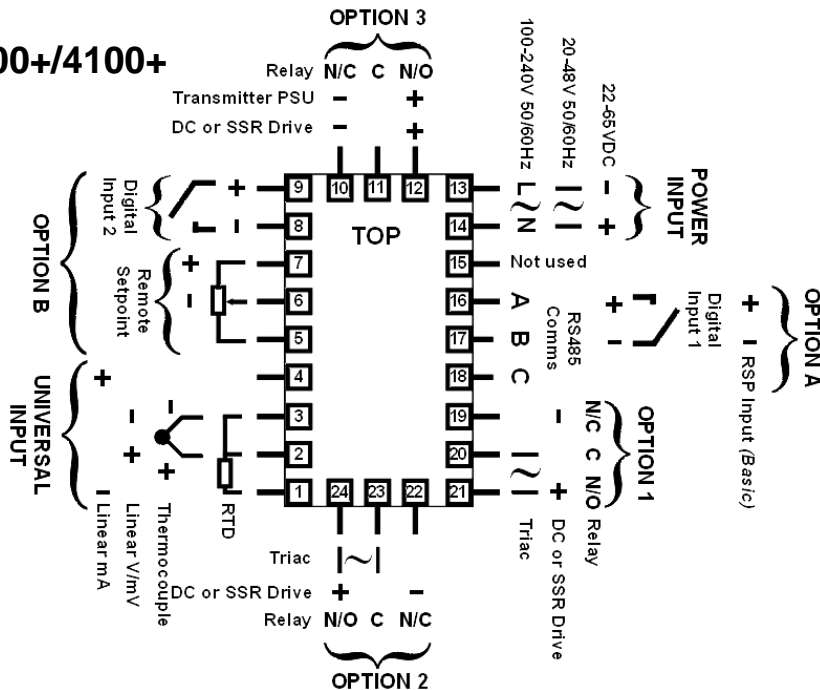


## Wiring Connections

### 6100+



### 8100+/4100+



#### 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     |
| Dual Relay Output .....       | PO2-W09     |
| 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     |
| Auxiliary Input (Basic) ..... | PA1-W04     |
| RS485 Comms .....             | PA1-W06     |

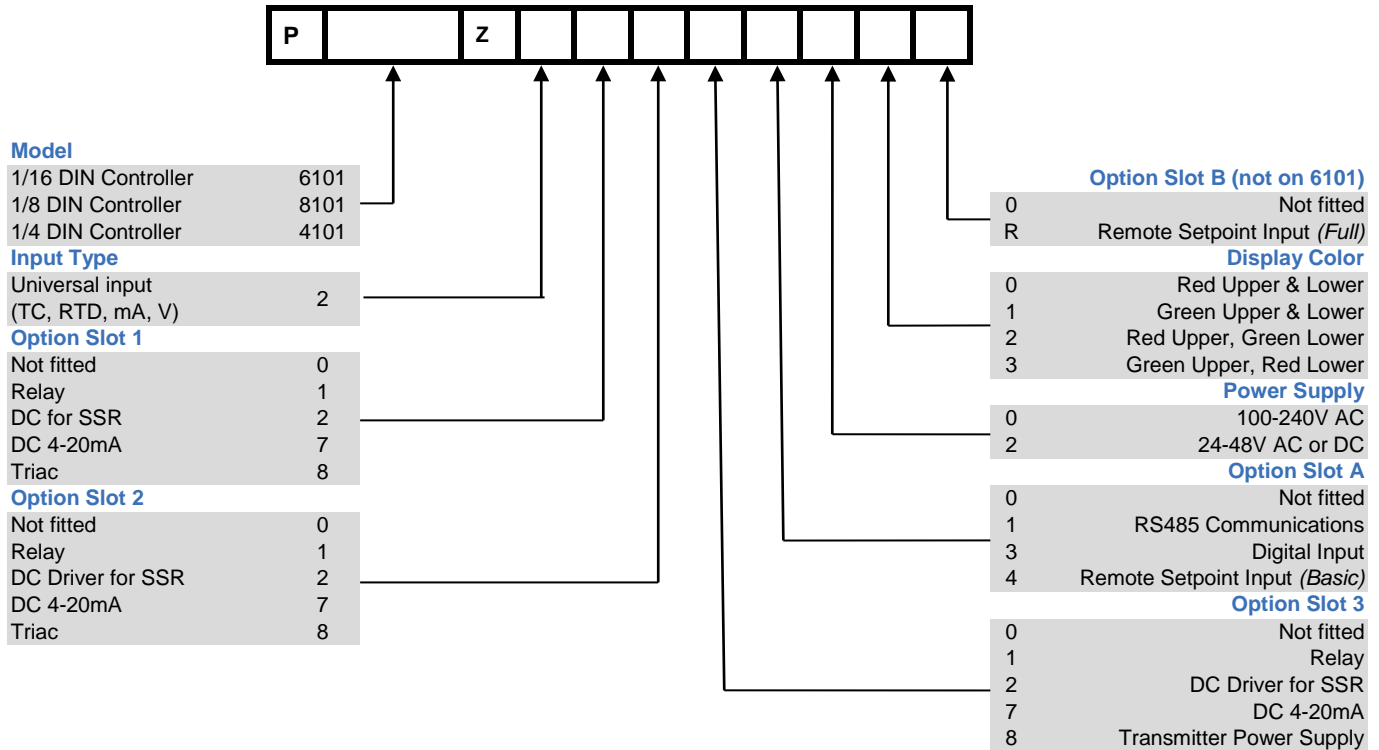
#### Field Reconfiguration

##### 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     |
| Dual Relay Output .....       | PO2-W09     |
| 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     |
| Dual Relay Output .....       | PO2-W09     |
| Option Slot A                 | Part Number |
| Digital Input .....           | PA1-W03     |
| Auxiliary Input (Basic) ..... | PA1-W04     |
| RS485 Comms .....             | PA1-W06     |
| Option Slot B                 | Part Number |
| Auxiliary Input (Full) .....  | PB1-W0R     |

## Ordering Code



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Brochures and datasheets are available for the complete range of West Control Solutions products, contact your local sales office or visit our website at: [www.west-cs.com](http://www.west-cs.com) for more information.

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