Partlow 1160+, 1400+, 1800+
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 Partlow 6100+, 8100+ and 4100+ give you the best in comprehensive control for most temperature and process control loops.

Specification

**Features**

<table>
<thead>
<tr>
<th>Control Types</th>
<th>Full PID with Pre-tune, Self-tune, manual tuning, or On-Off control. Heat only or heat &amp; cool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto/Manual</td>
<td>Selectable from front panel or via digital input, with bumpless transfer</td>
</tr>
<tr>
<td>Output Configuration</td>
<td>Up to 3 possible, for control, alarm, 24VDC transmitter power supply or retransmit of process value or setpoint</td>
</tr>
<tr>
<td>Alarm 1 &amp; 2 Types</td>
<td>Process high, process low, SP deviation, band, logical OR / AND. Also 1 loop alarm for process control security. Process alarms have adjustable hysteresis.</td>
</tr>
<tr>
<td>Human Interface</td>
<td>4 button operation, dual 4 digit 10mm &amp; 8mm high (6100+, 8100+) and 13mm &amp; 10mm high (4100+) LED displays, optional choice of colours (Red/Red, Red/Green, Green/Red or Green/Green), plus 5 LED indicators</td>
</tr>
<tr>
<td>PC Configuration</td>
<td>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</td>
</tr>
</tbody>
</table>

**Input**

<table>
<thead>
<tr>
<th>Thermocouple</th>
<th>J, K, C, R, S, T, B, L, N &amp; PtRh20%/vsPtRh40%.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTD</td>
<td>3 Wire PT100, 50Ω per lead maximum (balanced)</td>
</tr>
<tr>
<td>DC Linear</td>
<td>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</td>
</tr>
<tr>
<td>Impedance</td>
<td>&gt;10MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 5Ω for mA ranges</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.1% of input range ±1 LSD (T/C CJC better than 1°C)</td>
</tr>
<tr>
<td>Sampling</td>
<td>4 per second, 14 bit resolution approximately</td>
</tr>
<tr>
<td>Sensor Break Detection</td>
<td>&lt;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</td>
</tr>
</tbody>
</table>

**Outputs & Operations**

<table>
<thead>
<tr>
<th>Control &amp; Alarm Relays</th>
<th>Contacts SPDT 2 Amp resistive at 240V AC, &gt;500,000 operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control SSR Driver Outputs</td>
<td>Drive capability &gt;10V DC in 500Ω minimum</td>
</tr>
<tr>
<td>Triac Outputs</td>
<td>0.01 to 1 Amp AC, 20 to 280Vrms, 47 to 63Hz</td>
</tr>
<tr>
<td>DC Linear Outputs</td>
<td>0 to 20mA, 4 to 20mA into 500Ω max, 0 to 10V, 2 to 10V, 0 to 5V into 500Ω min.</td>
</tr>
<tr>
<td>Control outputs have 2% over/under drive applied. Accuracy ±0.25% at 250Ω (degrades linearity to 0.5% for increasing burden to specified limits)</td>
<td></td>
</tr>
<tr>
<td>Transmitter Power Supply</td>
<td>Output 24VDC (nominal) into 910Ω minimum to power external devices</td>
</tr>
<tr>
<td>Communications</td>
<td>2 Wire RS485, 1200 to 19200 Baud, Modbus and ASCII protocol (selectable)</td>
</tr>
<tr>
<td>Digital Input</td>
<td>Selects between 2 setpoints or Auto/Manual control. Volt free or TTL input</td>
</tr>
<tr>
<td>Remote Setpoint Input</td>
<td>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</td>
</tr>
</tbody>
</table>
### Operating & Environmental

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature &amp; RH</td>
<td>0 to 55°C (-20 to 80°C storage), 20% to 95% RH non-condensing</td>
</tr>
<tr>
<td>Power Supply</td>
<td>100 to 240V 50/60Hz 7.5VA (optional 20 to 48V AC 7.5VA/22 to 65V DC 5 watts)</td>
</tr>
<tr>
<td>Front Panel Protection</td>
<td>IEC IP66 (Behind panel protection is IP20)</td>
</tr>
<tr>
<td>Standards</td>
<td>CE, UL &amp; ULC recognised</td>
</tr>
</tbody>
</table>

### Dimensions

#### 1160+

- Width: 1160mm
- Depth: 48mm
- Height: 48mm

#### 1800+

- Width: 1800mm
- Depth: 48mm
- Height: 96mm

- 10mm (approx)

#### 1400+

- Width: 1400mm
- Depth: 48mm
- Height: 96mm

- Cut out
  - Width: 92mm +0.5
  - Height: 92mm +0.5

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Ref DS-Px100-1209-1-EN

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Wiring Connections

1160+

1800+/1400+

Field Reconfiguration

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Ordering Code

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

Part No.

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 (not on 6100)
- Not fitted: 0
- Remote Setpoint Input (Full): R
- Display Colour
  - Red Upper & Lower: 0
  - Green Upper & Lower: 1
  - Red Upper, Green Lower: 2
  - Green Upper, Red Lower: 3
- Power Supply
  - 100-240V AC or DC: 0
  - 24-48V AC or DC: 2

Option Slot A
- Not fitted: 0
- RS485 Communications: 1
- Digital Input: 3
- Remote Setpoint Input (Basic): 4

Option Slot 3
- 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
- Transmitter Power Supply: 8

For more details on the complete product range from West Control Solutions please contact your local distributor or visit www.West-CS.com.