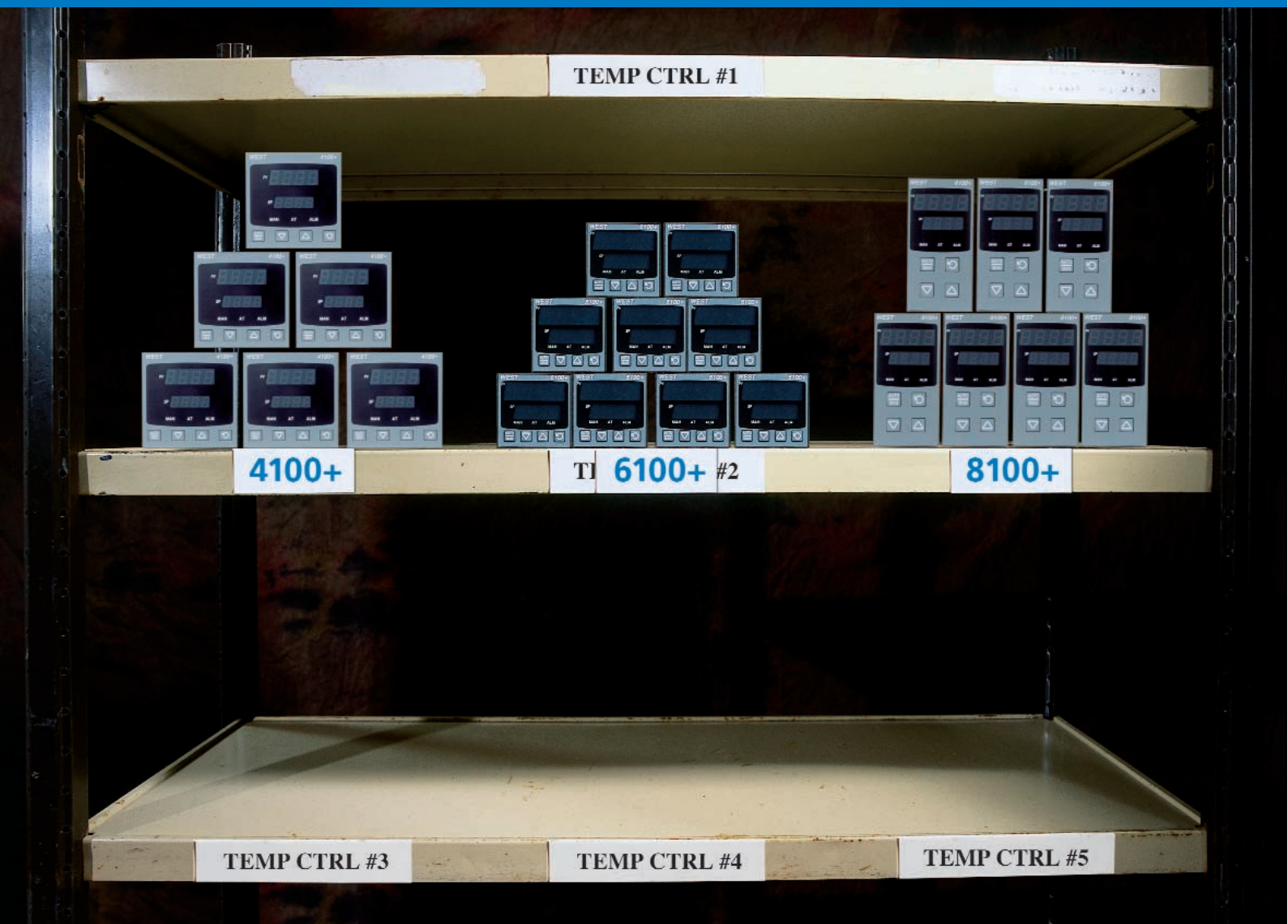


The new **+ series** temperature controller platform

+series

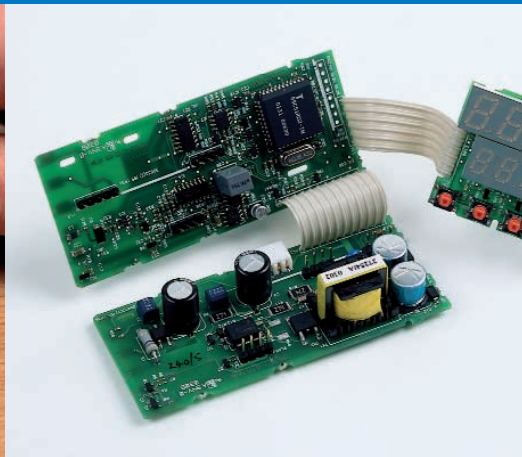
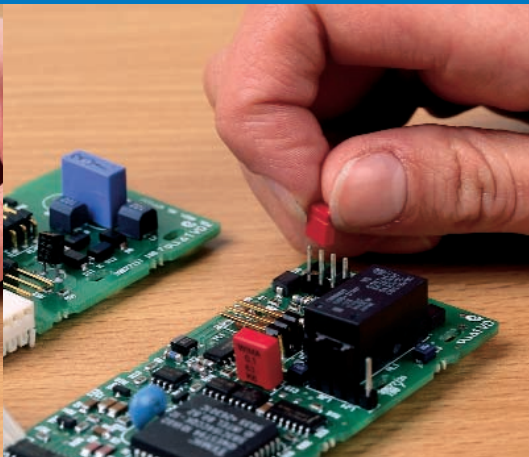
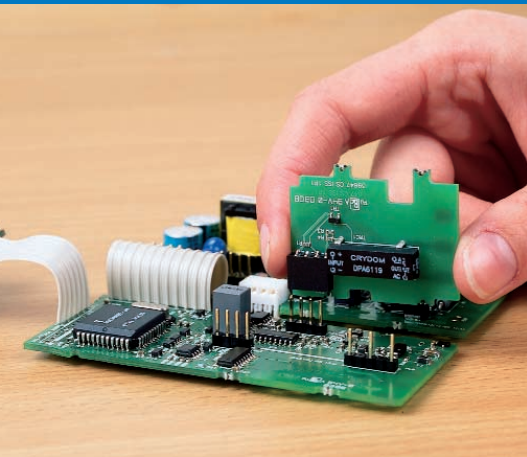


...so **adaptable**, you won't need anything else

The new + series

– Taking **flexibility** and **ease of use** to the next level

The '+' series are a new generation of discrete temperature controllers.
Look at all the advantages they offer:



Stock fewer types of controller All outputs plug-in

Maintaining stocks of a wide range of controller types for all possible applications is expensive, difficult to manage and can cause major problems if the right controller is not readily available. But the '+' series avoids this problem. All output cards are plug-in: relay, SSR, triac and linear. This means the base unit can be customised to each application as required.

Stock levels are reduced and ordering is simplified.

Avoid errors NO link jumpers

Many controllers still use tiny link jumpers to set input and output types. The trouble is, changing link jumpers is awkward, time-consuming and can easily result in error. But the '+' series solve this problem by eradicating link jumpers altogether.

No link jumpers means one less area for potential error.

Reduce set up times Auto-hardware configuration

Fitting output cards to a controller typically involves a menu set-up operation. It is an irritation and it takes time – which costs money. The '+' series get straight down to business. As soon as the output cards are fitted they automatically configure themselves.

Less time spent on each controller saves money and makes sense.

More Flexibility With RSP & TxPSU across the whole range

For increased flexibility we have added two new options to the range... Remote Set Point (RSP) and Transmitter Power Supply (TxPSU).

Remote Set Point is an entirely NEW feature for the 6100+, 8100+ and 4100+. The control setpoint can be set using a linear DC voltage or milliamp signal from an external device such as a PLC or another controller in cascade applications.

A 24V 22mA transmitter power supply option is also available across the range to provide excitation for sensors.

Customise the operator menu Easy to set up via PC

Many controllers can, at the very least, present operators with a bewildering array of unnecessary information and, at worst, allow access to parameters that could potentially cause big problems. The '+' series takes a more intelligent approach, enabling the operator menu to be customised so that it displays only what is needed.

Too much information is as bad as too little – '+' series operator menu can be tailored to precisely what is required.

Simplify operation Improved easy-to-use HMI

Developing the '+' series to incorporate so many new advantages also provided the ideal opportunity to review the HMI (human machine interface). The result is that the '+' series has some of the best HMI characteristics available, making the whole set up process quick and easy.

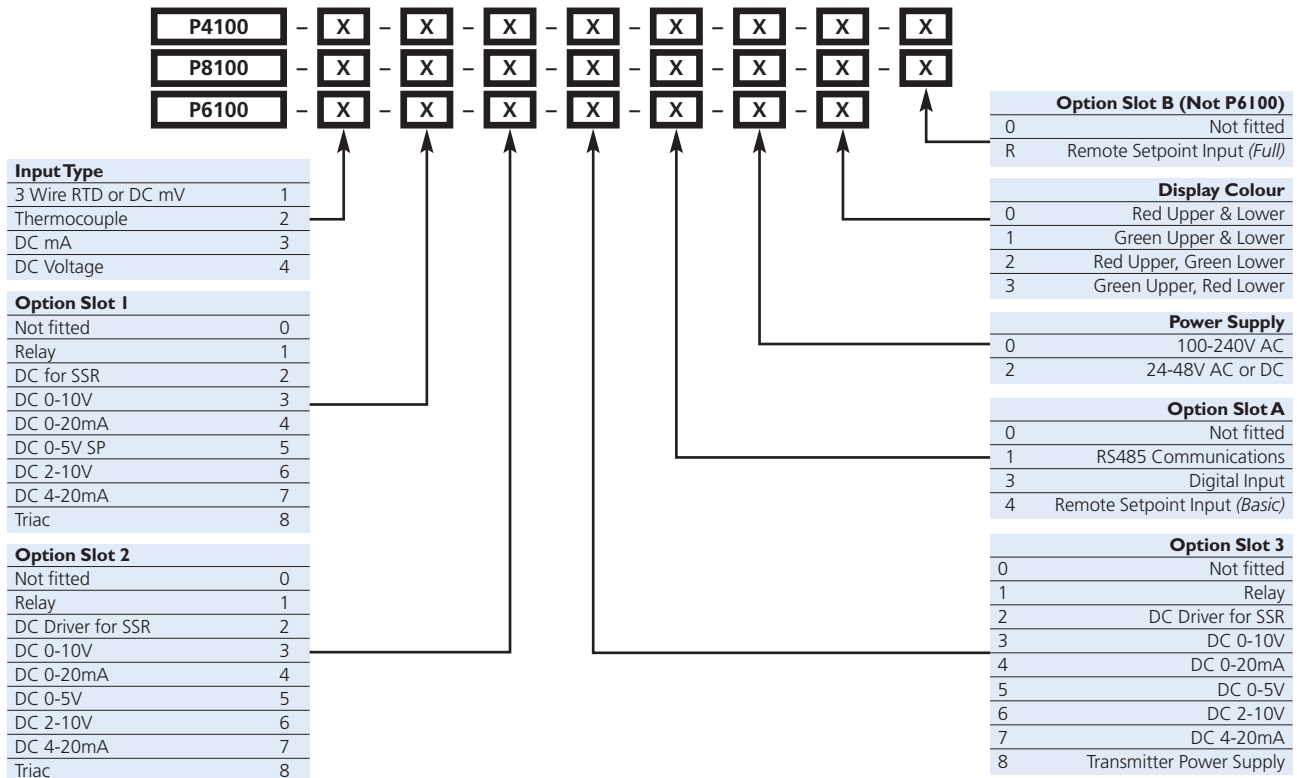
+series

Making things complicated is easy – the **clever trick** with the **+ series** is to **make it simple**.

Technical Data

| 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 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 & Options | |
| Control & Alarm Relays | Contacts SPDT 2 Amp resistive at 240V AC, >500,000 operations |
| Control SSR Outputs | Drive capability >10V DC in 500Ω minimum |
| Solid State (Triac) Outputs | 0.01 to 1 Amp AC, 20 to 280Vrms, 47 to 63Hz |
| DC 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 (also 0 to 100mV and ≥2KΩ Potentiometer on P4100 and P8100 only) Scaleable -1999 to 9999. Local/Remote setpoint selected from front panel (also from digital input, supplied as part of full RSP, on P4100 and P8100 only) |
| 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 | P6100 48x48mm, P8100 96x48mm, P4100 96x96mm. Protection IEC IP66 (Behind panel=IP20) |
| Standards | CE, UL & ULC recognised |

Order Code



In accordance with our policy of continuous improvement, we reserve the right to change specifications from those shown in this document.

West Instruments

Authorised distributor: **Ward Industries Limited**

Available From:

Tel: +44 (0) 1933 624963

Fax: +44 (0) 1933 625458

e-mail: info@wardindustries.co.uk

Web: www.wardindustries.co.uk



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