

NEW

**4100+™*****Affordable, Well-Featured,
Easy to Use and Adaptable******1/4 DIN Temperature Controller*****DESCRIPTION**

The West 4100+ is a new generation of '+' Series controller that takes flexibility and ease of use to new levels. The expanded '+' Series platform of 1/4, 1/8 and 1/16 DIN model controllers incorporates numerous product specification, communication, display interface and configuration software improvements that surpass competitive offerings in ease of use, delivery and value-per-dollar.

By adding more versatile features and user-friendly functionalities – like remote setpoint inputs, digital inputs, plug-in output modules, a customizable operator/HMI menu, jumperless and auto-hardware configuration, and 24VDC transmitter power supply – the new generation 4100+ Series controller transforms the complicated into the simple while saving you time (as much as 50% on product set-up), reducing inventory stock and virtually eliminating the likelihood of operator errors.

Making things complicated is easy – the clever trick with the new generation 4100+ Series controller from West is to make it simple.

APPLICATIONS:

Ideal for temperature control applications requiring a value-priced, user-friendly, versatile and well featured general-purpose controller.

INDUSTRIES:

- Industrial and lab ovens/furnaces, plastics and thermal forming
- Form/Fill and seal
- Packaging applications
- And any others where low costs, smaller size and unmatched connectivity are critical requirements.

FEATURES/BENEFITS

- Dual setpoints with optional remote selection
- Plug-in output modules allow installing just the functions needed
- Expanded user-selectable operator modes
- User-selectable plug-and-play output cards
- Process and loop alarms
- Adjustable hysteresis
- Optional 10V SSR driver
- Improved Windows® PC configuration software
- Improved easy-to-use HMI
- Jumperless input configuration
- Auto-hardware recognition
- Faster communication speeds
- More security options
- Backward compatible panel cutout, housing and terminal wiring capability

WEST™ brand

4100+™

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1/4 DIN Temperature Controller

SPECIFICATIONS*

STANDARD FEATURES

Dual setpoints with optional remote selection
 Plug-in output modules installing just the functions needed
NEW Improved HMI: four button operation, dual 4-digit LED displays
 4 per second input sample rate
 Universal input
 Full PID or ON/OFF control
 Heat/Cool operation (with dual outputs ordered)
 Selectable pre-tune, self-tune, manual tune
 Ramping setpoint
 Process and Loop alarms
NEW Jumperless input configuration
NEW Auto-detection of installed output modules.
NEW Improved PC configuration software (comms option not required)
Construction/Enclosure: Rugged ABS plastic housing

ENVIRONMENTAL CHARACTERISTICS

Operating Temp.: 32° to 131°F (0° to 55°C)
Storage Temp.: -4° to 176°F (-20° to 80°C)
Humidity: 20% to 95% non-condensing RH

ELECTRICAL

Supply Voltage: 100–240V 50/60Hz; optional 24VDC (20–48VAC / 22–65 VDC)
Power Consumption: 5W / 7.5VA max

DISPLAY

Type: Dual 4 digit displays, Red or Green, 7 segment LED
Height: 13mm (0.53") upper display, 10mm (0.39") lower display
Annunciators: LED indicators for output and status

INPUTS

Standard Universal input (T/C, RTD and DC Linear):
 T/Cs: J, K, C, R, S, T, B, L, N and Pt 20% Rh vs. Pt 40% Rh
RTD: 3-wire; PT100; 50Ω per lead maximum (balanced)
DC Linear (scalable –1999 to +9999):
Volts: 0–5, 1–5, 0–10 or 2–10VDC
DC milliamps: 0–20mA or 4–20mA
DC millivolts: 0–50, 10–50mV

OUTPUTS

All output types are user-selectable and customizable based on desired application; choose from the following output types:
Max. # of Outputs: Three for control, alarm, 24VDC transmitter power supply or retransmit of process value or setpoint
Relay: Optional SPDT; 240VAC 2.0A resistive. Lifetime: >500,000 operations at rated voltage/current
SSR Driver: Optional drive capability: >10VDC nominal into 500Ω minimum
DC Linear: Optional 0–20mA, 4–20mA into 500Ω max.; 0–10V, 1–5V, 2–10V, 0–5V into 500Ω minimum; control outputs have 2% over/under drive applied; accuracy ±0.25% (mA into 250Ω load, V into 2kΩ load); degrading linearly to ±0.5% for increasing burden to specified limits
Triac: Optional 0.01 to 1A AC, 20 to 280Vrms, 47–63Hz (limit 2)
Transmitter Power Supply: Optional 24VDC (limit 1)

OUTPUT FUNCTIONS

All output functions are user-selectable and customizable based on the application:
Heat Power
Cool Power
Process Alarm (reverse or direct)
Modes (Alarms 1 and 2): High/low, SP deviation, band, logical OR/AND
Loop Alarm (reverse or direct)
Retransmit (setpoint or process value)

ELECTRICAL PERFORMANCE

GENERAL:
Accuracy: ±0.1% of input range ±1 LSD (T/C CJC better than 1°C)
Input Sample Rate: 4 per second; 14 bit resolution
Impedance: >10MΩ for thermocouple and mV ranges, 47kΩ for V ranges and 5Ω for mA ranges
Sensor Break Detection: <2 seconds (except zero based DC ranges), control O/Ps turn off, high alarms activate for T/C and mV ranges, low alarms activate for RTD, mA or V ranges

COMMUNICATIONS INTERFACE

User-selectable: 2-wire, RS-485 serial communications option with choice of Modbus® or ASCII protocol; 1200 to 19,200 baud
PC Configuration: Off-line configuration from serial port to dedicated configuration socket (comms option not required)

RATINGS/AGENCY APPROVALS

Safety: CE, UR, cUR, UL file# E67237
EMC: Certified EN61326
Other: ISO 9002 registered

PROTECTION

IEC IP66; NEMA 4X (front panel)
 IEC IP20 (behind the panel protection)

PHYSICAL DIMENSIONS

Panel Cutout: 3.62" (92mm) × 3.62" (92mm)
Width: 3.78" (96mm)
Depth: 3.93" (100mm)
Height: 3.78" (96mm)
Weight: 0.46 lbs (0.21kg)
Mounting: Plug-in with panel mounting fixing strap

OPTIONS/ACCESSORIES

NEW 24VDC transmitter power supply option
NEW Faster RS-485 serial communication speeds and user-selectable (Modbus® or ASCII) option

Digital Input 1 (Optional): Selects between two setpoints or auto/manual tune control; volt free or TTL input

Basic Remote Setpoint Input (Optional): 0–20mA, 4–20mA, 0–10V, 2–10V, 0–5V; scalable –1999 to 9999; local or remote setpoint selected from front panel

Full Remote Setpoint Input (Optional): 0–20mA, 4–20mA, 0–5V, 1–5V, 0–10V, 2–10V, 0–100mV; scaleable –1999 to 9999; potentiometer (2kΩ minimum); local or remote setpoint selected from front panel; digital input can be configured to switch between setpoints (either setpoint 1 and 2 or between local setpoint and remote setpoint) or between auto and manual control modes. Not available on Model 1160+

Optional Choice of LED colors: (red/red, red/green, green/red, green/green); plus five indicators

10V SSR drive output

WARRANTY

3 years
 Made in USA

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West Brand 4100+ Data Sheet (7/05)



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WEST™ brand

4100+™

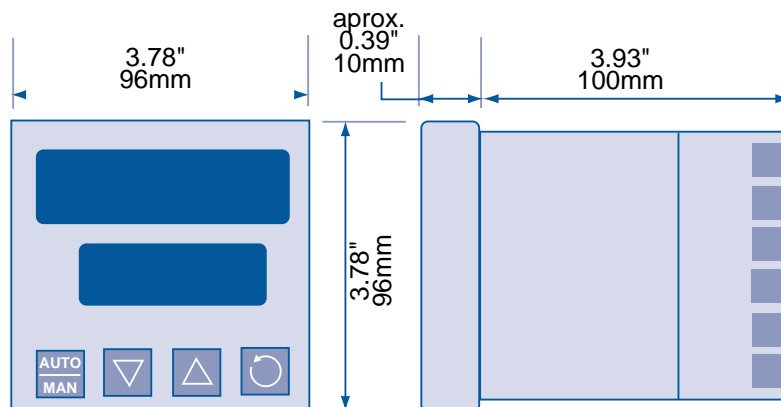
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MODELS

Code 1: Model #	Code 2: Input Type	Code 3: Output 1	Code 4: Output 2	Code 5: Output 3	Code 6: Option Slot A	Code 7: Power Supply	Code 8: Display Color	Code 9: Option Slot B
P4101Z	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I/4 DIN Temperature Controller includes: jumperless input configuration, auto-detection hardware and improved PC configuration software	<ul style="list-style-type: none"> 1 3-Wire RTD or DC mV 2 Thermocouple 3 DC mA 4 DC Voltage 	<ul style="list-style-type: none"> 0 Not fitted 1 Relay Output 2 DC Drive SSR Output 3 Linear 0-10V DC Output 4 Linear 0-20mA DC Output 5 Linear 0-5V DC Output 6 Linear 2-10V DC Output 7 Linear 4-20mA DC Output 8 Triac Output 	<ul style="list-style-type: none"> 0 Not fitted 1 Relay Output 2 DC Drive SSR Output 3 Linear 0-10V DC Output 4 Linear 0-20mA DC Output 5 Linear 0-5V DC Output 6 Linear 2-10V DC Output 7 Linear 4-20mA DC Output 8 Triac Output 	<ul style="list-style-type: none"> 0 Not fitted 1 Relay Output 2 DC Drive SSR Output 3 Linear 0-10V DC Output 4 Linear 0-20mA DC Output 5 Linear 0-5V DC Output 6 Linear 2-10V DC Output 7 Linear 4-20mA DC Output 8 Transmitter Power Supply 	<ul style="list-style-type: none"> 0 Not fitted 1 RS-485 Serial Communication 3 Digital Input 	<ul style="list-style-type: none"> 0 100-240 AC 2 24-48 AC or DC 	<ul style="list-style-type: none"> 0 Red upper and Lower 1 Green upper and lower 2 Red upper, Green lower 3 Green upper, Red lower 	<ul style="list-style-type: none"> 0 Not fitted R Full Remote Setpoint Input with Digital Input 2

DIMENSIONS - 1/4 DIN



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Panel Cutout: 92.0mm x 92mm (3.62" x 3.62")

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More Available. With factories around the world, global sales and applications support, and an expansive network of distributors, we stay close to our customers - shortening lead times and fostering responsiveness. Three-day lead time is standard, with same-day shipments available on many of our products.

More Selection. We have a broad selection of controllers to meet application requirements in a variety of industries. User-configurable, accurate and flexible, with low, mid, or high level performance ranges, our controller products meet your system and budgetary requirements.

More Reliable. Our experience with more than 25,000 customers has taught us to design controllers that are reliable and durable, with quality standards that meet six sigma requirements.

For additional information or a full-line catalog, contact DICG Customer Service or visit our web site.

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