West 8600
1/8 DIN Controller with Heater Break

ISE, Inc.

The West 8600 temperature controller can measure and display the heater current. Special heater break alarms give early warning of element failure, to protect equipment and product. A soft-start feature is available for process warm up.

- **Heat/Cool operation**
- **Process & Heater alarms**
- **Soft Start**
- **Ramping setpoint**

- **Current "Quick Transfer"**
- **Current Display**
- **RS485 Comms**
- **PC configuration**

C E

Technical Data

Features

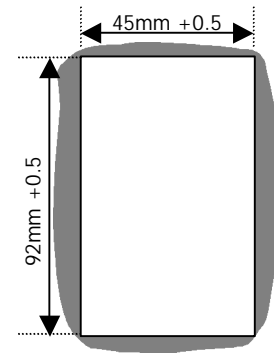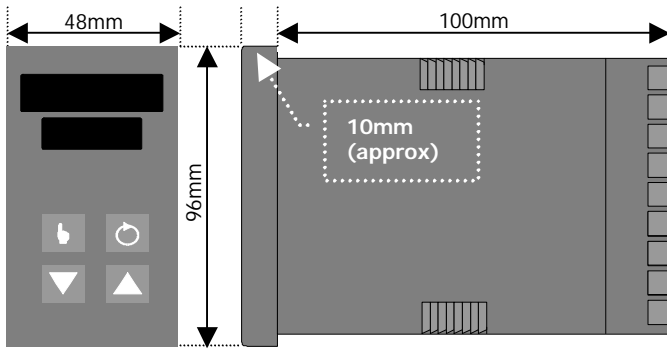|	
Control Types	Full PID with Pre-tune, Self-tune, Manual Tuning, or On-Off control. Heat only or heat & cool
Soft Start	Allows lower SP value and cycle time during the process start-up phase
Auto/Manual	Selectable from front panel, with bumpless transfer. Instant power-off feature also available as standard
Output Configuration	Up to 4 total. Max 2 for control (Heat & Cool), max 3 for Alarms, max 1 for retransmit Process value or Setpoint
Process Alarm Types	Process high, process low, SP deviation, band, logical OR
Heater Break Alarm Types	Current low or high, (in absolute amps or % of nominal current) plus contactor/thyristor short circuit
Human Interface	4 button operation, dual 4 digit 10mm & 8mm high LED displays, plus 3 LED indicators
PC Configuration	Off-line configuration from serial port to dedicated config socket (comms option not required)

Input

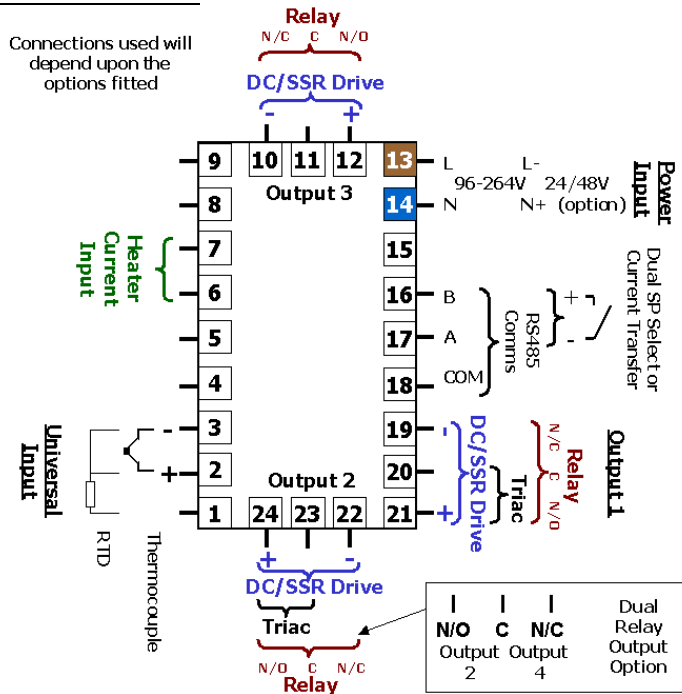|	
Thermocouple	J, K, R, S, T, B, L, & N.
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
Impedance	>100MΩ
Accuracy	+/- 0.25% of input span +/- 1 LSD (T/C CJC better than 0.7°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor Break Detection	<2 secs, control O/P's turn off, high alarms activate for thermocouple ranges, low alarms activate for RTD
Heater Current	0-50mA secondary from external current transformer. Display is scaleable up to 100 amps

Outputs & Options

Ctrl & Alarm Relays	Contacts *SPDT 2Amp resistive at 240V AC, >500,000 operations. *Dual relay=SPST for O/P's 2 & 4
Control SSR Outputs	Drive capability, output 1= >10V DC into 500Ω min, output 2= >4.3V DC into 250Ω min
Solid State (Triac) Outputs	0.01 to 1 Amp AC 20 to 280V, 47 to 63Hz
Retransmit Outputs	0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.25%
Communications	2 Wire RS485, 1200 to 9600 Baud, Modbus or West ASCII (Selectable)
Dual SP/Current Transfer	Volt free or TTL input. Selects between 2 setpoints or quick transfer of heater current as nominal value

Operating & Environmental

Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing
Power Supply	90 to 264V 50/60Hz (optional 20 to 55V AC/22 to 65V DC), approx 4 Watts
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Approvals and Certification	CE, UL & ULc

Connection Details

Connections used will depend upon the options fitted

Relay N/C C N/O

DC/SSR Drive − +

9	10	11	12	13	L L− 96-264V 24/48V

Output 3

Power Input

Heater Current Input 8, 7, 6, 5

14 N   N+ (option)

Dual SP Selector or Current Transfer

15
16 B
17 A   RS485 Comms
18 COM   + − Dual SP Selector or Current Transfer

Universal Input 3, 2, 1
RTD / Thermocouple

19 − DC/SSR Drive
20 Relay N/C C N/O
21 + Triac   Output 1

Output 2
24 23 22
+ DC/SSR Drive −
Triac
N/O C N/C
Relay

	N/O	C	N/C	Dual Relay Output Option
Output 2	N/O	C		
Output 4			N/C	

Field Reconfiguration

Input
Configurable Thermocouple or RTD, no extra parts required

Output 1
Type is fixed as Relay/SSR (selectable)

Output 2 (and 4)
Configurable as Cool O/P or Alarm via plug-in Relay, SSR, Triac or DC Linear modules. A Dual Relay card is available which allows Cool O/P or Alarm on output 2 plus Heater Break Alarm on output 4

Output 3
Configurable as Alarm via plug-in Relay module, or retransmit using DC Linear module

Option Slot
Configurable as RS485 comms or dual setpoint selection/current transfer, via plug-in modules

Order Code

N8601/ Z **x** **x** **x** **x** / **xx**

Input type	
3 Wire RTD or DC mV	1
Thermocouple	2
Output 1	
Relay Control	1
DC for SSR Control	2
Triac Control Output	8
Output 2 and 4	
Not fitted	0
Relay Control or Alarm 2	1
DC for SSR Control or Alarm 2	2
Triac Control	8
Dual Relay Control or Alarm, & Heater Break	9

Options and Power Supply	
00	No Options/90-264V AC supply
02	No Options/24-48V AC or DC supply
10	RS485 Comms/90-264V AC supply
12	RS485 Comms/24-48V AC or DC supply
30	Dual SP or Current Transfer/90-264V AC supply
32	Dual SP or Current Transfer/24-48V AC or DC
	Output 3
0	Not fitted
1	Relay Alarm 1 output
3	DC 0-10V Re-Transmit PV or SP
4	DC 0-20mA Re-Transmit PV or SP
5	DC 0-5V Re-Transmit PV or SP
7	DC 4-20mA Re-Transmit PV or SP

Current Transformers		
25 Amp	Part Number	M9610-A25
50 Amp	Part Number	M9610-A50
100 Amp	Part Number	M9610-A100

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