



# 8600

## 1/8 DIN Plastics Controller



The 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



### 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

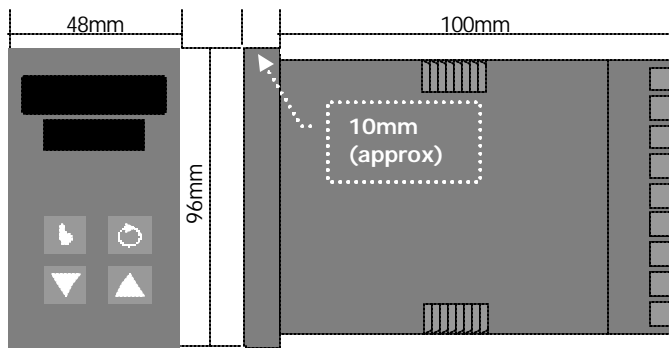
#### Outputs & Options

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 ASCII (Selectable)
Dual SP/Current Transfer	Volt free or TTL input. Selects between 2 setpoints or quick transfer of heater current as nominal value

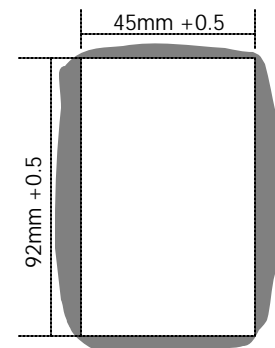
#### Operating & Environmental

Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing
Power Supply	100 to 240V 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

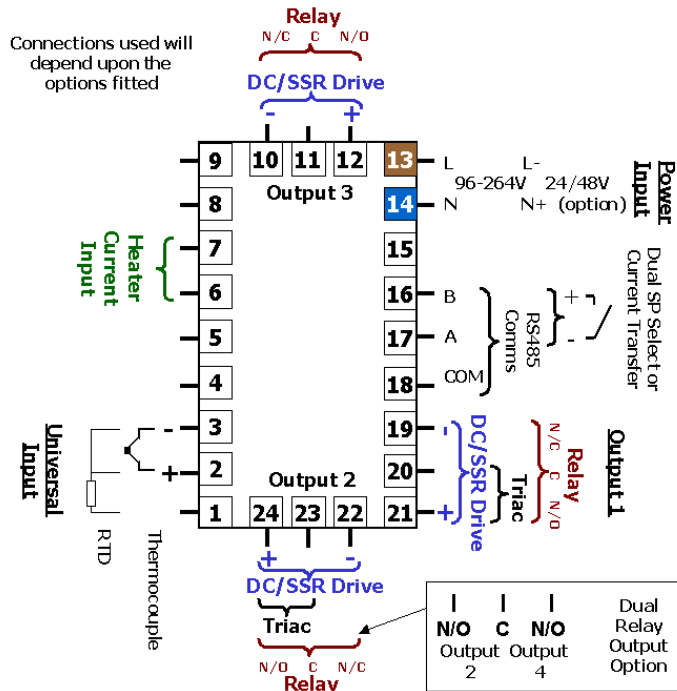
## Dimensions



## Panel Cut-out



## Connection Details



## 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

**N8600** - **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/100-240V AC supply
02	No Options/24-48V AC or DC supply
10	RS485 Comms/100-240V AC supply
12	RS485 Comms/24-48V AC or DC supply
30	Dual SP or Current Transfer/100-240V AC
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	85258
50 Amp	Part Number	85259
100 Amp	Part Number	85260

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