



Note: order thermocouple separately

FEATURES

- Designed for small plug-in kilns (up to 3kW)
- Easy to retro-fit to kilns without controls
- Ideal for glass, enamelling, bead annealing & general ceramics use
- 9 programs - each with up to 9 segments
- 1 controlled heating / cooling ramp + 1 soak per segment
- Soak times up to nearly 100 hours
- Ramp rates from 1 to 999°C/hour + full
- Controlled heating & cooling ramps
- Programs can be reviewed or altered while firing
- Program Pause & Segment Advance facilities
- Delayed start facility - up to 4 days
- Power failure recovery
- Energy used display
- Selectable thermocouple types
- Extensive kiln safety monitoring with alarm buzzer

DESCRIPTION

GENERAL The ST222 is a 9-program plug-in controller designed for general glass, ceramics & pottery use. Each program can have up to 9 segments. It is fully adjustable with heating and cooling indicators & continuous display of segment number. Each segment comprises of a ramp followed by a soak. Ramps can be heating or cooling. The ST222 executes a controlled ramp to the soak temperature where it dwells for the required period then executes the next segment. The end of the program is marked by selecting 'End' while entering a ramp rate. Natural cooling then follows.

SETTING UP Press the ► key to show the program number on the display – this can be changed if required with the ▲ & ▼ keys. Press the ► key until the required indicator lamp (ramp rate (°C/hr), temperature (°C) or time (hr.mins)) above the main display flashes. Change the displayed settings with the ▲ & ▼ keys which can be held down for acceleration. All settings are remembered while the controller is powered off.

FIRING The ►■ key is used to commence or to halt a firing. If a start delay has been set then the delay time remaining will be displayed. During ramping the kiln temperature is shown and either the heating or cooling indicator will be lit to show if controlled heating or controlled cooling is taking place. During soaking the soak time remaining and the soak temperature are alternately displayed. During firing the settings can be reviewed and altered at any time, the program can be paused/resumed or a segment can be advanced. In the event of a power failure the ST222 will intelligently re-commence firing when power returns.

ORDERING DETAILS

Code	Description
ST222/13A/13A	Fitted with UK fused 13A moulded plug with 2m lead & 13A socket
ST222/10A/10A	Fitted with European Schuko 10A moulded plug with 3m lead & 10A socket
ST222/special	Other configurations available - please ask factory

SPECIFICATION

Electrical

Power supply

Voltage range: 216.2 - 253V
Frequency: 50Hz (nom)
Phases: 1
Power: 3kW (max)

Fuse: 13A fuse in plug
(BS1363)
(UK version only)

Control Relay

Contact type: SPST NO
@13A max

Enclosure

Material: ABS (Flameproof)
Colour: Black
Size: 173mm x 85.6mm x 43.5mm
(less mains cable and gland)
Weight: 652g (approx)

Temperature

Temperature setting

Range: 0 to 1320°C (R/S) 0 to 1200°C (K/N)
Resolution: 1°C

Control Accuracy

P.I.D. Control
Reading accuracy: ±0.25% FSD ±1 digit

Thermocouple

R,S,K & N type (selectable)

Time

Start delay range: 00:00 to 99hr 59min
Soak time range: 00:00 to 99hr 59min
Resolution: 1 min

Programs

9 programs each with 1-9 segments
1 ramp & 1 soak per segment
ramp rate: 1 to 999°C/hour or full power
Ramps can be heating or cooling

Error Handling

Thermocouple failure detection
Thermocouple reversal detection
Heater failure detection
Kiln over-temperature detection
Room over-temperature detection
Alarm buzzer

Other

Program running indicator
Heat on indicator
Heating & cooling ramp indicators
Energy used display
Program pause & segment advance features

Environmental

Location:	For indoor use only
Operating Temperature:	0°C to +50°C
Storage Temperature:	-10°C to +55°C
Sealing:	IP40
Pollution Class:	2
Installation Category:	II

FURTHER DETAILS

Complete operating & installation instruction handbooks can be downloaded from our web site at <http://www.staffordinstruments.co.uk>

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www.staffordinstruments.co.uk/docs/st222/data222.pdf

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