

Temperature Programmer

FEATURES

- 32 fully adjustable programs
- 32 segments per program
- 1 controlled heating / cooling ramp + 1 soak per segment
- Optional WiFi & USB interface for datalogging, remote monitoring & control
- Ideal for glass or ceramics use
- Soak times up to nearly 100 hours
- Ramp rates from 1 to 999°/hour + full
- Programs can be reviewed or altered while firing
- Program Pause & Segment Advance facilities
- Keyboard lockable
- Delayed start facility - up to 4 days
- Power failure recovery
- Energy used display
- Worldwide operation
- °C/°F switchable display
- Standard alarm / safety relay with alarm buzzer
- Optional event / damper / fan relay
- Pre-loaded with 10 standard ceramics programs & 9 standard glass programs which can be altered as required



DESCRIPTION

The ST215C is a small easy to use ergonomically designed controller in a hand-held case. It is supplied with a wall mounting holster bracket and a flexible lead and plug as standard. Bright yellow LED displays are fitted. The ST215C is designed to control single zone electric kilns and is derived from our long established ST315B controller.

It is suitable for worldwide use with a universal power supply and selectable °C/°F operation.

It has an option for a 3rd relay to operate an auto-damper or a fan. This relay can also operate in a flexible event mode.

There is also an option for a WiFi / USB interface for remote monitoring & control + local & remote datalogging.

For a multi-zone controller see our ST535C.



DESCRIPTION

GENERAL

The ST215C is a 32-program controller designed for glass, ceramics & pottery use. Each program can have from 1 to 32 segments. It is fully adjustable with a detailed 4-lamp mimic display & continuous display of segment number. Each segment comprises of a ramp followed by a soak. Ramps can be heating or cooling. It 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 display the program number – this can be changed if required with the ▲ & ▼ keys. To change any of the controller's settings press the ► key (or reverse with the ◀ key) until the required lamp on the mimic display flashes. The current value will be displayed together with a temperature, ramp rate or time icon. Change the displayed settings with the ▲ & ▼ keys which can be held down for acceleration. All settings are remembered while the controller is powered off. The keyboard can be locked to prevent tampering.

FIRING

The ►■ key is used to commence a firing when an optional start delay can be entered. The progress of the firing is shown on the mimic display. If a start delay has been set then the delay time remaining will be displayed. During firing the settings can be reviewed and altered if required, the program can be paused/resumed or a segment can be advanced. Also the current set-point and the current energy used can be viewed by pressing the ◀ key. During soaking the soak time remaining and the soak temperature are alternately displayed. In the event of a power failure the controller will intelligently re-commence firing when power returns.

CONFIGURATION

The ST215C can be configured to the kiln using a configuration menu. The thermocouple type and kiln power rating (for the energy used function) can be configured together with °C/°F operation. Other installer-configurable items include power failure recovery enable/disable, error message handling and control parameter adjustments.

The ST215C is supplied with a moulded ABS holster style wall mounting bracket and a flexible lead & plug.

SPECIFICATION

Electrical

Power supply

Line voltage range: 90 - 264VAC
Frequency: 50/60Hz

Power: Controller 4VA (max)
Switched outputs: 125VA

Fuse: 3.15A slow-blow HRC
20mm x 5mm ceramic

Control Relays (2 or 3)

Contact type: SPST NO
Switched Live -
Line voltage output
@500mA max

Lead & Connector

2m flexible grey polyurethane lead
Harting 7D plug

(Other lead & connector options available)

Enclosure

Material: ABS flame retardant UL 94V-0
Sealing: IP50
Size: 80/62mm(W), 165mm(L), 28mm(D)
Colour: Black RAL9011

Temperature

Temperature setting

Range: 0 to 1400°C (R/S) 0 to 1250°C (K/N)
Resolution: 1°C

Control Accuracy

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

Thermocouple

R,S,K & N type (selectable)

Cold Junction Compensation

Yes - precision semiconductor type

Time

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

Programs

32 programs each with 1-32 segments.
1 ramp & 1 soak per segment
ramp rate: 1 to 999°/hour or full power
Ramps can be heating or cooling

External Interface Option

USB 'A' socket for connecting USB Flash memory drive (USB1, USB2 or USB3).
WiFi module - connects to a local WiFi router by WPS (router pushbutton) or AP mode.

Environmental

Operating temperature range: -10°C to +55°C
Storage temperature range: -10°C to +55°C

Error Handling

Thermocouple failure detection
Thermocouple reversal detection
Heater failure detection
Kiln over-temperature detection
Room over-temperature detection
Lock-up on error facility
Audible Alarm (buzzer)

Other

Keyboard lock facility + indicator
Program running & kiln heating-on indicators
Energy used display
Program pause & segment advance features

Weight

Instrument + wall bracket + standard cable: 0.410kg
Shipping weight: 0.530kg

Wall Bracket

Material: ABS flame retardant UL 94V-0
Colour: Black RAL9011
Fixing slot centres (vertical): 70mm
Fixing slot size: 8mm x 4mm

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