

CARBOLITE® **IGERO** 30-3000°C

Operating Instructions

Over-Temperature Controller



Type 3216OT

Set point tracking

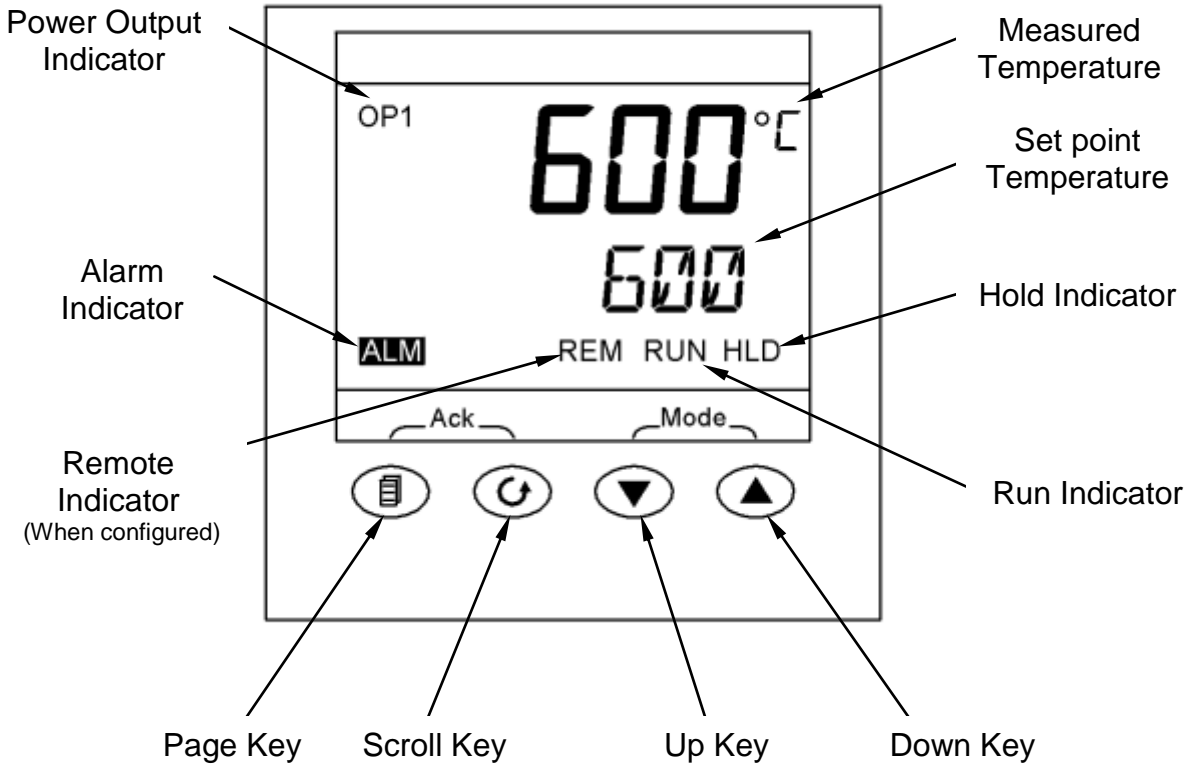
English

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1 Description

1.1 32160T Over-Temperature Controller



1.2 Keys

Page Key	The <i>Page</i> key is used to access level 2 when held down for 3 seconds.
Scroll Key <	The <i>Scroll</i> key is used to scroll through the parameters.
ACK Page + Scroll <	When pressed simultaneously the <i>ACK</i> function is used to: <ul style="list-style-type: none"> • Return to the Home Menu. • Acknowledge timer end. • Acknowledge an alarm if activated.
Arrow Keys U λ	The arrow keys are used individually to adjust the selected parameters and in combination to run a program

Note: If a parameter is selected and no further action is taken, the display will time out and revert back to the home display in its working level after approximately 1 minute

2 Basic Operating Instructions

2.1 Furnace or Oven Controls

Most Carbolite Gero products are fitted with an “Instrument Switch” which cuts off power to the controller and other parts of the control circuit. See the instruction manual for the furnace or oven for the overall operating instructions.

To operate the 3216OT there must be power to the furnace or oven, and the Instrument switch must be on. If a time switch is included in the furnace or oven circuit, this must be in an On period.


When an over-temperature condition occurs, the controller cuts the power to a contactor, which in turn cuts power to the heating elements. Power is not restored until the controller is “reset”. Other components do not generally have power to them cut on over-temperature; oven fans usually remain running, but may not do so if other options (such as a door switch) are fitted.

2.2 The 3216OT Operation - Set Point Tracking

When switched on, the controller lights up, goes through a short test routine, and then displays the measured temperature and the over-temperature set point.

The 3216OT set point tracking is connected internally to the main temperature controller. The main controller transmits its set point value to the over temperature controller. A local deviation high alarm of 15°C is added to the retransmitted set point. The over temperature controller thus automatically tracks the main set point and does not require adjustment when changing the main temperature controller set point.

If the oven is hot and the set point of the main controller is turned down more than 15°C then the over temperature circuit will trip.

The **Scroll** key  allows access to the parameters within a list. Some parameters are display-only; others may be altered by the operator.

A single press of the scroll key  in the Home list displays the ID.

To return to the Home list at any time, press Page  and Scroll  together, or wait for 45 seconds.

The **Down**  and **Up**  keys are used to alter parameter values.

2.3 Basic Operation - Set Point Tracking

No adjustment of the over temperature controller is necessary in normal use. The unit is supplied with the tracking over temperature value set to track at 15°C above the furnace or oven set point temperature.

2.4 Over-Temperature Alarm

If an over-temperature condition occurs, the OP2 indicator flashes, and an alarm message OVEN TRACKING OVER-TEMPERATURE scrolls across the screen, alternating with the set point. Power to the heating elements is disconnected.

2.5 Resetting the Over-Temperature Alarm

To acknowledge the alarm press **Scroll** and **Page** together.

If the alarm is acknowledged while there is still an over-temperature condition, the OP2 indicator stops flashing but continues to glow. The OVEN TRACKING OVER-TEMPERATURE alarm continues to scroll until the over-temperature condition is cleared (by the temperature falling), when normal operation resumes.

If the alarm is acknowledged when the temperature has dropped such that the over-temperature condition no longer exists, then the furnace or oven immediately resumes normal operation.

2.6 Sensor Break

The over-temperature cut-out system also operates if the over-temperature control thermocouple breaks or becomes disconnected. The message S.br flashes where the measured temperature is normally displayed.

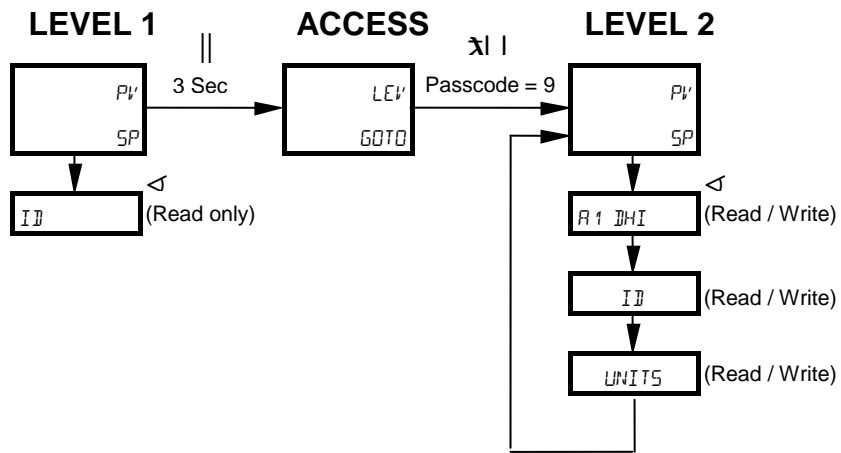
3 Audible Alarm

If an audible alarm is supplied for use with the over-temperature controller, then it is normally configured to sound on over-temperature condition, and to stop sounding when the alarm is acknowledged as given in section '2.5 Resetting the Over-Temperature Alarm'. Note that the alarm may sound during controller start-up.

It is not possible to cover in this manual other possible alarm features which may be included by customer special order.

4 Navigation Diagram

4.1 32160T



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