

Operation Manual

Instruction Notes for 3622576, 3622577, 3622578, 3622579

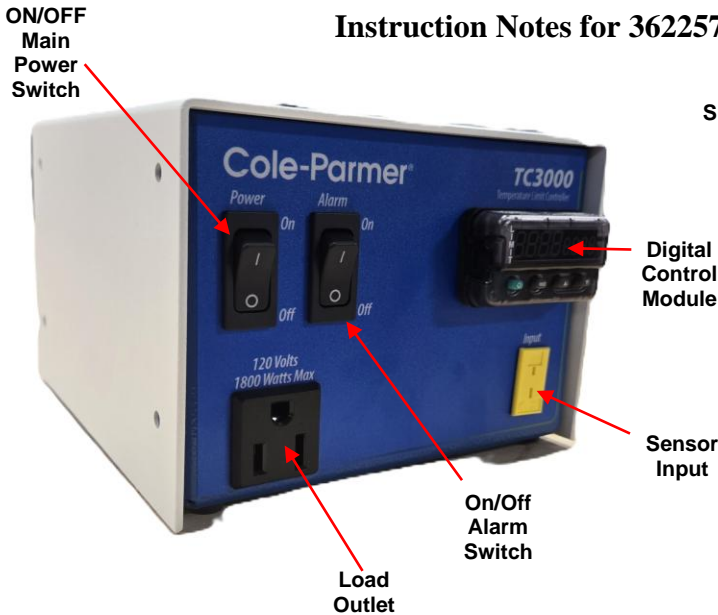


Figure 1

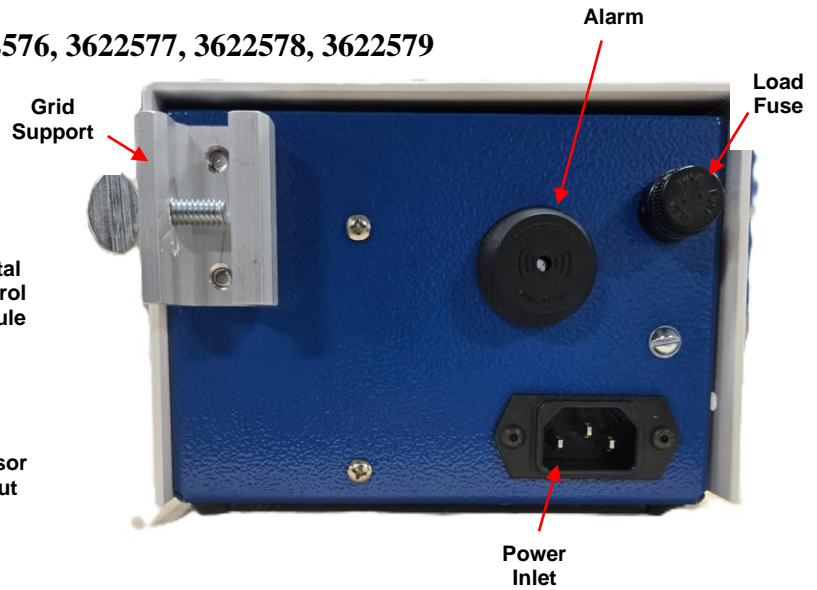


Figure 2

General Description

This control is a microprocessor-based, digital indicating, automatic temperature limit control with a single input and a single output. The control displays the process temperature and the condition of the control, either **Safe** or **Fail**. This unit comes with a 6' detachable power cord, grid support bracket, which is ideal for fume hood mounting to maximize bench space. This family of control accepts a type "J", "K", "T" thermocouples or RTD input depending on the model ordered.

This control automatically stores all information in a non-volatile memory.

Control Features

1. On/Off switch.
2. 15-amp output.
3. Circuit protection (fuse)
4. Low profile housing.

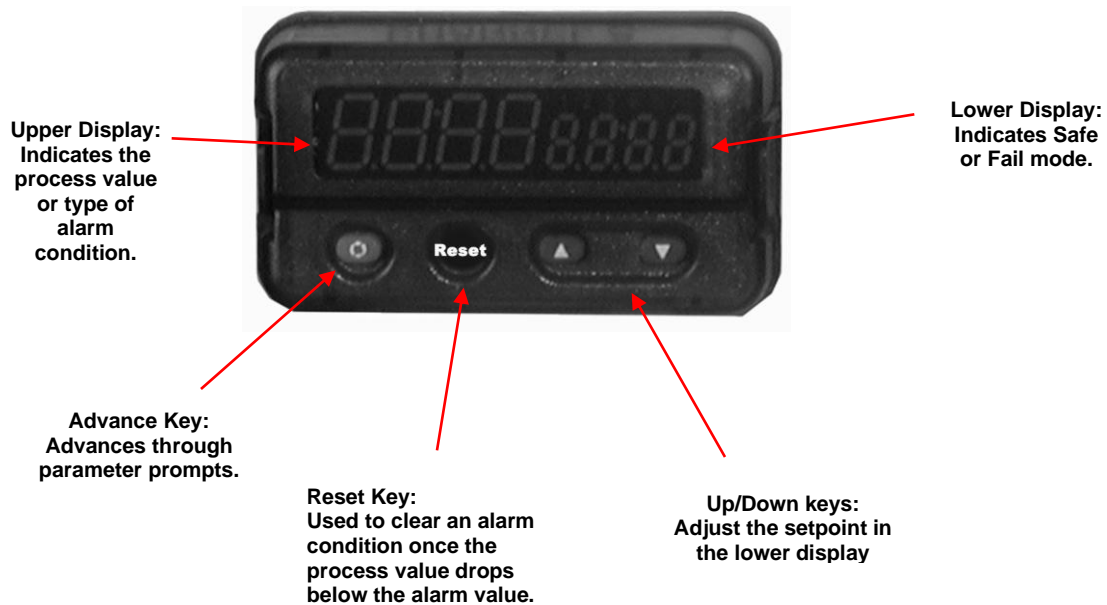


Figure 3. Digital Control Module Detail

How to Setup and Operate

First, connect the load and the sensor to the receptacles on the front panel. Next, plug the control line cord into an appropriate 3-wire grounded power receptacle. Push the power switch to the "ON" position. Wait five seconds for the control unit to energize.

The control is shipped from the factory with the display reading in degrees C. If a display in degrees F is desirable, press the **UP/DOWN** arrow keys simultaneously for three seconds to access the Setup Page. Press the **Advance** key until the Celsius_Fahrenheit parameter [C-F] is shown in the lower display. Press the **UP** arrow key to change from C to F.

After changing the display, press the **Reset** key to display the set point temperature and the process temperature (temperature at the sensor).

Press the **Advance** key to set the lower and upper limit:

Limit Low Value: LLS (factory set to 0)

Limit High Value: LHS (factory set to 100)

Under normal operations, **Safe** will appear in the lower display.

If an alarm condition occurs, **Fail** will appear in the lower display and the type of alarm will appear in the upper display.

An audible alarm will sound if an alarm condition occurs and can be switch off by turning off the alarm switch. Once the process temperature fall within the low and high limit values, you will need to press the reset button on the control module to turn the load receptacle back on.

Control Sensor

Proper placement of the sensor can eliminate many problems in the total system. The probe should be placed so that it can detect any temperature change with little thermal lag. In a process that requires fairly constant heat output, the probe should be close to the heater. In processes where heat demand is variable, the probe should be close to the work area. Some experimenting with probe location can be tried to provide optimum results.

Specifications

Control Mode

- Microprocessor-based, single input, single output.

Operator Interface

- **Advance, Reset, Up and Down** keys and ON/OFF switch.
- Dual, four digit LED displays.
- Thermocouple receptacle or (RTD) and 3-wire load receptacle.

Input

- Type J, K , T thermocouple or (RTD): input grounded or ungrounded.
- Automatic cold junction compensation and break protection for sensor.
- Degrees F or degrees C display; user selectable (preset for degrees C)

Range Type J:	-200°C to 1200°C
Range Type K:	-200°C to 1370°C
Range Type T:	-200°C to 400°C
Range Type RTD:	-200°C to 800°C

Primary Output (Heating or Cooling)

- 15 Amp, 120 Volts.

Accuracy

- Calibration accuracy: 0.1% of span.
- Temperature stability: 0.2 °F / °F rise in ambient maximum.
- Voltage stability: 0.01% of span / % of rated line voltage.

Power

- 50/60 Hz 5%
- Data retention upon power failure via nonvolatile memory.

Operating Environment

- 32 to 149 °F / 0 to 65 °C; 0 to 90% RH, non-condensing.

Error Code Definitions and Actions:

Er.In - An open or reversed polarity sensor is the most likely cause. Check the sensor; if the connection is good and functions properly, call the factory. Make sure the input parameter [SEn] is set to the correct type thermocouple.

Er.Ab – Ambient temperature may be too hot or too cold. Make sure that the temperature surrounding the control is –18 to 65C.

Er.CS – Checksum Error. Settings may have changed unexpectedly. Press the **Infinity** key to clear the error. Verify settings. If error message persists, contact the factory.

To clear a corrected error, cycle power the control.

Maintenance

Simple preventative maintenance steps include keeping the controller clean. Protect it from overload, excessive dirt, oil and corrosion.

Warranty

Cole-Parmer, for itself does hereby offer a warranty for products from the date of receipt by the user, under normal and proper usage, against defects in workmanship and materials for 12 months, and will repair or replace any defective part(s) without charge when same is shipped Prepaid to Cole-Parmer from which the product was originally purchased.

Should the nature of any defect require that the product, or any constituent portion thereof, be returned to Cole-Parmer, Vernon Hill, Illinois, prepaid for service, a condition precedent to any return shall be the procurement of authorization from Cole-Parmer assigning a **Return Goods Number** to the product or part requiring service.

Parts and accessories manufactured by others are warranted only to the extent of the regular warranty of the manufacturer or supplier of such materials and only insofar as Cole-Parmer is able to transfer the benefits of warranty coverage, if any, to the user. Any adequately warranted defective part or accessory manufactured or supplied by others may be exchanged through Cole-Parmer for a replacement part is shipped prepaid and received at Cole-Parmer within 30 days from the date any replacement part is obtained by the user.

This warranty supersedes and is given in lieu of all implied warranties, and is void if the user causes damages from improper usage of product under normal operating conditions.

12 MONTHS LIMITED WARRANTY ON ALL PARTS AND LABOR IS GIVEN BY COLE-PARMER.

CATALOG NUMBER 3622576, 3622577, 3622578, 3622579

SERIAL NUMBER _____

DATE OF PURCHASE _____

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