Controls & Functions

- Three front buttons for power on/off, min/max functions, selection of °F, °C, or K, auto shutoff times, calibration and, configuration options
- User-defined pass codes for configuration and calibration to prevent unauthorized changes

Maximum and Minimum Readings

- User-configurable maximum and/or minimum temperature indication. Factory default configuration MAX/MIN disabled. Choice of MAX only, MIN only, MAX/MIN, or none
- Option to retain or clear MAX/MIN temperatures at shutoff

Battery Replacement

- A low battery indication will be shown in the upper left-hand corner of the display when the battery voltage falls sufficiently. The batteries should be replaced soon after the indicator comes on to prevent unreliable readings.
- If unit does not power up, replace the batteries.
  1. Loosen the 6 Phillips screws on the back of the unit until the cover can be removed.
  2. Remove the battery cover and remove the batteries by lifting up the positive end of the battery (opposite the spring) taking care not to bend the battery holder spring.
  3. Discard old batteries properly, do not discard into fire, sources of extreme heat, or in any hazardous manner.
  4. Always replace both batteries at the same time with high quality alkaline batteries. Install batteries with correct orientation. The negative (flat) end of each battery should be inserted first facing the battery holder spring.
  5. Replace the back cover, including the sealing gasket.

How to Order

- For °F/C, shutoff times and min/max functions are field configurable. If you require a certain configuration to be pre-set from the factory, please indicate it on your order.
- Option—add to end of model number
- -CC—Conformal coating on circuit board for moisture resistance

Specifications

- Range and Resolution
  -58.0°F to 392.0°F, -50.0°C to 200.0°C or 220K to 475K
  0.1 degree resolution
  User selectable °F, °C or K

- Accuracy
  Includes linearity, hysteresis, repeatability
  ±0.3°C at 0°C, ±1.1°C at 150°C
  11-point linearization table

- Display
  4 readings per second nominal display update rate
  4 digit LCD, 0.5” H
  5 character 0.25” H alphanumeric

Batteries, Battery Life, Low Battery Indication

- Battery: 2 AA alkaline, approx. 1000 hours
- BL: 2 AA alkaline, approx. 150 to 750 hours depending on backlight usage
- Button press activates backlighting for 1 minute
- Low battery symbol on display

Sensor

- IEC-751 Class B 100 platinum RTD
- 0.00385 alpha curve
- Continuous weld
- 1/2” NPT male fitting, 316L stainless steel
- Spring-loaded probe versions fit standard thermowells

Connection, Material, Media Compatibility

- All wetted parts are 316L stainless steel
- 1/2” NPT x 1/2” NPT hex nipple
- Stem length approx. 0.25” longer
- 316 stainless Hex nipple
- Stem length 1.25”
- Measured from top of full threads to tip of probe
- Thermowell “A” or “element length”

 jamais, 0.25” dia.

Dimensions

- 3.5”
- 2.8”
- 3.0”
- 0.75”
- 1.25”
- 0.25” dia.

- Continuous weld on non-spring loaded models
- Spring-loaded models approx. 0.25” longer to compress element in thermowell.
- 0.50” max. compression
- Thermowell “A” or “element length”
- Measured from top of full threads to tip of probe
- Red LED display backlight

Specifications are subject to change without notice. Consult factory for your specific requirements.
Precautions
Read these instructions before installation. Configuration may be easier before installation.
Install or remove thermometer using a wrench on the hex fitting only. Do not attempt to turn by forcing the housing.
Use a thermowell appropriate for the process.
Do not exceed maximum allowable housing temperature.
Due to the hardness of 316 stainless steel, it is recommended that a thread sealant be used to ensure leak-free operation.

Normal Operation
To turn the unit on, press the left front power button.
The display segments are tested.
The actual temperature and units are displayed and updated approximately 4 times per second.
The factory default configuration is °F, 5 minute auto shutoff and MAX/MIN disabled.
The auto shutoff timer is reset whenever any button is pressed.
To shut off the unit manually at any time, press and hold the power button until OFF is displayed (up to about 5 seconds total if MAX/MIN is enabled) and then release the button.
If the unit is configured with an auto shutoff time, a five second warning period is provided prior to auto shutoff, during which the display indicates OFF. Press any button to reset timer.
If so equipped, the optional display backlighting can be turned on by momentarily pressing a button whenever the thermometer is on. The backlighting will turn on for one minute and then automatically shut off. This also restarts the auto shutoff timer. The display backlighting will not appear under bright lighting conditions.

Temperature Unit Selection
To change temperature units, press and hold the setup (up) button until the temperature indication is blank and only the temperature units are displayed.
Then use the ▲ or ▼ buttons to select the desired temperature units. Standard units are Fahrenheit, Celsius, and Kelvin.
When the desired units are displayed, press and release the power button to save the selection and exit the change mode.
If no buttons are pressed for 15 seconds, the unit will automatically save the selection and exit the change mode.

Auto Shutoff Time Selection
To change the auto shutoff time, press and hold the off (down) button until the auto shutoff time is displayed.
The lower display will indicate RST H if the auto shutoff time displayed on the upper segments is in minutes, and RST H it if it is in hours.
Use the ▲ or ▼ buttons to select 0, 1, 2, 5, 10, 15, 20, or 30 minutes, or 1, 2, 4, or 8 hours.
Setting the time to zero to disables the auto shutoff timer and the thermometer will stay on until manually shut off or until the batteries are depleted. Use the power button to turn the thermometer off when not in use to conserve battery life.
When the desired auto shutoff time is displayed, press and release the power button to save the selection and exit the change mode.
If no buttons are pressed for 15 seconds, the unit will automatically save the selection and exit the change mode.

User Configuration Mode
With the unit off, press and hold the enter button. Then press the power button. Release buttons when the display indicates CFG.
Before the unit enters the Configuration Mode, the display initially indicates , with the first underscore blinking, and with CFGPC on the character display.
Note: The unit will automatically revert to normal operation if no buttons are operated for approximately 15 seconds. To cancel and return to normal operation, press and release the power button without entering any pass code numbers.
Enter the user configuration pass code (3510 factory default): Use the ▲ or ▼ buttons to select the left-most digit to 3.
Press and release the power button to index to the next position. The 3 will remain, and the next position will be blinking.

Use the ▲ or ▼ buttons to select 5.
Press and release the power button to index to the next position. 3 5 will remain, and the third position will be blinking.
Use the ▲ or ▼ buttons to select 1.
Press and release the power button to index to the next position. 3 5 1 will remain, and the fourth position will be blinking.
Use the ▲ or ▼ buttons to select 0.
Press and release the power button to proceed with configuration procedures. Note: If an incorrect pass code is entered, the unit will return to the start of the pass code entry sequence.
MAX/MIN configuration
The upper display will be blank.
Use the ▲ or ▼ buttons to select from the following:

- MX/MN Both highest and lowest values will be captured
- MX-- Only highest value measured will be captured
- --/MN Only lowest value measured will be captured
- -- Capture feature is disabled

Press and release the power button to move on to the next parameter.

MAX/MIN memory
The upper display will indicate clr.
Use the ▲ or ▼ buttons to select from the following:

- AUTO Maximum and Minimum values will automatically be cleared whenever the unit shuts off.
- MAXN Maximum and Minimum values will be retained and must be cleared manually as desired.

Press and release the power button to save the user configuration and restart the unit.

Maximum and Minimum Readings
Thermometers are normally configured with maximum and minimum capture functions disabled. One or both can be enabled in the User Configuration mode.
If enabled, step the unit through the display modes by pressing the power button for about 1 second until the display indicates either MAX or MIN or degree units. The display mode cycles through the following steps:
MAX mode: The maximum temperature is shown with the lower display alternating between MAX and the degree units. The thermometer may be left in this mode if a display of the maximum reading is desired.
MIN mode: The minimum temperature is shown with the lower display alternating between MIN and the degree units. The thermometer may be left in this mode if a display of the minimum reading is desired.
Normal mode: The current temperature and the degree units are displayed.

To manually reset the memory, press and continue to hold the power button until the display indicates new. The unit will automatically revert to normal operation if no buttons are operated for approximately 15 seconds. To cancel and return to normal operation, press and release the power button without entering any pass code characters.
Enter access code 1220
Use the ▲ or ▼ buttons to select the left-most digit to 1.
Press and release the power button to index to the next position. The 1 will remain, and the next position will be blinking.
Use the ▲ or ▼ buttons to select 2.
Press and release the power button to index to the next position. The 2 will remain, and the third position will be blinking.
Use the ▲ or ▼ buttons to select 2.
Press and release the power button to index to the next position. The 2 will remain, and the third position will be blinking.
Use the ▲ or ▼ buttons to select 0.
Press and release the power button to proceed. Note: If an incorrect access code was entered, the unit will return to the start of the access code entry sequence.
Once the correct access code has been entered, the display will indicate the existing user-defined pass code with CFGPC or CALPC on the character display.

Changing the User-Defined Pass Codes
Configuration pass code: With the unit off, press and hold the enter button to view and/or change the user configuration pass code. Then press the power button. Release all buttons when the display indicates CFG.

Calibration pass code: With the unit off, press and hold the enter button to view and/or change the user calibration pass code. Then press the power button. Release all buttons when the display indicates CAL.

Before the unit enters the view or change pass code mode, the display initially indicates , with the first underscore blinking, and CFGPC or CALPC on the character display.
Note: The unit will automatically revert to normal operation if no buttons are operated for approximately 15 seconds. To cancel and return to normal operation, press and release the power button without entering any pass code characters.

Enter access code 1220
Use the ▲ or ▼ buttons to select the left-most digit to 1.
Press and release the power button to index to the next position. The 1 will remain, and the next position will be blinking.
Use the ▲ or ▼ buttons to select 2.
Press and release the power button to index to the next position. The 2 will remain, and the third position will be blinking.
Use the ▲ or ▼ buttons to select 2.
Press and release the power button to index to the next position. The 2 will remain, and the third position will be blinking.
Use the ▲ or ▼ buttons to select 0.
Press and release the power button to proceed. Note: If an incorrect access code was entered, the unit will return to the start of the access code entry sequence.
Once the correct access code has been entered, the display will indicate the existing user-defined pass code with CFGPC or CALPC on the character display.

Operate the ▲ or ▼ button to select the first character of the new pass code.
When the correct first character is being displayed, press and release the power button to proceed to the next pass code character.
Repeat above until the entire pass code is complete.
To exit the view or change pass code mode, press and hold the power button. Release the button when the display indicates -- -- -- to restart the unit.