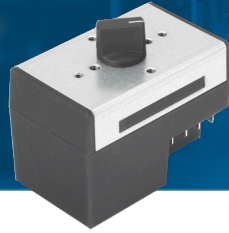


Electronic Temperature Controller

ECAP Series



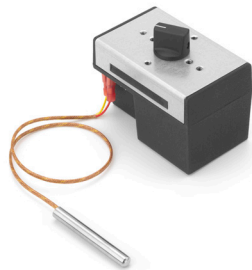
selco
our service makes the difference

The simplicity of electromechanical thermostats with the power of electronics

Selco's ECAP series electronic temperature controller uses NTC thermistors, J- or K- type thermocouples, and/or RTD sensors to control up to 2 relay outputs. The controller is supplied in an environmentally sealed plastic enclosure and is rated for pollution levels up to Level 3, intended for use in residential and commercial appliances. Because the ECAP is electronic, it can be programmed to open or close on rise. It can also be made adjustable to your specified temperature range, and is supplied with a potentiometer for user temperature adjustment. Fixed temperature versions that prevent user tampering are also available. A Bluetooth-enabled version works with the Selco smartphone app to allow you to interact with the eCap wirelessly from up to 30 feet away! Several add-on accessories are coming soon, including PC desktop software, USB key/dongle, and optional external digital readout.



*Product markings subject to change



Everyday Applications

Appliances Freeze Protection Dehumidifiers Heaters Freezers
Dryers Food Equipment Ovens Refrigeration ...and more!

SENSOR TYPE	TEMPERATURE RANGE
NTC Thermistor	-40°F (-40°C) to 400°F (205°C)
Thermocouple J	140°F (60°C) to 1364°F (740°C)
Thermocouple K	140°F (60°C) to 2012°F (1100°C)
RTD Class B	-40°F (-40°C) to 1292°F (700°C)

*Contact Selco for information on sensor accuracies and tolerances.

Key Features

- > UL Approved (E230832)
- > Drop-in replacement for bulb and capillary thermostats
- > Heavy duty 30A relay, or up to 2 relays (combined load not to exceed 20A)
- > Multiple input sensors available (NTC thermistor, RTD, and J or K thermocouple)
- > Wide sensing temperature range from -40°F to 2012°F depending on sensor
- > 1 degree accuracy (1°F for RTDs and 1°C for thermocouples)
- > Multiple brackets available
- > Variety of control knobs available

Technical Specifications

Environmental Temperature

- > 14°-140°F (-10°-60°C)
- *ECAP body only, sensor separate

Power

- > Line voltage and low voltage models
- *See Part Number Configurator for more info

Sensor Inputs

- > Two NTC inputs -OR-
- > Two RTD/TC inputs
- *Contact Selco for more info regarding our value added capabilities for sensor assemblies

Relay Outputs

- > Single relay 30A
- > Single relay 20A
- > Dual relay up to 20A combined load
- > 12VDC output for SSR
- *See Part Number Configurator for more info

Controls

- > Potentiometer for adjustable versions
- > Reprogrammable through on-board comm port

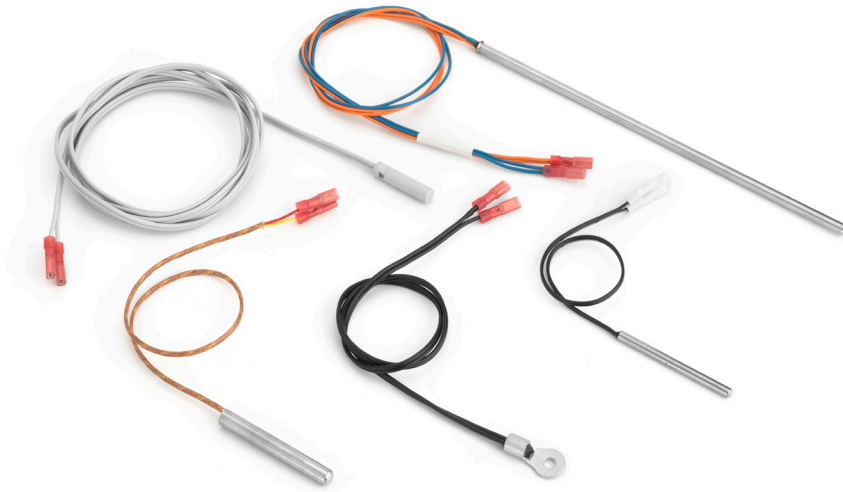
Optional

- > Custom mounting brackets
- > Custom or standard knobs for potentiometer



Wide variety of sensor options

Selco offers a wide variety of sensors in multiple sizes and formats (epoxy, enclosed, thermowell, ring lugs etc). Our ECAP + sensors package is ideal for applications where tighter accuracy is key. The sensors offered for use with the ECAP remain stable over time, and are not affected by altitude like traditional liquid-filled bulb and capillary style thermostats. Choose one of Selco's existing sensor designs, or give us your design specifications/drawings. Our ISO 9001:2015 design and manufacturing facility will do the rest.



Flexibility to meet your load needs

The ECAP series has a variety of relay options to support load requirements. Our 30A relay version is designed to support heavy duty loads, the 20A version is a drop-in replacement for many hot bulb and capillary thermostats, our two relay version is perfect for cold applications, and our SSR output version is designed to drive external relays.

UL recognized contact ratings (all ratings at 140°F/60°C unless noted, contact Selco for additional ratings at other temperatures)

MODEL ECAP-H3 (single 30A relay)

- > At 45°C: 30A @ 240VAC General Purpose, 100K Cycles
- > At 60°C: 20A @ 240 VAC General Purpose, 100K cycles
- > 12FLA, 45LRA @ 240Vac motor load, 100K Cycles

ECAP-L3 (single 30A relay)

- > At 40°C: 30A @ 240VAC General Purpose, 100K Cycles
- > At 60°C: 20A @ 240 VAC General Purpose, 100K cycles
- > 12FLA, 45LRA @ 240Vac motor load, 100K Cycles

ECAP-H20 (dual relay) and ECAP-H21 (single 20A relay)

Load #1 *

- > At 60°C: 1/3hp, 125VAC, 30K Cycles;
- > At 60°C: 5A, 250Vac, resistive, 50k cycles;
- > At 60°C: 10A, 250Vac, general purpose/resistive, 6k cycles;

Load #2 *

- > At 60°C: 1/3hp, 125VAC, 30K Cycles
- > At 60°C: 5A, 250Vac, resistive, 50k cycles
- > At 60°C: 10A, 250Vac, general purpose/resistive, 6k cycles

*max combined load not to exceed 20A.

ECAP-H22 (12VDC for SSR)

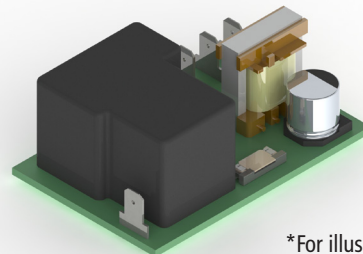
- > ELV, 12VDC output, 115mA, resistive.

ECAP-L21 (single 20A relay)

- > 1/3hp, 125VAC, 30K Cycles;
- > 5A, 250Vac, resistive, 50k cycles;
- > 10A, 250Vac, general purpose/resistive, 6k cycles;

ECAP-L22 (up to two 12VDC for SSR)

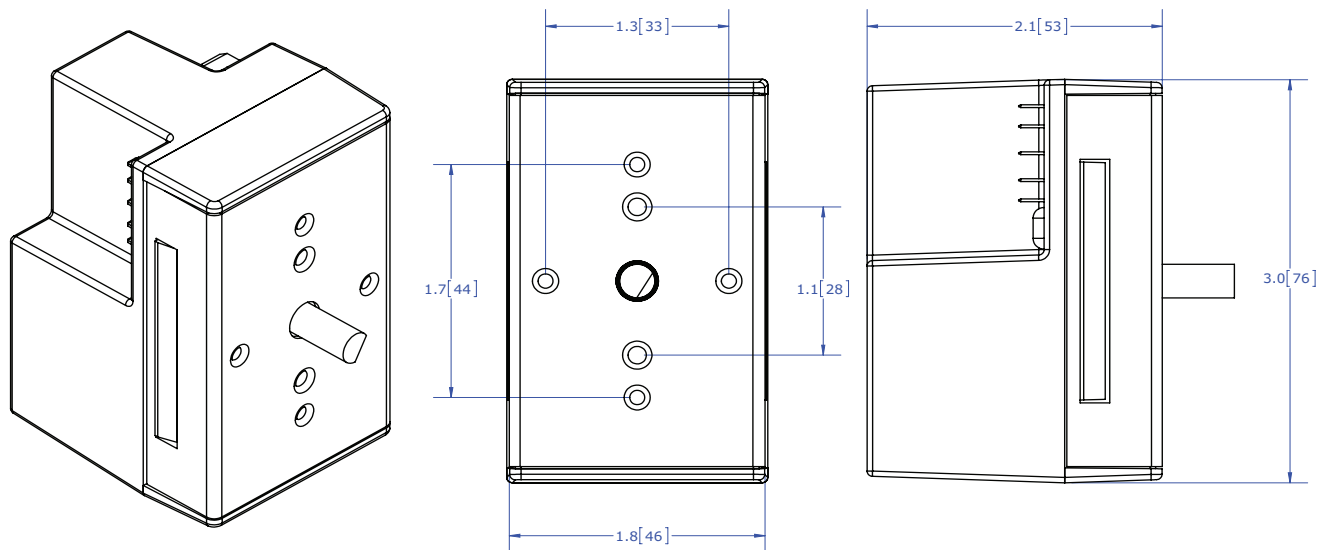
- > Load #1: SELV, Limited Energy - 12VDC output, max of 250mA
- > Load #2: SELV, Limited Energy - 12VDC output, max of 250mA



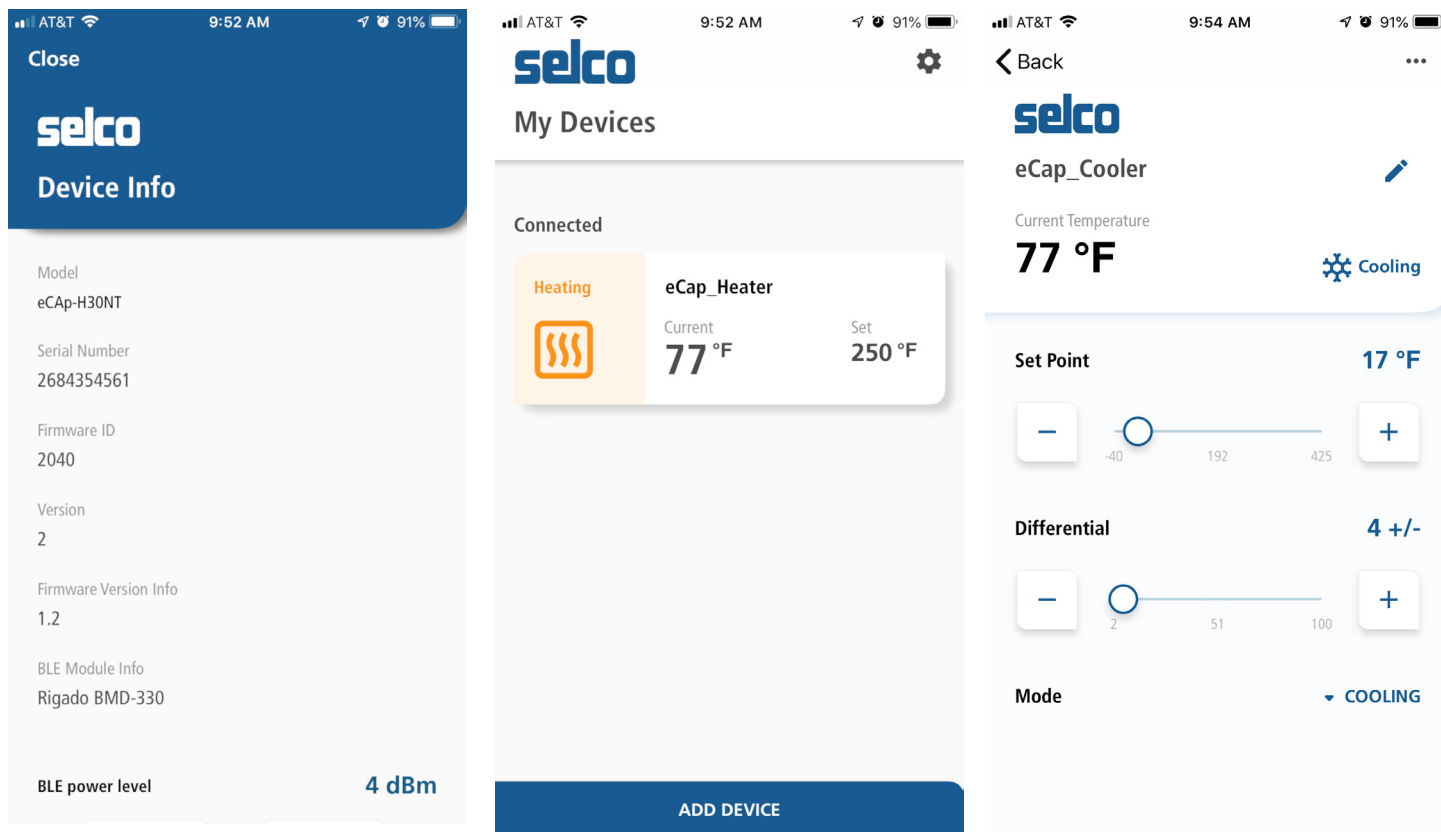
*For illustrative purposes only

Compatible footprint with traditional bulb & capillary controls

These controls are compact and similar in form, fit, function and price to conventional electromechanical bulb and capillary thermostats. They have been designed to replace mounting brackets from 1.1" to 1.75" (28 to 44 mm) and have multiple shaft options. Power connections are 0.250" male quick connects, and sensor connections are 0.110" male quick connects. Custom brackets are available upon request. This makes them the perfect drop-in replacement to existing designs.



A look inside the app....

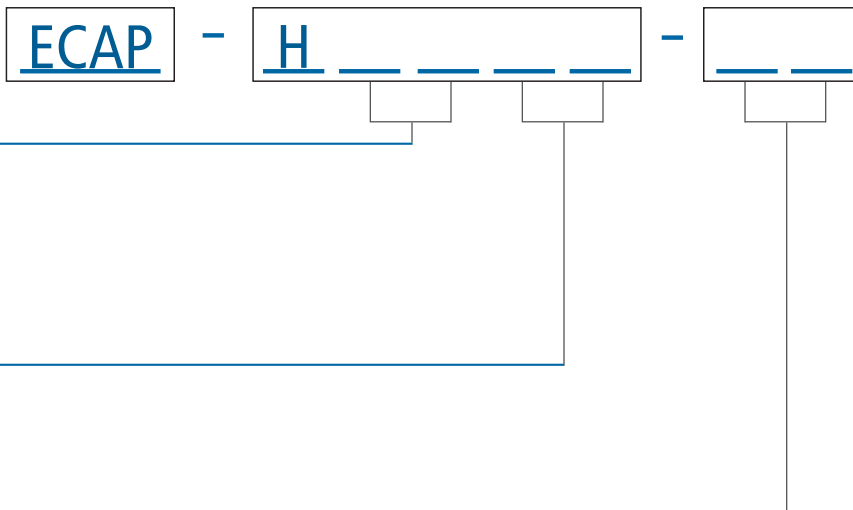


The ECAP can be reprogrammed, by the OEM, with different parameters for multiple applications using a portable programmer. See ICP2-Portable(G3) (not sold by Selco Products)

Part Number Configurators

Line Voltage 85-250VAC, 50/60Hz

*unless otherwise noted



Output Options

- 20 Dual relay (max combined load not to exceed 20A)
- 21 Single relay 20A
- 22 Single 12VDC for external SSR
- 30 Single relay 30A

Input Type

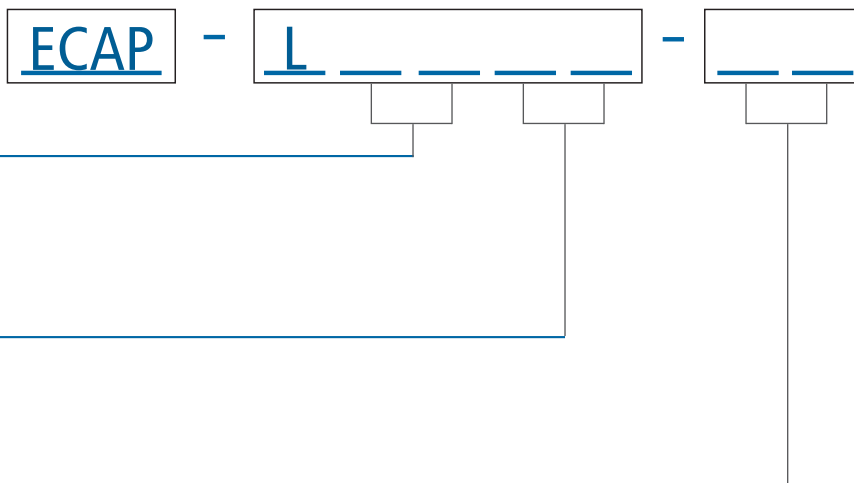
- NT Two NTC inputs
- HD Two RTD/TC inputs

IoT Module (Optional)

- BL Bluetooth low power

Low Voltage 12-24VAC/VDC (L)

*For SELV systems (Safety Extra Low Voltage)



Output Options

- 21 Single relay 20A
- 22 Single or dual for external SSR
- 30 Single relay 30A

Input Type

- NT Two NTC inputs
- HD Two RTD/TC inputs

IoT Module (Optional)

- BL Bluetooth low power

Samples available upon request!

NOTE: It is the customer's sole responsibility to specify and determine the suitability of a particular control or component based on their unique individual applications and requirements, with respect to temperature settings, cycle life, electrical load and environmental conditions.

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