**FC100 Proportional fan control thermostat**

*Smart controller with fault detection*

**FEATURES**

- **Easy Installation**
  No setup or configuration required. Compatible with a wide range of temperature sender probes. Ideal for retrofit. Optional mounting bracket available.

- **Proportional soft-start**
  Slowly ramps up fan speed to reduce mechanical shock and increase motor life. Safety is improved by slowly starting fan.

- **Solid State**
  High current, reliable solid-state output can drive up to 25-amp fan loads directly. No relays to fail.

- **Override Input**
  Override input allows fan to be energized remotely by a switch, sensor, or other controller.

- **Fault Detection**
  Automatically detects fan and temperature sender failure. LED blinks fault codes for easy troubleshooting.

- **Alarm Output**
  Alarm output energized on fault detection or over-temperature condition. Automatically shut down equipment or activate light or siren.

**OPERATION**

Controller monitors temperature sender and controls fan to maintain 120-130°F oil temperature. (Other temperature setpoints available. Consult factory.)

Active fault detection monitors temperature sender and fan current. Led blinks fault codes for troubleshooting:

- Solid Normal Operation
- 1 blink (* *) Fan open / No load
- 2 blink (** **) Fan shorted / Over current
- 3 blink (** *** **) Temp sensor open
- 4 blink (**** ****) Over temp alarm, above 185°F

Alarm output is energized in fault condition. (0.5-amp max.)

Output is operated continuously at 100% in temp sensor open condition. (broken temperature sensor wire)

If multiple faults are detected, fault codes are flashed sequentially.

Energize override input to manually run fan at 100%.

**DIMENSIONS**

Consult factory for compatibility with other temperature senders.

**ORDERING INFORMATION**

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<tr>
<th>PART #</th>
<th>DESCRIPTION</th>
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<tr>
<td>FC100</td>
<td>Fan Controller Module with temperature sender included</td>
</tr>
<tr>
<td>TS10</td>
<td>Temperature sender probe only</td>
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<tr>
<td>FCB</td>
<td>Fan Controller mounting bracket only</td>
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*The FC100 is an affordable, full featured proportional fan controller that is reliable and easy to use.*
### SPECIFICATIONS

**General**
- **Power Requirement**: 12-24vdc, 100mA nominal + power to FAN

**Outputs**
- **Fan**: Solid-State proportional output. 25-Amps Max.
  - Output de-energized on overcurrent (>30 amps) fan condition. Reset power to retry.
- **Alarm**: Solid-State open collector, positive output. 0.5-Amp Max.
  - Alarm output energized on fault or above high temperature limit.

**Control Range**
- **Operation**: 130degF = ramp to 100%, 120degF = off.
  - Other setpoint temperatures possible. Consult factory.
- **High Temperature Limit**: 185degF Alarm output energized.

**Inputs**
- **Temperature**: For use with Datcon 02024-00 (Miratron TS10)
- **Override**: Connect to 12 or 24Vdc (battery) to energize fan.

**Indicators**
- **Fault LED**: Solid = Normal operation
  - 1 blink = Open or disconnected fan motor
  - 2 blink = Shorted or overcurrent fan motor
  - 3 blink = Temp sensor open or out of range
  - 4 blink = Over temp alarm

**Dimensions**
- **Overall**: 3.0” L x 1.6” W x 1” H
  - Mounting Hardware included. Optional mounting bracket available.

**Environmental**
- **Sealing**: Potted electronic module
- **Storage**: -40ºC to 85ºC
- **Operating ambient temperature**: -10ºC to 50ºC

**WIRING**

**TERMINAL BLOCK LABELS:**
- **GND**: CHASSIS GROUND / BATTERY NEG (-)
- **GND**: FAN GROUND (IF NEEDED)
- **O/R**: OVERRIDE INPUT (+12/24V)
- **V+**: 12/24V BATTERY POS (+)
- **FAN**: FAN OUTPUT, 25 AMPs MAX.
- **ALM**: ALARM OUTPUT, 0.5 AMP MAX.
- **TS +**: TEMP SENDER (+) (ONE WIRE TYPES)
- **TS -**: TEMP SENDER (-) (TWO WIRE TYPES)

Optional mounting bracket (FCB)