

DIGITAL THERMATIC® FAN SWITCH KIT (#0445) INSTALLATION INSTRUCTIONS

This switch is setup for 12V usage - for 24V applications replace the built in 12V relays for 24V relays.

**PLEASE READ ALL THESE INSTRUCTIONS THOROUGHLY BEFORE YOU START WORK.
DON'T RUSH - ENSURE YOU HAVE FULL UNDERSTANDING OF THE WORK AHEAD BEFORE YOU COMMENCE.**

COMPONENTS

- ⊕ 1 x Digital Thermatic Fan Switch
- ⊕ 1 x Temperature Probe Mounting Kit
- ⊕ 1 x Temperature Probe
- ⊕ 1 x ¼" NPT Thermal Sensor Kit
- ⊕ 1 x Red 6mm Ring Terminal
- ⊕ 1 x Blue 6mm Ring Terminal
- ⊕ 2 x Blue Connectors
- ⊕ 2 x Self-Tapping Screws



Rated Voltage	12V or 24V
Rated Continuous Current Draw	30 Amps
MAX Current Draw	40 Amps
MAX Start Up Current	60 Amps
Temperature Setting Range	40°C - 110°C (104°F - 230°F)
Ingress Protection	IP66

OPERATION

Fan #1 will start at the set temperature. Fan #2 will start 10 seconds after Fan #1 starts. Both fans will operate until the temperature has been reduced to 5°C (9°F) below your set temperature.

SWITCH MOUNTING

Mount the switch in the engine bay, in a convenient location using the self-tapping screws provided.

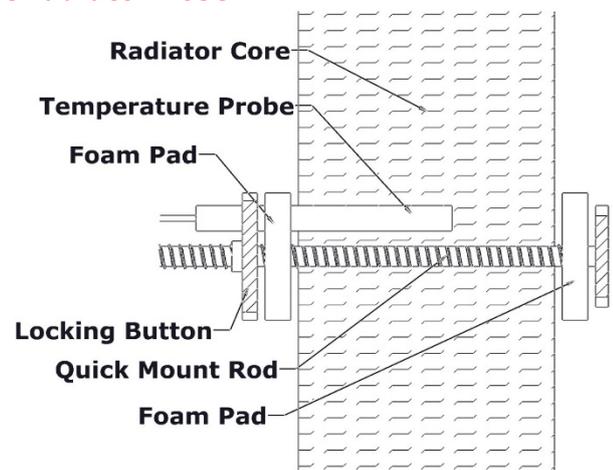
- **Temperature Sensor wire MUST NOT be cut in ANY circumstances.**
- Ensure the mounting location allows easy access to the set button.
- Keep unit away from high heat sources, such as exhaust manifolds etc.

OPTION 1: TEMPERATURE PROBE INSTALLATION

Requires access to the front and rear face of the radiator. Remove the radiator and/or condenser, if necessary.

The Temperature probe MUST NOT be installed under the radiator hose.

- ⊕ Select a Temperature Probe mounting location that will not interfere with the fan/s.
 - For optimum performance, install the temperature probe as close to the hot coolant inlet as possible.
 - The temperature probe must **not** extend through the radiator core as this will affect the switch's operation.
- ⊕ Remove the backing paper from foam pad. Slide the foam pad onto the quick mount rod so the pad adheres to the head of the quick mount rod.
- ⊕ Gently separate the radiator fins where you propose to insert the temperature probe.
 - A small screwdriver can assist you with this procedure.
- ⊕ Insert the Quick Mount Rod between the separated fins. Push the locking button and sensor onto the Quick Mount Rod to sit flush with the face of the radiator. Cut off excess quick mount rod.



OPTION 2: ¼" NPT THERMAL SENSOR INSTALLATION

If you would prefer to install the Thermal Sensor into the thermostat housing, engine block, or directly into the radiator, use the ¼" NPT Thermal Sensor supplied in your kit. If you wish to install the Sensor in the top radiator hose, we recommend part #0415 or part #0419 (Sold Separately).

- ⊕ Unplug the Temperature Probe and plug in the ¼" NPT Thermal Sensor. Thread adapter fittings (not supplied) may be required.
 - You need to be mindful that the location of the Thermal Sensor can affect the temperature reading and adjustments may be needed when setting the target temperature.
 - When a port is not available, it is possible to drill and tap a hole for locating the Thermal Sensor. When tapping a custom port, you need to be certain there is a minimum wall thickness of 3mm.
 - if tapping a hole is not possible, a weld-on ¼"NPT fitting can be installed.
- ⊕ Install the Thermal Sensor into the port, making sure not to over tighten or damage the Thermal Sensor.
 - You may require some thread tape or sealant to achieve a watertight seal.

**Part #0415: Air Bleed Adapter Kit
*Optional**



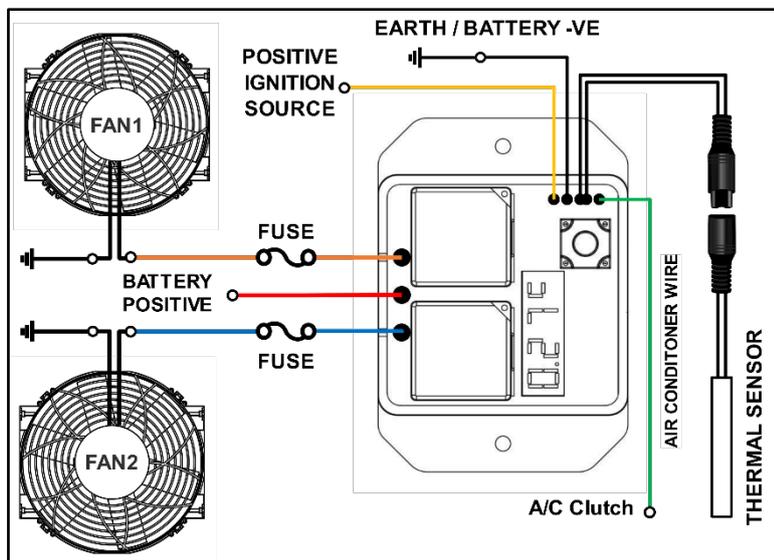
WIRING

- Connect the **RED** "BATTERY +VE" wire to battery positive.
- Connect the **BLACK** "EARTH" wire to the chassis or negative Earth.
- Connect the **YELLOW** "IGNITION" wire to a Positive ignition or accessories source.
 - DO NOT wire to the ECU or the ignition coils as this can cause operational issues.
- Connect the **ORANGE** "FAN 1" wire to Fan 1 Positive.
- Connect the **BLUE** "FAN 2" wire to Fan 2 Positive.
- Ensure fan/s are rotating in correct direction.

OPTIONAL:

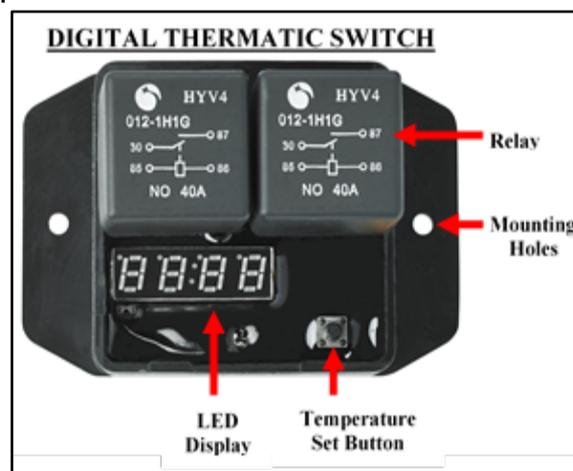
- Connect the **GREEN** "AIR CONDITIONER" wire to A/C Compressor.
 - the "AIR CONDITIONER" wire can be used as a manual override by simply connecting it to a positive source through a switch.

***For positive earth systems, wire 'Earth' to battery negative not the chassis**



SETTING TARGET TEMPERATURE (Factory Set temp is 85°C = 185°F)

- Press the 'Set Button' once to display the present temperature setting.
 - Press and hold the 'Set Button' to switch between °C & °F.
- Press the 'Set Button' again to increment the set temperature by 1 degree.
 - Press and hold down the 'Set Button' to scroll through the temperature range. 40°C (104°F) to 110°C (230°F)
- Start the engine and allow the coolant to reach normal operating temperature.
- Once normal operating temperature is reached set your target to 10°C (18°F) above temperature displayed. Your setting will be saved to memory after three (3) seconds.
 - Your temperature setting will be retained when the ignition is turned off or is disconnected from the battery.
 - Air temperature around the Temperature Probe positioned in the radiator fins may be less than the coolant temperature. Adjust your set temperature accordingly.
- Conduct a road test, monitoring engine temperature. If necessary, adjust the set/target temperature to suit your requirements.



DIAGNOSTIC CHART

Condition	Troubleshooting
Unit does not operate	➤ Check all the wire connections
Err 1	➤ Check sensor wiring for any short circuits
Err 2	➤ Check sensor wiring for any open circuits
Temperature does not increase or has constant high reading	➤ Thermal Sensor Open or Short circuit

These installation instructions will suit most applications but there are circumstances surrounding some engine designs, environments, and the nature of the system involved, which may require other installation arrangements not outlined here. Frequently Asked Questions (FAQ) are listed on our website www.daviescraig.com.au. Emails can be directed to info@daviescraig.com.au or Telephone +61 (0) 3 9369 1234 during business hours.

WARRANTY

Davies, Craig Pty Ltd warrants for a period of two years or 2000 hours continuous running (whichever is the lesser) from the date of purchase. Davies, Craig shall carry out, free of cost, any repairs that are reasonably necessary to correct any fault in the operation of your Davies, Craig product provided that such a fault is directly attributable to a defect in the workmanship or materials used in the manufacture of the part(s). This warranty is void if the product is misused, altered, tampered with, or is installed or used in a manner that is inconsistent with Davies, Craig's written recommendations and/or installation instructions. Labour and consequential costs are excluded. **DAVIES, CRAIG PTY. LTD.**

Register your warranty at: www.daviescraig.com.au under the support tab.