



High Country Tek, Inc.

# Hydraulic Fan System Controller: **HFS-2**

Electronic Control Solutions for the Global Fluid Power Industry



## Application Information:

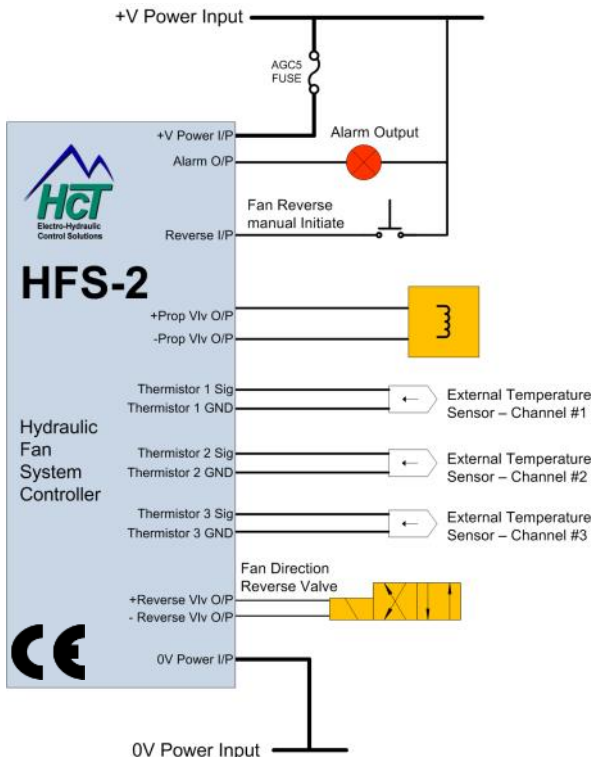
- Optimizes fan speed control relative to temperature requirements.
- **Engines or systems without J1939 capability.**
- Uni **or** Bi-Directional hydraulic fan drive applications.
- OEM, Re-power and Retro-fit opportunities.

## Product Feature Overview:

- Pre-written Windows™ software application, ready for user values.
- **3x discrete temperature zone sensor inputs**
- Automatic or Manually initiated fan reverse cycle
- Charge air priority/limiting and noise test features
- 1x PWM output for any make of proportional valve or pump control.
- 1x ON/OFF output for reverse fan direction valve
- 1x ON/OFF output for alarm integration into host system
- Open and short circuit cable protection with monitoring
- Heavy duty industry standard 2 part or WeatherPak connectors.
- System 'error' indicator LED with blink code.



## Electrical Connection Diagram:



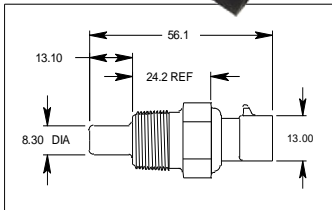
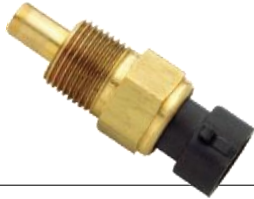
## Controller Specification Overview:

- |                              |  |
|------------------------------|--|
| <b>Housing Type:-</b>        | HCT unique 'encapsulated' block.                               |
| <b>Input Supply Voltage:</b> | 10 – 32VDC ( Absolute Maximum )                                |
| <b>Input Supply Current:</b> | Valve Current Setting + 200mA Quiescent (Max)                  |
| <b>Command Input Type:</b>   | 3 x 2 wire Thermistor, temperature                             |
| <b>Command Input Value:</b>  | $\Omega$ only (Max temp = 50 $\Omega$ Min temp = 2M $\Omega$ ) |
| <b>Proportional Output:</b>  | 1 x PWM up to 3.3A max current                                 |
| <b>Reverse cycle I/P:</b>    | Lo → Hi logic input with S/W de-bounce                         |
| <b>Reverse valve Output:</b> | 1 x ON/OFF up to 3.3A max current                              |
| <b>Alarm Output:</b>         | 1 x ON/OFF up to 3.3A max current                              |
| <b>Dither Frequency :</b>    | Software adjustable, ~30 to 250Hz                              |
| <b>Housing Material:-</b>    | Black, Polycarbonate   |
| <b>Wire Connections:-</b>    | 2 Part or Weatherpack connectors                               |
| <b>Connector type:-</b>      | Weidmuller / Weatherpack ( Q option )                          |
| <b>Encapsulation:-</b>       | Flameproof epoxy resin   |
| <b>Mounting:-</b>            | 3 x No. 8 ( 5mm ) screws .                                     |
| <b>Temperature range:-</b>   | - 40 to +75 °C ( operational )                                 |
| <b>NEMA/IP Rating:</b>       | NEMA 6P / IP67   |
| ( Module only )              | derate for connector as required.                              |



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## Temperature Sensor Specifications: 206-00083



Housing Type: Delphi Unique  
 Typical supply voltage: +5VDC  
 Dissipation Constant\*: 24mW/°C  
 Thermal Time Constant\*\*: 17.5 to 23.5 seconds  
 Temperature range: -40 to +150 °C  
 ( operational )  
 NEMA/IP Rating: NEMA 6P/68

Sensor Body: Brass  
 Connector Body: PBT 30%  
 Glass Filled  
 Hex Size: 18.9mm / 3/4"  
 Thread Size: 3/8" - 18 NPTF  
 Thread Sealant: GM09985473  
 Sealing Pressure: 145kPa  
 Installation Torque: 20Nm  
 Overall Weight: 40g

**Contact HCT customer service for more sensor options and information**

## Connector Details:

## Dimensional Data:

**HFS-2:** - 2 part 'Orange' connectors are:-

Weidmuller style SLA and BLS

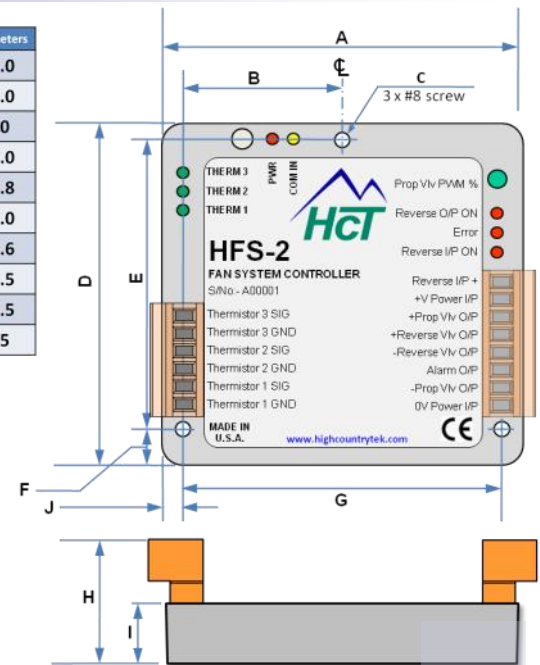
### 6 way connector:

- Pin 1: Thermistor #3 Signal
- Pin 2: Thermistor #3 GND
- Pin 3: Thermistor #2 Signal
- Pin 4: Thermistor #2 GND
- Pin 5: Thermistor #1 Signal
- Pin 6: Thermistor #1 GND

### 8 way connector:

- Pin 1: Reverse cycle start input
- Pin 2: +VDC supply input
- Pin 3: +Prop. Valve O/P
- Pin 4: +Reverse valve O/P
- Pin 5: -Reverse valve O/P
- Pin 6: +Alarm O/P
- Pin 7: -Prop. Valve O/P
- Pin 8: 0V Power supply / GND

Label	Inches	Millimeters
A	3.77	96.0
B	1.89	48.0
C	Ø 0.186	5.0
D	3.82	97.0
E	3.10	78.8
F	0.46	12.0
G	3.25	82.6
H	0.1.6	41.5
I	0.64	16.5
J	0.26	6.5



### Notes:

Unit weight is approx. 250 grams

Not to scale, please contact HCT for exact dimensions

HFS-2 Module shown with Weidmuller connectors

## Need More Information ?

For the latest company and product information customer service, pricing, order placement and application support, contact us through E-mail at: [info@hctcontrols.com](mailto:info@hctcontrols.com)

# www.hctcontrols.com



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