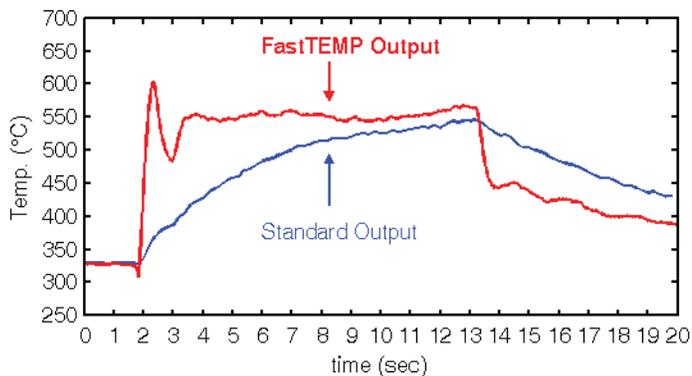


# ECM FastTemp™ Fast Response Thermocouple Module



- Fast Response (less than 50 msec)
- Uses Standard K-Type Thermocouples
- -60 to 1370 °C Measurement Range
- Internal Cold Junction Compensation
- Fast and Standard Speed Outputs
- Driven Voltage Outputs
- Wide Supply Voltage Range
- Environmentally Sealed

ECM's FastTemp thermocouple module outputs ultra-high bandwidth temperature measurements using standard K-Type (Chromel Alumel), grounded thermocouple probes. Measurements that once required a 0.005" (0.13mm) diameter exposed-bead thermocouple can now be performed using a 1/16" (1.5mm) shielded (i.e. more rugged) thermocouple. The speed increase is made possible by ECM's proprietary active-drive thermocouple circuitry. With FastTemp, fast dynamic temperature information hidden by conventional thermocouple amplifiers now becomes available for use. FastTemp is especially suited for temperature measurements in the exhaust of engines.

## Specifications

<b>Range</b>	-60 to 1370°C (-76 to 2498°F)
<b>Accuracy</b>	± 1°C RTI (relative to input) ± 10mV RTO (relative to output)
<b>Response Time</b>	<b>Fast</b> Less than 50 msec (10 to 90%) <b>Standard</b> Dependant on probe used
<b>Outputs</b>	5mV/°C for Fast and Standard signals Less than 500Ω output impedance 200V Isolation from sensor input to outputs 2 Female BNC connectors
<b>Sensor</b>	<b>Supplied</b> 1/16" (1.5mm) dia., 6" (150mm) grounded K-Type <b>Optional</b> Any grounded K-Type Internal cold junction compensation
<b>Cable</b>	<b>Sensor</b> 2m <b>Power</b> 2m
<b>Power</b>	6 to 35 VDC, 200mW typical 500V galvanic isolation from sensor input and outputs LED power status indicator
<b>Mounting</b>	Two 1/5" (5mm) holes from top, Two 10-32 (M5 x 0.8) threaded holes on back
<b>Size &amp; Weight</b>	152mm x 70mm x 30mm (6" x 2.75" x 1.2"), 360gm (12.7oz)
<b>Environmental</b>	IP67, -55 to +125°C, 100% humidity, environmentally sealed

## Ordering Information

<b>FastTemp</b>	FastTemp Kit (includes parts FT-01, FT-02, FT-03, FT-04, FT-05. See below.)
<b>FT-01</b>	FastTemp module
<b>FT-02</b>	Spare 2m power cable (use with P/N FT-03)
<b>FT-03</b>	Spare power cable banana plug adapter
<b>FT-04</b>	Spare 2m thermocouple sensor cable
<b>FT-05</b>	Spare 1/16" (1.5mm) diameter, 6" (150mm) long, grounded K-Type thermocouple probe
<b>04-01</b>	Optional AC/DC Supply, supports multiple units

**ECM** ENGINE CONTROL  
AND MONITORING

Los Altos, CA 94023-0040 • USA • Tel: (408) 734-3433 • Fax: (408) 734-3432 • [www.ecm-co.com](http://www.ecm-co.com)

Specifications subject to change without notice. Copyright © 2014 ECM. Printed in USA.  
ECM\_FastTemp04-15-14.pdf

Techniques protected under patents issued and pending.