

# Amphenol Thermometrics' Inline flow-through temperature sensors.

## Content

- Highlight the features of the flow-through series thermistor assemblies
- Discuss the benefits of the flow-through series
- Review typical applications

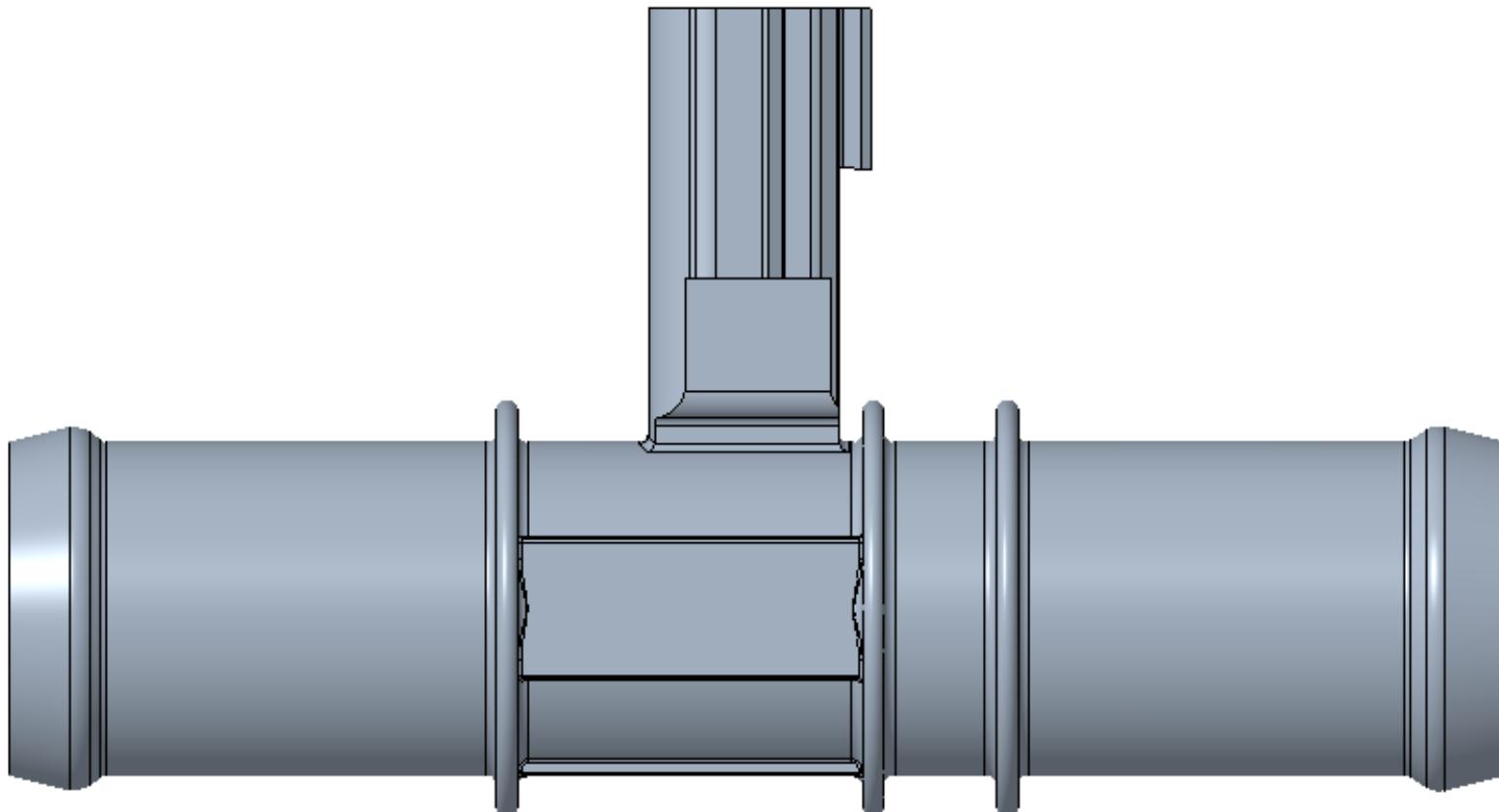
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***Note: View in slideshow mode to see animations***



# Introduction

- Hose mounted
- NTC thermistor technology
- Fluid temperature

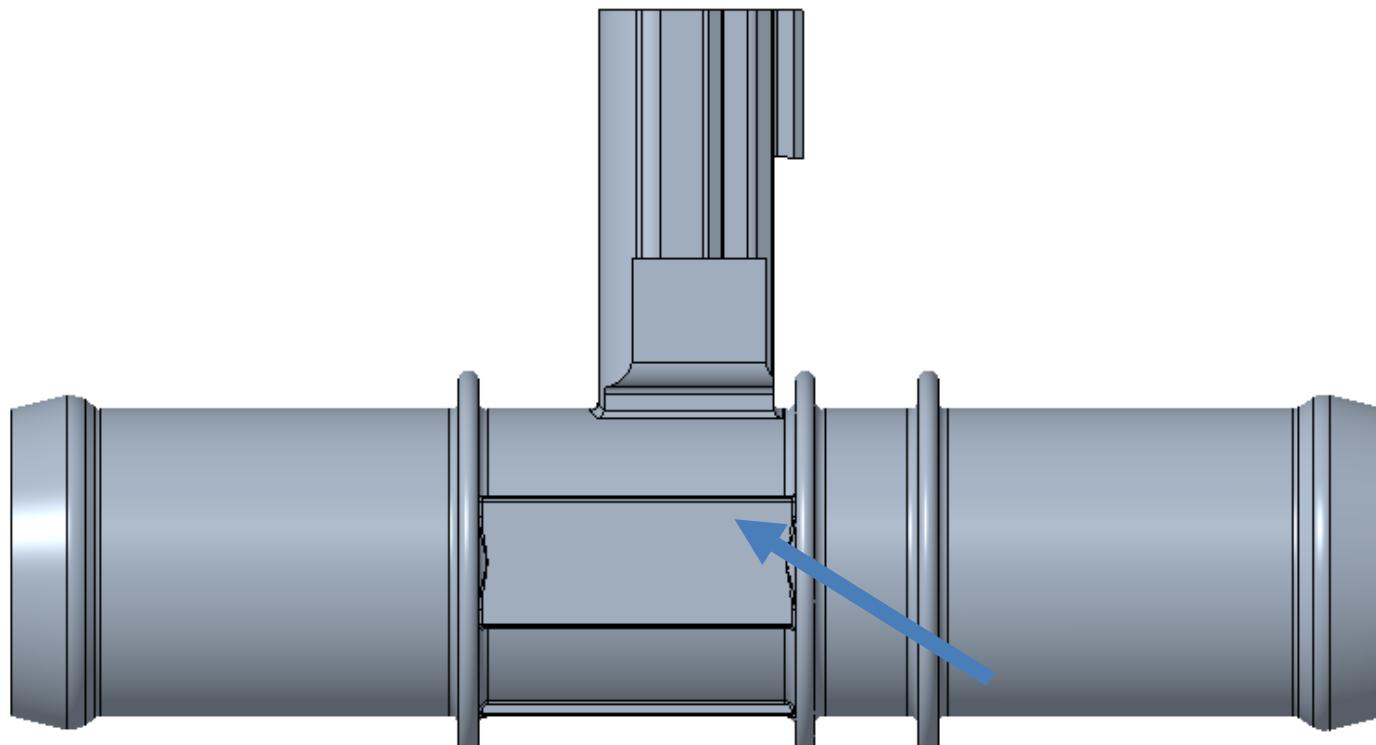


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# Construction

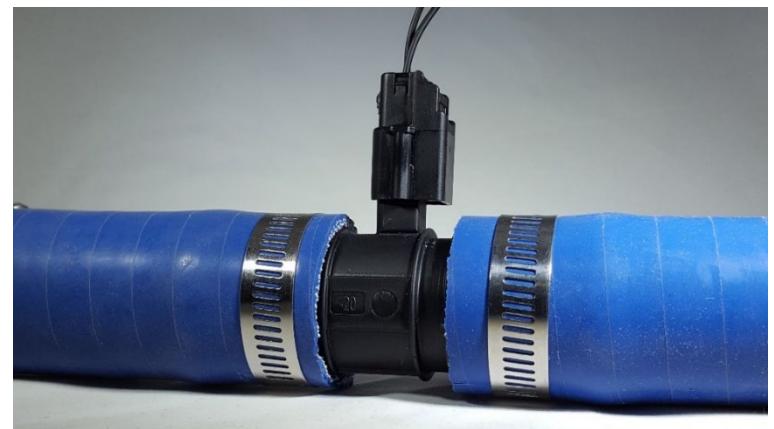
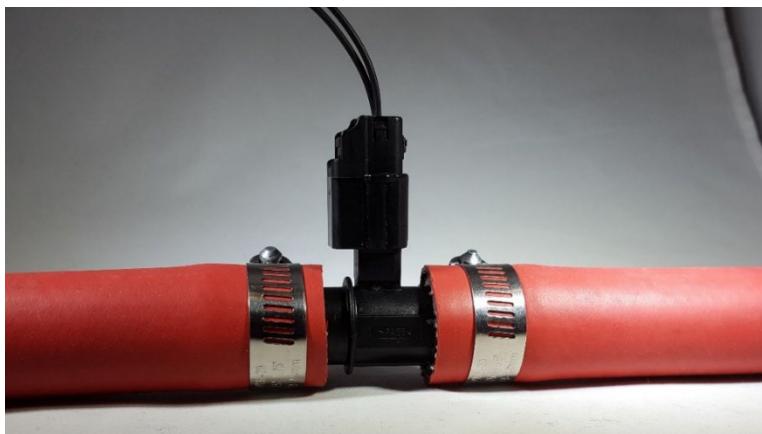
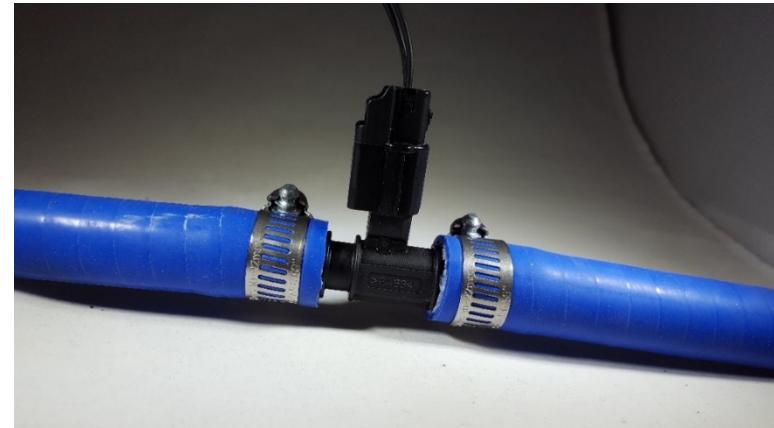
- Thermistor pre-mold 2 pc construction
- Direct soldered connection to NTC
- Leak proof construction



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# Features



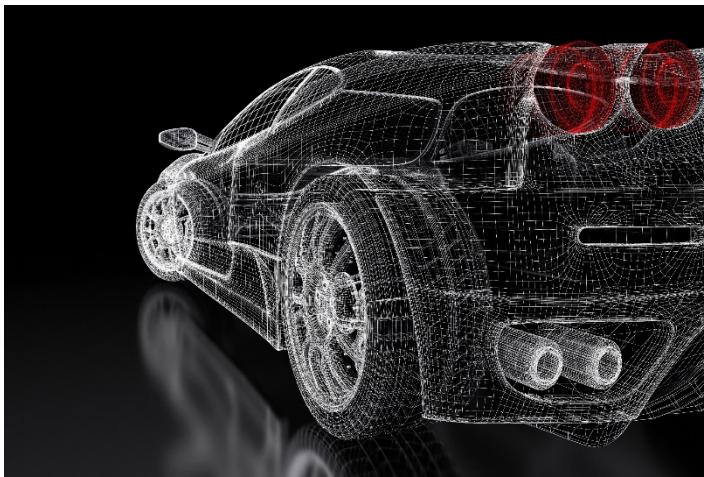
Part No.	Hose Size (in)	SAE J1231 Hose Dash Size
GE-2102	1/2"	-8
GE-1935	3/4"	-12
GE-2103	1 1/4"	-20

Operating Temp:  
-40°C to 120°C

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- Housing Mat'l: Polyamide 6/6
- Beta 25/85: 3977K
- Resistance @ 25°C: 10,000Ω
- Typ. Operating Pressure: 241 kPa



RvT Table			
Temp. (°C)	Resistance (Ω)	Resistance Tolerance (+ %)	Temp. Tolerance (+°C)
-40	332776	5.95	0.5
-20	96481	4.24	0.5
0	32566	2.71	0.4
20	12486	1.72	0.4
25	10000	1.50	0.3
40	5331	2.11	0.5
60	2490	2.84	0.6
85	1071	3.58	0.8
100	678.1	5.56	1.0
120	338.2	7.00	1.2

### Mating Connector

Molex 31403-2100 without CPA Lock  
 Molex 31403-2110 with CPA Lock

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# Flow Through Sensor Common Applications

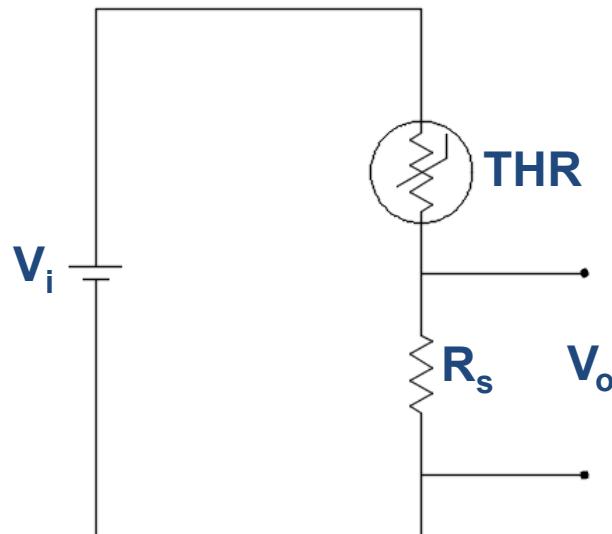
- Engine Coolant Temperature
- Battery Pack Coolant Line Temperature
- Process Flow Management
- HVAC Water Management
- Home Appliances



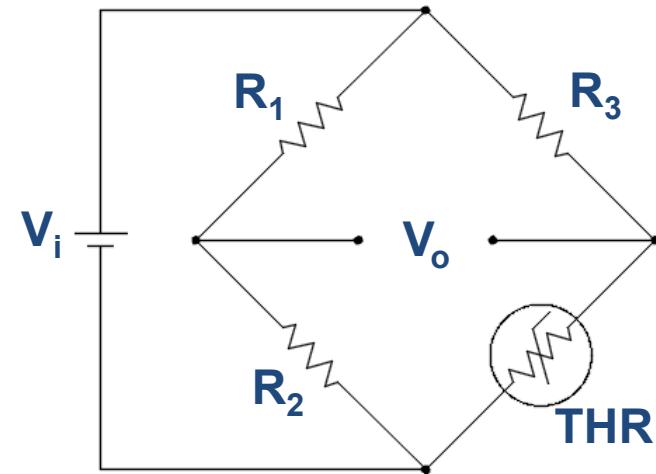
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# Flow Through Sensor Common Applications, cont'd.

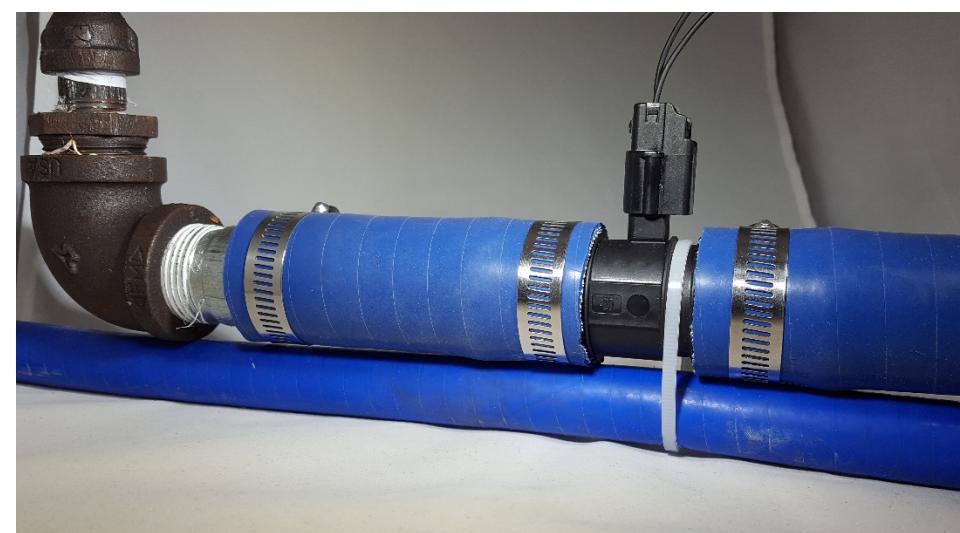
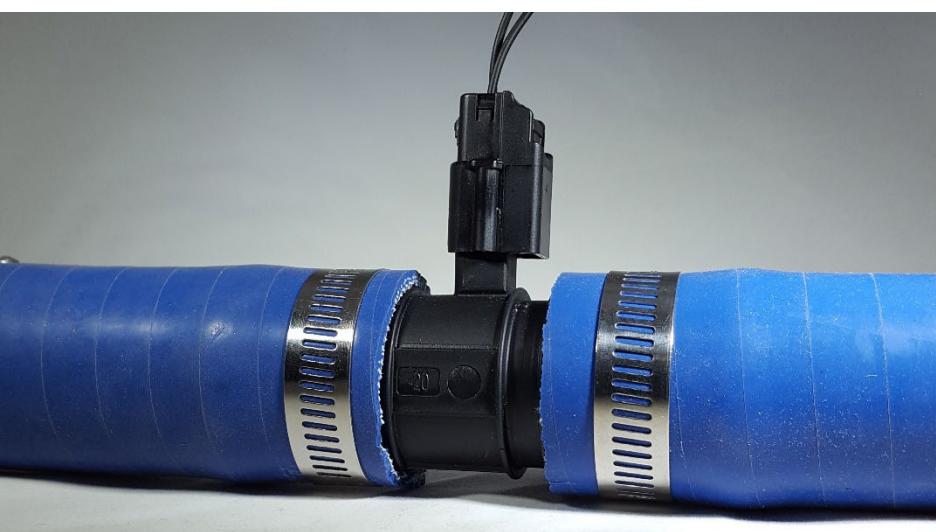
Voltage Divider



Wheatstone Bridge



## Typical Installation



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# Compatible Hose Clamps



Worm Gear



Constant Tension



Pinch Style

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# Additional Information

## Product Spotlight

## Datasheet



### Inline Flow-Through Fluid Temperature Sensor



The inline flow-through temperature sensor monitors the temperature of a fluid that passes through it. A system control module receives this temperature reading and uses a control loop to control the overall system temperature. This could be engine temperature, heater temperature, industrial supply temperature, etc.

#### Applications

- Engine Coolant Temperature
- Battery Pack Coolant Line Temperature
- Process Flow Management
- HVAC Water Management
- Home Appliances

#### Features

- High Sensitivity
- Wide Application Range
- Compact Design
- SAE J-1231 Interface
- USCAR Sealed Connection System
- Available in 3 standard hose sizes



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# Summary

- Direct soldered NTC and pre-mold housing construction with proven reliability
- $10,000\Omega \pm 1.5\% @ 25^\circ\text{C}$
- 25/85 Beta of 3977K
- 3 Standard hose sizes:  $\frac{1}{2}''$ ,  $\frac{3}{4}''$ , and  $1\frac{1}{4}''$
- Typical Operating Pressure: 241 kPa
- Easy integration into existing systems
- Catalog and customized options possible

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