

Custom Thermal Switch Configurations



Honeywell's Custom Thermal Switch configurations utilize the basic 200 or 500 Series, hermetically sealed switching mechanism.

Modules are manufactured to meet specific custom requirements, including severe or unusual environments, high or low current applications, unusual temperature ranges and/or nonstandard differentials and setpoint tolerances.

Modules can be incorporated into a broad variety of configurations to meet unique customer requirements. Special features include all stainless probe configurations; specified connectors; overmolding; setpoint tolerances to $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$); special processing in accordance with custom requirements; and unique outlines and mounting configurations designed to meet unusual envelop requirements. Thermal response of our custom switches can be tailored to meet specific application requirements.

All Honeywell Custom Thermal Switches are ideally suited to applications where exceptional reliability and consistent high quality are key requirements.

Application Examples:

- Heated window temperature control
- Duct air temperature control
- Gyro/accelerometer temperature control
- Motor overheat protection
- Transmission overheat detection
- Pump motor overheat protection
- Hydraulic system temperature control and overheat warning
- Surface and strip heater control
- Battery charge rate control

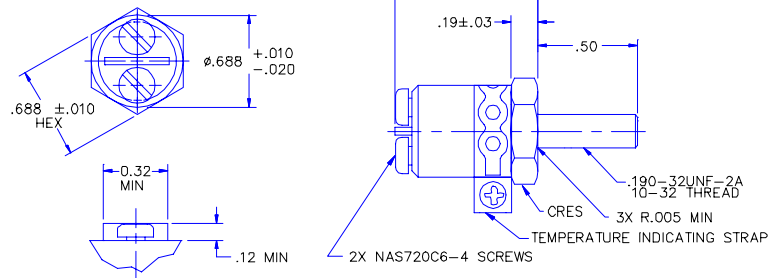
Features

- Special terminal configurations and plating
- Overmolds and lead wires available
- Temperature ranges from -100°F (-73.3°C) to over $+700^{\circ}\text{F}$ ($+371^{\circ}\text{C}$)
- Custom setpoint tolerances to $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$)
- High pressure housings available
- Crisp SPST contact operation
- Contact pressure independent of bimetal disc
- Special electrical connectors
- High vibration and shock resistance
- All welded construction
- Hermetically sealed, backfilled with Nitrogen having a 10% Helium tracer
- Unique shapes assemblies, materials, and finishes designed to meet your custom requirements
- Anti-icing/de-icing controls

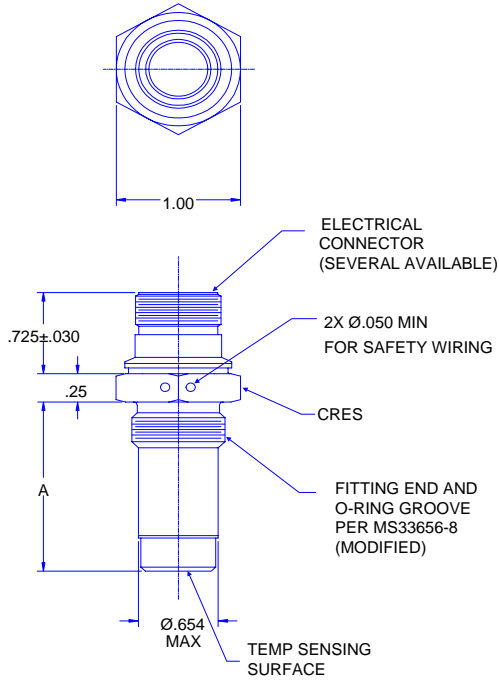
Configuration Drawings (dimensions in millimeters)

All configurations shown are available with upright terminals

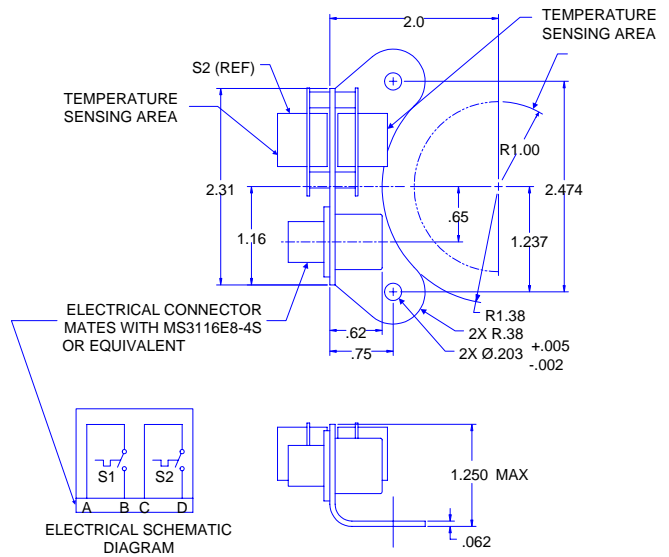
Overheat Protection



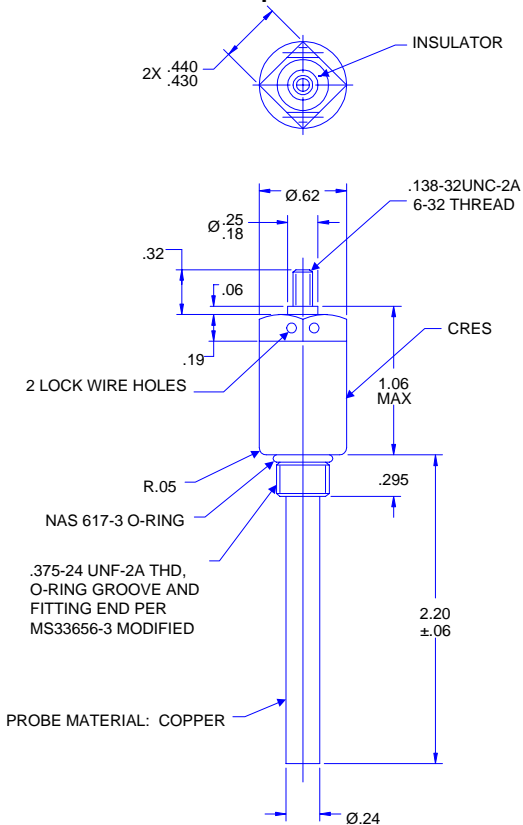
Bleed Air



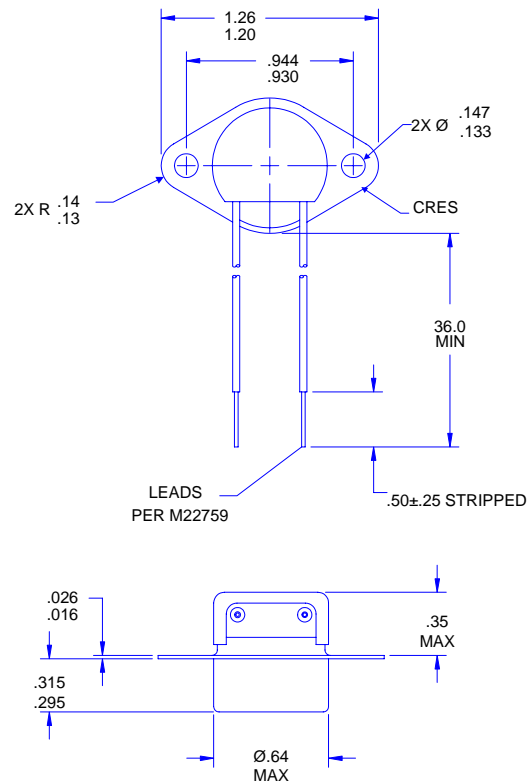
De-icing



Transmission Overtemp Protection



Environmental Control



Specifications for Custom Thermal Switches

Performance Characteristics	
Contact Arrangement	SPST (SPDT thermostats are available. Please contact factory for more information)
Contact Ratings	5 amperes resistive at 28 VDC 2.0 amperes resistive at 115 VAC RMS 1.0 ampere lamp load at 28 VDC
Endurance	100,000 cycles minimum at rated DC or AC loads
Dielectric Withstanding	1500 VAC RMS - terminals to case, 500 microramperes maximum leakage
Insulation Resistance	500 megohms minimum at 500 VDC
Environmental (MIL-STD-202)	
Vibration (Sine)	Method 204, 50g to 2000 Hz, 30g to 2000 Hz
Vibration (Random)	Method 204, over 60g RMS, 20 to 2000 Hz
Shock	Method 213, 100g/6ms, 750g/0.5ms
Thermal Shock	Method 107, Condition B, -85° to +257°F (-65°C to 125°C)
Acceleration	Method 212, Condition A, 30g
Salt Spray	Method 101, Condition B, 48 hours
Moisture Resistance	Method 106, 240 hours, 90 - 98% RH and from +75°F to +150°F (+23.8°C to 65.5°C)
Hermetic Seal	Method 112, Condition C, Proc. IV

Tolerance Limits

Honeywell also offers a line of high current modules rated to 15 amps resistive at 120/240 VAC RMS, 10 amps resistive at 28 VDC.

Specified Temp Setpoint Range °F (°C)	Standard Setpoint Tolerance °F (°C)	Nominal Differential Range °F (°C)	
		Min	Max
-100 to 0 (-73.3 to -18)	±6 (±3)	5 (3)	35 (19)
0 to 250 (-18 to 121)	±5 (±3)	3 (2)	50 (28)
250 to 300 (121 to 149)	±7 (±4)	5 (3)	50 (28)
300 to 700 (149 to 371)	±10 (±6)	5 (3)	70 (39)

Find out more:

www.thermalswitch.com

Defense & Space Redmond

Honeywell International, Inc.
MAIL ADDRESS: P.O. Box 97001
15001 N.E. 36th Street
Redmond, Washington 98073-9701
PHONE: 888 206 1667
FAX: 425 883 2104
www.honeywell.com

TScustom 11/2005
Copyright © 2000, Honeywell
International Inc. All Rights
Reserved. Printed in USA

ISO-9001 Certification Since 1995

DISCLAIMER: Specifications are subject to change without notice. Honeywell reserves the right to make changes to any product or technology herein to improve reliability, function, or design. Honeywell does not assume any liability arising out of the application or use of the product.

