Honeywell

High Temperature Premium Large Basic Switches

HT Series

003129

Issue 1

Datasheet

DESCRIPTION

Honeywell HT Series high temperature premium large basic switches are designed for extreme environmental temperature applications. The HT Series is designed for continuous use in temperature environments up to 538 °C [1000 °F]. The switch design incorporates a high temperature snap switch mechanism and stainless steel housing with a ceramic base which is well suited for high temperature environments typically found in commercial and industrial applications. The HT Series is electrically rated up to 250 VAC with UL and CSA certifications. Overall housing dimensions for the switch (1.96 in L x 0.70 in W x 1.25 in H) are optimal where there is limited space on equipment.

VALUE TO CUSTOMERS

- Designed for a wide temperature range with a continuous upper temperature of 538 °C [1000 °F]
- Preferred for high temperature applications, the reliability of the HT Series limit switches minimize equipment downtime which results in increased equipment productivity and cost savings

FEATURES

- Designed for high temperature applications, up to 538 °C [1000 °F] for continuous use
- High-temperature snap-spring design provides stable switch characteristics
- Different styles of integral actuators: standard pin plunger or for additional overtravel, radius plunger or inline roller plunger styles are available
- Stainless steel actuators and housings with a ceramic base
- Side mount to the common 25,4 mm [1.00 in] centers or panel mount with a 15/32 [0.469] inch diameter hole
- Certifications for UL and CSA

POTENTIAL APPLICATIONS

- Valve position sensing for aircraft engines
- Industrial incinerators for door position
- Industrial ovens for door position

DIFFERENTIATION

- Only manufacturer to offer a high temperature 538 °C [1000 °F] rated electromechanical switch in a small size package

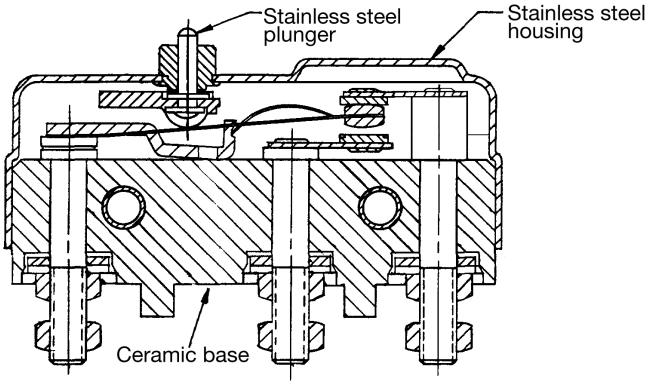
PORTFOLIO

In addition to the HT Series high temperature switches, Honeywell offers a complete range of sealed switches for aircraft and military systems. The sealed switches include the EN Series, HM Series, HE Series, HR Series, HS Series, SE Series, and XE Series.

High Temperature Premium Large Basic Switches, HT Series

Table 1. Specifications

Characteristic	Parameter
Description	High temperature unsealed premium large basic switch
Certifications	UL & CSA
Housing material	Stainless steel housing with a ceramic base
Actuators	Pin plunger, large diameter pin plunger with bushing mount, inline roller plunger with bushing mount
Contacts	Fine silver and silver alloy
Circuitry	1PDT (one-pole double-throw)
Electrical rating	3 A, 1/10 HP @ 125 Vac or 2 A, 1/6 HP @ 250 Vac
Electrical termination	Stainless steel 6-32 threads with hex nuts
Mechanical endurance	6000 cycles
Electrical endurance	6000 cycles
Dielectric strength (initial)	1000 VRMS, 500 μA max. leakage
Environmental sealing	Unsealed
Temperature range	-54 °C to 538 °C [-67 °F to 1000 °F]



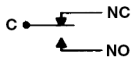
HT SERIES SWITCHES

The HT Series basic switches are designed with a high-temperature snap-spring mechanism in a stainless steel housing with a ceramic base. Installation of the switch is accomplished with side mount on 25,4 mm [1.00 in] centers or panel mount with a 15/32 [0.469] inch diameter threaded bushing. The panel mount style (threaded bushing) provides additional overtravel for the application.

Electrical connections for the HT Series switches are #6-32 stainless steel threaded terminals integral to the switch with hex nuts supplied with the switches.

CIRCUITRY

1PDT



One Single-Pole
Double-Throw Circuit

ELECTROMECHANICAL SWITCHES

Definitions below explain the meaning of operating characteristics. Characteristics shown in tables were chosen as most significant. They are taken at normal room temperature and humidity. These may vary as temperature and humidity conditions differ. Sketches show how characteristics are measured for in-line plunger actuation.

Linear dimensions for in-line actuation are from top of plunger to a reference line.

Differential Travel (D.T.) – Plunger or actuator travel from point where contacts "snap-over" to point where they "snapback."

Free Position (F.P.) – Position of switch plunger or actuator when no external force is applied (other than gravity).

Full Overtravel Force – Force required to attain full overtravel of actuator.

Operating Position (O.P.) – Position of switch plunger or actuator at which point contacts snap from normal to operated position. Note that in the case of flexible or adjustable actuators, the operating position is measured from the end of the lever or its maximum length. Location of operating position measurement shown on mounting dimension drawings.

Operating Force (O.F.) – Amount of force applied to switch plunger or actuator to cause contact "snap-over." Note in the case of adjustable actuators, the force is measured from the maximum length position of the lever.

Overtravel (O.T.) – Plunger or actuator travel available beyond operating position.

Pretravel (P.T.) – Distance or angle traveled in moving plunger or actuator from free position to operating position.

Release Force (R.F.) – Amount of force still applied to switch plunger or actuator at moment contacts snap from operated position to unoperated position.

Total Travel (T.T.) – Distance from actuator free position to overtravel limit position.

IN-LINE PLUNGER ACTUATION

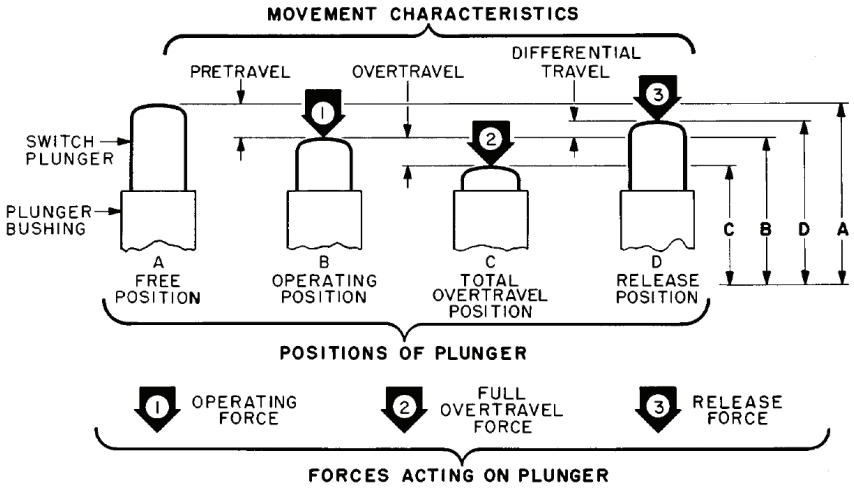


Table 2. Order Guide

		Switch Characteristics					
Catalog Listing	**Actuator & Installation**	**Operating Force N [oz]**	**Release Force min. N [oz]**	**Free Position nom. mm [in]**	**Pretravel max. mm [in]**	**Overtravel min. mm [in]**	**Differential Travel max. mm [in]**
1HT1	Pin plunger with bushing mount	2,78 to 5,56 [10 to 20]	1,67 [6.0]	25,4 [1.00]	1,65 [0.065]	4,78 [0.188]	0,25 [0.010]
2HT1	Pin plunger with side mount	2,78 to 5,56 [10 to 20]	1,67 [6.0]	18,2 [0.72]	1,27 [0.050]	0,25 [0.010]	0,25 [0.010]
3HT1	Inline roller plunger with bushing mount	8,34 [30] max.	1,67 [6.0]	37,3 [1.47]	1,42 [0.056]	4,78 [0.188]	0,25 [0.010]

PRODUCT DIMENSIONS

Figure 1. 1HT1 mm [in]

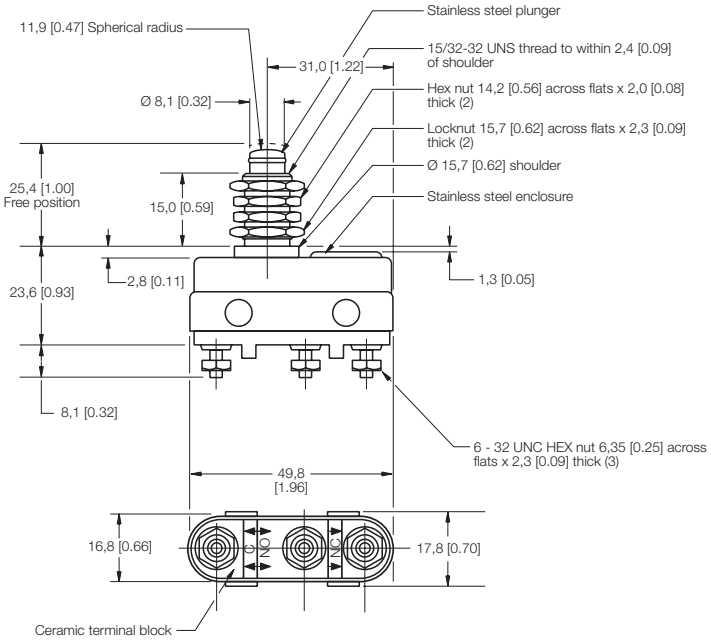
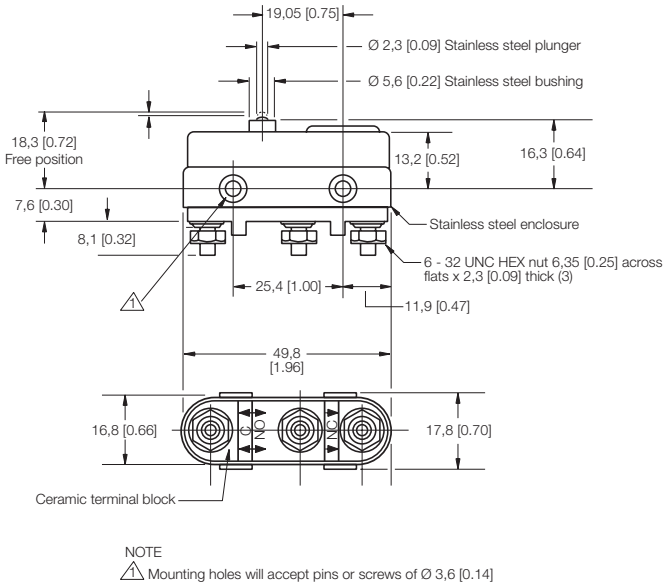
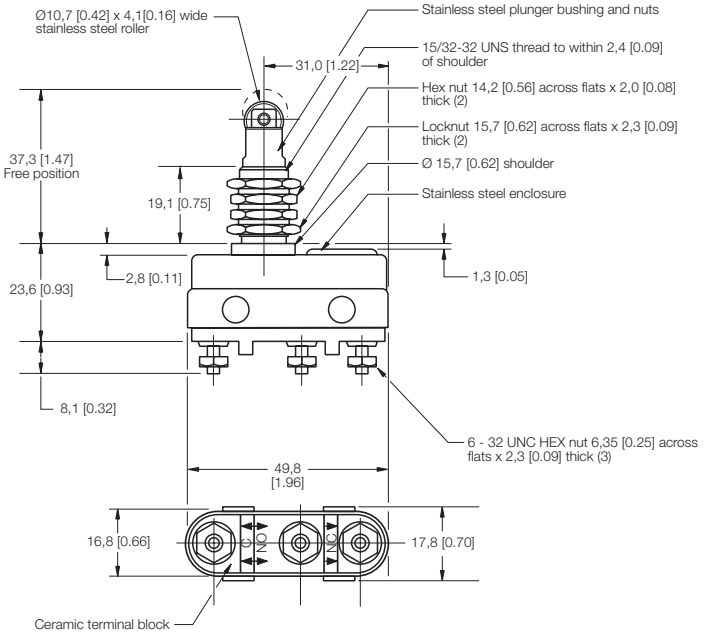


Figure 2. 2HT1 mm [in]



NOTE
1 Mounting holes will accept pins or screws of Ø 3,6 [0.14]

Figure 3. 3HT1 mm [in]



ADDITIONAL MATERIALS

The following associated literature is available on the Honeywell web site at sensing.honeywell.com:

- Product installation instructions
- Aerospace range guide

⚠ WARNING
PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING
MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

Find out more

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003129-1-EN IL50 GLO
July 2016