

Liquid-Resistant
THINSWITCH[®]

U.S. Patent Nos. 5,446,252 6,982,392

Installation and Operating Instructions
Applies to T-222-LR & HT-291-LR

RoHS Compliant



General

The Thinswitch Limit Switch verifies ejector plate return when tied into the machine control. Placed next to the rest buttons in a mold, the switch protects the mold from premature closure after part ejection.

The Thinswitch can also be used with a bolt or pin actuator with a minimum diameter of 3/8" (9.5mm). Care should be taken to avoid crushing the housing with the actuator.

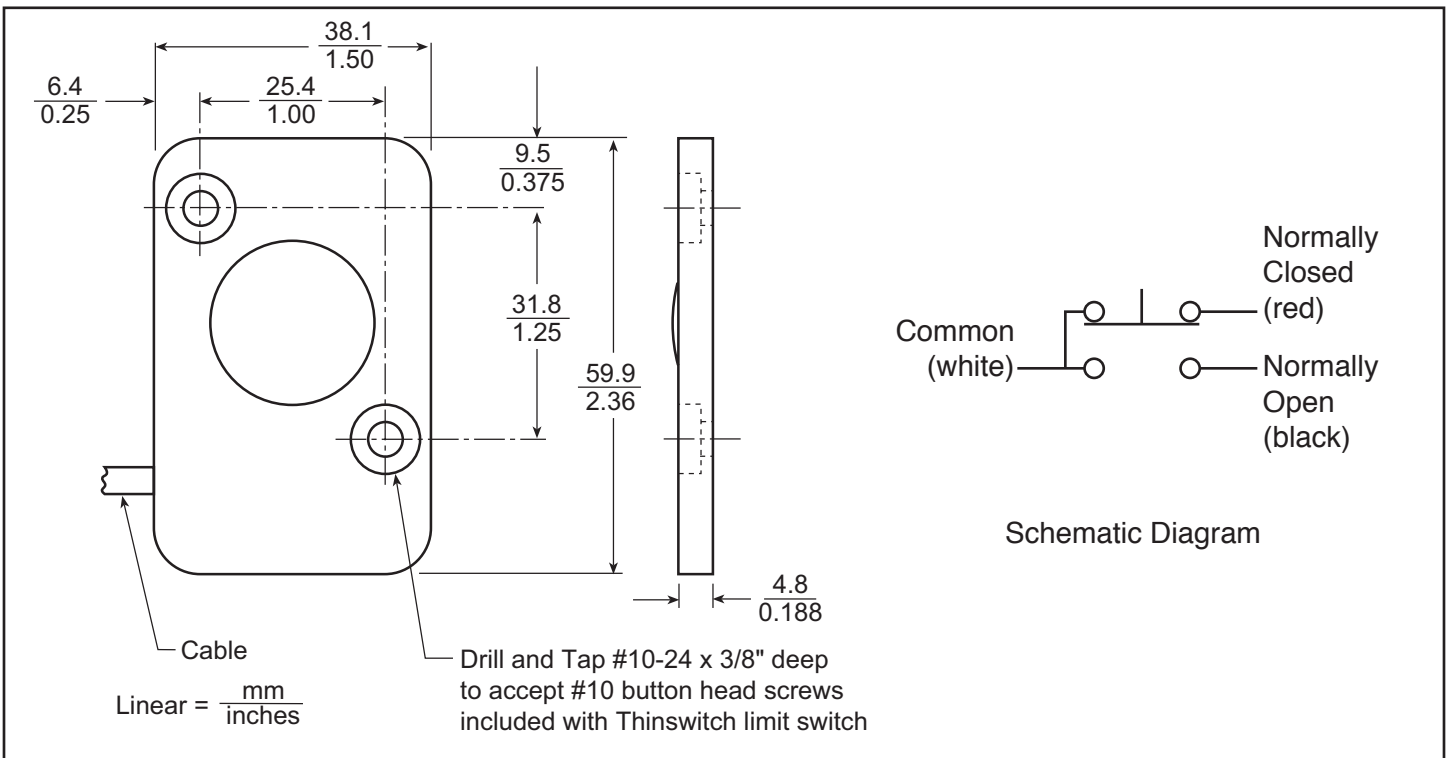
The Liquid-Resistant Thinswitch is designed to operate in conditions where occasional water or oil spray is present. Do not immerse the switch or subject it to direct, continuous liquid spray.

The Thinswitch Limit Switch is designed for use in very low power mold protection control circuits. It is not intended to switch heavy loads in power applications.

Installation

Install the Thinswitch as follows:

1. Check height of rest buttons. If button height is less than .1875" (4.76mm), machine a pocket to accept the switch to match rest button height. The actuation spring should extend above the rest button.
2. The switch may be positioned in any direction.
3. Verify that any rest buttons on the ejector plate will not interfere with the switch, wire clips or wire routing.
4. Drill and tap two mounting holes 10-24 x 3/8" (9.5mm) deep per drawing.
5. Verify the switch contact operation before placing mold in service.
6. Wire switch in accordance with prevailing electrical standards. Wire switch directly to the injection molding machine controls or to an approved locking male plug. An electrical receptacle can be mounted to the molding machine for convenience.

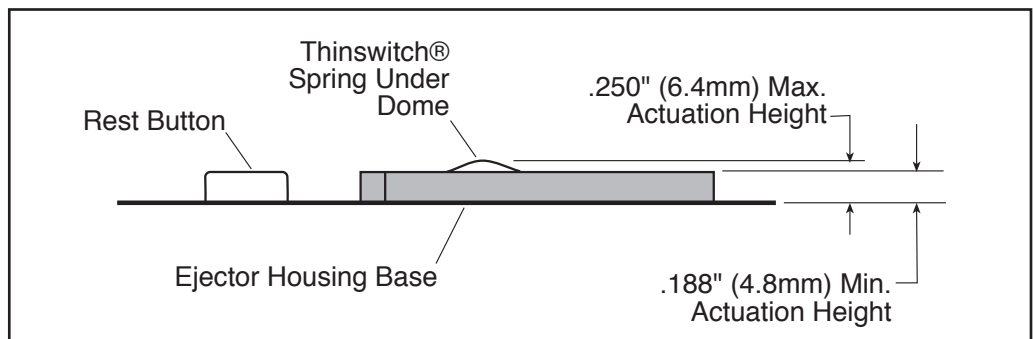
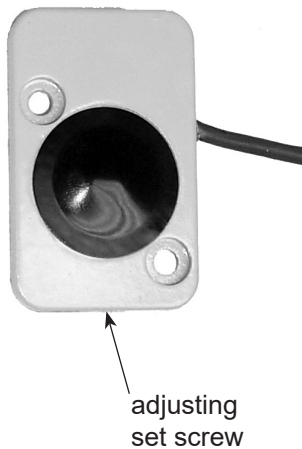


Operation

- The operating point of the switch is adjusted by turning the set screw shown below.
- Minimum actuation height is .188" (4.7mm), Maximum recommended actuation height is .250" (6.4mm).
- Each 1/4 turn of the adjusting screw changes actuation height .012" (0.3mm).
 - Adjust the actuation height to .010" - .015" (.25mm - .38mm) above minimum actuation height.

Before shipment, all switches are calibrated to optimum actuation position.

Premature spring and switch failure may result by adjusting the operating point more than .020" (.5mm) above minimum actuation height.



Specifications

Rated current is dependent upon operating temperature. A lower operating temperature allows more current safely through the Thinswitch cable. See the table below for details.

Rated Current (Resistive) vs. Operating Temperature					
T-222-LR			HT-291-LR		
Amps	°F	°C	Amps	°F	°C
5.0	85	29.4	5.0	100	37.7
4.0	120	49.0	4.5	155	68.3
3.0	155	68.3	4.0	210	98.8
2.0	175	79.4	3.5	250	121.1

Above rated current is resistive. Maximum inductive current is 4A.

- Switching Element ContactsForm C - SPDT
- Utilization Categories.....AC-12, DC-12
- Insulation Voltage..... $U_i = 250V$
- Impulse Withstand Voltage $U_{imp} = 2.5kV$
- Pollution Degree3
- Relative Humidity $\leq 50\%$ at 40°C max.
- Operating Altitude.....3,000M max.
- Operating and storage/transport
 - T-222-LR.....-53.9°C to +79.4°C
 - HT-291-LR.....-53.9°C to +121°C

Component Materials

- Body.....Fiberglass-Reinforced Nylon
- Spring.....Stainless Steel
- Back Cover.....Polyester Film
- Wire Leads22 ga. stranded 3 conductor, shielded cable, 6ft. (1.8m) long, ends stripped and tinned

Limited Warranty

Seller warrants that this product supplied will conform to the description herein stated and that the product will be of standard quality. This is the sole warranty made by Seller with respect to this product. Seller expressly disclaims any other express or implied warranties, including, but not limited to, the implied warranty of merchantability and the implied warranty of fitness for a particular purpose.

Seller shall not be liable for any cost or damages, whether direct, incidental or consequential, including, but not limited to, any injury, loss or damage resulting from the use of this product, regardless of whether any claim for such cost or damages is based on warranty, contract, negligence, tort or strict liability. The sole liability of Seller is limited to repairing or replacing this product.

This warranty shall not apply to any products that have been repaired or altered by anyone other than Seller. The warranty shall not apply to any products subject to misuse due to common negligence or accident, nor to any products manufactured by Seller which are not installed or operated in accordance with the printed instructions of Seller or which have been operated beyond the rated capacity of the goods.