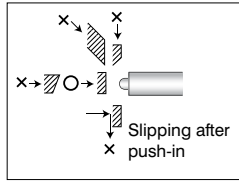


# Precision Limit Switches

## High-Vacuum Resistance Switches

- $10^{-5}$  Pa high vacuum switch
- Ultra-small design
- 3 micron ( $\mu\text{m}$ ) repeat accuracy
- No movement differential
- Stainless steel housings

### High Vacuum Resistance



O indicates correct target approach and orientation.  
 X indicates approach and orientation that should be avoided.

High-Vacuum Resistance Switches Selection Chart									
Part Number	Price	Actuator/Head Type*	Barrel Type	Barrel Diameter/Thread*	Stroke	Switching Output	Contact Force	Sensor Dimensions	Connection Type
<b>High-Vacuum Resistance Switches</b>									
<b>GN-PT5M3A</b>	\$192.00	1.5 mm (0.059 in) plunger SR 2mm (0.079 in)	Threaded	M5x0.5	1.5 mm (0.059 in)	N.O.	0.5 N	Figure 1	Polytetrafluoroethylene (PTFE) 0.5 m (1.6 ft) core wire, AWG 30
<b>GN-PT5M3B</b>	\$192.00	1.5 mm (0.059 in) plunger SR 2mm (0.079 in)	Threaded	M5x0.5	1.5 mm (0.059 in)	N.C.	0.5 N	Figure 2	Polytetrafluoroethylene (PTFE) 0.5 m (1.6 ft) core wire, AWG 30

\*  $\varnothing$  = diameter, SR = surface radius



**GN-PT5M3A**



**GN-PT5M3B**

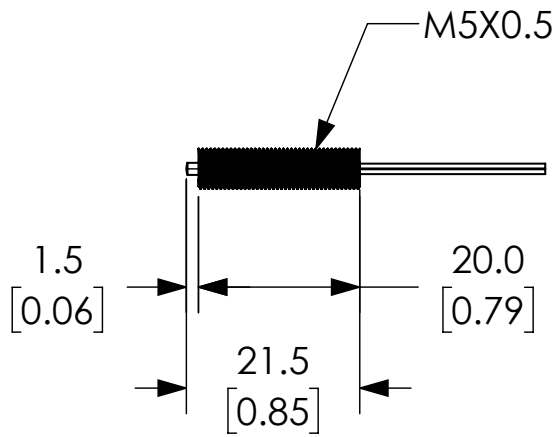
# Precision Limit Switches

## High-Vacuum Resistance Switches

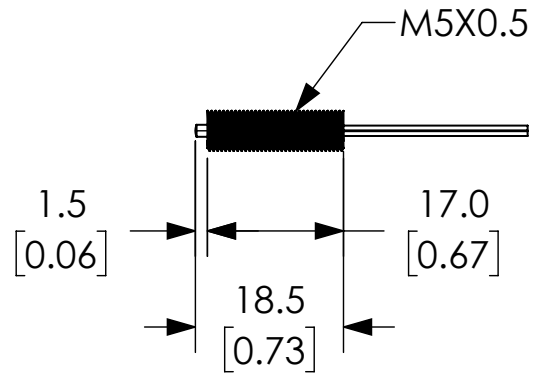
### Dimensions

mm [inches]

**Figure 1**  
**GN-PT5M3A**



**Figure 2**  
**GN-PT5M3B**



# Precision Limit Switches

## High-Vacuum Resistance Switches

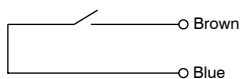
High-Vacuum Resistance Switches Specifications	
	GN
Environmental	
<b>Compatible Vacuum</b>	10 <sup>-5</sup> PA
<b>Degree of Protection</b>	IP40
<b>Temperature Range</b>	120°C (248°F) (allowable baking temperature)
Mechanical Ratings	
<b>Enclosure Material</b>	304 Stainless Steel
<b>Pretravel</b>	0* (GN-PT5M3A: about 0.3 mm)
<b>Torque (for nuts on threaded barrels, set screws on smooth barrels)</b>	1 N•m (0.73 lb•ft)
<b>Oscillation</b>	10–55Hz total amplitude 1.5 for X, Y, Z each direction
<b>Impact</b>	300 m/s <sup>2</sup> for X, Y, Z each direction
Electrical Ratings	
<b>Contact Life</b>	3 million operations
<b>Repeat Accuracy</b>	Both On–Off, Off–On: 0.003 mm**
<b>Recommended Minimum Operating Speed</b>	10 mm/minute
<b>Contact Voltage</b>	5–24VDC
<b>Steady Current Rating</b>	10mA or less
<b>Max In-rush Current Rating</b>	20mA
<b>Connection Type</b>	0.5 m (19.69 in) Polytetrafluoroethylene (PTFE) core wire, 2x30AWG
<b>Indicating</b>	N/A

\* Adjust the installed location of the switch by the signal switching point.

\*\* At operating speed 50-200 mm/minute. Operating speed slower than 10 mm/min is not recommended.

## Circuit Diagrams

Normally open (NO)



Normally closed (NC)

