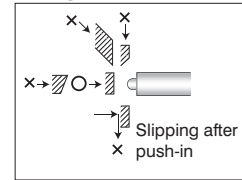


# Precision Limit Switches

## Precision Touch Limit Switches

- Ultra-small design (M5 or Ø5)
- 3 micron (µm) repeat accuracy
- No movement differential
- Dustproof / water-resistant (IP67) models available
- Stainless steel housings
- Metal bearing

### Straight Touch



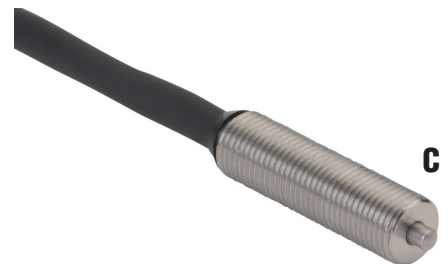
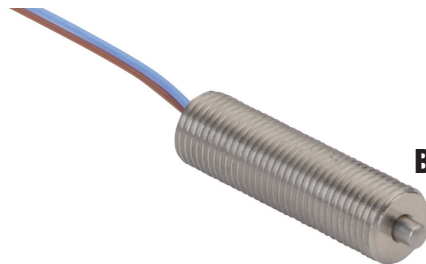
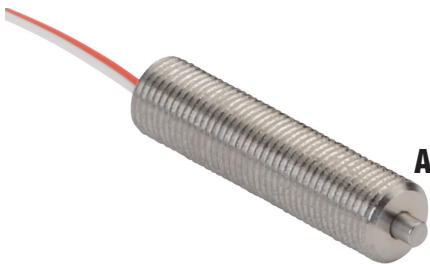
O indicates correct target approach and orientation.  
 X indicates approach and orientation that should be avoided.

### Precision Touch Limit Switches Selection Chart

Part Number	Price	Actuator/Head Type*	Barrel Type	Barrel Diameter/Thread*	Stroke	Switching Output	Contact Force	Sensor Dimension	Connection Type	Photo		
<b>Straight Touch</b>												
<b>PT5M3WA</b>	\$61.00	Ø 1.5 mm plunger, SR 2mm	Threaded	M5×0.5	1.5 mm	N.O.	0.5 N	Figure 1	Core wire, 0.5m length	A		
<b>PT5M3WB</b>	\$61.00							Figure 2		B		
<b>PT5M3CB-L</b>	\$72.00							Smooth	Ø 5mm	N.C.	0.8 N	Figure 3
<b>PT5S3CB-L</b>	\$68.00		Figure 4	D								
<b>PTP5M3CB-L</b>	\$79.00		Threaded	M5×0.5		Figure 5	E					
<b>PTP5S3CB-L</b>	\$74.00		Smooth	Ø 5mm		Figure 6	F					

\* Ø = diameter, SR = surface radius

-L: LED indicator (mounted in cable 120mm from the switch)



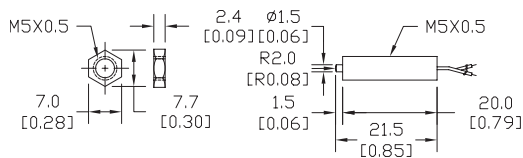
# Precision Limit Switches Dimensions

## Precision Touch: PT / PTP Series

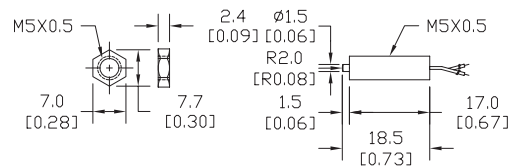
### Dimensions

mm [inches]

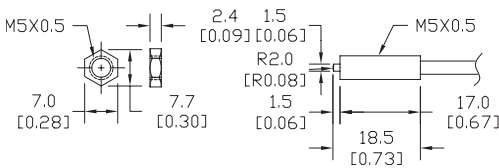
**Figure 1**  
**PT5M3WA**



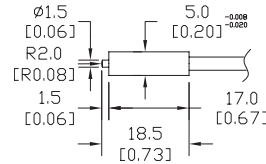
**Figure 2**  
**PT5M3WB**



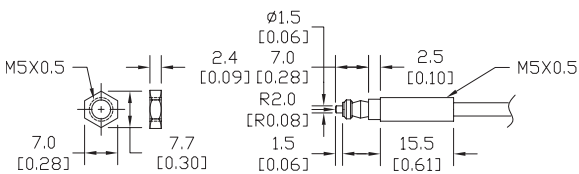
**Figure 3**  
**PT5M3CB-L**



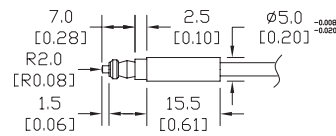
**Figure 4**  
**PT5S3CB-L**



**Figure 5**  
**PTP5M3CB-L**



**Figure 6**  
**PTP5S3CB-L**



See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

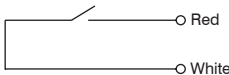
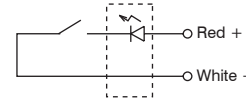
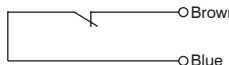
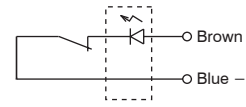
# Precision Limit Switches

Precision Touch Limit Switches Specifications		
	PT5x3xx	PTP5x3CB
<b>Environmental</b>		
<b>Degree of Protection</b>	IP40	IP67
<b>Temperature Range</b>	Operating: 0–80°C (32–176°F) (Ice-free)	
<b>Mechanical Ratings</b>		
<b>Enclosure Material</b>	303 Stainless Steel	
<b>Pretravel</b>	0* (PT5M3WA: about 0.3 mm)	
<b>Torque (for nuts on threaded barrels, set screws on smooth barrels)</b>	1 N·m	
<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	
<b>Electrical Ratings</b>		
<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 without LED indicator, 10mA with LED indicator.	
<b>Connection Type</b>	PTxxxWx: Core-wire cable, 0.5m (x2) Oil resistant Ø0.6 Tensile strength 15N. PTxxxCB: Cable, 2m Oil-resistant Ø2.8/2 cores Tensile strength 30N, Minimum bending R7.	
<b>Indicating</b>	-L: LED indicator (mounted in cable 120mm from the switch)	

\* 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

Without LED	With LED
<p>Normally open (N.O.)</p> 	<p>Normally open (N.O.)</p>  <p>LED Normally Off</p>
<p>Normally closed (N.C.)</p> 	<p>Normally closed (N.C.)</p>  <p>LED Normally On</p>