

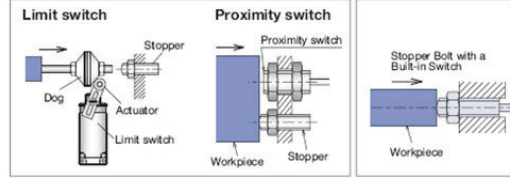
Precision Limit Switches

Stopper Bolt Precision Limit Switches

Stopper bolt precision limit switches incorporate a mechanical stop along with the limit switch function, eliminating the need for a separate mechanical stop in many situations.

- 2 tasks with one device
- Housing a high-accuracy built-in switch in a stopper bolt
- Provides higher contact force ideal for indexing/positioning
- 10 micron (μm) repeat accuracy
- No movement differential
- No temperature drift

Stopper Bolt Limit Switches can reduce parts count
 conventional switches stopper bolt switch



Stopper Bolt Precision 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
Straight Touch										
STP100UA-L	\$59.00	Ø 5.5mm plunger with upward cover	Threaded	M10x1.5	0.7mm	N.O.	4N	Figure 1	Cable, 2m length	A
STP100DA-L	\$59.00	Ø 5.5mm plunger with downward cover		M8x1.25				Figure 2		B
STS080PA-L	\$48.00	Ø 1.5mm plunger		M10x1.5			Figure 3	C		
STS100PA-L	\$50.00	Ø 1.5mm plunger		M8x1.25			Figure 4			
STE080PA-L	\$52.00	Ø 1.5mm plunger		M10x1.5			Figure 5			
STE100PA-L	\$52.00	Ø 1.5mm plunger		M10x1.5			Figure 6			

* Ø = diameter, SR = surface radius



A



B



C



D



E



F

Precision Limit Switches Dimensions

Stopper Bolt: STP / STS / STE Series

Dimensions

mm [inches]

Figure 1
STP100UA-L

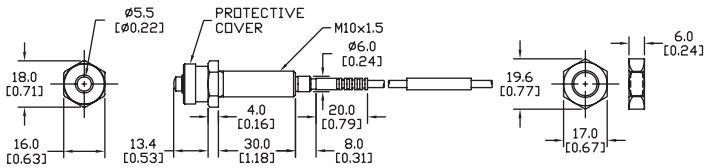


Figure 2
STP100DA-L

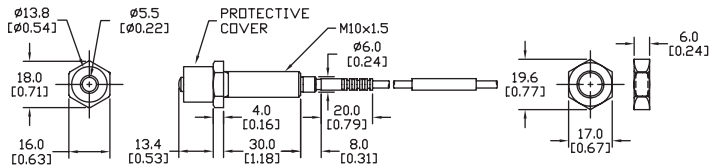


Figure 3
STS080PA-L

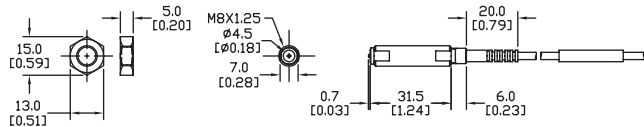


Figure 4
STS100PA-L

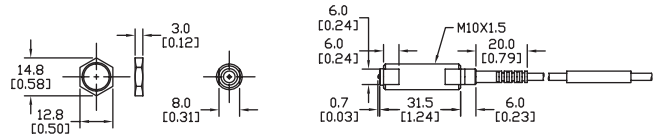


Figure 5
STE080PA-L

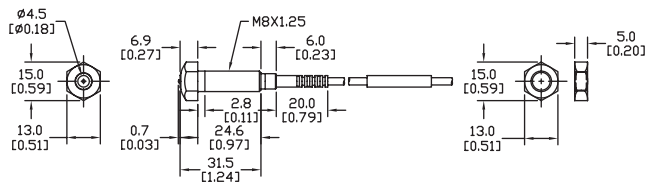
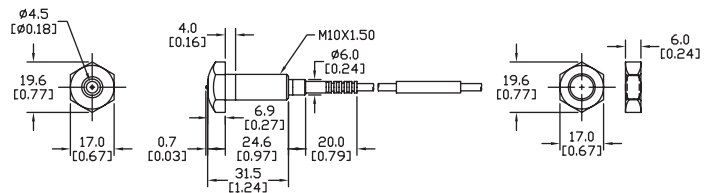


Figure 6
STE100PA-L



See our website, www.AutomationDirect.com, for complete Engineering drawings.

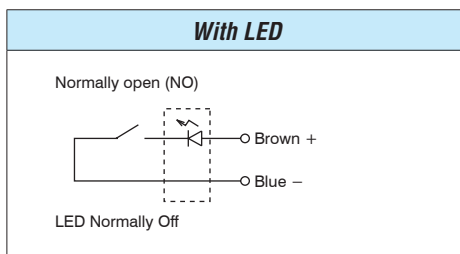
Precision Limit Switches

Stopper Bolt Precision Limit Switches Specifications			
	STP	STS	STE
Environmental			
Degree of Protection	IP67**	IP65**	
Temperature Range	Operating: 0–80°C (32–392°F) (Ice-free)		
Mechanical Ratings			
Enclosure Material	Stainless Steel		
Torque (for nuts on threaded barrels, set screws on smooth barrels)	See Torque Limit Figure		
Oscillation	10–55Hz total amplitude 1.5 for X, Y, Z each direction		
Impact	300 m/s ² for X, Y, Z each direction		
Repeat Accuracy	Both On Off, Off On/ 0.01 (range) (At operating speed 50-200mm/min) *2		
Recommended Minimum Operating Speed	10 mm/minute		
Withstand load	5000N		
Electrical Ratings			
Contact Life	10 million (No bungle caused by vibration and use under contact rating)		
Impact resistance	0.4J		
Contact Voltage	5–24VDC		
Steady Current Rating	10mA or less		
Max In-rush Current Rating	20mA		
Connection Type	Standard length 2m Oil resistant 2.8 / 2 cores, Tensile strength 30N, minimum bending R7		
Indicating	-L: LED indicator (mounted in cable 120mm from the switch)		

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

** At normal temperature (0–80°C [32–176°F]).

Circuit Diagrams



Torque Limits

Applicable models	Tightening torque
STS080PA	10N•m
STE080PA	
STS100PA	25N•m
STE100PA	
STP100UA	
STP100DA	