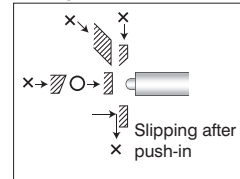


Precision Limit Switches

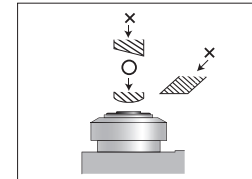
High Precision Touch and Tool Setter Switches

- 0.5 micron (μm) repeat accuracy
- No movement differential
- No temperature drift
- Dustproof / water-resistant (IP67)
- LED indicator

Straight Touch



Tool Setter



O indicates correct target approach and orientation.

X indicates approach and orientation that should be avoided.

High Precision Touch and Tool Setter 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										
P085DB-AL	\$116.00	Ø 5.5 mm plunger, SR 1.0 mm	Threaded	M8x0.5	3mm	N.C.	1N	Figure 1	Cable, 3m length	A
P10DB-AL	\$116.00			M10x0.5				Figure 2		B
P10DA-AL	\$116.00			N.O.		Figure 3		C		
Tool Setter										
P11DDB-DULD	\$145.50	Ø 16mm plunger, Ø 5mm flat	NA	NA	3mm	N.C.	1.5 N	Figure 4	Cable, 3m length	D
P11EDB-DULD	\$145.50				5mm			Figure 5		E
P21EDBP-22-28	\$495.00	Ø 18.5mm plunger, 10mm flat			5mm			Figure 6	Cable, 5m length	F

* Ø = diameter, SR = surface radius

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

-xxLD: LED indicator (attached to sensor)



A



B



C



D



E



F

Precision Limit Switches Dimensions

High Precision Touch and Tool Setter: P08 / P10 / P11 Series

Dimensions

mm [inches]

Figure 1
P085DB-AL

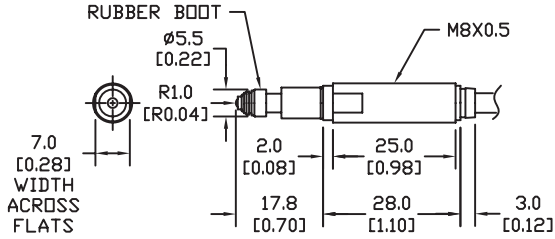


Figure 2
P10DB-AL

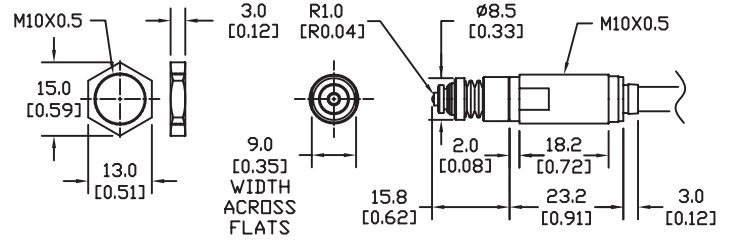


Figure 3
P10DA-AL

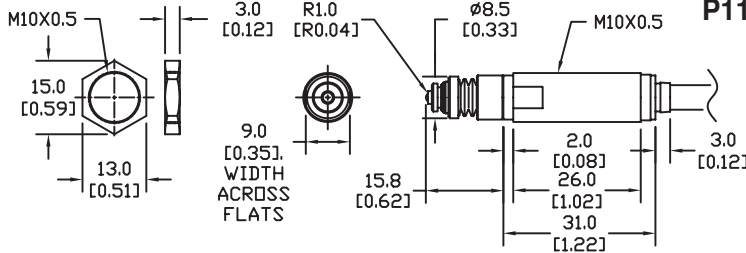


Figure 4
P11DDB-DULD

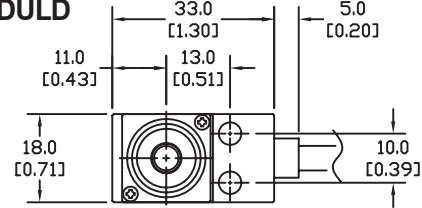


Figure 5
P11EDB-DULD

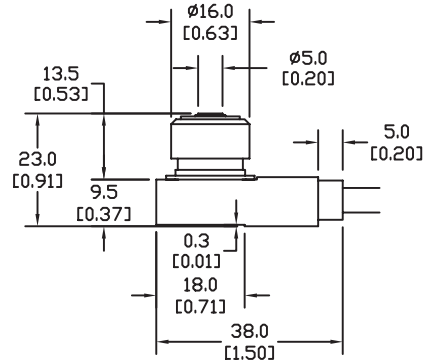
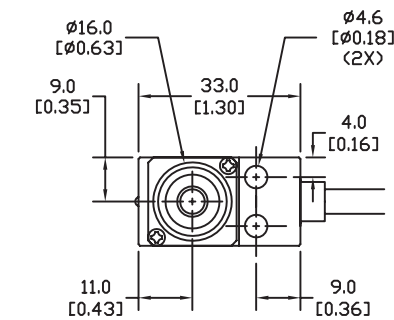
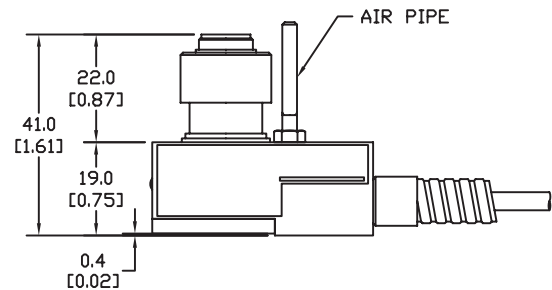
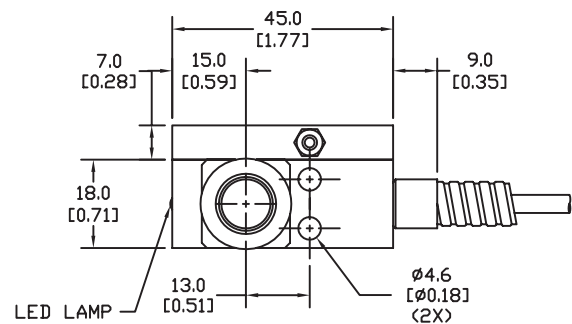


Figure 6
P21EDBP-22-28



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

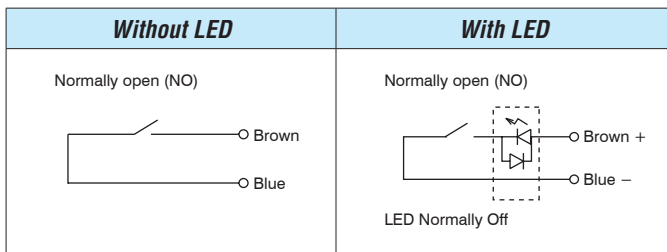
Precision Limit Switches

High Precision Touch and Tool Setter Switches Specifications				
	P08	P10	P11	P21
Environmental				
Degree of Protection	IP67			
Temperature Range	Operating: 0–80°C (32–176°F) (Ice-free)			
Mechanical Ratings				
Enclosure Material	303 Stainless Steel		Aluminum	
Pretravel	0*	P10DA: 0.2 mm P10DB: 0*	0*	2.5 mm
Torque (for nuts on threaded barrels, set screws on smooth barrels)	4 N·m	8 N·m	N/A	
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: 0.0005 mm (range)**			
Recommended Minimum Operating Speed	10 mm/minute			
Electrical Ratings				
Contact Life	3 million operations			
Contact Voltage	5–24VDC			
Steady Current Rating	10mA or less			
Max In-rush Current Rating	10mA (limit current to protect LED indicator)			
Connection Type	Cable: 3m Oil resistant Ø5/2 cores (P08: Ø4/2 cores), Tensile strength 30N, minimum bending R7.			Cable: 5m Oil resistant Ø5/2 cores (P08: Ø4/2 cores), Tensile strength 30N, minimum bending R7.
Indicating	-L: LED indicator (mounted in cable 120mm from the switch)		LD: LED indicator (attached to sensor)	

* 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



P21 Wiring

