



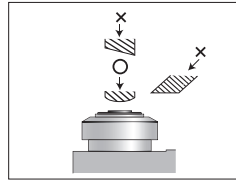
Precision Limit Switches

High Precision Touch and Tool Setter Limit Switches

Features

- Tool setter for blade positioning, wear detection, breakage, etc.
- 0.5 micron (μm) repeat accuracy
- No movement differential
- No temperature drift
- Dustproof / water-resistant (IP67)
- LED indicator

Tool Setter



O indicates correct target approach and orientation.

X indicates approach and orientation that should be avoided.

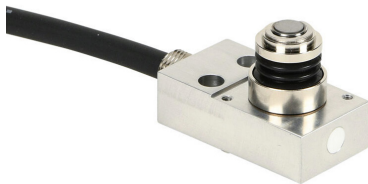
High Precision Touch and Tool Setter Limit Switches Selection Chart

Part Number	Price	Drawing Link	Actuator/Head Type*	Mounting Direction	Mounting Hole	Stroke	Switching Output	Contact Force	Connection Type
<u>P11DDB-DLD</u>	\$172.00	<u>PDF</u>	Ø 16mm plunger, Ø5mm flat	downward	(2) Ø 4.6	3mm	(1) N.C.	1.5N	Cable 3m [9.8ft]
<u>P11DDB-DULD</u>	\$186.00	<u>PDF</u>	Ø 16mm plunger, Ø 5mm flat	upward	(2) Ø 4.6	3mm	(1) N.C.	1.5N	Cable 3m [9.8ft]
<u>P11DMB-DULD</u>	\$172.00	<u>PDF</u>	Ø 16mm plunger, Ø 5mm flat	upward	(2) M4	3mm	(1) N.C.	1.5N	Cable 3m [9.8ft]
<u>P11EDB-DULD</u>	\$186.00	<u>PDF</u>	Ø 16mm plunger, Ø 5mm flat	upward	(2) Ø 4.6	5mm	(1) N.C.	1.5N	Cable 3m [9.8ft]
<u>P21EDBP-22-28</u>	\$634.00	<u>PDF</u>	Ø 18.5mm plunger, Ø 10mm flat	upward	(2) Ø 4.6	5mm	(1) N.C.	1.5N	Cable 5m [16.4ft]

* Ø = diameter

-xxLD: LED indicator (attached to sensor)

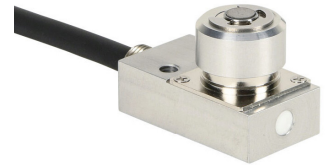
[P21EDBP-22-28](#) includes M5 air inlet



[P11DDB-DLD](#)



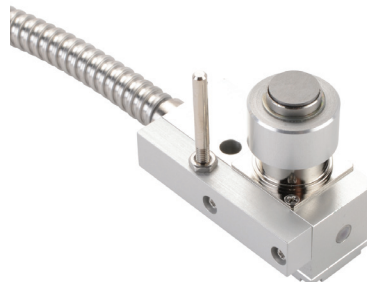
[P11DDB-DULD](#)



[P11DMB-DULD](#)



[P11EDB-DULD](#)



[P21EDBP-22-28](#)



Precision Limit Switches

High Precision Touch and Tool Setter Limit Switches Specifications

Series	P11	P21
Environmental		
Degree of Protection	IP67	
Temperature Range	Operating: 0 to 80°C [32 to 176°F] (Ice-free)	
Mechanical Ratings		
Enclosure Material	Aluminum	
Pretravel	0*	1st signal 0*, 2nd signal 2.5 mm (0.098 in)
Torque (for nuts on threaded barrels, set screws on smooth barrels)	N/A	
Vibration	10–55Hz total amplitude 1.5 for X, Y, Z each direction	
Shock	300 m/s² for X, Y, Z each direction	
Repeat Accuracy	Both On–Off, Off–On: 0.0005 mm (range)**	
Recommended Minimum Operating Speed	50mm [1.96in]/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 (9.84 ft) oil resistant Ø5/2 cores (P08: Ø4/2 cores) Tensile strength 30N, minimum bending R7, 30AWG	Cable: 5m (16.40ft) oil resistant Ø3.7/4 cores (P08: Ø4/2 cores), Tensile strength 30N, minimum bending R7, 30AWG
Indicating	-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 closed (N.C.)</p>	<p>Normally closed (N.C.)</p> <p>LED Normally On</p>

P21 Wiring

With LED
<p>2-signal type (P21)</p> <p>First Signal</p> <p>Normally closed (N.C.)</p> <p>Second Signal</p> <p>Normally closed (N.C.)</p>