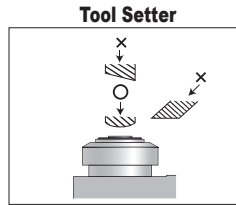


# Precision Limit Switches

## High Precision Tool Setter Switches

- Tool setter for blade positioning, wear detection, breakage, etc.
- 0.5 micron ( $\mu\text{m}$ ) repeat accuracy
- No movement differential
- No temperature drift
- Dustproof / water-resistant (IP67)
- LED indicator



O indicates correct target approach and orientation.

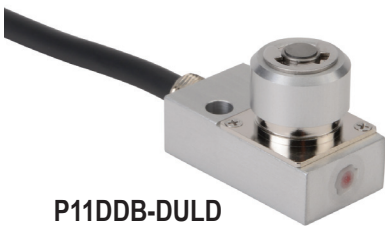
X indicates approach and orientation that should be avoided.

### High Precision Touch and Tool Setter Switches Selection Chart

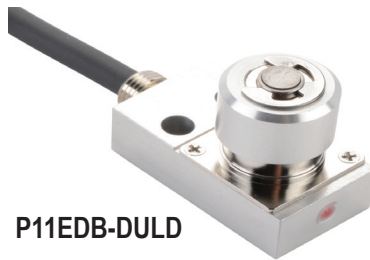
Part Number	Price	Drawing Link	Actuator/Head Type*	Barrel Type	Barrel Diameter/Thread	Stroke	Switching Output	Contact Force	Connection Type
<b>Tool Setter</b>									
<a href="#"><u>P11DDB-DULD</u></a>			Ø 16mm plunger, Ø 5mm flat	NA	NA	3mm	N.C.	1.5 N	3m (9.84 ft) cable
<a href="#"><u>P11EDB-DULD</u></a>			Ø 16mm plunger, Ø 5mm flat	NA	NA	5mm	N.C.	1.5 N	3m (9.84 ft) cable
<a href="#"><u>P21EDBP-22-28</u></a>			Ø 18.5mm plunger, Ø 10mm flat	NA	NA	5mm	N.C.	1.5 N	5m (16.40 ft) cable

\* Ø = diameter

-xxLD: LED indicator (attached to sensor)



P11DDB-DULD



P11EDB-DULD



P21EDBP-22-28

# Precision Limit Switches

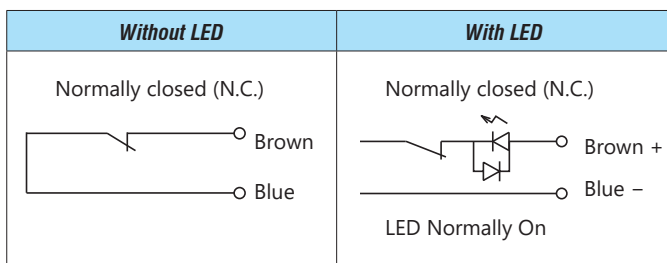
## High Precision Tool Setter Switches

High Precision Touch and Tool Setter Switches Specifications		
Series	P11	P21
<b>Environmental</b>		
Degree of Protection	IP67	
Temperature Range	Operating: 0–80°C (32–176°F) (Ice-free)	
<b>Mechanical Ratings</b>		
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	
Oscillation	10–55Hz total amplitude 1.5 for X, Y, Z each direction	
Impact	300 m/s <sup>2</sup> for X, Y, Z each direction	
Repeat Accuracy	Both On–Off, Off–On: 0.0005 mm (range)**	
Recommended Minimum Operating Speed	10 mm/minute	
<b>Electrical Ratings</b>		
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 (16.40 ft) oil resistant Ø5/2 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



### P21 Wiring

