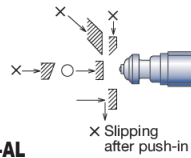


# Precision Limit Switches

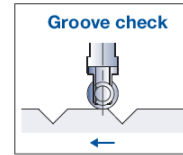
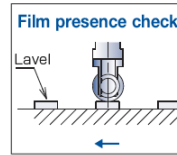
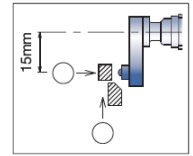
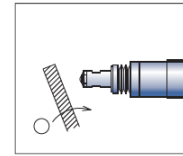
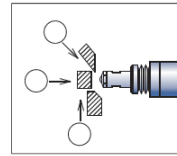
## High Precision Touch and Tool Setter Switches

- 0.5 micron ( $\mu\text{m}$ ) repeat accuracy
- No movement differential
- No temperature drift
- Dustproof / water-resistant (IP67)
- LED indicator
- Stainless steel



**P085DB-AL**  
**P10DA-AL**  
**P10DB-AL**  
**P10DLB-AL**

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



**P10DHA-TML**  
**P10DHB-TML**  
**P10DHLTB-TML**

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>Straight Touch</b>									
<a href="#">P085DB-AL</a>		<a href="#">PDF</a>	Ø 5.5 mm plunger, SR 1.0 mm	Threaded	M8×0.5	3mm	N.C.	1N	3m (9.84 ft) cable
<a href="#">P10DB-AL</a>		<a href="#">PDF</a>	Ø 8.5 mm plunger, SR 1.0 mm	Threaded	M10×0.5	3mm	N.C.	1N	3m (9.84 ft) cable
<a href="#">P10DA-AL</a>		<a href="#">PDF</a>	Ø 8.5 mm plunger, SR 1.0 mm	Threaded	M10×0.5	3mm	N.O.	1N	3m (9.84 ft) cable
<a href="#">P10DLB-AL</a>		<a href="#">PDF</a>	Ø 8.5 mm plunger, SR 1.0 mm	Threaded	M10×0.5	3mm	N.C.	1N	3m (9.84 ft) cable
<b>Straight Touch With Ball Bearing</b>									
<a href="#">P10DHA-TML</a>		<a href="#">PDF</a>	Ø 2.5 mm plunger, SR 2.0 mm	Threaded	M14×0.5	3mm	N.O.	1N	3m (9.84 ft) cable
<a href="#">P10DHB-TML</a>		<a href="#">PDF</a>	Ø 2.5 mm plunger, SR 2.0 mm	Threaded	M14×0.5	3mm	N.C.	1N	3m (9.84 ft) cable
<a href="#">P10DHLTB-TML</a>		<a href="#">PDF</a>	Ø 2.5 mm plunger, SR 2.0 mm	Threaded	M14×0.5	10mm	N.C.	1N	3m (9.84 ft) cable

\* Ø = diameter, SR = surface radius  
 -xL: LED indicator (mounted in cable 120mm from the switch)



P085DB-AL



P10DB-AL



P10DA-AL



P10DLB-AL



P10DHA-TML



P10DHB-TML



P10DHLTB-TML

# Precision Limit Switches

## High Precision Touch and Tool Setter Switches: P08 / P10 Series

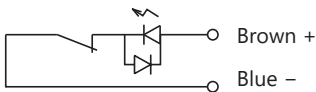
High Precision Touch and Tool Setter Switches Specifications				
Series	P08	P10	PDH	PDHL
<b>Environmental</b>				
Degree of Protection	IP67			
Temperature Range	Operating: 0–80°C (32–176°F) (Ice-free)			
<b>Mechanical Ratings</b>				
Enclosure Material	303 Stainless Steel			
Pretravel	0*	P10DA: 0.2 mm P10DB: 0*		0*
Torque (for nuts on threaded barrels, set screws on smooth barrels)	4 N•m (2.95 lb•ft)	8 N•m (5.90 lb•ft)	10 N•m (7.38 lb•ft)	
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 Oil resistant Ø5/2 cores (P08: Ø4/2 cores), tensile strength 30N, minimum bending R7, 20AWG			
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.

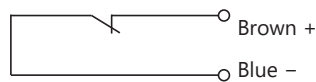
## Circuit Diagrams

Normally open (N.O.)



LED Normally Off

Normally closed (N.C.)



LED Normally On