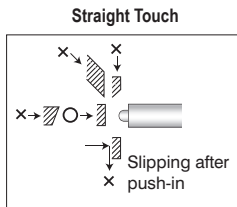


# METROL Precision Limit Switches

## Precision Touch Limit Switches

### Features

- Slim design (from M5) allows side-by-side installation
- Long-stroke and water-resistant models available
- 5 micron (µm) repeat accuracy
- Stainless steel housing
- Metal bearing
- Straight-touch and straight needle touch available



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



**CSJ055A-L**

**CS067A-CL**

Precision Touch Limit 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="#">CSJ055A</a>	\$45.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5 mm	Threaded	M5×0.5	2.8mm	(1) N.O.	1N	Cable, 3m [9.8ft]
<a href="#">CSJ055A-L</a>	\$54.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm			2.8mm	(1) N.O.	1N	
<a href="#">CSJS50A</a>	\$45.00	<a href="#">PDF</a>	Ø 2mm plunger SR 1.5mm	Smooth	Ø 5mm	2.8mm	(1) N.O.	1N	
<a href="#">CSJS50A-L</a>	\$54.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm			2.8mm	(1) N.O.	1N	
<a href="#">CS065A-L</a>	\$60.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm	Threaded	M6×0.5	2.8mm	(1) N.O.	1N	
<a href="#">CSS60A-L</a>	\$56.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm	Smooth	Ø 6mm	2.8mm	(1) N.O.	1N	
<a href="#">CSS60B-L</a>	\$56.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm			2.8mm	(1) N.C.	1N	
<a href="#">CS067A</a>	\$51.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm	Threaded	M6×0.75	2.8mm	(1) N.O.	1N	
<a href="#">CS067A-B</a>	\$55.00	<a href="#">PDF</a>	Ø 2mm plunger, Ø 4mm flat			2.8mm	(1) N.O.	1N	
<a href="#">CS067A-L</a>	\$60.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm			2.8mm	(1) N.O.	1N	
<a href="#">CS067B</a>	\$51.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm			2.8mm	(1) N.C.	1N	
<a href="#">CS067B-L</a>	\$60.00	<a href="#">PDF</a>	Ø 2mm plunger, SR 1.5mm			2.8mm	(1) N.C.	1N	
<a href="#">CS067A-BL</a>	\$65.00	<a href="#">PDF</a>	Ø 2mm plunger, Ø 4mm flat			2.8mm	(1) N.O.	1N	
<a href="#">CSS80A-L</a>	\$56.00	<a href="#">PDF</a>	Ø 3.5mm plunger, SR 3mm			Smooth	Ø 8mm	2.8mm	
<a href="#">CS087A-L</a>	\$60.00	<a href="#">PDF</a>	Ø 3.5mm plunger, SR 3mm	Threaded	M8×0.75	2.8mm	(1) N.O.	1N	
<a href="#">CSK087A</a>	\$58.00	<a href="#">PDF</a>	Ø 3.5mm plunger, SR 3mm			5mm	(1) N.O.	1N	
<a href="#">CSK087A-L</a>	\$67.00	<a href="#">PDF</a>	Ø 3.5mm plunger, SR 3mm			5mm	(1) N.O.	1N	
<a href="#">CSK087B-L</a>	\$67.00	<a href="#">PDF</a>	Ø 3.5mm plunger, SR 5mm			5mm	(1) N.C.	1N	
<a href="#">CSP087A-AL</a>	\$78.00	<a href="#">PDF</a>	Ø 5.5mm plunger, 2mm round			2.8mm	(1) N.O.	1N	
<a href="#">CSP087B-AL</a>	\$78.00	<a href="#">PDF</a>	Ø 5.5mm plunger, 2mm round			2.8mm	(1) N.C.	1N	
<b>Straight Needle Contact Touch</b>									
<a href="#">CSJ055A-CL</a>	\$60.00	<a href="#">PDF</a>	needle plunger, 1.5mm flat	Threaded	M5×0.5	2.8mm	(1) N.O.	1N	Cable, 3m [9.8ft]
<a href="#">CS065A-CL</a>	\$67.00	<a href="#">PDF</a>	needle plunger, 1.5mm flat		M6×0.5	2.8mm	(1) N.O.	1N	
<a href="#">CS067A-CL</a>	\$83.00	<a href="#">PDF</a>	needle plunger, 1.5mm flat		M6×0.75	2.8mm	(1) N.O.	1N	
<b>Spring Plunger</b>									
<a href="#">SP080A-L</a>	\$51.00	<a href="#">PDF</a>	Ø 2.5mm plunger SR 1.25mm	Threaded	M8×1.25 mm	3mm	(1) N.O.	8N	Cable 2m [6.56ft]

\* Ø = diameter, SR = surface radius

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



# Precision Limit Switches



**CSJ055A**



**CSJ055A-L**



**CSJS50A**



**CSJS50A-L**



**CS065A-L**



**CSS60A-L**



**CSS60B-L**



**CS067A**



**CS067A-B**



**CS067A-L**



**CS067B**



**CS067B-L**



**CS067A-BL**



**CSS80A-L**



**CS087A-L**



**CSK087A**



**CSK087A-L**



**CSP087A-AL**



**CSJ055A-CL**



**CS065A-CL**



**CS067A-CL**



**SP080A-L**



# Precision Limit Switches

Precision Touch Limit Switches Specifications						
Type	Straight Touch Switches					
Series	CS	CSJ	CSS	CSK	CSP	SP
<b>Environmental</b>						
Degree of Protection	IP65				IP67	IP40
Temperature Range	Operating: 0 to 80°C [32 to 176°F] (Ice-free)					
<b>Mechanical Ratings</b>						
Enclosure Material	Stainless Steel					
Pretravel	0.3 mm					2.2 mm
Torque (for nuts on threaded barrels, set screws on smooth barrels)	4 N•m	2 N•m	N/A	N/A	7 N•m	L1 10N•m L2 5•Nm
Vibration	10–55Hz total amplitude 1.5 for X, Y, Z each direction					
Shock	300 m/s <sup>2</sup> for X, Y, Z each direction					
Repeat Accuracy	5 micron (µm) *					Both On-Off, Off-On 0.01mm (range)
Recommended Minimum Operating Speed	50mm (1.96 in)/minute					
<b>Electrical Ratings</b>						
Contact Life	10 million operations					3 million (spring)
Contact Voltage	5–24VDC					
Steady Current Rating	10mA or less					
Max In-rush Current Rating	20mA without LED indicator, 10mA with LED indicator					
Connection Type	Cable: 3m (2m for SP series) Oil resistant Ø2.8/ 2 cores, Tensile strength 30N, minimum bending R7					
Indicating	-L models: 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.

## Circuit Diagrams

Without LED	With LED (-L models)
<p>Normally open (N.O.)</p>	<p>Normally open (N.O.)</p>
<p>Normally closed (N.C.)</p>	<p>Normally closed (N.C.)</p>