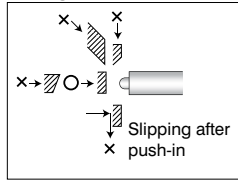


# Precision Limit Switches

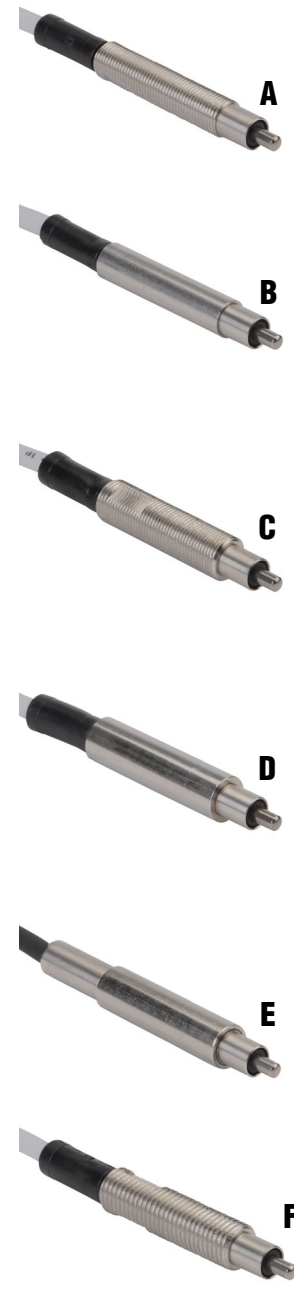
## Precision Touch Limit Switches

- Slim design (from M5) allows side-by-side installation
- Long-stroke and water-resistant models available
- 5 micron ( $\mu\text{m}$ ) repeat accuracy
- Stainless steel housing
- Metal bearing
- Straight-touch and straight needle touch available

### Straight Touch



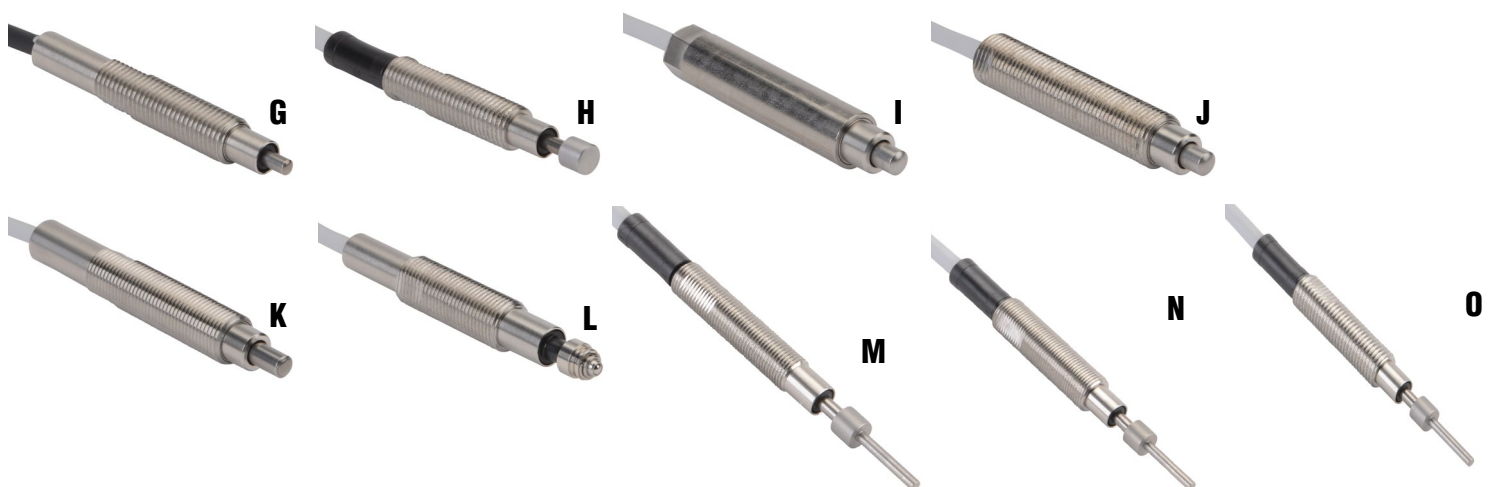
O indicates correct target approach and orientation.  
 X indicates approach and orientation that should be avoided.



Precision Touch Limit Switches Selection Chart															
Part Number	Price	Actuator/ Head Type*	Barrel Type	Barrel Diameter/ Thread*	Stroke	Switching Output	Contact Force	Sensor Dimension	Connection Type	Photo					
<b>Straight Touch</b>															
CSJ055A-L	\$42.50	Ø 2mm plunger, SR 1.5 mm	Threaded	M5x0.5	2.8 mm	N.O.	1N	Figure 1	Cable, 3m length	A					
CSJS50A-L	\$42.50		Smooth	Ø 5mm				Figure 2		B					
CS065A-L	\$48.00		Threaded	M6x0.5				Figure 3		C					
CSS60A-L	\$44.00		Smooth	Ø 6mm				Figure 4		D					
CSS60B-L	\$44.00		Threaded	M6x0.75				Figure 5		E					
CS067A-L	\$48.00									N.C.	F				
CS067B-L	\$48.00	N.O.			G										
CS067A-BL	\$51.00	Ø 2mm plunger, Ø 4mm flat	Smooth	Ø 8mm	5mm	N.O.	Figure 6	Figure 7	H						
CSS80A-L	\$44.00	Ø 3.5mm plunger, SR 3mm								Threaded	M8x0.75	N.C.	Figure 8	Figure 9	I
CS087A-L	\$48.00														
CSK087A-L	\$53.00	Ø 2mm ball	Threaded	M8x0.75	2.8 mm	N.C.	Figure 10	K							
CSK087B-L	\$53.00								N.O.	Figure 10	L				
CSP087A-AL	\$60.00	Ø 2mm ball	Threaded	M8x0.75	2.8 mm	N.C.	Figure 10	L							
CSP087B-AL	\$60.00								N.O.	Figure 10	L				
<b>Straight Needle Contact Touch</b>															
CSJ055A-CL	\$47.50	1.5mm flat	Threaded	M5x0.5	2.8 mm	N.O.	1N	Figure 11	Cable, 3m length	M					
CS065A-CL	\$53.00			M6x0.5				Figure 12		N					
CS067A-CL	\$65.00			M6x0.75				Figure 13		O					

\* Ø = diameter, SR = surface radius

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



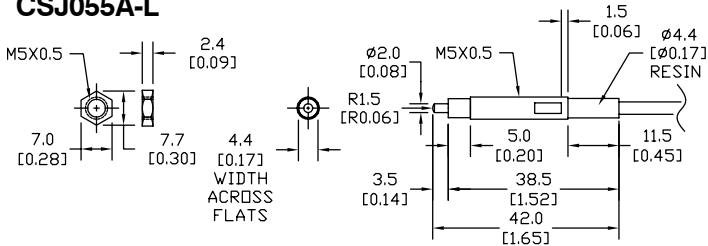
# Precision Limit Switches Dimensions

Precision Touch: CS / CSJ / CSS / CSK / CSP Series

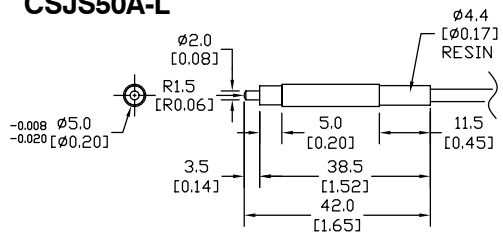
## Dimensions

mm [inches]

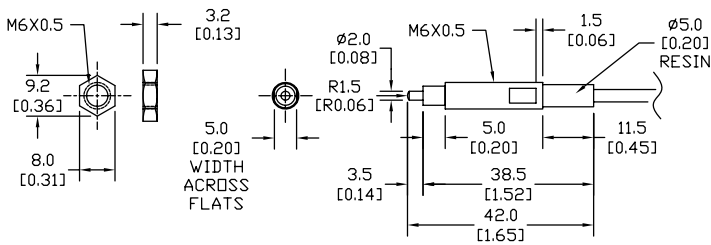
**Figure 1**  
**CSJ055A-L**



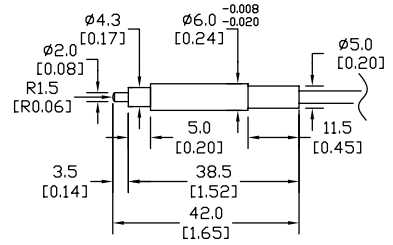
**Figure 2**  
**CSJS50A-L**



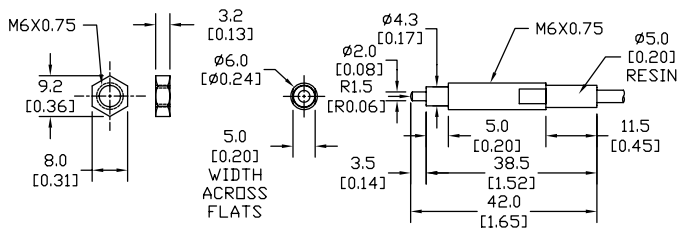
**Figure 3**  
**CS065A-L**



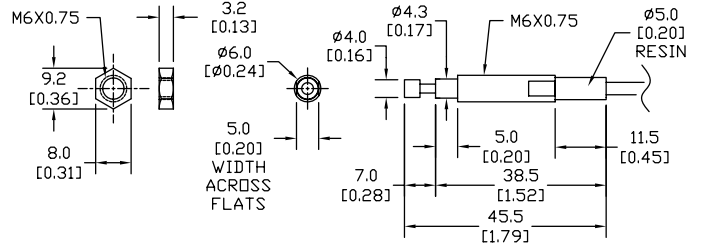
**Figure 4**  
**CSS60A-L / CSS60B-L**



**Figure 5**  
**CS067A-L / CS067B-L**



**Figure 6**  
**CS067A-BL**



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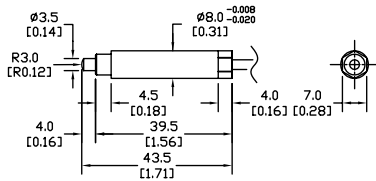
# Precision Limit Switches Dimensions

Precision Touch: CS / CSJ / CSS / CSK / CSP (continued)

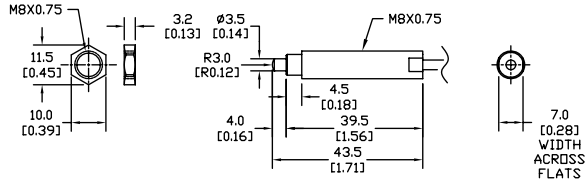
## Dimensions

mm [inches]

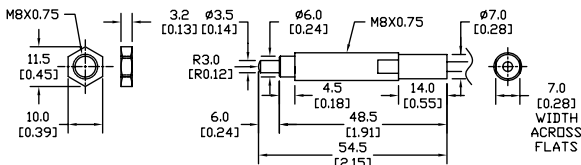
**Figure 7**  
**CSS80A-L**



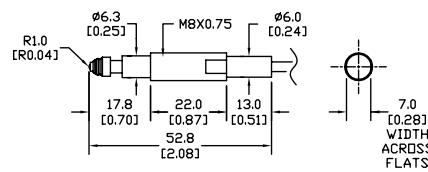
**Figure 8**  
**CS087A-L**



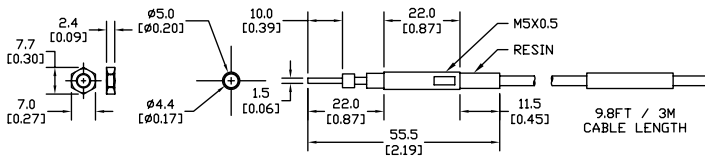
**Figure 9**  
**CSK087A-L / CSK087B-L**



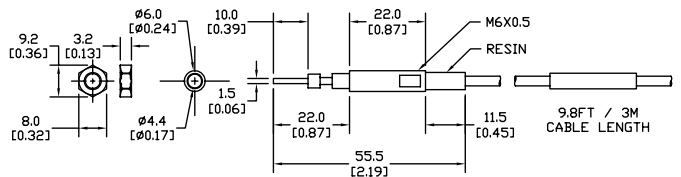
**Figure 10**  
**CSP087A-AL / CSP087B-AL**



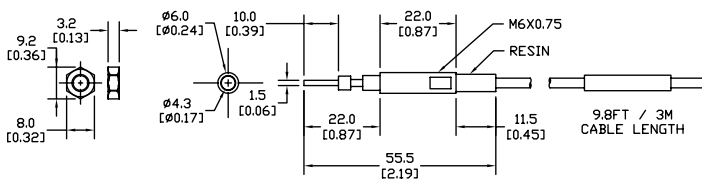
**Figure 11**  
**CSJ055A-CL**



**Figure 12**  
**CS065A-CL**



**Figure 13**  
**CS067A-CL**



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# Precision Limit Switches

Precision Touch Limit Switches Specifications				
	Straight Touch Switches			
	CS	CSJ	CSS	CSK
	CSP			
Environmental				
Degree of Protection	IP65			
Temperature Range	Operating: 0–80°C (32–176°F) (Ice-free)			
Mechanical Ratings				
Enclosure Material	Stainless Steel			
Pretravel	0.3 mm			
Torque (for nuts on threaded barrels, set screws on smooth barrels)	4Nm	2Nm	N/A	7Nm
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	5 micron (µm)			
Recommended Minimum Operating Speed	10 mm/minute			
Electrical Ratings				
Contact Life	10 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 (2m for CSHP series) Oil resistant Ø2.8/2 cores, Tensile strength 30N, minimum bending R7			
Indicating	-L: 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
<p>Normally open (NO)</p>	<p>Normally open (NO)</p> <p>LED Normally Off</p>
<p>Normally closed (NC)</p>	<p>Normally closed (NC)</p> <p>LED Normally On</p>