



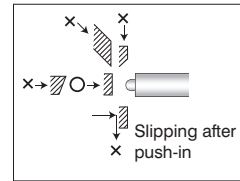
# Precision Limit Switches

## Precision Mini Straight Touch Limit Switches

### Features

- Mini size suitable for machines required to be small and for narrow installation space
- Stroke length (1.5mm)
- 3 micron ( $\mu\text{m}$ ) repeat accuracy
- Stainless steel housing
- Metal bearing

### Precision Mini Touch



O indicates correct target approach and orientation.

X indicates approach and orientation that should be avoided.

### Precision Mini Straight 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         |
|------------------------------------|---------|----------------------------|-----------------------------------|-------------|-------------------------|--------|------------------|---------------|-------------------------|
| <a href="#"><u>CSM105CA</u></a>    | \$55.00 | <a href="#"><u>PDF</u></a> | Ø 3.5mm plunger<br>SR 2.5mm       | Threaded    | M10×0.5                 | 1.5mm  | (1) N.O.         | 1N            | Cable 2m [6.56ft]       |
| <a href="#"><u>CSM105WA</u></a>    | \$57.00 | <a href="#"><u>PDF</u></a> | Ø 3.5mm plunger<br>SR 2.5mm       | Threaded    | M10×0.5                 | 1.5mm  | (1) N.O.         | 1N            | Core wire 0.5m [1.64ft] |
| <a href="#"><u>CSMP105WA</u></a>   | \$60.00 | <a href="#"><u>PDF</u></a> | 2mm plunger with boot<br>SR 2.5mm | Threaded    | M10×0.5                 | 1.5mm  | (1) N.O.         | 1N            | Core wire 0.5m [1.64ft] |
| <a href="#"><u>CSM105CA-L</u></a>  | \$62.00 | <a href="#"><u>PDF</u></a> | Ø 3.5mm plunger<br>SR 2.5mm       | Threaded    | M10×0.5                 | 1.5mm  | (1) N.O.         | 1N            | Cable 2m [6.56ft]       |
| <a href="#"><u>CSMP105CA-L</u></a> | \$66.00 | <a href="#"><u>PDF</u></a> | 2mm plunger with boot<br>SR 2.5mm | Threaded    | M10×0.5                 | 1.5mm  | (1) N.O.         | 1N            | Cable 2m [6.56ft]       |

\* Ø = diameter, SR = surface radius

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



[CSM105CA](#)



[CSM105WA](#)



[CSMP105WA](#)



[CSM105CA-L](#)



[CSMP105CA-L](#)



# Precision Limit Switches

| Precision Mini Straight Touch Limit Switches Specifications         |                                                                                                                                                          |                |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Type                                                                | Precision Angled                                                                                                                                         | Precision Mini |
| Series                                                              | CSM                                                                                                                                                      | CSMP           |
| Environmental                                                       |                                                                                                                                                          |                |
| Degree of Protection                                                | IP65                                                                                                                                                     | IP67           |
| Temperature Range                                                   | Operating: 0 to 80°C [32 to 176°F] (Ice-free)                                                                                                            |                |
| Mechanical Ratings                                                  |                                                                                                                                                          |                |
| Enclosure Material                                                  | 303 Stainless Steel                                                                                                                                      |                |
| Pretravel                                                           | 0.3 mm                                                                                                                                                   |                |
| Torque (for nuts on threaded barrels, set screws on smooth barrels) | 8 N•m [5.901 lb•ft]                                                                                                                                      |                |
| 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: 0.003 mm*                                                                                                                           |                |
| Recommended Minimum Operating Speed                                 | 50mm [1.96in]/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                                                     | Core wire cable, 0.5 m (x2), oil resistant, Ø 0.6, tensile strength 15N, Cable: 2m, oil resistant Ø2.8/2 cores, tensile strength 30N [6.74 lbf], 2-26AWG |                |
| Indicating                                                          | -L: LED indicator (mounted in cable 120mm from the switch)                                                                                               |                |

\* At operating speed 50-200 mm/minute. Operating speed slower than 10mm/min is not recommended.

## Circuit Diagrams

| Without LED                 | With LED                    |
|-----------------------------|-----------------------------|
| <p>Normally open (N.O.)</p> | <p>Normally open (N.O.)</p> |