

Appearance and Dimension

**CHL-5000**

Optional metal idler wheel  
Nylon Roller LSN-5000P

**CHL-5220**

Direction of rotor CHL-5220

**CHL-5030**

Optional metal idler wheel

**CHL-5300**

**CHL-5050**

**CHL-5330**

**CHL-5100**

**CHL-5381**

**CHL-5200**

Direction of rotor CHL-5220

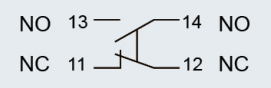
**CHL-5391**



Features

- Double circuit type of limit switch
- High mechanical strength, consists of intensive plastic and aluminum cast
- Water-proof and oil proof construction
- Built-in contact box has double-spring and long mechanical life
- Smooth operation with larger over travel distance
- Various actuators for different application

Contact Form



Ratings

| Rated Voltage  | Noninductive Load (A)          |     |           |     | Inductive Load (A) |    |            |     |
|----------------|--------------------------------|-----|-----------|-----|--------------------|----|------------|-----|
|                | Resistance Load                |     | Lamp Load |     | Inductive Load     |    | Motor Load |     |
|                | NC                             | NO  | NC        | NO  | NC                 | NO | NC         | NO  |
| 125VAC         | 5                              | 5   | 1.5       | 0.7 | 3                  | 3  | 2          | 1   |
| 250VAC         | 5                              | 5   | 1         | 0.5 | 3                  | 3  | 1.5        | 0.8 |
| 8VDC           | 5                              | 5   | 3         | 3   | 5                  | 4  | 3          | 3   |
| 14VDC          | 5                              | 5   | 3         | 3   | 4                  | 4  | 3          | 3   |
| 30VDC          | 5                              | 5   | 3         | 3   | 4                  | 4  | 3          | 3   |
| 125VDC         | 0.4                            | 0.4 |           |     |                    |    |            |     |
| 250VDC         | 0.2                            | 0.2 |           |     |                    |    |            |     |
| Inrush Current | N.C: below 24A, N.O: below 12A |     |           |     |                    |    |            |     |

NOTES: 1. Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).  
 2. Lamp load has an inrush current of 10 times the steady-state current, while motor load has an inrush current of 6 times the steady-state current.  
 3. Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

|                       |  |
|-----------------------|--|
| Operation speed       | 5mm-0.5m/s   |
| Operating frequency   | Electical: 30 operations/min   |
| Contact resistance    | 25mΩ max. (initial value)  |
| Insulation resistance | 100mΩ min. (below 500VDC)  |
| Dielectric strength   | 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts                   |
|                       | 1500VAC, 50/60 Hz for 1 minute between each terminal and ground  |
| Vibration             | 10-55Hz, 1.5mm double amplitude  |
| Shock                 | Mechanical durable: 1,000m/Sec <sup>2</sup> (about 100G'S)<br>Malfunction: 300m/Sec <sup>2</sup> (about 30G'S) |
| Ambient temperature   | Using: -20~+70°C (With no icing)   |
| Humidity              | <95% RH  |
| Electrical life       | 500,000 operations above   |
| Protection level      | IP66   |

NOTES: The default size of conduit connector is M18x1.5. Conduit connector size is PG11.5, with product model number plus (-P), example: CSA-012-P.

Operating Characteristics

| Model                 | CSA       | CSA-001 | CSA-003 | CSA-012 | CSA-021<br>CSA-021M | CSA-041 | CSA-031<br>CSA-031M | CSA-051 | CSA-061 | CSA-071 | CSA-081 |
|-----------------------|-----------|---------|---------|---------|---------------------|---------|---------------------|---------|---------|---------|---------|
| Operating force       | OF (Max.) | 800g    | 800g    | 800g    | 400g                | 400g    | 400g                | 400g    | 150g    | 150g    | 150g    |
| Release force         | RF (Min.) | 400g    | 400g    | 400g    | 100g                | 100g    | 100g                | 100g    | 50g     | 50g     | 50g     |
| Pre-travel            | PT (Max.) | 1.8mm   | 1.8mm   | 1.8mm   | 20°                 | 20°     | 20°                 | 20°     | 30mm    | 30mm    | 30mm    |
| Tripping position     | TP ± 10%  | 2.0mm   | 2.0mm   | 2.0mm   | 22.5°               | 22.5°   | 22.5°               | 22.5°   | 22.5°   | 22.5°   | 22.5°   |
| Movement differential | MD (Max.) | 1.2mm   | 1.2mm   | 1.2mm   | 10°                 | 10°     | 10°                 | 10°     | 14°     | 14°     | 14°     |
| Over travel           | OT (Min.) | 4.0mm   | 4.0mm   | 4.0mm   | 75°                 | 75°     | 75°                 | 75°     | 20mm    | 20mm    | 20mm    |
| Total travel          | TT (Min.) | 5.8mm   | 5.8mm   | 5.8mm   | 95°                 | 95°     | 95°                 | 95°     | 50mm    | 50mm    | 50mm    |
| Rotary indexing       |           |         |         |         | 22.5°               | 22.5°   | 22.5°               | 22.5°   |         |         |         |