

## CZ-3

## Compact Prewired Limit Switch

## Specifications <br> ■ DPDS limit switch for multiple applications. <br> ■ Rugged aluminum alloy diecast housing <br> - High mechanical strength. <br> ■ Oil resistance, waterproof and dustproof structure.

## Ratings

| Rated voltage | Noninductive load <br> (A) |  |  |  | Inductive load <br> (A) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Resistance load |  | Lamp load |  | Inductive load |  | Motor load |  |
|  | NC | NO | NC | NO | NC | NO | NC | NO |
| 125 VAC | 5 (0.1) |  | 1.5 | 0.7 | 3 |  | 2.5 | 1.3 |
| 250 VAC | 3 |  | 1 | 0.5 | 2 |  | 1.5 | 0.8 |
| 8 VDC | 5 (0.1) |  | 2 |  | 5 | 4 |  |  |
| 14 VDC | 5 (0.1) |  | 2 |  | 4 | 4 |  |  |
| 30 VDC | 4 (0.1) |  | 2 |  | 3 | 3 |  |  |
| 125 VDC | 0.4 |  | 0.05 |  | 0.4 | 0.4 |  |  |
| 250 VDC | 0.2 |  | 0.03 |  | 0.2 | 0.2 |  |  |

Characteristics

| Rating | 5A 125V,3A 250VAC |
| :---: | :---: |
| Operating speed | $1 \mathrm{~mm} \sim 1 \mathrm{~m} / \mathrm{s}$ |
| Operating frequency | Mechanical:120 operations/min. |
|  | Electrical:30 operations/min. |
| Contact resistance | $15 \mathrm{~m} \Omega$ max.(initial) |
| Inslation resistance | $100 \mathrm{~m} \Omega \mathrm{~min}$.(at 500VDC) |
| Dielectric strength | 1000VAC, $50 / 60 \mathrm{HZ}$ for 1 minute between terminals of the same polarity |
|  | 1500VAC, $50 / 60 \mathrm{HZ}$ for 1 minute between currentcarrying and non-current-carrying metal parts |
|  | 1500VAC, $50 / 60 \mathrm{HZ}$ for 1 minute between each terminal and ground |
| Vibration Frequency | 10 to 55HZ,1.5mm double amplitude |
| Shock | Mechanical:Approx.1000m/s² (Appprox.100G'S) |
|  | Electrical:Approx.500m/s ${ }^{2}$ (Approx.50G'S) |
| Ambient temperature | $-10^{\circ} \mathrm{C} \sim+70{ }^{\circ} \mathrm{C}$ |
| Humidity | Below 95\%RH |
| Life | Mechanical.10,000,000 operations/min. |
|  | Electrical.200,000 operations/min. |
| Degree of protection | IEC:IP67 |
| Weight | Approx.360g(cable length 3m) |
|  | Approx.540g(cable length 5m) |

Operating characteristics

| Models | CZ-3101 | CZ-3102 | CZ-3103 | CZ-3104 | CZ-3110 | CZ-3111 | CZ-3112 | $C Z-3113$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OF Max. | $1200 \mathrm{gf}(11.77 \mathrm{~N})$ | $1200 \mathrm{gf}(11.77 \mathrm{~N})$ | $1200 \mathrm{gf}(11.77 \mathrm{~N})$ | $580 \mathrm{gf}(5.69 \mathrm{~N})$ | $1200 \mathrm{gf}(11.77 \mathrm{~N})$ | $1800 \mathrm{gf}(17.65 \mathrm{~N})$ | $1800 \mathrm{gf}(17.65 \mathrm{~N})$ | $1800 \mathrm{gf}(17.65 \mathrm{~N})$ |
| $150 \mathrm{gf}(1.47 \mathrm{~N})$ |  |  |  |  |  |  |  |  |
| RF Min. | $450 \mathrm{gf}(4.41 \mathrm{~N})$ | $450 \mathrm{gf}(4.41 \mathrm{~N})$ | $450 \mathrm{gf}(4.41 \mathrm{~N})$ | $150 \mathrm{gf}(1.47 \mathrm{~N})$ | $450 \mathrm{gf}(4.41 \mathrm{~N})$ | $450 \mathrm{gf}(4.41 \mathrm{~N})$ | $450 \mathrm{gf}(4.41 \mathrm{~N})$ | $450 \mathrm{gf}(4.41 \mathrm{~N})$ |
| PT Max. | 1.8 mm | 1.8 mm | 1.8 mm | 25 | 1.8 mm | 1.8 mm | 1.8 mm | 1.8 mm |
| OT Min. | 3 mm | 3 mm | 3 mm | 40 | 3 mm | 3 mm | 3 mm | 3 mm |
| MD Max. | 0.2 mm | 0.2 mm | 0.2 mm | 3 | 0.2 mm | 0.2 mm | 0.2 mm | 0.2 mm |
| OP | $15.7 \pm 1 \mathrm{~mm}$ | $28.5 \pm 1 \mathrm{~mm}$ | $28.5 \pm 1 \mathrm{~mm}$ | - | $28.5 \pm 1 \mathrm{~mm}$ | $24.9 \pm 1 \mathrm{~mm}$ | $34.3 \pm 1 \mathrm{~mm}$ | $34.3 \pm 1 \mathrm{~mm}$ |

## CZ-3 compact Prewired Limit Switch

Appearance and dimension


CZ-3103


CZ-3111


## Fastening of the switch cable

The switch bodies are filled with resin for sealing purposes. To avoid stressing the cable and switch body, fasten the switch at 5 cm or farther away from the switch body, should the wire be bent, the bending radius shall be at least 45 mm .


## Installation

The service life and accuracy of switches will be effected by the shape of actuator operation frequency \& over travel. So the angular of the fixing level should be about $30^{\circ}$, the surface finish of the fixing level should be over, the hardness is from HV400~500. When installing, the position of the concave part should be above the standard panel


## Contact types



## Switch bank mounting

A maximum of six switches may be mounted together as a switch bank.During the installation,the convex part of the switch back.The mounting panel shall be 6 mm or thicker.


## Mounting

Recommended tightening torque according to the follwing form.

| Model | Screw type | Torque |
| :---: | :---: | :---: |
| 1 | M5 fastening screws | $43.4 \sim 52 \mathrm{lb} . \mathrm{in}$ <br> $(50 \sim 60 \mathrm{kgf.cm})$ |
| 2 | M3.5 installing screws | $6.9 \sim 7.9 \mathrm{lb} . \mathrm{in}$ <br> $(8 \sim 9 \mathrm{kgf.cm})$ |

## Mounting holes

Mount the switch body to a rigid mounting panel using two M5 screws.


