## ZC-N2255



## Ratings

| Shape / Structure | Enclosed Limit switches |
| :--- | :--- |
| service life | General type |
| Operating mechanism | Snap action |
| Actuator | Sealed roller plunger |
| Frequency | $50 / 60 \mathrm{~Hz}$ |
| Switching mechanism | Self-reset mechanism |
| Contact configuration | Single-Pole, Double-Throw type |
| Contact form | 1 C |
| Load | General load |
| Ratings (AC): Non-Inductive load | Rated voltage: 125 VAC, Resistive load: $10 \mathrm{~A} \mathrm{(NC)} 10 \mathrm{~A}$ (NO), Lamp load: 3 A (NC) 1.5 A <br> (NO) <br> Rated voltage: 250 VAC, Resistive load: 10 A (NC) $10 \mathrm{~A} \mathrm{(NO)} ,\mathrm{Lamp} \mathrm{load:} 2.5 \mathrm{~A}$ (NC) 1.25 <br> A (NO) |


| Ratings (AC): Inductive load | Rated voltage: 125 VAC, Inductive load: 10 A (NC) 10 A (NO), Motor load: 5 A (NC) 2.5 A (NO) <br> Rated voltage: 250 VAC, Inductive load: 10 A (NC) 10 A (NO), Motor load: 3 A (NC) 1.5 A (NO) |
| :---: | :---: |
| Ratings (DC): Non-Inductive load | Rated voltage: 8 VDC, Resistive load: $10 \mathrm{~A}(\mathrm{NC}) 10 \mathrm{~A}(\mathrm{NO})$, Lamp load: 3 A (NC) 1.5 A (NO) <br> Rated voltage: 14 VDC, Resistive load: 10 A (NC) 10 A (NO), Lamp load: 3 A (NC) 1.5 A (NO) <br> Rated voltage: 30 VDC, Resistive load: 6 A (NC) 6 A (NO), Lamp load: 3 A (NC) 1.5 A (NO) Rated voltage: 125 VDC, Resistive load: 0.5 A (NC) 0.5 A (NO), Lamp load: 0.4 A (NC) 0.4 A (NO) <br> Rated voltage: 250 VDC, Resistive load: 0.25 A (NC) $0.25 \mathrm{~A}(\mathrm{NO})$, Lamp load: 0.2 A (NC) 0.2 A (NO) |
| Ratings (DC): Inductive load | Rated voltage: 8 VDC, Inductive load: 6 A (NC) 6 A (NO), Motor load: 5 A (NC) 2.5 A (NO) Rated voltage: 14 VDC, Inductive load: 6 A (NC) 6 A (NO), Motor load: 5 A (NC) 2.5 A (NO) Rated voltage: 30 VDC, Inductive load: 5 A (NC) $5 \mathrm{~A}(N O)$, Motor load: 5 A (NC) 2.5 A (NO) Rated voltage: 125 VDC, Inductive load: 0.05 A (NC) 0.05 A (NO), Motor load: 0.05 A (NC) 0.05 A (NO) Rated voltage: 250 VDC, Inductive load: 0.03 A (NC) 0.03 A (NO), Motor load: 0.03 A (NC) 0.03 A (NO) |
| Explanation | The above values indicate the steady-state current. Lamp load has an inrush current of 10 times the steady-state current. Inductive load has a power factor of 0.4 Min . (AC) and a time constant of 7 ms Max. (DC). Motor load has an inrush current of 6 times the steadystate current. |
| Inrush current | $\begin{aligned} & \text { NC: } 30 \mathrm{~A} \\ & \text { NO: } 15 \mathrm{~A} \end{aligned}$ |
| Protective circuit | Classification of protection against electric shock: Class II Short-circuit protective device: 10 A fuse type gG (IEC269) Switch category: D (IEC335) |
| Ambient temperature | Operating: -10 CEL to 80 CEL (with no icing or condensation) |
| Ambient humidity | Operating: $35 \%$ RH to $95 \%$ RH (with no icing or condensation) |

Characteristics

| Permissible operating speed | $0.05 \mathrm{~mm} / \mathrm{s}$ to $0.5 \mathrm{~m} / \mathrm{s}$ |
| :---: | :---: |
| Permissible operating frequency (Mechanically) | 120 operations / 1 minute Max. |
| Permissible operating frequency (Electrically) | 20 operations / 1 minute Max. |
| Contact resistance | 15 m Ohm Max. (Initial value) (Measuring method is contact resistance meter.) |
| Insulation resistance | Between each terminal of the same polarities: 100 M Ohm Min. Between live-metallic part and ground: 100 M Ohm Min. <br> Between each terminal and non-live-metallic part: 100 M Ohm Min. <br> (at 500 VDC Megger) |
| Dielectric strength | Between each terminal of the same polarities: 1,000 VAC Between live-metallic part and ground: 2,000 VAC Between each terminal and non-live-metallic part: 2,000 VAC ( $50 / 60 \mathrm{~Hz}$ for 1 min ) |
| Durability (Mechanically) | 10,000,000 operations Min. * When operate the actuator with the specified value of the Over Travel. (No load) <br> (Temperature, Humidityconditions: 5 CEL to 35 CEL, 40 \%RH to $70 \%$ RH) |
| Durability (Electrically) | 500,000 operations Min. * When operate the actuator with the specified value of the Over Travel. (Resistive load 10 A at 125 VAC) <br> (Temperature, Humidityconditions: 5 CEL to 35 CEL, 40 \%RH to 70 \% RH) |
| Pollution degree | 3 (EN60947-5-1) |
| Vibration resistance (Malfunction) | Vibration frequency range: 10 to 55 Hz , Double amplitude: 1.5 mm , Contact opening: 1 ms Max . at the free position and the total travel position. |
| Shock resistance (Destruction) | 1,000 m/s2 |
| Shock resistance (Malfunction) | Contact opening is 1 ms Max. at the free position and the total travel position at $300 \mathrm{~m} / \mathrm{s} 2$. |
| Degree of protection | IEC60529 (JEM): IP67 |


| Applicable standard (UL) | Standard No.: UL508 <br> File number: E76675 |
| :--- | :--- |
| Applicable standard (CSA) | Standard No.: C22.2 NO.14 <br> File number: LR45746 |
| Applicable standard (TUV) | Standard No.: EN60947-5-1 <br> File number: J50041904 |
| Applicable standard (CCC(CQC)) | Standard No.: GB14048.5 <br> File number: 2003010303077620 |
| Applicable standard (EC Directive (Low Voltage | 2006/95/EC |
| Directive)) | Side mounting |
| Mounting specification |  |

## Operating characteristics

| Operating Force (OF) | Standard value 6.86 N Max. |
| :--- | :--- |
| Release Force (RF) | Standard value 1.67 N Min. |
| Pre-Travel (PT) | Standard value 1.5 mm Max. |
| Over-Travel (OT) | Standard value 2.5 mm Min. |
| Movement Differential (MD) | Standard value 0.2 mm Max. |
| Operating Position (OP) | Standard value $47.4+/-0.8 \mathrm{~mm}$ |

## Precautions for correct use:

To attach the protective cover to the case, hold the cover in almost parallel to the case and then push it to the case. If the cover is pushed diagonally, the rubber packing may slip off and degrading the seal ability of the switch.
Note:
Rubber material is oil-proof rubber(NBR). Cap-rubber is made from weather-proof rubber(Chloroprene rubber).


Caution: All units are in millimeters unless otherwise indicated.


