



# Data Sheet

## RISH Cam TNC Series



Rishabh's New Rish cam TNC Switches offers a complete range of switches for control, making and breaking circuit, isolation of power circuit.

- Rish Cam TNC 25 A

- Rish Cam TNC 32 A



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## Breaker Control Switches (TNC)

### Product Features

- Compact Design
- 60 Degree Angle of Throw
- Pistol Grip Handle
- Spring Loaded Mechanism
- Standard Mounting Plate

### Application

TNC switch is a three position switch, when it is in close position it put the circuit breaker in operation by energizing the closing coil and when it is in trip position it will trip the circuit by energising the trip coil in circuit breaker.

The switch return to neutral position after any operation (either close or trip). It makes close & open commands momentarily.

A focused range of Rish Cam Spring Return Series switches cover most of applications with different contact designs, contact materials and terminal allow their use as control switches as well as in electronic circuitry and in aggressive environment according to IEC/EN 60947-1,3 &5

### Operation

TNC (Trip Neutral Close) in normal condition the switch will be in Neutral position. To close the circuit breaker, user need to rotate the switch knob in direction of "Close" as mentioned in TNC switch and breaker will be in operation. We need to rotate the switch knob in the direction of "Trip" as mentioned in TNC switch so that the circuit breaker will get tripped for maintenance.

Normally Open (N.O.) & Normally Close (N.C.)

Momentary switches can be described as normally open or normally close, which refers to original or rest position of the switch. Normally open momentary switch has one or more circuits that are open when actuator is at its normal or rest position. An open circuit is an incomplete circuit with open space between contacts. Therefore, N.O. circuit is also referred as "Normally OFF".

Normally close momentary switch has one or more circuits that are close when actuator is at its normal or rest position. A close circuit is a complete circuit with closed contacts. Therefore, N.C. circuit is also referred as "Normally ON".



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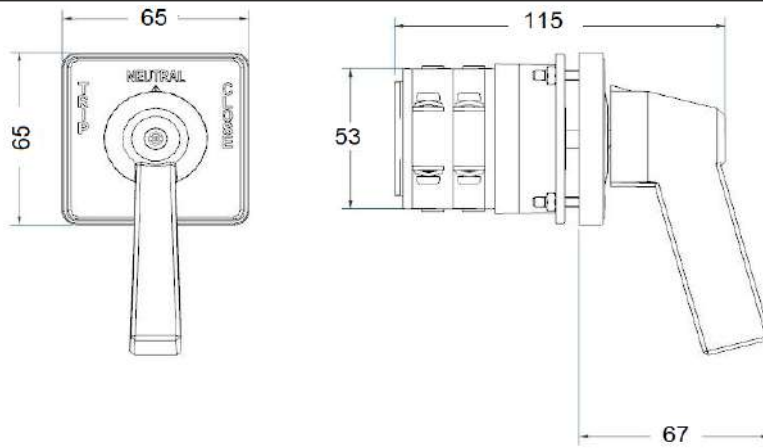


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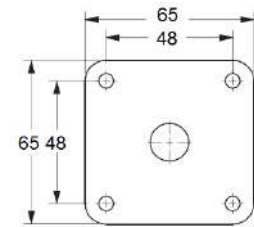


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### TNC Dimensional Drawings



### Panel Mounting



| Technical Data                                      |      |                 |        |        |
|---|------|-----------------|--------|--------|
| Description   |      | Unit            | TNC 25 | TNC 32 |
| Rated Operational Voltage                           | Ue   | V AC            | 690    | 690    |
|   |      | V DC            | 250    | 250    |
| Resistance to Surge Voltage                         | Uimp | kV              | 6      | 6      |
| Rated Uninterrupted Current                         | Ith  | A               | 32     | 40     |
| <b>Rated Operational Current Pilot Duty AC15 Ie</b> |      |                 |        |        |
| 220-240 V AC  |      | A               | 8      | 14     |
| 380-440 V AC  |      | A               | 5      | 6      |
| Short Circuit Protection HRC Fuse Size              |      | A               | 25     | 32     |
| Rated Short Circuit                                 |      | kA              | 10     | 10     |
| <b>Terminal Cross Section</b>                       |      |                 |        |        |
| Rigid Wire  | min  | mm <sup>2</sup> | 1.5    | 2.5    |
|   | max  |                 | 4      | 6      |
| Flexible Wire                                       | min  | mm <sup>2</sup> | 1      | 1.5    |
|   | max  |                 | 2.5    | 4      |
| Terminal Screw                                      |      |                 | M4     | M4     |
| Terminal Tightening Torque                          |      |                 | 1.2 Nm | 1.2 Nm |

#### General

#### Endurance :

#### Mechanical

100,000 operations at  
300 cycles/hour

#### Electrical

10,000 operations at  
120 cycles/hour  
Operational Temperature  
25°C to 55°C, frequency  
upto 5 kHz

| DC Breaking Capacity |                           |                |                    |         |         |                |                    |         |         |
|----------------------|---------------------------|----------------|--------------------|---------|---------|----------------|--------------------|---------|---------|
| Voltage              | No. of Contacts in series | TNC 25         |                    |         |         | TNC 32         |                    |         |         |
|                      |                           | Resistive Amps | Inductive L/R Amps |         |         | Resistive Amps | Inductive L/R Amps |         |         |
|                      |                           |                | 10 msec            | 20 msec | 40 msec |                | 10 msec            | 20 msec | 40 msec |
| 50 V                 | 1                         | 20             | 20                 | 15      | 6       | 25             | 25                 | 18      | 8       |
|                      | 2                         | -              | -                  | 20      | 14      | -              | -                  | 25      | 18      |
|                      | 3                         | -              | -                  | -       | 20      | -              | -                  | -       | 25      |
| 125 V                | 1                         | 3              | 2.5                | 1.5     | 1.0     | 5              | 3                  | 2       | 1.2     |
|                      | 2                         | 20             | 15                 | 10      | 5       | 25             | 18                 | 12      | 6       |
|                      | 3                         | -              | 20                 | 20      | 10      | -              | 25                 | v       | 12      |
| 250 V                | 1                         | 1.0            | 0.5                | 0.3     | 0.2     | 1.2            | 0.6                | 0.4     | 0.3     |
|                      | 2                         | 5              | 2                  | 1.0     | 0.5     | 6              | 2.5                | 1.2     | 0.6     |
|                      | 3                         | 20             | 10                 | 4       | 1       | 25             | 12                 | 5       | 1.2     |



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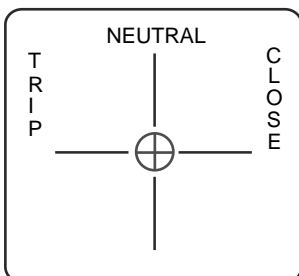
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### Ordering Information :

|   |          |          |          |           |          |          |          |          |           |           |
|---|----------|----------|----------|-----------|----------|----------|----------|----------|-----------|-----------|
| <b>TRCX</b>   | <b>X</b> | <b>X</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>XX</b> | <b>XX</b> |
| <b>TSR1</b> : TNC 1NO 1NC Switch<br><b>TSR2</b> : TNC 2NO 2NC Switch            |          |          |          |           |          |          |          |          |           |           |
| <b>Ampere Code</b><br>A : 25 A<br>B : 32 A                                      | A<br>B   |          |          |           |          |          |          |          |           |           |
| <b>Type</b><br>2 : 1NO 1NC<br>4 : 2NO 2NC                                       |          | 2<br>4   |          |           |          |          |          |          |           |           |
| <b>No. Of Pole</b><br>2 : 2 Pole<br>4 : 4 Pole                                  |          |          | 2<br>4   |           |          |          |          |          |           |           |
| <b>MAX. No. of Ways</b><br>01 : 1 ways  |          |          |          | 01        |          |          |          |          |           |           |
| <b>Neutral</b><br>N : with Neutral  |          |          |          |           | N        |          |          |          |           |           |
| <b>Angle</b><br>6 : 60 Degree   |          |          |          |           |          | 6        |          |          |           |           |
| <b>knob shape</b><br>L : Pistol Shape   |          |          |          |           |          |          | L        |          |           |           |
| <b>Front plate colour</b><br>A : Silver Sheet & Black<br>B : Yellow Sheet & Red |          |          |          |           |          |          |          | A<br>B   |           |           |
| <b>Blank</b>  |          |          |          |           |          |          |          |          | 00        |           |
| <b>Customer Specification</b>   |          |          |          |           |          |          |          |          |           | 00        |



| Sr. No. | Ordering Code      | Description         |
|---------|--------------------|---------------------|
| 1       | TSR1-A2201N6LA0000 | TNC 25A 1NO 1NC 60D |
| 2       | TSR2-A4401N6LA0000 | TNC 25A 2NO 2NC 60D |
| 3       | TSR1-B2201N6LA0000 | TNC 32A 1NO 1NC 60D |
| 4       | TSR2-B4401N6LA0000 | TNC 32A 2NO 2NC 60D |



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