

# Micro Switch

V Series



## Part Number Description

V 1 15F - 2 C

|               |                        |                         |                         |                  |
|---------------|------------------------|-------------------------|-------------------------|------------------|
| 1 Description | No mark : Standard     | V : Special ( Only 01 ) |                         |                  |
| 2 Head Type   | 01 : Push Plunger      | 06 : Lever              | 070 : Round Lever       | 060 : Long Lever |
|               | 07 : Roller Long Lever | 08 : Short Lever        | 09 : Roller Short Lever |                  |

VAP - 1 2

|                |          |           |            |           |
|----------------|----------|-----------|------------|-----------|
| 1 Button Size  | 10 : Ø10 | 13 : Ø13  | 18 : Ø18   |           |
| 2 Button Color | R : Red  | G : Green | Y : Yellow | K : Black |

## General Specification

|                            |   |
|----------------------------|---|
| Contact Form               | 1C  |
| Contact Material           | Ag alloy  |
| Contact & Contact Distance | 0.5mm   |
| Insulation Resistance      | 100MΩ min.(at 500VDC)                               |
| Contact Resistance         | Max. 50mΩ   |
| Maximum Inrush Current     | Norminal Open (N/O) 15A    Norminal Close (N/C) 30A |

| Contact Ratings | Voltage | Non-Inductive       |                      |                     |                      | Inductive           |                      |                     |                      |
|-----------------|---------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|
|                 |         | Resistance Load     |                      | Lamp Load           |                      | Inductive Load      |                      | Motor Load          |                      |
|                 |         | Norminal Open (N/O) | Norminal Close (N/C) | Norminal Open (N/O) | Norminal Close (N/C) | Norminal Open (N/O) | Norminal Close (N/C) | Norminal Open (N/O) | Norminal Close (N/C) |
|                 | 125VAC  | 15A                 | 15A                  | 1.5A                | 3A                   | 10A                 | 10A                  | 2.5A                | 4A                   |
|                 | 250VAC  | 10A                 | 15A                  | 1.0A                | 2A                   | 6A                  | 10A                  | 1A                  | 3A                   |
|                 | 8VDC    | 10A                 | 15A                  | 1.5A                | 4A                   | 8A                  | 10A                  | 2.5A                | 6A                   |
|                 | 14VDC   | 5A                  | 15A                  | 1.5A                | 4A                   | 4A                  | 10A                  | 2.5A                | 6A                   |
|                 | 30VDC   | 2A                  | 10A                  | 1.0A                | 4A                   | 1.5A                | 6A                   | 1.5A                | 4A                   |
|                 | 125VDC  | 0.5A                | 0.6A                 | 0.1A                | 0.1A                 | 0.05A               | 0.6A                 | 0.05A               | 0.01A                |
|                 | 250VDC  | 0.25A               | 0.3A                 | 0.05A               | 0.05A                | 0.03A               | 0.3A                 | 0.04A               | 0.05A                |

The aforementioned values are steady-state current values.  
 The inductive load has a power factor of 0.4 or more (AC), and a time constant of 7 m/s or less (DC).  
 The inrush current is ten times larger than steady-state current in the lamp load, and six times, in the motor load.

|                      |                                    |                |
|----------------------|------------------------------------|----------------|
| Operating Speed      | 0.1mm/sec ~ 0.5m/sec               |                |
| Dielectric Strength  | 1,500VAC 1 Minute                  |                |
| Life Cycle           | Electrical                         | Min. 100,000   |
|                      | Mechanical                         | Min. 1,000,000 |
| Vibration Resistance | 10 ~ 55Hz(durable amplitude 1.5mm) |                |
| Shock Resistance     | 30G                                |                |
| Ambient Temperature  | -25°C ~ +80°C (with no icing)Z     |                |
| Ambient Humidity     | 35% ~ 80% RH                       |                |

\* The material and the specification of the product can be changed without notice for better quality.




## Product Selection

|   | Color | Part Number | Contact Form | Contact & Contact Distance | PT    | MD    | OT    | OP              |
|---|-------|-------------|--------------|----------------------------|-------|-------|-------|-----------------|
|    | Black | V15F-01C    | 1C           | 0.5 mm                     | 1.7mm | 0.4mm | 0.8mm | 14.7<br>±0.6 mm |
|    | Black | V15F-06C    | 1C           | 0.5 mm                     | 32mm  | 12mm  | 12mm  | 15.3<br>±1.2 mm |
|    | Black | V15F-070C   | 1C           | 0.5 mm                     | 32mm  | 12mm  | 12mm  | 15.5<br>±1.2 mm |
|   | Black | V15F-060C   | 1C           | 0.5 mm                     | 75mm  | 22mm  | 22mm  | 15.3<br>±2.6 mm |
|  | Black | V15F-07C    | 1C           | 0.5 mm                     | 32mm  | 12mm  | 12mm  | 20.7<br>±1.2 mm |
|  | Black | V15F-08C    | 1C           | 0.5 mm                     | 1.6mm | 0.5mm | 0.8mm | 15.3<br>±0.8 mm |
|  | Black | V15F-09C    | 1C           | 0.5 mm                     | 1.6mm | 0.5mm | 0.8mm | 20.7<br>±0.8 mm |
|  | Black | VV15F-01C   | 1C           | 0.5 mm                     | 1.6mm | 0.4mm | 0.8mm | 14.7<br>±0.6 mm |

# Micro Switch

V Series

## Product Selection

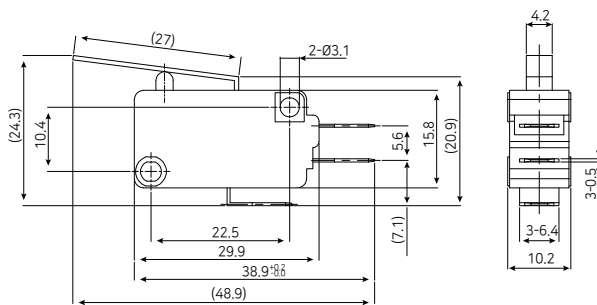
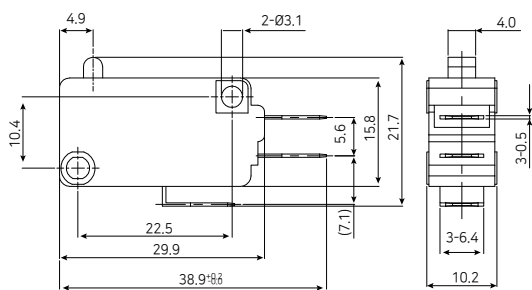
|   | Button Color | Part Number | Contact Form | Contact & Contact Distance | PT    | MD    | OT    | OP              |
|---|--------------|-------------|--------------|----------------------------|-------|-------|-------|-----------------|
|  | Red          | VAP - 10R   | 1C           | 0.5 mm                     | 1.6mm | 0.4mm | 0.8mm | 14.7<br>±0.6 mm |
|   | Green        | VAP - 10G   |              |                            |       |       |       |                 |
|  | Red          | VAP - 13R   | 1C           | 0.5 mm                     | 1.6mm | 0.4mm | 0.8mm | 14.7<br>±0.6 mm |
|   | Green        | VAP - 13G   |              |                            |       |       |       |                 |
|   | Yellow       | VAP - 13Y   |              |                            |       |       |       |                 |
|   | Blue         | VAP - 13B   |              |                            |       |       |       |                 |
|   | Black        | VAP - 13K   |              |                            |       |       |       |                 |
|  | Red          | VAP - 18R   | 1C           | 0.5mm                      | 1.6mm | 0.4mm | 0.8mm | 14.7<br>±0.6 mm |
|   | Green        | VAP - 18G   |              |                            |       |       |       |                 |
|   | Yellow       | VAP - 18Y   |              |                            |       |       |       |                 |
|   | Blue         | VAP - 18B   |              |                            |       |       |       |                 |
|   | Black        | VAP - 18K   |              |                            |       |       |       |                 |

## Dimension

unit : mm

V15F - 01C

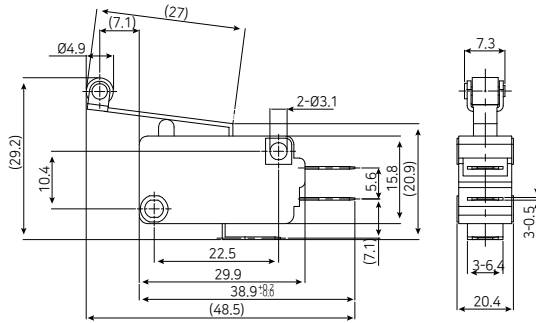
V15F - 06C



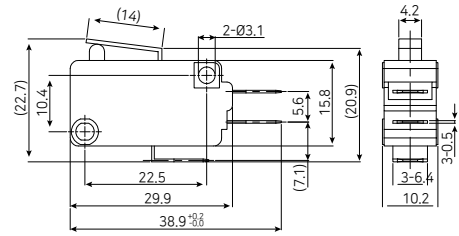
# Dimension

unit : mm

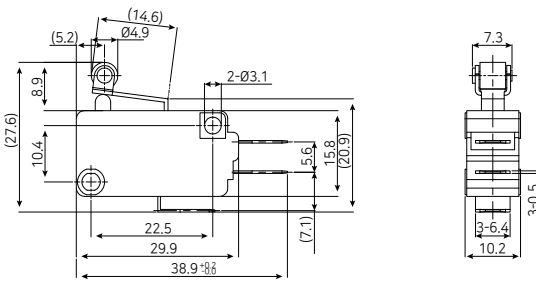
V15F-07C



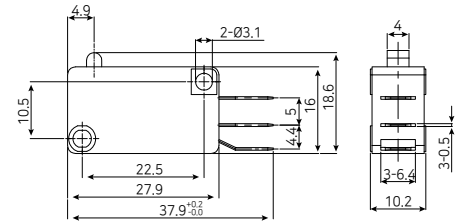
V15F-08C



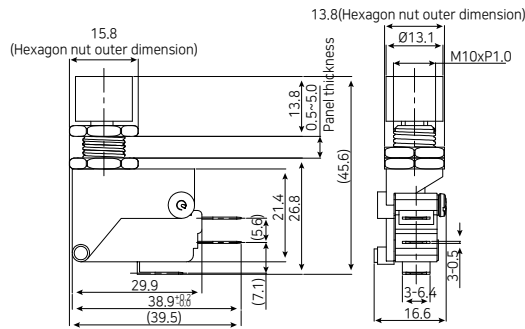
V15F-09C



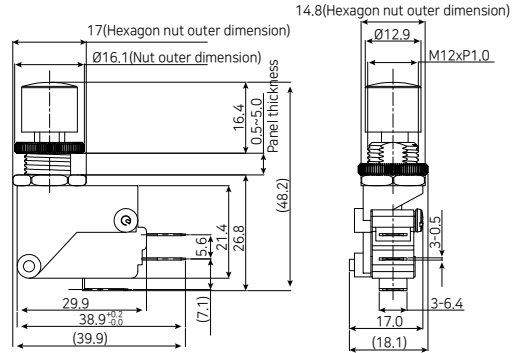
V15F-01C



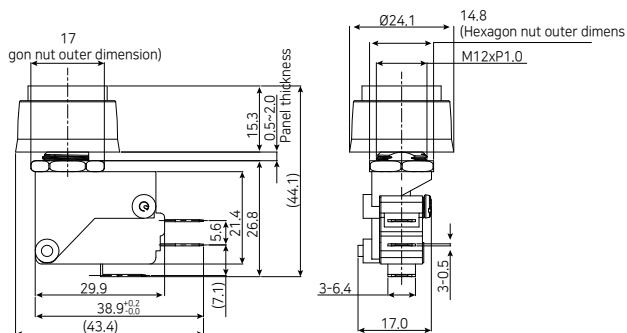
VAP-10



VAP-13



VAP-18



Rev. 2/14

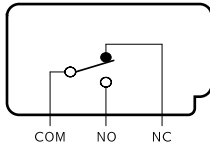
Data subject may change without notice.

# Micro Switch

V Series

## Diagram

V15F - 01C

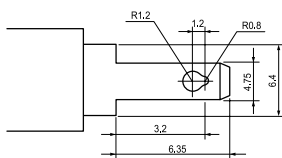


COM : Common terminal  
NO : Always open terminal  
NC : Always closed terminal

## Glossary

| Operating characteristics | Category | Abbr.                            | Term | Unit          | Definition   |
|---------------------------|----------|----------------------------------|------|---------------|--|
|                           | Force    | Force required for operation     | OF   | g, kg<br>g-mm | Force on the actuator required for the motion from the free position to the operating position   |
|                           |          | Restoring force                  | RF   | g, kg<br>g-mm | Force on the actuator required for the motion from the operating limit position to the restoring position  |
|                           |          | Force required for entire motion | TF   | g, kg<br>g-mm | Force on the actuator required for the motion from the operating position to the operating limit position  |
|                           | Motion   | Motion to the operating position | PT   | mm, deg       | Distance or angle from the free position of the actuator to the operating position   |
|                           |          | Motion after operation           | OT   | mm, deg       | Distance or angle from the operating position of the actuator to the operating limit position  |
|                           |          | Hysteresis distance              | MD   | mm, deg       | Distance or angle from the operating position of the actuator to the restoring position  |
|                           |          | Total motion                     | TT   | mm, deg       | Distance or angle from the free position of the actuator to the operating limit position   |
|                           | Position | Free position                    | FP   | mm, deg       | The position of the operating part when no force is applied from outside   |
|                           |          | Operating position               | OP   | mm, deg       | The position of the actuator when the external force is applied to the actuator and the moving contact reverses from the free position                           |
|                           |          | Restoring position               | RP   | mm, deg       | The position of the actuator when the external force to the actuator is reduced and the moving contact reverses from the operating position to the free position |
|                           |          | Operating limit position         | TTP  | mm, deg       | The position of the actuator when the actuator reaches the actuator stop position  |

## Terminal



※ Quick Connect Tab #187 / Soldering t=0.5