# Pushbutton Switches

**multicomp**PRO

**RoHS Compliant**

## Features:

- Material : frames are nylon. Terminals are silver plated brass.
- M types are metal frames, nickel plated brass.

## Specifications:

| | |
|---|---|
| Rating | : 3A 125V, 1.5A 250V AC |
| Max. contact Resistance | : 50mΩ. |
| Min. insulation Resistance | : 500V dc 100MΩ. |
| Dielectric strength | : 1,000V ac 1 minute |
| Button | : Red. |
| Housing | : Black. |

## Scope

These requirements cover manually and mechanically operable special-use switches:

That is for use on direct current as well as on alternating current only.

For which the load ratings do not exceed 60 amperes at 250 volts or a lower potential and 30 amperes or 2 horsepower at 600 volts or a lower potential.

## Electrical Ratings

| Item | Requirements |
|---|---|
| Rated voltage and current | (base on switch type) |
| Contact resistance (new state) | <100mΩ (5V, 1A DC) |
| Dielectric strength (new state) | >1,000V<br>>2,500V (10mA between the contacts) |
| Insulation resistance (new state) | >100MΩ (500V DC between the open contacts) |
| Inrush current | 50A/3msec (capacitive load) |
| Electrical life endurance | >6,000 operations<br>Volt drop : <100mV<br>>10,000 operations |
| Temperature rise at the terminals (according to electrical life endurance) | <30°C - 6000 operations<br><45°C - 10,000 operations<br>(ambient conditions : 25 ±2°C and 65 ±5%R.H) |

## Mechanical Characteristics

| Item | Requirements |
|---|---|
| Actuating force | (base on switch type) |
| Operating life endurance | >100,000 operations |
| Terminal strength | >2.5kg - solder terminal<br>>6.8kg - plug-in/screw terminal |
| Solderability of terminals | Max. 350°C/3sec (no pressure may be exerted on the terminals when soldering by hand) |

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
Element14.com/multicomp-pro

**multicomp**PRO

Page <1>                08/02/21   V1.0

# Pushbutton Switches

## Environmental

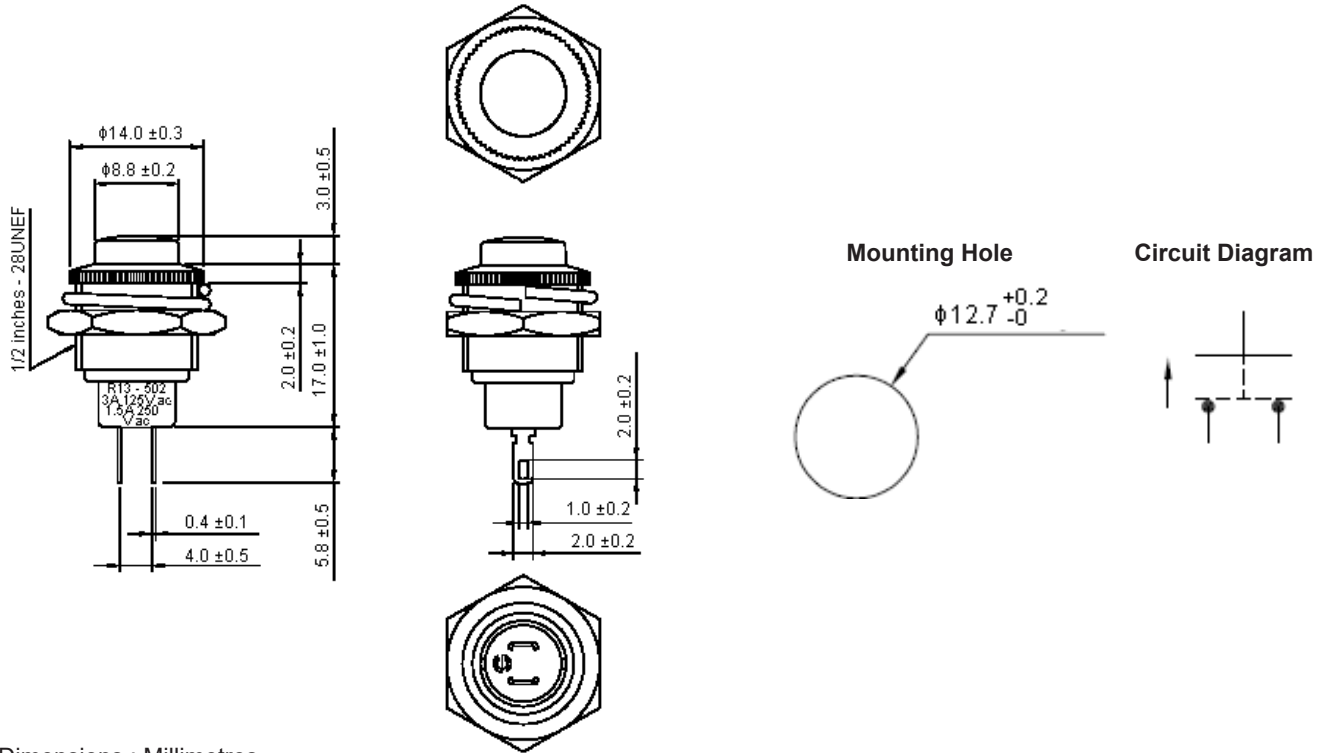| Item | Requirements |
|---|---|
| Ambient temperature | 20°C to +65°C |
| Humidity | Maximum 85% |
| Salt spray test | No remarkable rust in metal parts (5% salt/35°C 24hrs) |
| Shock test | No mechanical defect or damage (100g/10msec X, Y, Z 3 times) |
| Vibration test | No mechanical defect damage (10-55Hz/1.5mm/X, Y, Z 2hrs) |

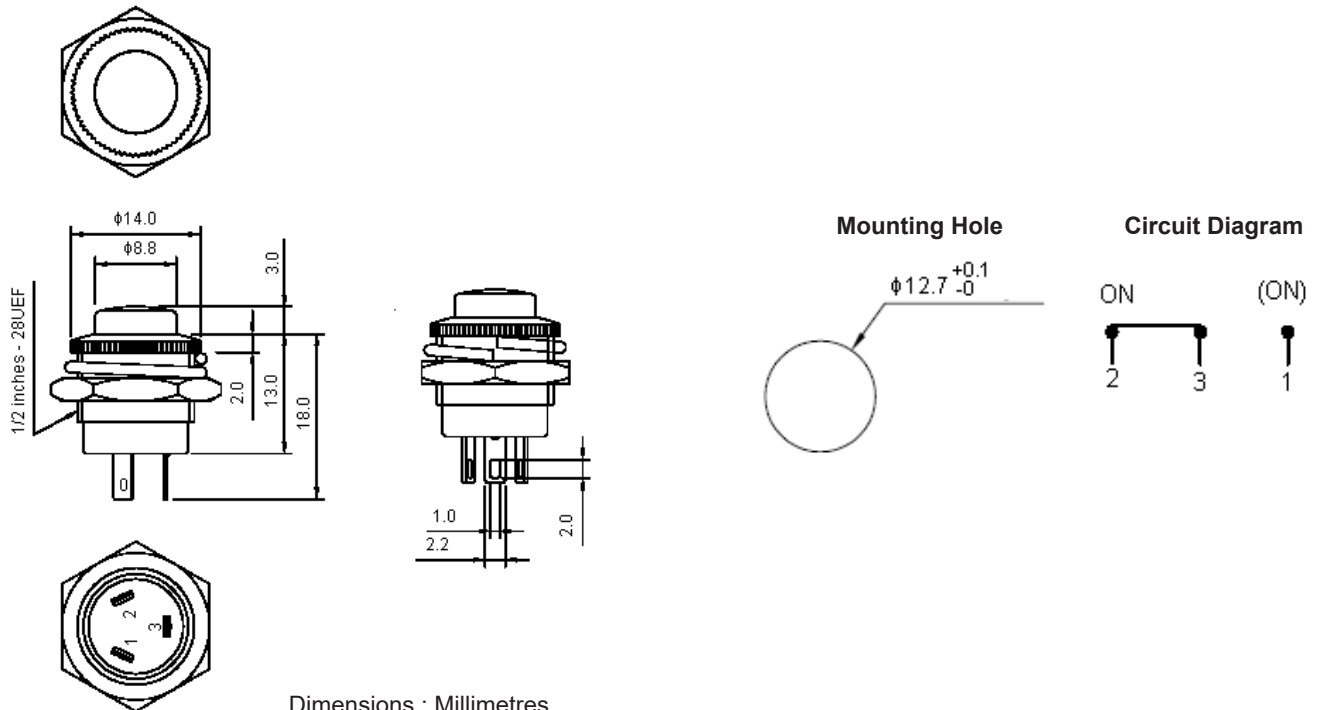## R13-502A-05-R and R13-502A-05-B



Dimensions : Millimetres

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
Element14.com/multicomp-pro

**multicomp** PRO

Page <2>                     08/02/21    V1.0

# Pushbutton Switches

## R13-502MA-05-R and R13-502MA-05-B

φ14.0 ±0.3
φ8.8 ±0.2
3.0 ±0.5
1/2 inches - 28UNEF
2.0 ±0.2
17.0 ±1.0
R13 - 502
3A 125Vac
1.5A 250
Vac
0.4 ±0.1
4.0 ±0.5
5.8 ±0.5
2.0 ±0.2
1.0 ±0.2
2.0 ±0.2

**Mounting Hole**

φ12.7 +0.2 -0

**Circuit Diagram**

Dimensions : Millimetres

## R13-502MC-05-R and R13-502MC-05-B

φ14.0
φ8.8
3.0
1/2 inches - 28UEF
2.0
13.0
18.0
1.0
2.2
2.0

**Mounting Hole**

φ12.7 +0.1 -0

**Circuit Diagram**

ON          (ON)

2          3          1

Dimensions : Millimetres

# Pushbutton Switches



## Part Number Table

| Description | Circuit | Part Number |
|---|---|---|
| Switch, Red Push Button, SPST | 2P SPST OFF-(ON) | R13-502A-05-R |
| Switch, Black Push Button, SPST | | R13-502A-05-B |
| Switch, Red Push Button, SPST | 2P SPST OFF-(ON) | R13-502MA-05-R |
| Switch, Black Push Button, SPST | | R13-502MA-05-B |
| Switch, Red Push Button, SPDT | 3P SPDT ON-(ON) | R13-502MC-05-R |
| Switch, Black Push Button, SPDT | | R13-502MC-05-B |

## Part Number Explanation:

**R13** - **502A** - **05** - **R**

Product Series Code

Model Number

Terminal Type

0 5 SO
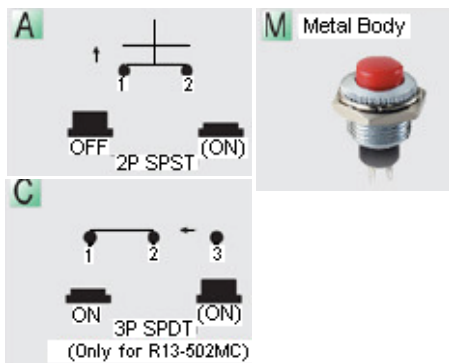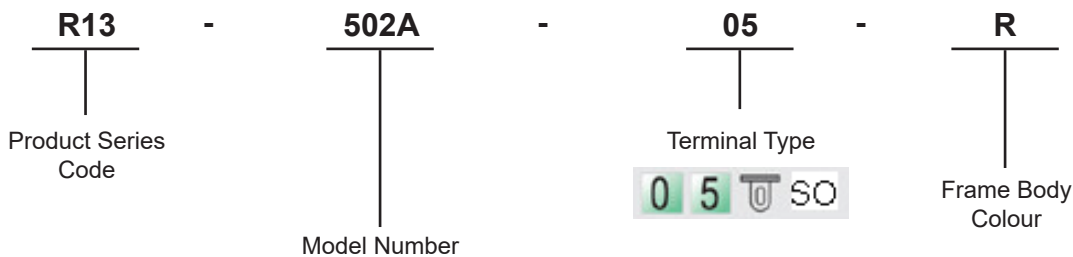
Frame Body Colour



Frame Body Colour : B = Black and R = Red.

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
Element14.com/multicomp-pro

08/02/21   V1.0