



## Features:

- Material : actuators and frames are nylon. Terminals are silver plated brass.

## Specifications:

Rating	: 3A 125V, 1.5A 250V AC; 10A 250V AC 1/2HP.
Max. contact Resistance	: 50mΩ.
Min. insulation Resistance	: 500V dc 100MΩ.
Dielectric strength	: 1,000V AC 1 minute.

## 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 >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 Volt drop : <100mV >10,000 operations
Temperature rise at the terminals (according to electrical life endurance)	<30°C - 6000 operations <45°C - 10,000 operations (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 >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)

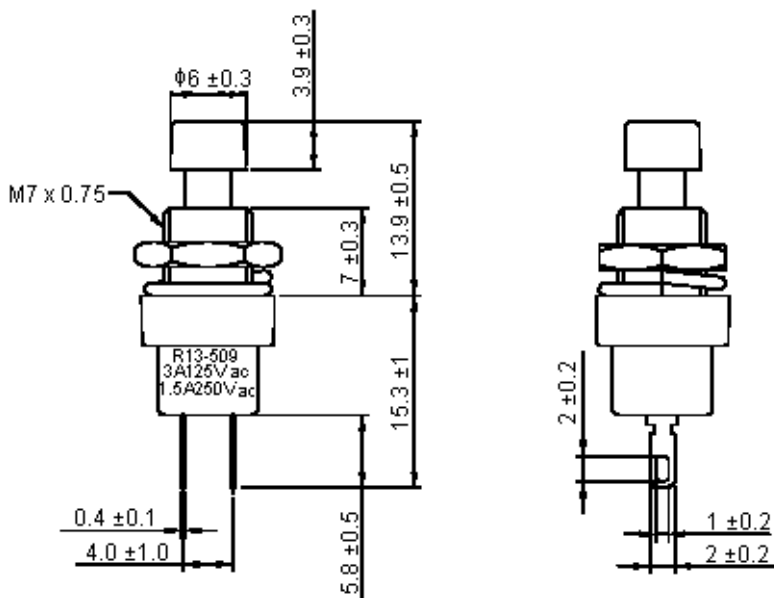
# Pushbutton Switches



## Environmental

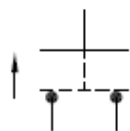
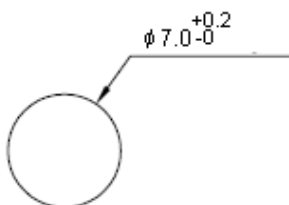
Item	Requirements
Ambient temperature	20°C to +65°C
Humidity	Maximum 85%
Salt spray test	No remarkable rust in metal parts (5% salt/35°C 24hrs)
Shock test	No mechanical defect or damage (100g/10msec X, Y, Z 3 times)
Vibration test	No mechanical defect damage (10-55Hz/1.5mm/X, Y, Z 2hrs)

## R13-509A-05-BB and R13-509A-05-BR



Mounting Hole

Circuit Diagram



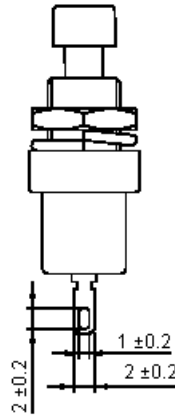
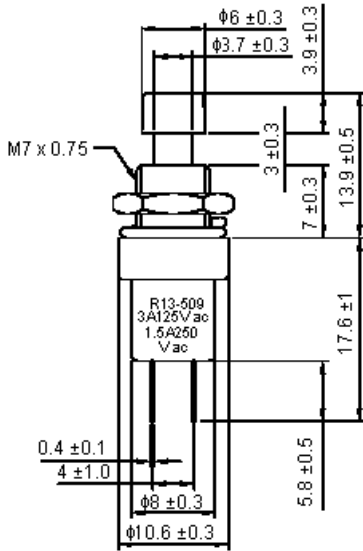
Dimensions : Millimetres



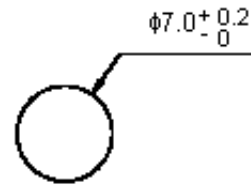
# Pushbutton Switches



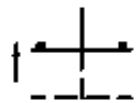
## R13-509B-05-BB



Mounting Hole

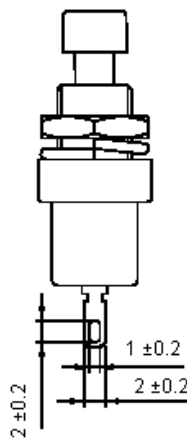
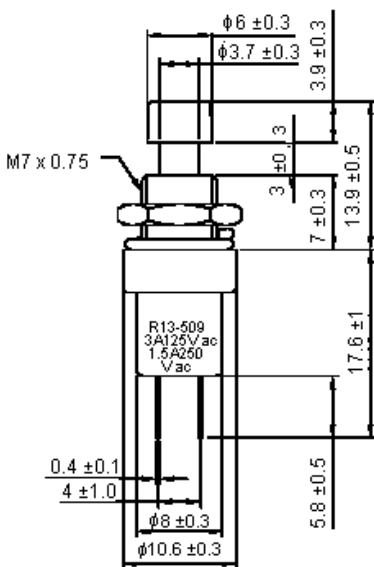


Circuit Diagram

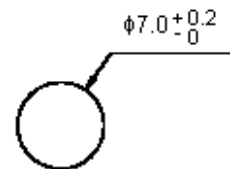


Dimensions : Millimetres

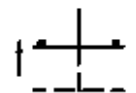
## R13-509B-05-BR



Mounting Hole



Circuit Diagram



Dimensions : Millimetres



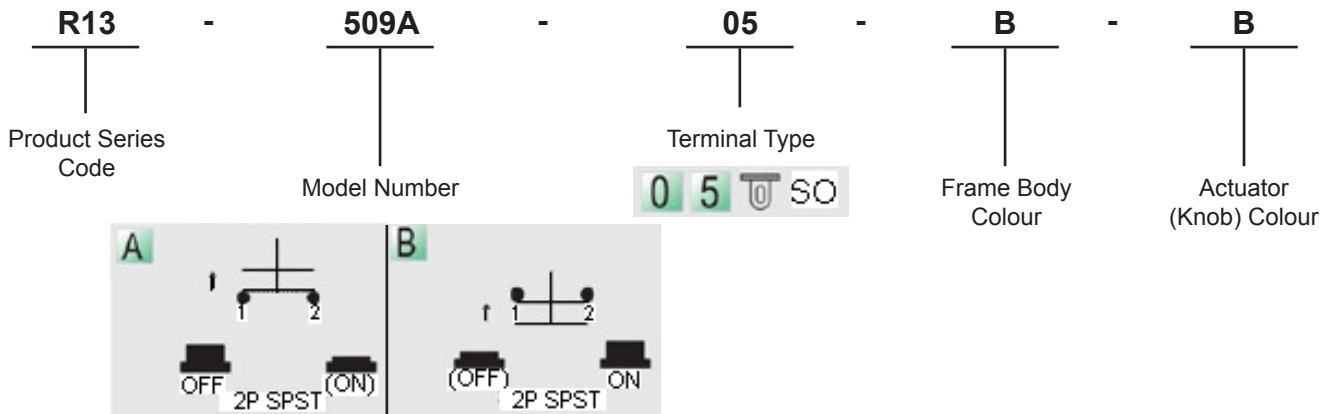
# Pushbutton Switches



## Part Number Table

Description	Circuit	Part Number
Switch, Push Button, SPNO, MOM	2P SPST OFF-(ON)	R13-509A-05-BB
Switch, Push Button, SPNC, MOM	2P SPST ON-(OFF)	R13-509B-05-BB
Switch, Push Button, SPNO, MOM	2P SPST OFF-(ON)	R13-509A-05-BR
Switch, Push Button, SPNC, MOM	2P SPST ON-(OFF)	R13-509B-05-BR

## Part Number Explanation:



Frame Body Colour : B = Black.  
 Actuator (Knob) Colour : B = Black and R = Red.

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