## Rocker Switches


$\varnothing 20.2$



20 A 12 V dc
Dimensions: Millimetres

## 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) | <100 m 2 ( $5 \mathrm{~V}, 1 \mathrm{~A} \mathrm{dc}$ ) |
| Dielectric strength (new state) | $\begin{aligned} & >1,000 \mathrm{~V} \\ & >2,500 \mathrm{~V} \text { ( } 10 \mathrm{~mA} \text { between the contacts) } \end{aligned}$ |
| Insulation resistance (new state) | >100 M $\Omega$ ( 500 V dc between the open contacts) |
| Inrush current | $50 \mathrm{~A} / 3 \mathrm{msec}$ (capacitive load) |
| Electrical life endurance | $>6,000$ operations <br> Volt drop : <100 mV <br> $>10,000$ operations |
| Temperature rise at the terminals (according to electrical life endurance) | $<30^{\circ} \mathrm{C}-6,000$ operations <br> $<45^{\circ} \mathrm{C}-10,000$ operations <br> (ambient conditions : $25 \pm 2^{\circ} \mathrm{C}$ and $65 \pm 5 \% \mathrm{RH}$ ) |

www.element14.com
www.farnell.com
www.newark.com

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## Mechanical Characteristics

| Item | Requirements |
| :--- | :--- |
| Actuating force | (base on switch type) |
| Operating life endurance | $>100,000$ operations |
| Terminal strength | $>2.5 \mathrm{~kg}$ - solder terminal <br> $>6.8 \mathrm{~kg}-$ plug-in $/ \mathrm{screw}$ terminal |
| Solderability of terminals | Maximum $350^{\circ} \mathrm{C} / 3 \mathrm{~s}$ (no pressure may be exerted <br> on the terminals when soldering by hand) |

## Environmental

| Item | Requirements |
| :--- | :--- |
| Ambient temperature | $-20^{\circ} \mathrm{C}$ to $+65^{\circ} \mathrm{C}$ |
| Humidity | Maximum $85 \%$ |
| Salt spray test | No remarkable rust in metal parts $\left(5 \%\right.$ Salt $/ 35^{\circ} \mathrm{C}$ <br> 24 hours $)$ |
| Shock test | No mechanical defect or damage $(100 \mathrm{~g} / 10 \mathrm{~ms}$ <br> $\mathrm{X}, \mathrm{Y}, \mathrm{Z} 3$ times) |
| Vibration test | No mechanical defect damage $(10$ to $55 \mathrm{~Hz} / 1.5 \mathrm{~mm} /$ <br> $\mathrm{X}, \mathrm{Y}, \mathrm{Z} 2$ hours $)$ |

Part Number Table

| Description | Part Number |
| :--- | :--- |
| SWITCH, ROCKER, SPST, ON-OFF | R13-112A-02-BB-0A |
| SWITCH, ROCKER, SPST, ON-OFF, MOM | R13-112F-02-BB-0A |
| SWITCH, ROCKER, SPST, ON-OFF | R13-112A5-02-WW-0A |
| SWITCH, ROCKER, SPST, ON-OFF | R13-112A-02-BB-3A |
| SWITCH, ROCKER, SPST, ON-OFF, MOM | R13-112F-02-BB-3A |
| SWITCH, ROCKER, SPST, ON-OFF | R13-112A5-02-WW-3A |
| SWITCH, ROCKER, DPST, ON-OFF | R13-244A-02-BB-0A |
| SWITCH, ROCKER, DPST, ON-OFF | R13-244A5-02-WW-0A |
| SWITCH, ROCKER, DPST, ON-OFF | R13-244A-02-BB-3A |
| SWITCH, ROCKER, DPST, ON-OFF | R13-244A5-02-WW-3A |
| SWITCH, ROCKER, SPST, ON-OFF, IP65 | R13-112A8-02-BB-0A |
| SWITCH, ROCKER, SPST, IP65, MOM | R13-112F8-02-BB-0A |
| SWITCH, ROCKER, SPST, ON-OFF, IP65 | R13-112A8-02-BB-2A |

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Part Number Table

| Description | Part Number |
| :--- | :--- |
| SWITCH, ROCKER, SPST, IP65, MOM | R13-112F8-02-BB-2A |
| SWITCH, ROCKER, SPST, RED ILLUM. | R13-112B-02-BR-0A |
| SWITCH, ROCKER, SPST, GREEN ILLUM. | R13-112B-02-BG-0A |
| SWITCH, ROCKER, DPST, RED ILLUM. | R13-244B-02-BR-0A |
| SWITCH, ROCKER, DPST, GREEN ILLUM. | R13-244B-02-BG-0A |
| SWITCH, ROCKER, SPST, RED, IP65 | R13-112B8W-02-BR-0A |
| SWITCH, ROCKER, SPST, GREEN, IP65 | R13-112B8W-02-BG-0A |
| SWITCH, ROCKER, SPST, RED ILLUM. | R13-112B9-02-BBR-0A |
| SWITCH, ROCKER, SPST, GREEN ILLUM. | R13-112B9-02-BBG-0A |

Part Number Explanation:


Frame Body Colour : B = Black and W = White
Actuator Knob Colour : W = White, $B=$ Black, $R=$ Red and $G=$ Green
Print $: 0=$ None
Package : A = Bulk

