## PUSHBUTTONS AND TOGGLES - SUBMINIATURE

8354

Double-break flexible leaf snap-action mechanism
Momentary or maintained action
Changeover-SPDT microswitch as standard
One, two, three and four-pole configurations
Long life
Ratings from $1 \mathrm{~mA} 4 \mathrm{~V}--$ to $6 \mathrm{~A} 250 \mathrm{~V} \sim$
Operating temperature $-40^{\circ} \mathrm{C}$ up to $+125^{\circ} \mathrm{C}$


## Main specifications

|  |  |  | Pushbuttons |  |  |  |  | Toggles |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Action | Momentary | Momentary + Maintained* | Momentary | Momentary + Maintained* | Momentary | Maintained 2 positions | Maintained 2 positions |
|  |  | Features | Large button Side outputs |  | Large button Rear outputs |  | Small button Side outputs | Large lever Side outputs | Small lever Side outputs |
|  |  |  | 83542 | 83540 | 83543 | 83541 | 83547 | 83544 | 83546 |
| Function |  | Connections |  |  | - - |  | $83547001$ | 83544001 | 83546004 |
| $\begin{gathered} \text { 1-pole } \\ (8354-0) \end{gathered}$ | I (changeover) | W2 (solder) | 83542002 | 83540001 |  |  |  |  |  |
| $\begin{array}{c\|} \hline \text { 2-pole } \\ \text { (8354-3) } \\ \hline \end{array}$ | I (changeover) | W2 (solder) | 83542301 | 83540301 | 83543301 | 83541301 | 83547301 | 83544301 | 83546302 |
| $\begin{gathered} \hline \text { 3-pole } \\ (8354-6) \end{gathered}$ | I (changeover) | W2 (solder) | 83542601 | 83540601 | 83543601 | 83541601 | 83547602 | 83544601 | 83546601 |
| Electrical characteristics |  |  |  |  |  |  |  |  |  |
| Rating nominal / 250 V AC (A) |  |  | 6 | 6 | 6 | 6 | 6 | 6** | 6 |
| Rating thermal / 250 V AC (A) |  |  | 11 | 11 | 11 | 11 | 11 | 11** | 11 |
| Mechanical characteristics |  |  |  |  |  |  |  |  |  |
|  |  |  | 1.6 | 1.6 | - | - | 1 | 3 | 3 |
|  |  |  |  | 3.2 | 3,2 | $3,2$ | 2 | 4 | 4 |
| Maximum operating force, 3-pole (N) |  |  | 4.8 | 4.8 | 4,8 | 4,8 | 3 | 7 | 5 |
| Maximum total travel force (N) |  |  | 20 | 20 | 20 | 20 | 1,2 | - | - |
|  |  |  | 0.7 | 0.7 | 0,7 | 0,7 |  | - | - |
| Total travel (mm) |  |  | 5 | 3.9 $-40 \rightarrow+125$ | 5 | 3,9 | 3,5 | $30^{\circ}$ | $30^{\circ}$ |
| Ambient operating temperature ( ${ }^{\circ} \mathrm{C}$ ) |  |  | $-40 \rightarrow+125$ |  | $-40 \rightarrow+125$ | $-40 \rightarrow+125$ | $-40 \rightarrow+105$ | $-40 \rightarrow+125$ | $-40 \rightarrow+125$ |
| Mechan | cal life - normal | avel*** (op.) | $10^{6}$ | - $5 \times 10^{5}$ | $10^{6}$ | - | $10^{6}$ | - | - |
| Mechanical life - total travel (op.) |  |  | $5 \times 10^{5}$ |  | $5 \times 10^{5}$ | $5 \times 10^{5}$ | $5 \times 10^{5}$ | $10^{5}$ | $10^{5}$ |
| Weight, 1-pole (g) |  |  | 12 | 13 | 19 | - | 7,5 | 18 | 8 |
| Weight, 2-pole (g) |  |  |  | 16 |  |  | 10 | 21 | 11 |
|  |  |  | $\begin{aligned} & 15 \\ & \hline 18 \\ & \hline \end{aligned}$ |  |  | 23 | 13 |  | 14 |

* Push slightly for momentary action. Fully push for maintained action, to latch, then to unlatch. ** Ratings at $48 \mathrm{~V} \sim$
*** Normal travel: until point of resistance


## Additional specifications

- Buttons, toggles: PA66, POM (83547), nickel-plated steel $(83544,83546)$
- Mounting brackets: zinc-plated steel
- Barrels, knurled bezels, nuts: nickel-plated brass
- Locating washer: stainless steel
- Contacts: silver alloy (gold-plated silver alloy: on request)
- Terminals: copper nickel
- Sealing cap (accessory): silicone rubber
- Degree of protection: IP40 (button side), IP50 with cap (accessory)
- Protection against electric shock: Class I
- Rated insulation voltage Ui: $250 \mathrm{~V}, 48 \mathrm{~V}$ (83544)
- Impulse withstand voltage Uimp: $2.5 \mathrm{kV}, 0.5 \mathrm{kV}$ (83544)
- Pollution degree: 3 , $2(83541,83543,83544)$
- Certification marks: c㒕 on request / @


## Product adaptations

> Functions on request: normally closed (R) or normally open (C) SPST microswitches
) 4-pole pushbuttons: 835419, 835439

> Dual-current variants with gold-plated contacts for use from 1 mA to 5 A
Rear outputs on 83540, 83542, 83544, 83546 and 83547 models (1-pole only)
Side outputs on 83541 and 83543
) Terminals for printed boards
) Higher operating force on 83542 (SP3134)
, Sealing cap accessory for IP50 protection on button side (for 83540, 83541, 83542, 83543)
) Red button on 83540, 83541, 83542, 83543 models
) cURus approved models

## Principles (per pole)

Double break snap-action switch

## Changeover - SPDT (form Za):



Both circuits must be used at same polarity

## Curves

## Operating curve for types 8354




Normally closed - SPST-NC (form Y)


## Normally open - SPST-NO (form X)


(1) Number of cycles

The operating curve relates to contact life, but switch durability is also limited by mechanical life of operating device : see "Mechanical life"

## Dimensions

Products


83541-83543


83547


## Panel cutouts

83540-83541-83542-83543-83544


* When used with the locating washer


## Connections

W2 solder or quick-connect $2.8 \times 0.5$


## Mounting accessories

Hexagonal nuts


Thickness: 1.5

83546-83547


X1 for PCB (consult us)


## Knurled bezels



## Sealing cap



Mounting accessories


## Installation recommendations

See "Basic technical concepts"

## How to order

Use the 8 digit part numbers when they are defined
Other cases, precise:
Type of switch/nb of poles - Function - Connection - UL approval* - Adaptation* + Mounting accessories*

* if needed

Example: 835426 I W2 UL +70135750

## Warning:

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