## MINIATURE MICROSWITCHES - PREMIUM

## V3-83161

> High precision flexible leaf snap-action mechanism
) Operation without balance-point, even at extremely slow actuating speed
) Broad range of operating forces from 0.15 N to 5 N
) Ratings from 4 A to 20(8) A $250 \mathrm{~V} \sim$, 10(4) A $400 \mathrm{~V} \sim$ and $1 / 2 \mathrm{hp} 125-250 \mathrm{~V} \sim$
Contact gap less or greater than 3 mm (micro-disconnection ( $\mu$ ) or full disconnection)
Operating temperature from $-60^{\circ} \mathrm{C}$ up to $+150^{\circ} \mathrm{C}$ - High resistance to shock and vibration
Mechanical life up to 50 million cycles
ENEC and cURus approved


Wide choice of actuators on 4 possible fixing positions (pre-assembled or retrofittable)
Main specifications

| Function | Connections |
| :---: | :---: |
| 1 (changeover) | W2 (solder) |
| 1 (changeover) | W3 (QC 6.3x0.8) |
| 1 (changeover) | W6A5 (QC 4.8x0.5) |
| 1 (changeover) | W3R5 (QC 6.3x0.8, Rast 5) |
| 1 (changeover) | W5 (screw + clamp) |
| 1 (changeover) | W6D8 (QC 4.8x0.8) |
| 1 (changeover) | W7A5 (QC 2.8×0.5) |
| 1 (changeover) | 2W7A8 (QC 2.8x0.8, double) |
| R (normally closed) | W2 (solder) |
| R (normally closed) | W3 (QC 6.3x0.8) |
| R (normally closed) | W6A5 (QC 4.8x0.5) |
| R (normally closed) | W3R5-W5-W6D8-W7A5-2W7A8 |
| C (normally open) | W2 (solder) |
| C (normally open) | W3 (QC 6.3×0.8) |
| C (normally open) | W6A5 (QC 4.8x0.5) |
| C (normally open) | W3R5-W5-W6D8-W7A5-2W7A8 |
| Electrical characteristics |  |
| Rating nominal / 250 V AC (A) |  |
| Rating thermal / 250 V AC (A) |  |
| Rating ENEC/NF / 250 V AC (A) |  |
| Rating UL/ 125/250 V AC (A) |  |
| Mechanical characteristics |  |
| Maximum operating force ( N ) |  |
| Min. Release force ( N ) |  |
| Maximum total travel force ( N ) |  |
| Max. Allowable overtravel force ( N ) |  |
| Maximum rest position (mm) |  |
| Operating position (mm) |  |
| Maximum differential travel ( mm ) |  |
| Min. overtravel (mm) |  |
| Ambient operating temperature ( ${ }^{\circ} \mathrm{C}$ ) |  |
| Mechanical life for 2/3 OT (operations) |  |
| Contact gap (mm) |  |
| Weight (g) |  |
| * Please consult us <br> ** Also available with | rating force (831612 SP4165) |


| $\begin{aligned} & \text { Standard } \\ & 831613 \end{aligned}$ |  | High current 831612 |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Standard | UL | Standard | UL | UL SP4186 |
| 83161301 | 83161348 | - | 83161273 | - |
| 83161338 | 83161344 | 83161241 | 83161244 | $\bullet$ |
| 83161304 | 83161343 | - | -* | - |
| 83163023 | 83163107 | - * | - * | -* |
| 83161303 | 83161349 | -* | -* | - |
| 83161305 | 83161341 | -* | -* | - |
| 83161309 | 83161350 | - | - | - |
| 83161310 | - | -* | - | - |
| 83161316 | 83163041 | $\bullet$ | 83161274 | $\bullet$ |
| 83161311 | 83163066 | - | - | - |
| 83161359 | - | -* | -* | - |
| - | - | -* | -* | $\bullet$ * |
| 83161315 | - | $\bullet$ | $\bullet$ | $\bullet$ |
| 83161312 | 83161346 | $\bullet$ | $\bullet$ | $\bullet$ |
| 83161325 | - | -* | -* | - |
| $\bullet$ | $\bullet$ | -* | -* | -* |
| $\begin{array}{r} 16 \\ \hline 20 \end{array}$ |  | 20 |  |  |
|  |  | 22 |  |  |
| 16(4) | 16(4) | 20(8) | 20(8) | 20(8) |
|  | 16-1/2hp | - | 15.1-1/2hp | 20.1-1/2hp |
| 0.8 |  | $1^{* *}$ |  |  |
| 0.2 |  | 0.2 |  |  |
| 2 |  | 2.5 |  |  |
| 20 |  | 20 |  |  |
| 16.2 |  | 16.1 |  |  |
| $14.7 \pm 0.3$ |  | $14.7 \pm 0.4$ |  |  |
| 0.35 |  | 0.35 |  |  |
| 1.2 |  | 1.1 |  |  |
| $-60 \rightarrow+125$ |  | -60 $\rightarrow+125$ |  |  |
| $2 \times 10^{7}$ |  | $2.5 \times 10^{5}$ |  |  |
| 0.4 |  | 0.4 |  |  |
| 5.6 |  | 5.6 |  |  |

${ }^{* *}$ Also available with 3N operating force (831612 SP4165)

## Additional specifications

- Case: PA6 GF (UL 94-V2 / GWFI $960^{\circ} \mathrm{C}$ ) - Standard versions

PBT GF (UL 94-V0 / GWFI $960^{\circ} \mathrm{C}$ ) - UL versions
PET GF (UL 94-V0 / GWFI $960^{\circ} \mathrm{C} / \mathrm{GWIT} 775^{\circ} \mathrm{C}$ ) - On request

- Button: PA66
- Moving blade: silver-plated beryllium copper
- Contacts: silver alloy, micro-profile (831612: silver cadmium oxyde)
- Terminals: brass (except W2 : copper nickel)
- Levers: stainless steel or polyamide, polyamide roller
- Nuts for 161L: nickel-plated brass
- Degree of protection: IP40 (mechanism)
- Proof tracking index: PTI 250

Protection against electric shock: button and 161-type actuators have reinforced insulation for Ui 250V / Uimp 2,5kV / pollution 2

- Recommended min actuating speed: $0.001 \mathrm{~mm} / \mathrm{s}$
- Certification marks: Standard versions: NF @ © EH[


