MICON


## Switching individually

With the new MICON 5, switching is redefined. The click varies from a gentle to a distinctly sportive sound, depending on the type used. This makes it possible to tailor the look and feel of the input keyboard to the style of the overall system.

RAFI's new MICON 5 short-travel keyswitch sets the benchmark in miniaturisation while safeguarding switching reliability and excellent tactile and acoustic properties.

In membrane keyboards, in operating panels or under keycaps: The RAFI MICON 5 leaves great freedom to your designers and offers to your customers the switching reliability that lasts for a product's life.


## This is the leading edge: Technology, look \& feel, service life.

Machines and devices should above all be easy and safe to operate: With keyswitches giving a distinct feedback. And which offer reliable switching for the full life cycle of a product.

RAFI's new MICON 5 opens up entirely new perspectives for the development of data entry systems and control panels with its footprint of only $5.1 \times 6.4 \mathrm{~mm}$.

First class acoustic and tactile properties, excellent look and feel combined with absolute switching reliability for keyboards and data entry units.


The MICON 5 excels by its minimum dimensions, superior tactile properties and a sealed contact system with gold contacts. This makes it ideally suited for the most sophisticated applications just as for the most severe conditions of use.
( MICON 5: The reliable switching unit for use under keycaps. Push, pull, rocker, double push functions, etc. Whatever you want to switch, you can realise all your ideas with the MICON 5.

- MICON 5: Unbeatable also under membrane overlays.

Experience pays. The MICON 5 offers you utmost flexibility in designing many different control panels in combination with the RAFI plungers of variable heights and actuation areas, ranging from extremely small keypads to exclusive control panels.


## Part numbers

| Order no. | Terminals | Height [mm] | Operating force $\mathrm{F}_{1}$ [ N ] (+- 20\%) | Switching travel $\mathrm{S}_{2}[\mathrm{~mm}]$ (+- 0,5 mm) | Operating life [operations] (testing force) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1.14.002.101/0000 | SMD | standard 3,85 | 3,0 | 0,7 | 1.000.000 (4 N) |
| 1.14.002.001/0000 | SMD | standard 3,85 | 4,5 | 0,8 | 250.000 ( 6 N ) |
| 1.14.002.111/0000 | SMD | standard 3,8 | 5,5 | 0,9 | 1.000 .000 ( 8 N ) |
| 1.14.002.011/0000 | SMD | standard 3,85 | 8,5 | 1,1 | 250.000 (12 N) |
| 1.14.002.103/0000 | SMD | low 3,45 | 3,0 | 0,6 | 1.000.000 (4 N) |
| 1.14.002.003/0000 | SMD | low 3,45 | 4,5 | 0,7 | 250.000 (6 N) |
| 1.14.002.113/0000 | SMD | low 3,45 | 5,5 | 0,7 | 1.000 .000 ( 8 N ) |
| 1.14.002.106/0000 | THT | standard 3,85 | 3,0 | 0,7 | 1.000.000 (4 N) |
| 1.14.002.006/0000 | THT | standard 3,85 | 4,5 | 0,8 | 250.000 ( 6 N ) |
| 1.14.002.116/0000 | THT | standard 3,85 | 5,5 | 0,9 | 1.000 .000 ( 8 N ) |
| 1.14.002.016/0000 | THT | standard 3,85 | 8,5 | 1,1 | 250.000 (12 N) |

## Mechanical characteristics <br> (preliminary data)

| Operating force range: | See table part numbers, others <br> available on request |
| :--- | :--- |
| Tactile feedback: | Uniform over the service life and <br> temperature range |
|  |  |

## Mechanical Design

(preliminary data)

| Contact system: | Snap-action contact, gold-plated on <br> both sides |
| :--- | :--- |
| Contact arrangement: | 1 NO contact |


| Keyswitch mounting: | On printed circuit board |
| :--- | :--- |
| Fixing: | Reflow or wave soldering; gluing not <br> required |
| Terminals: | High-grade tin <br> (lead-free to WEEE standards) |
| Terminal shape: | Recessed J-shape terminals for SMD, <br>  <br> PCB solder terminals for THT |
| Flammability of materials: | UL 94 HB <br> (non-halogenous acc. to WEEE) |
| Dimensions: | $6,4 \times 5,1 \times 3,85 / 3,45 \mathrm{~mm}$ |

## RAFI MICON 5

## Basic element

## Metal cover



Sectional view of keyswitch

Silicone seal and actuator


Standard keyswitch with extension plunger


MICON 5 under customer-specific keycaps

## Electrical characteristics

(preliminary data)

| Rated voltage: | 0.02 to $42 \mathrm{~V} \mathrm{AC} \mathrm{/} \mathrm{DC}$ |
| :--- | :--- |
| Rated current: | 0.01 to 100 mA |
| Rated power, max.: | 1 W |
| Contact resistance: | $<100 \mathrm{mOhms}$ |
| Bouncing time: | $<5 \mathrm{~ms}$ |
| Switching travel: | $0,5 \ldots 1 \mathrm{~mm}$, depending on version |



## Other characteristics

(preliminary data)

| Operating temperature: | $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Storage temperature: | $-50^{\circ} \mathrm{C}$ to $+95^{\circ} \mathrm{C}$ |
| Resistance to extreme climates: | Constant enviroment to IEC 600 68-2-78 |
| and 2-30, Variable environment to IEC |  |
| $60068-2-30$ and 2-33 |  |

## MICON 5 in summary

SMD-J or THT terminalsDimensions $(\mathrm{L} \times \mathrm{W} \times \mathrm{H})$ : $6.4 \times 5.1 \times 3.85 \mathrm{~mm}$Minimum grid: $5.72 \times 7.95 \mathrm{~mm}$Flexible illumination options: One or more LEDs per button or keypad- Suitable for use under keycaps or under a membrane overlay》 Various operating forces, suitable to each applicationOptimum tactile and acoustic feedback: Distinct clickHermetically sealed contact systemReliable gold/gold contacts》 Operating life up to 1 million operations




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