

## MICON 5 SAFETY, SMT standard, $2.9 \pm 0.6$ N, 1 NC + 1 NO



### Description

MICON 5 tactile switches offer extreme switching reliability, with a very small space requirement. They can be arranged individually, in rows or as key blocks. For use beneath overlays, we recommend combining the MICON 5 tactile switches with plungers. Here are the properties at a glance:

- › Suitable for the most important soldering techniques
- › Soldering bath for THT versions
- › Reflow soldering for SMT versions
- › Vapor phase soldering for SMT versions
- › Manual soldering
- › Processing of the SMT design with SMT automatic assembly machines
- › IMDS entry
  
- › Packaging in blister tape, spool with 2,100 pieces
- › Proposal for stencil printing: 150 µm stencil with 10% pad reduction on area



### technical data

#### › general

Operating temperature, min.	-40 °C
Operating temperature, max.	125 °C
Storage temperature, min.	-40 °C
Storage temperature, max.	90 °C
illuminated	No
Soldering	Reflow
Solder heat resistance according to standard	DIN EN 60068-2-58 DIN EN 61760-1
Packaging	Blister
Packaging unit	2,100 pcs.
Net weight	0.3 g
Operating life	1,000,000 cycles
B10	1,300,000 cycles
Degree of protection, front side, according to ISO 20653	IP67 (IP6K7)
Degree of protection on rear side acc. to ISO 20653	IP67 (IP6K7)
MSL Moisture Sensitivity Level	1
Shock resistance according to standard IEC 60068-2-27	50 g at 11 ms amplitude semi-sinusoidal
Oscillation resistance according to standard IEC 60068-2-6	5 g at 10...500 Hz

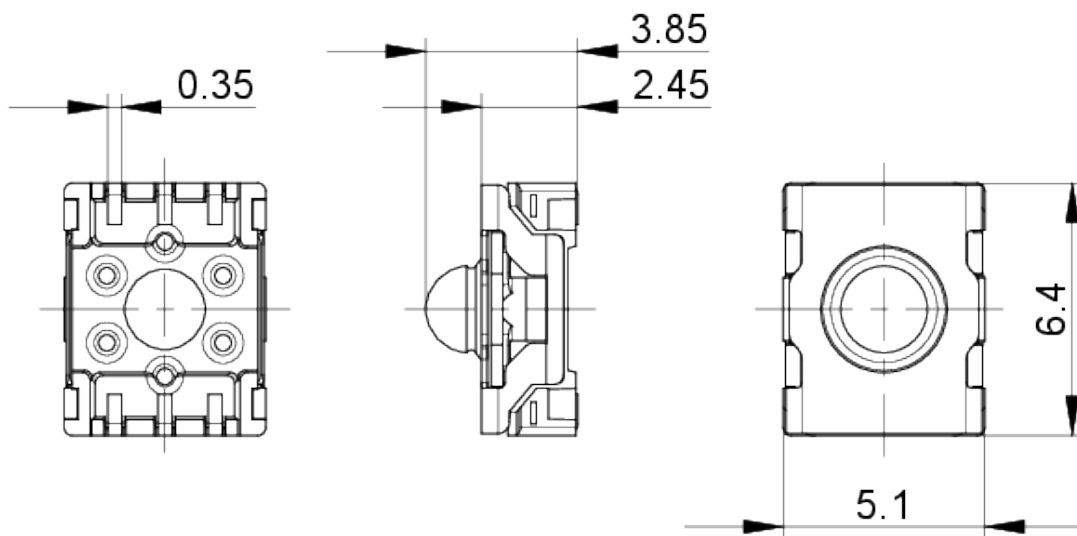
#### direct links

- › [RAFI eCatalog](#)

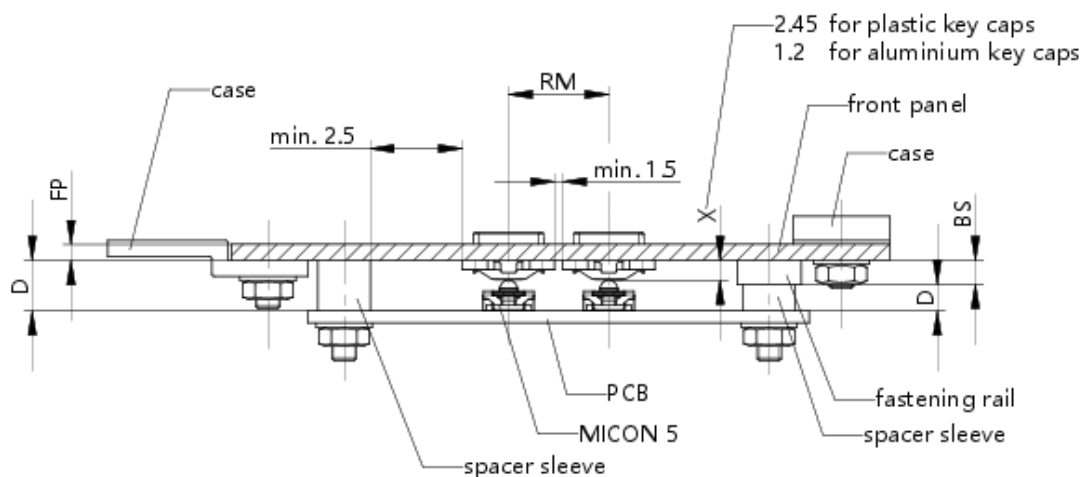
Minimum order quantity (MOQ)	2,100 pcs.
RoHS compliant	Yes
REACH compliant	Yes
Product code	XW
<b>&gt; mounting diameters</b>	
Outside dimension, length	6.4 ± 0.1 mm
Outside dimension, width	5.1 ± 0.1 mm
Installation height	3.85 ± 0.1 mm
Grid, min.	6 x 7.8 mm
<b>&gt; mechanical data</b>	
Terminal on the rear	SMT
Actuation function	momentary contact function
Operating force, max.	4 N
Operating force, min.	2.9 ± 0.6 N
Contact function	1 NC + 1 NO
Contact system	Snap-action contact DPST - Double Pole Single Throw
Contact material	Gold
Solderability	Yes
Bounce time at 10 mm/s	<5 ms
Switching function	Break before make
Switching travel	0.7 ± 0.15 mm
<b>&gt; electrical data</b>	
Rated voltage, min.	0.02 V
Rated voltage, max.	35 V
Dielectric strength	250 V
Rated current, min.	0.00001 A
Rated current, max.	0.1 A
Rated power, max.	1 W

**drawings**

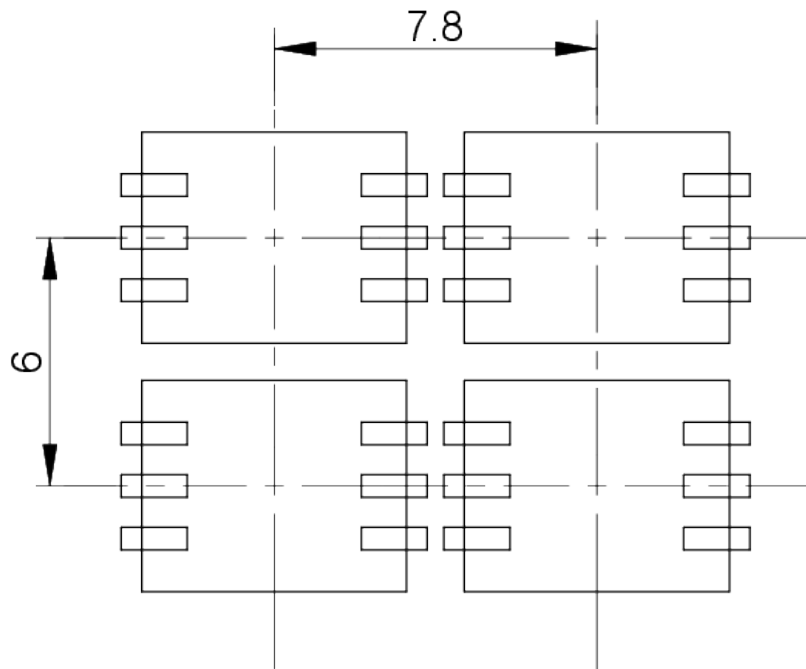
**Dimensioned drawing**



**System drawing**

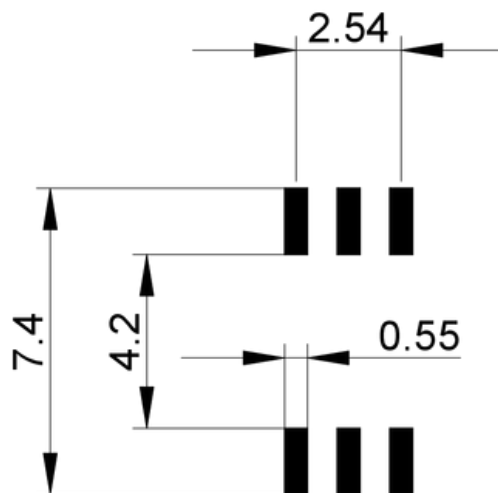


PCB drawing

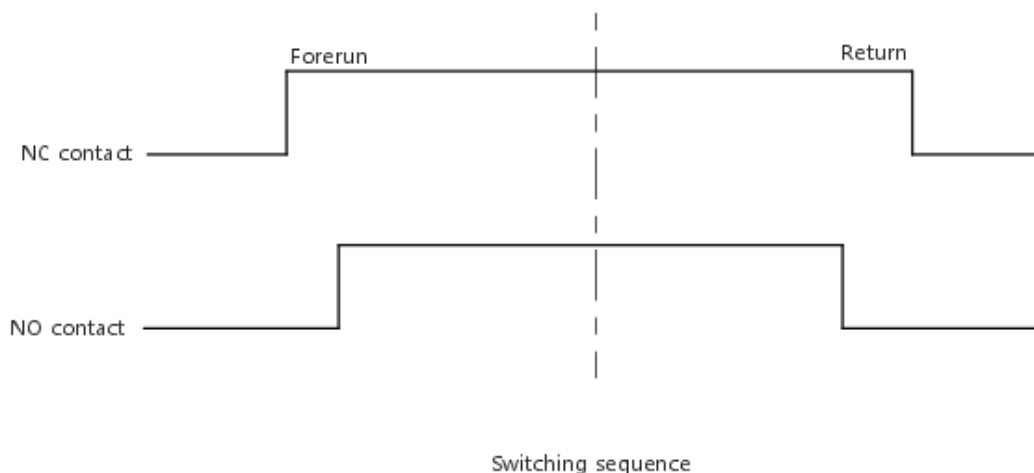


MICON 5 SMT

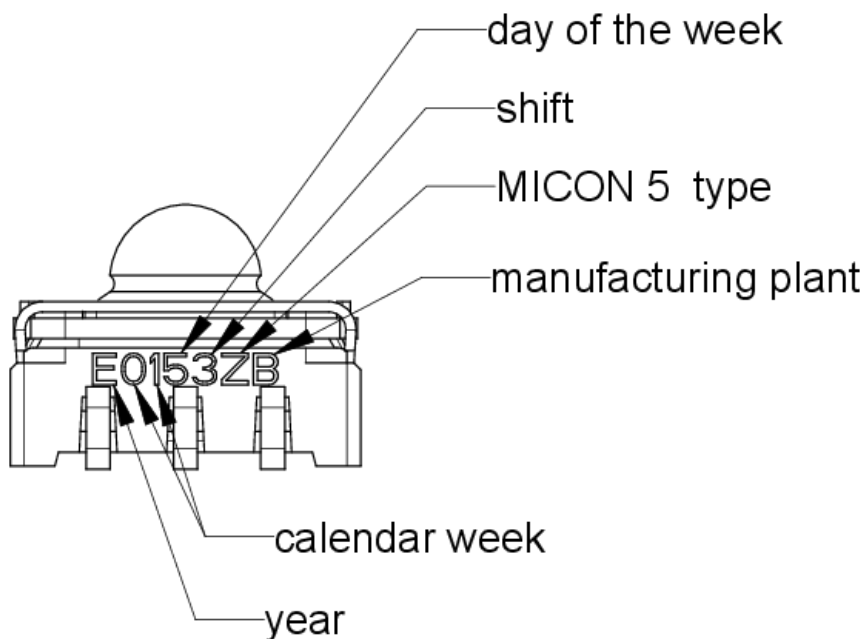
PCB drawing



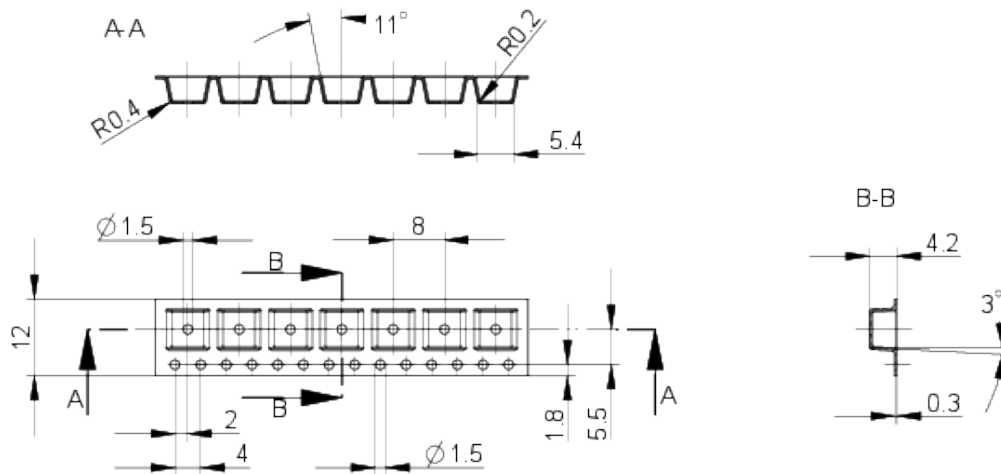
**Schematic diagram**



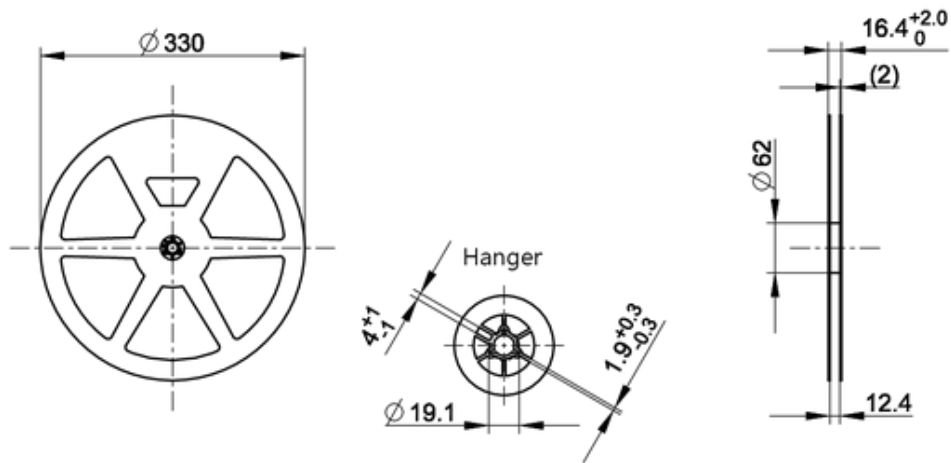
**Product labeling drawing**



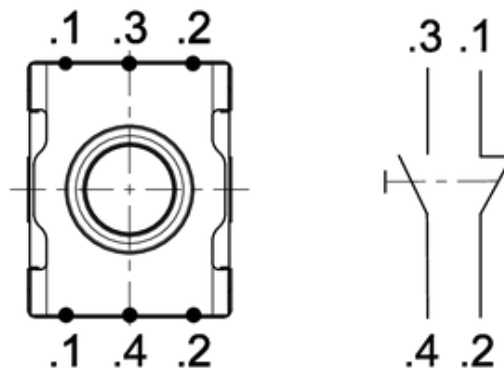
**Packaging drawing**



**Packaging drawing**



**Connection drawing**

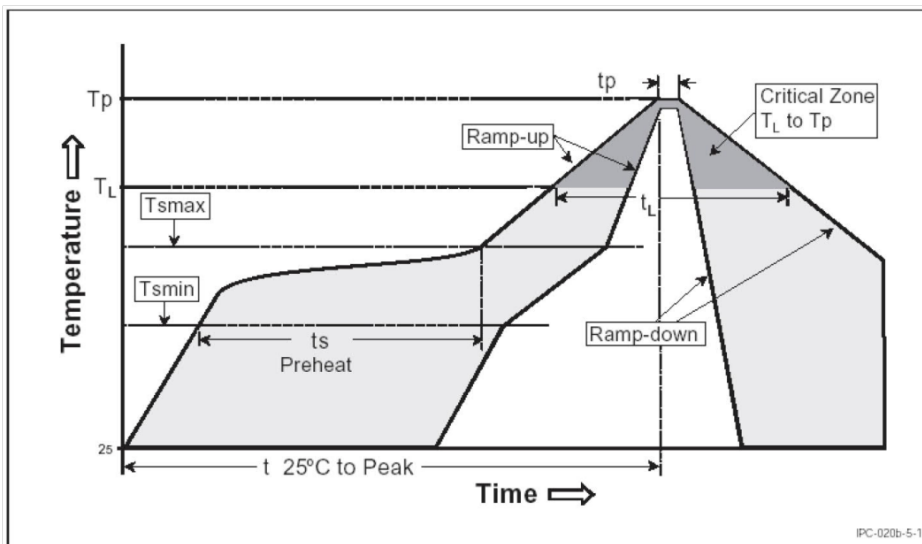


mounting

RAFI soldering profile for ROHS compliant reflow components



Publication date: October 7, 2021



Parameter	RAFI values
Gradient ( $T_L$ to $T_P$ )	max. 3°C / s
<b>Preheating zone</b>	
Minimum temperature ( $T_{smin}$ )	150°C
Maximum temperature ( $T_{smax}$ )	200°C
Time (from min. to max.) ( $t_s$ )	60 - 120 s
Gradient ( $T_{smax}$ to $T_L$ )	max. 3°C / s
Time over melting temperature ( $T_L$ ) time ( $t_L$ )	217°C 60 - 150 s
Peak temperature ( $T_P$ )	max. 260°C (+0°C)
Time within peak temperature - 5°C ( $t_p$ )	20-40 s
Gradient ramp down	max. 6°C / s
Time difference from 25°C to peak temperature	max. 8 minutes

The reflow soldering profile is based on the definition of Jedec J-STD-020D.

The information in this sheet only contains general descriptions and / or performance features, which may not apply precisely as described to the respective application, and which may change due to further product enhancements. The technical data, illustrations and other information about our products are the mere results of individual technical testing. These descriptions and other product features are only binding if they expressly agreed upon at the time of the conclusion of a binding contract. In all other cases, we reserve the right to make technical changes as well as changes of availability. Pictures and other graphic illustrations are approximations only. All product names may be trademarks or brand names of the RAFI Group or any other sub-supplier of RAFI. The use of such by any third parties for their own purposes may infringe the rights of the respective entity holding those rights. Subject to change and errors excepted. Details about delivery times and availability are noncommittal and have no legal force.

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## Media Robust Electronics



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## MICON 5 S, SL and SAFETY

Valid for all variants MICON 5 S 1.14.005., MICON 5 SL 1.14.105. and MICON 5 SAFETY 1.14.205.

### Recommended potting compounds

WEVO-CHEMIE GmbH

WEVOPUR 7210 FL/WEVONAT 507

#### Important note

Maximum potting height B must not be exceeded.

### Recommended circuit board protection

Lackwerke Peters GmbH & Co.KG

combination of high-viscosity (HT-T)  
and low-viscosity coating from the  
ELPEGUARD® SL 1307 family

Lackwerke Peters GmbH & Co.KG

ELPEGUARD® SL 1800

#### Important note

The conformal coating of our tactile switches must be tested in the final application. Coating that enters the tactile switch does not harden directly, so that any resulting malfunction can only be detected later.

If the tactile switch is completely coated, the coating may peel off the elastomer of the tactile switch during the first few actuations. Press the tactile switch only after the coating has hardened.

We recommend leaving out the elastomer area when coating to prevent detachment.

#### General remark

The suitability and use of the recommended media for potting, conformal coating and nano-coating must be qualified and approved in the final application.

The potting, conformal coating and nano-coating must be used in accordance with the manufacturer's technical data sheet.

Actuation of the tactile switch only after the potting compound, conformal coating and nano coating has completely hardened.

Other potting compounds and processes for printed circuit board protection on request.

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