

## RACON 12 ST, SMT, 3.6 ± 0.7 N, 1 NO



### fields of application

- › Measurement-control-regulation
- › Mechanical and system engineering
- › Automotive
- › Electro-medical

### special features

- › Gold contacts, reliable switching with low currents
- › Special tactile feedback
- › Different operating forces
- › Variable overall heights due to plunger
- › Terminal technology: SMT or THT
- › Traceability through product identification
- › sealable (tested media see Downloads)



### description

Our top-quality RACON 12 tactile switches – in the dimensions 12 x 12 mm – feature an unmistakable click, high switching reliability, a sealed contact system and castability. That has made RACON the standard in many industries. Whether for automotive applications, systems with keycaps, or membrane keyboards, RACON impresses in the THT or SMT versions – for your application too.

RACON 12 tactile switches can be arranged individually, in rows or as key blocks. When used beneath membrane overlays, the RACON key switches should be combined with plungers. 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 designs with SMT automatic assembly machines

IMDS entry

### technical data

#### › general

Color	blue
Operating temperature, min.	-40 °C
Operating temperature, max.	125 °C
Storage temperature, min.	-50 °C
Storage temperature, max.	90 °C
illuminated	No
Soldering	Reflow
Solder heat resistance according to standard	DIN EN 60068-2-58

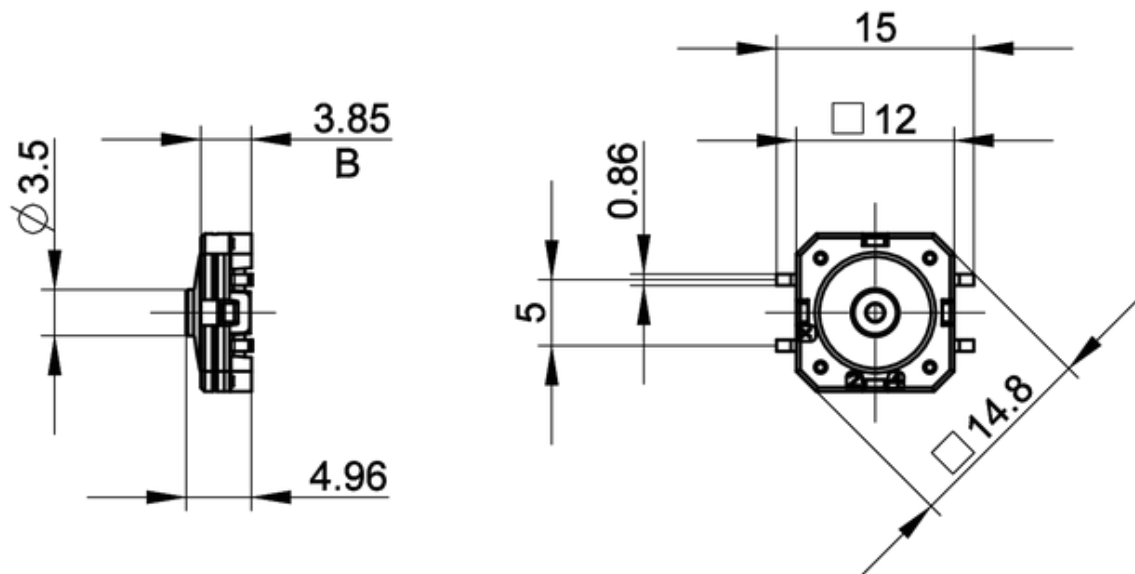
#### direct links

- › [RAFI eCatalog](#)

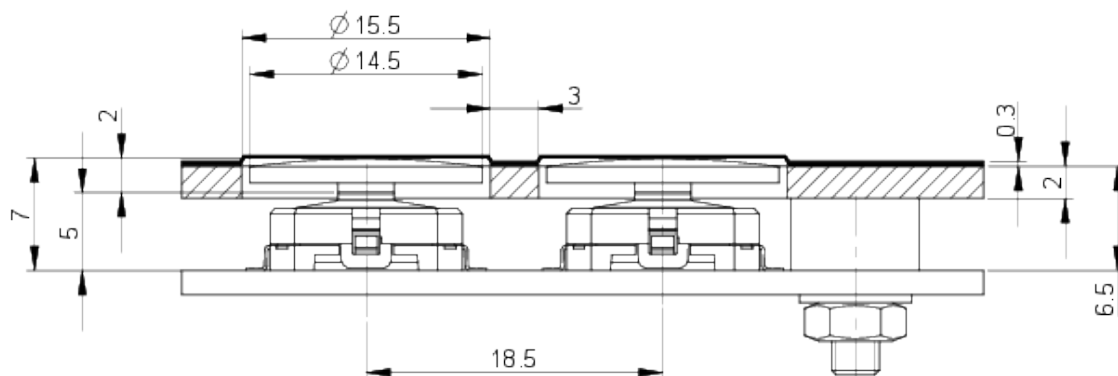
Packaging	Blister
Packaging unit	750 pcs.
Operating life	1,000,000 cycles
B10	1,300,000 cycles
Degree of protection, front side, according to ISO 20653	IP67 (IP6K7)
Degree of protection on rear side acc. to ISO 20653	IP67 (IP6K7)
MSL Moisture Sensitivity Level	1
Corrosive gas testing according to standard	Yes
MOQ order	750 pcs.
RoHS compliant	Yes
REACH compliant	Yes
Product code	TC
<b>&gt; mounting diameters</b>	
Outside dimension, length	12 mm
Outside dimension, width	12 mm
Installation height	4.95 ± 0.1 mm
Grid, min.	12.50 x 15.24 mm
<b>&gt; mechanical data</b>	
Actuation function	momentary contact function
Operating force, max.	8 N
Operating force, min.	3.6 ± 0.7 N
Switching travel	0.61 ± 0.15 mm
Bounce time at 10 mm/s	<5 ms
Contact function	1 NO
Contact system	Snap-action contact SPST - Single Pole Single Throw
Contact material	Gold
Solderability	Yes
Terminal on the rear	SMT
<b>&gt; electrical data</b>	
Rated voltage, min.	0.02 V
Rated voltage, max.	35 V
Rated current, min.	0.00001 A
Rated current, max.	0.1 A
Rated power, max.	1 W

**drawings**

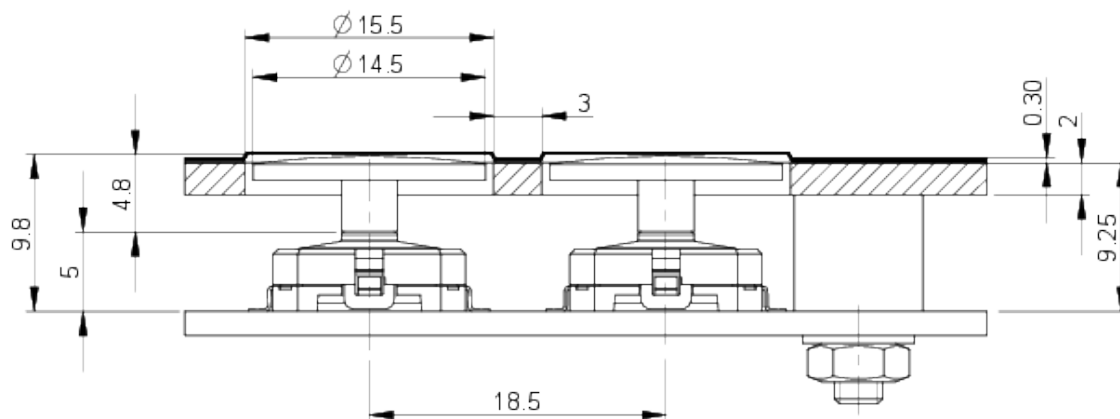
**Dimensioned drawing**



**System drawing**



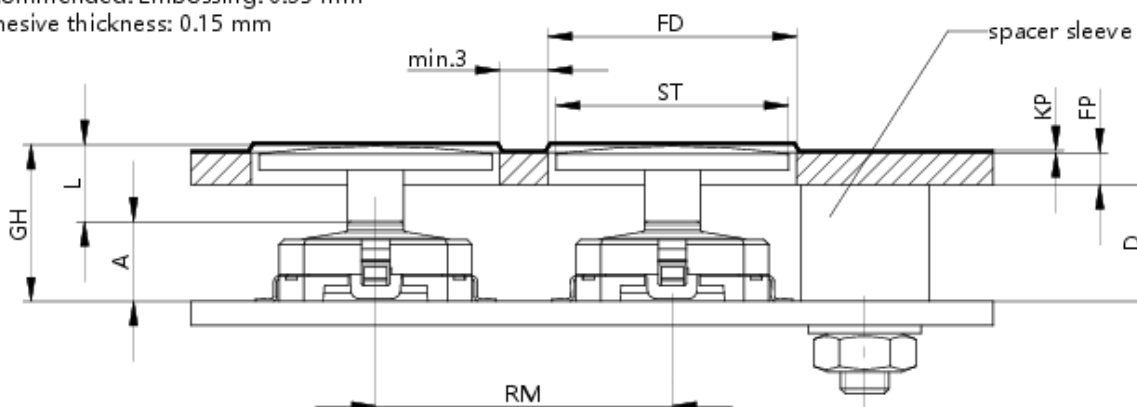
**System drawing**



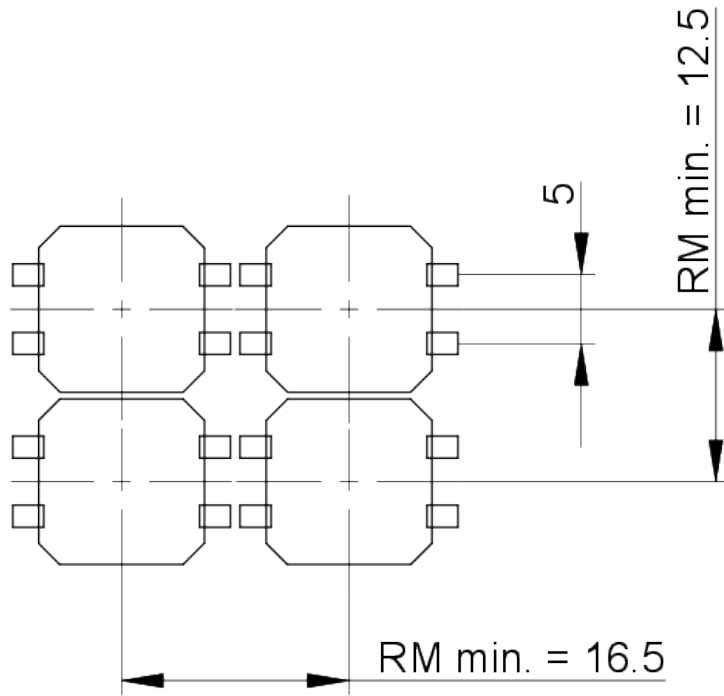
**System drawing**

SMT gullwing connection

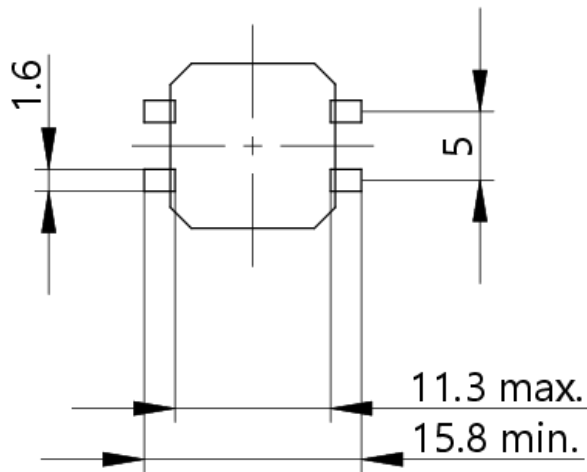
Recommended: Embossing: 0.35 mm  
Adhesive thickness: 0.15 mm



PCB drawing

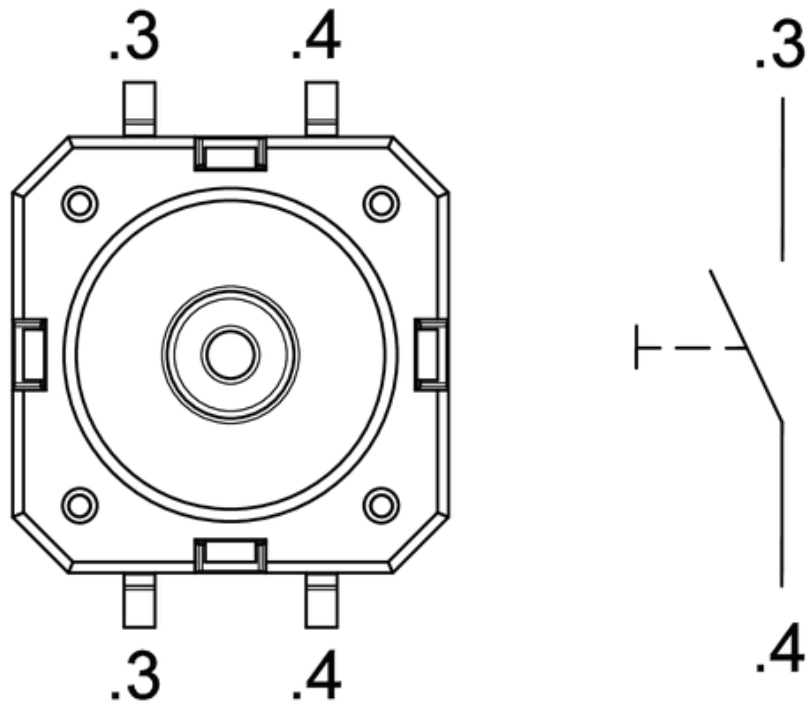


PCB drawing

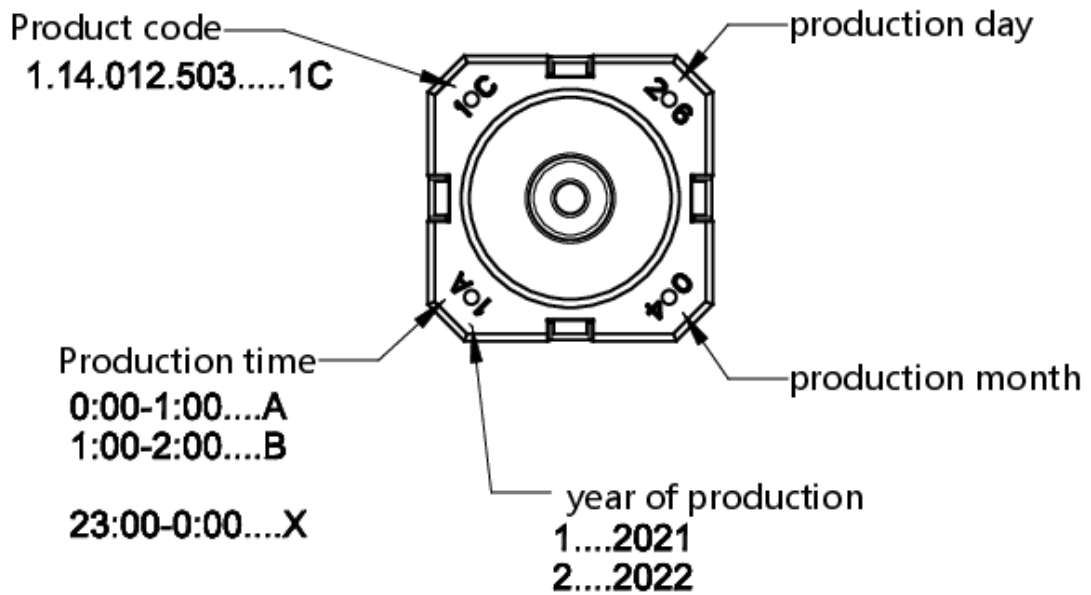


PCB-Pad  
component side

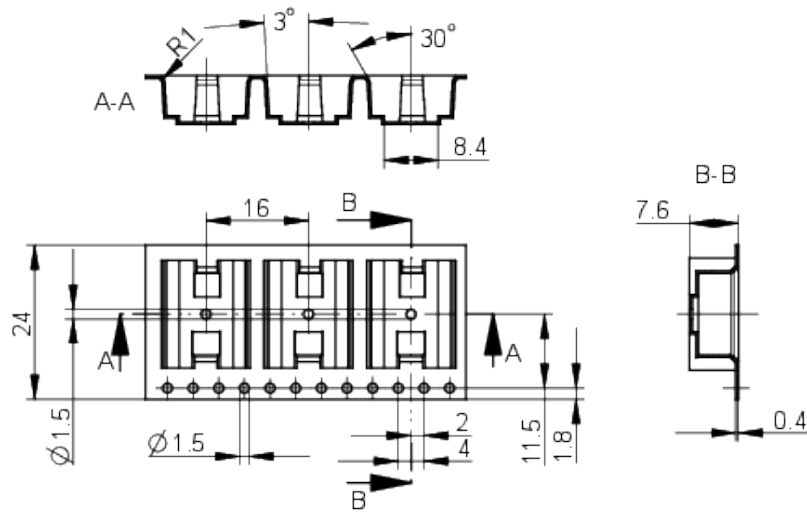
Schematic diagram



Product labeling drawing



**Packaging drawing**

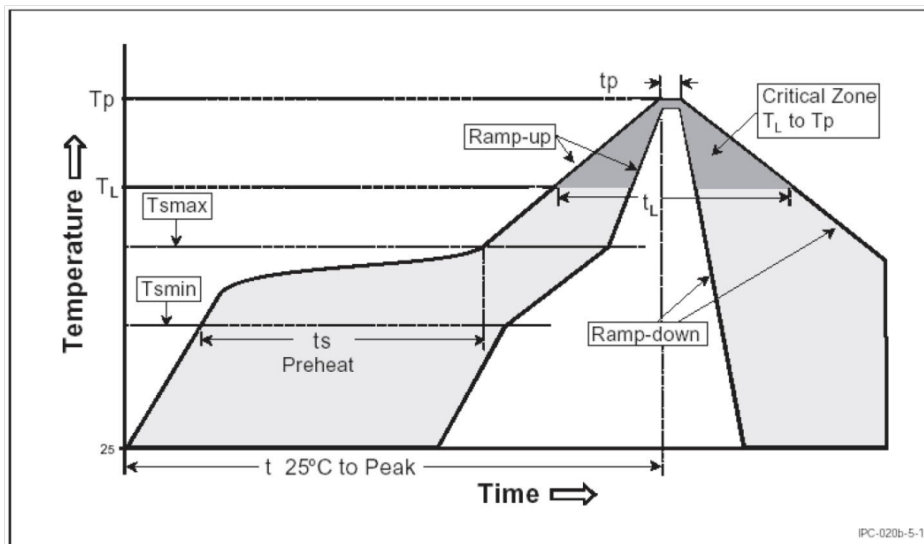


mounting

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 Jecdec J-STD-020D.

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