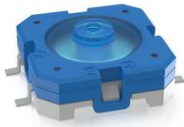


RACON 12 ST, SMT, 3.6 ± 0.7 N, 1 NO



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

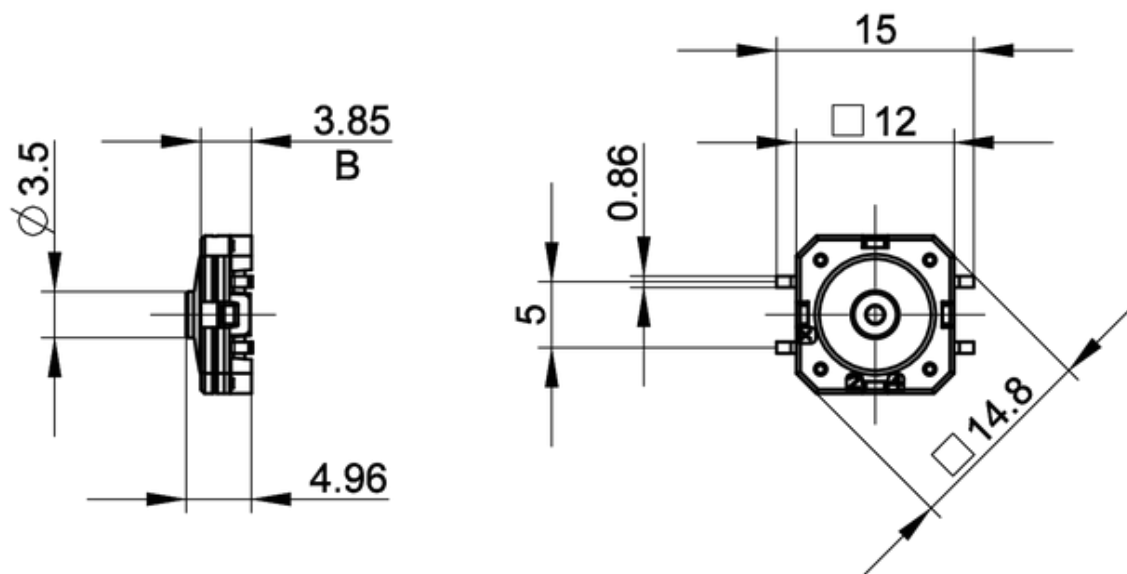
Color	blue	direct links
Operating temperature, min.	-40 °C	> RAFI eCatalog
Operating temperature, max.	125 °C	
Storage temperature, min.	-50 °C	
Storage temperature, max.	90 °C	
illuminated	No	
Soldering	Reflow	
Solder heat resistance according to standard	DIN EN 60068-2-58	
Packaging	Blister	
Packaging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

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date: Jun 5, 2025 page: 1/9

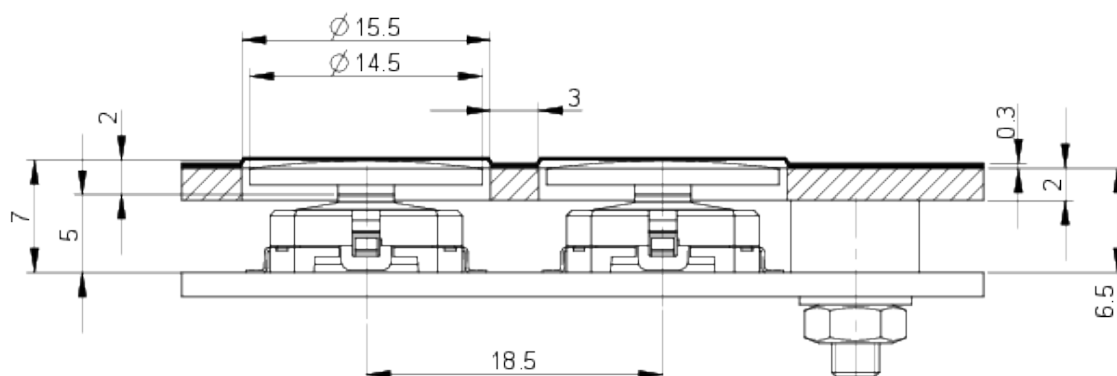
Corrosive gas testing according to standard	Yes
Minimum order quantity (MOQ)	750 pcs.
RoHS compliant	Yes
REACH compliant	Yes
Product code	TC
> mounting diameters	
Outside dimension, length	12 mm
Outside dimension, width	12 mm
Installation height	4.95 ± 0.1 mm
Grid, min.	12.50 x 15.24 mm
> mechanical data	
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
> electrical data	
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

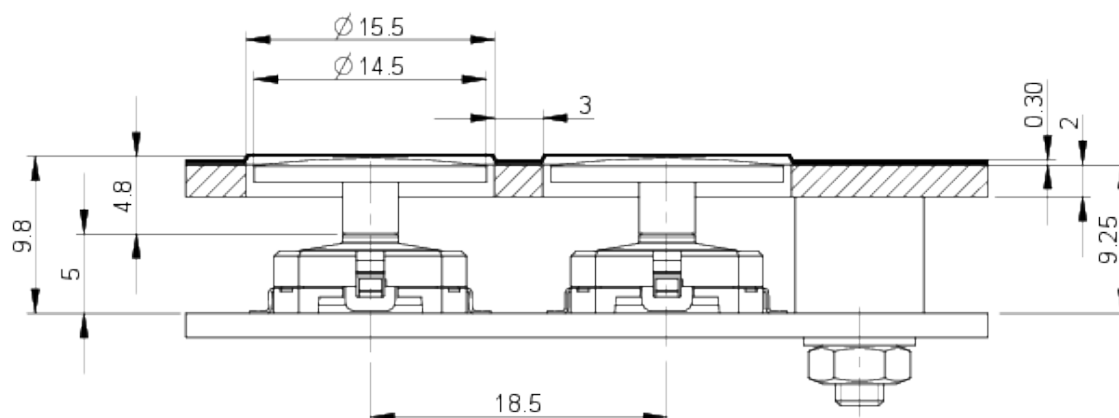
Dimensioned drawing



System drawing



System drawing

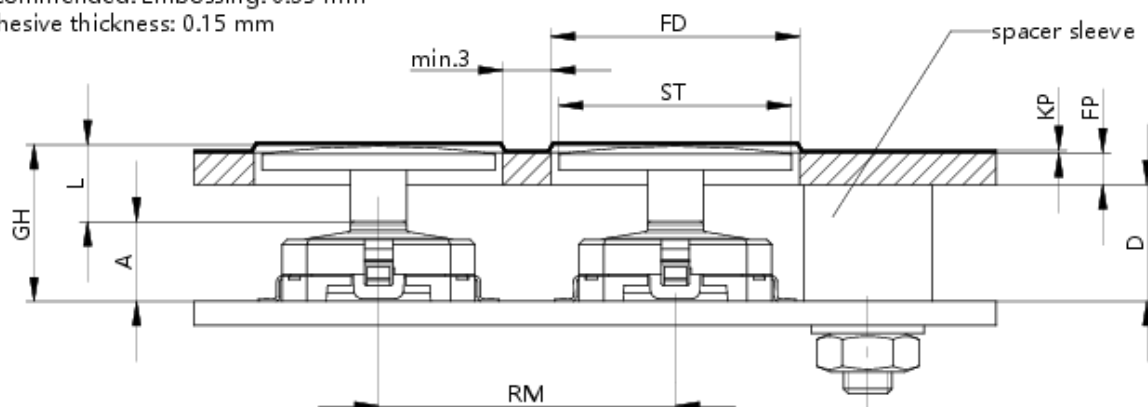


System drawing

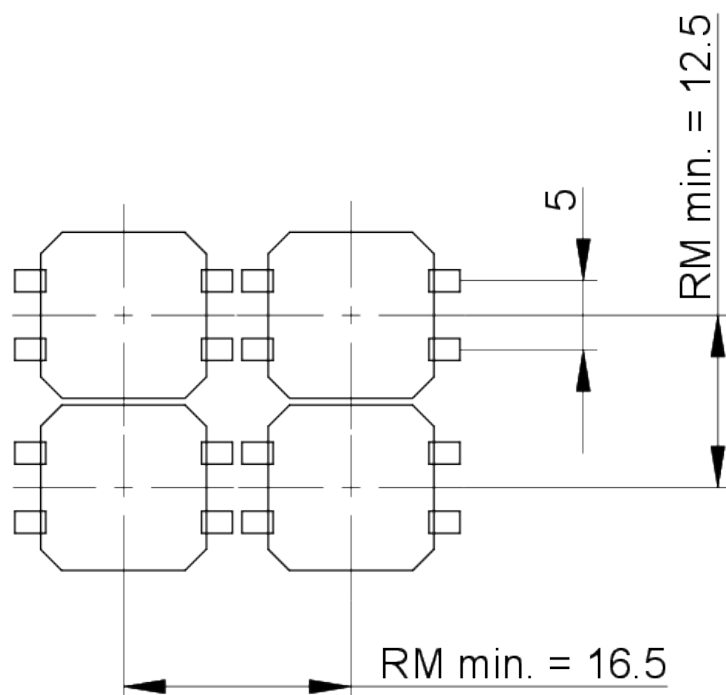
SMT gullwing connection

Recommended: Embossing: 0.35 mm

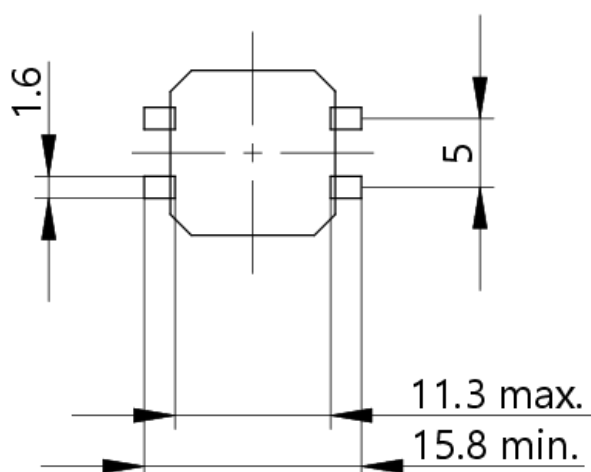
Adhesive thickness: 0.15 mm



PCB drawing

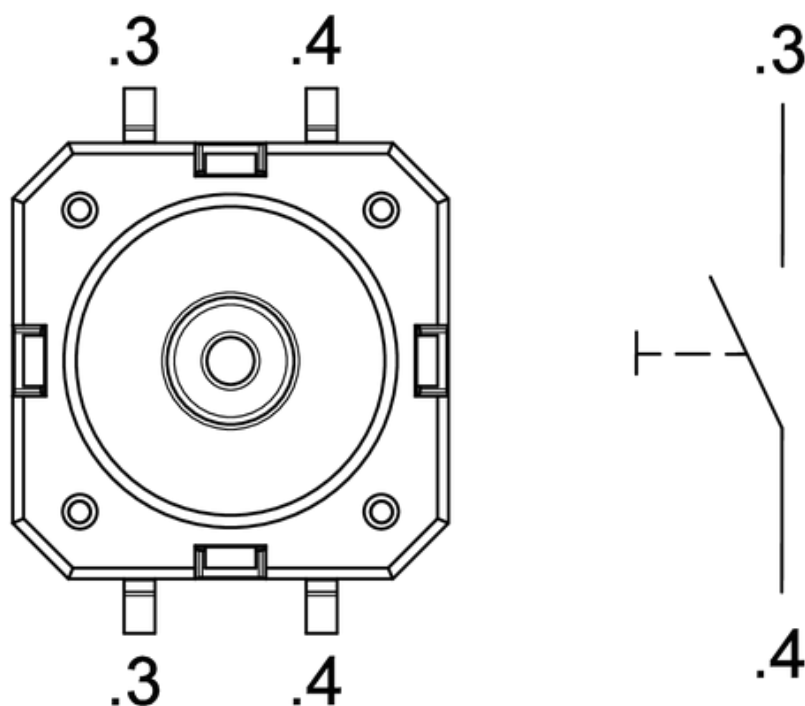


PCB drawing

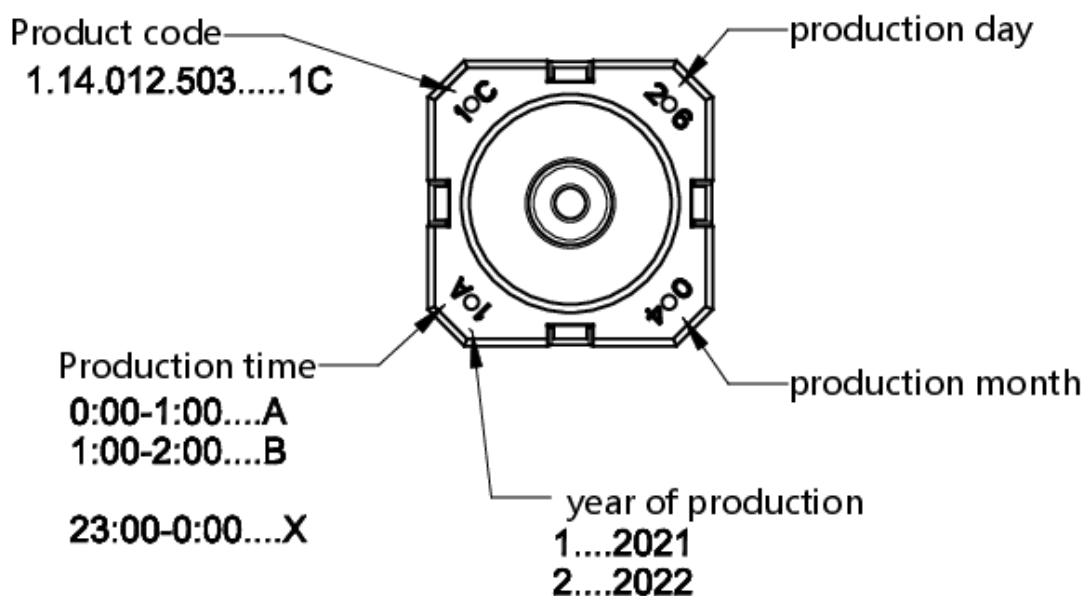


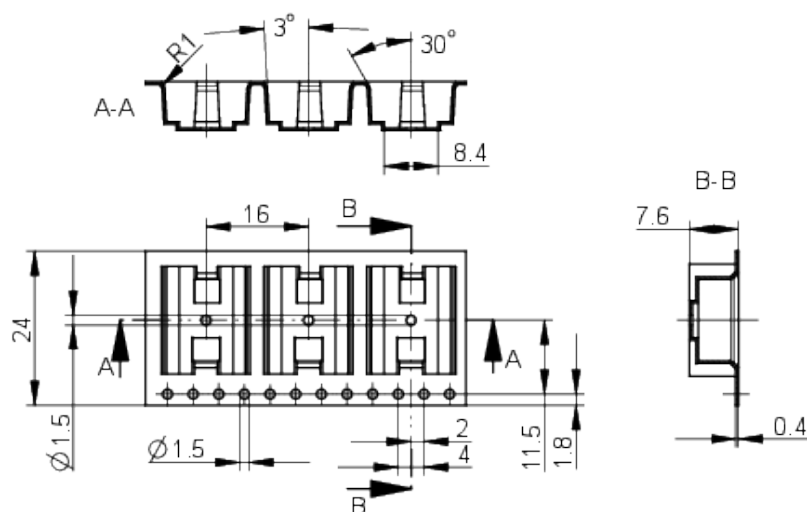
PCB-Pad
component side

Schematic diagram



Product labeling drawing



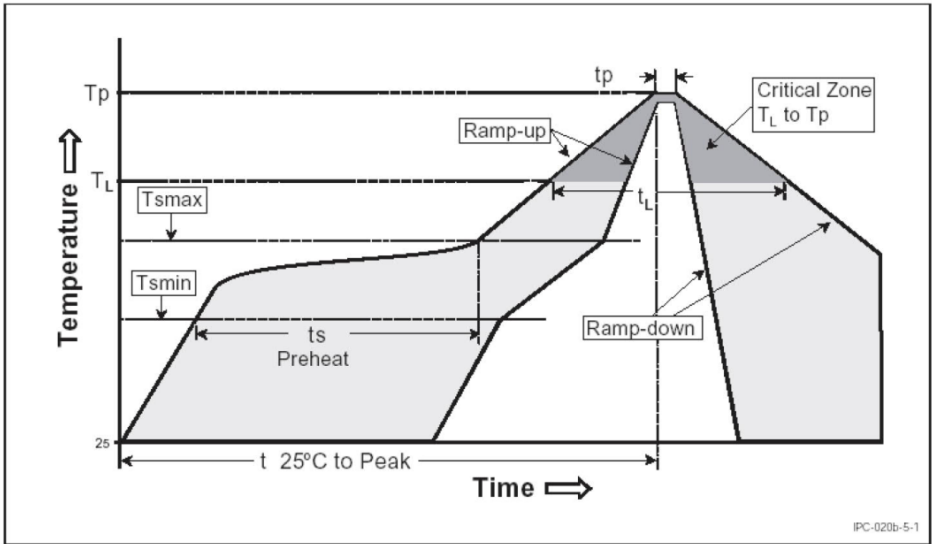
Packaging drawing

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
Preheating zone	
Minimum temperature (T _{smin})	150°C
Maximum temperature (T _{smax})	200°C
Time (from min. to max.) (ts)	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 (tp)	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.

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Media Robust Electronics



Publication date: February 13, 2025

RACON 12 ST

Valid for all variants RACON 12 ST, 1.14.112.5XX-9XX

Recommended potting compounds

WEVO-CHEMIE GmbH

WEVOPUR 7210 FL/WEVONAT 507

WEVOPUR PD4431 FL/WEVONAT 300

STOCKMAIER URETHANES GmbH & Co.KG

Stobicast® L768.16 Polyol/Isocyanat

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 complete hardened.

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

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