

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 unmistakeable 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
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

direct links

[> RAFI eCatalog](#)

The information in this data 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.

date: Jun 5, 2025 **page:** 1/9

RAFI GmbH & Co. KG

Ravensburger Str. 128-134
88276 Berg / Ravensburg
Germany
www.rafi-group.com,
info.headquarters@rafi-group.com

Corrosive gas testing according to standard	Yes
Minimum order quantity (MOQ)	750 pcs.
RoHS compliant	Yes
REACH compliant	Yes
Product code	TC

> mounting diameters

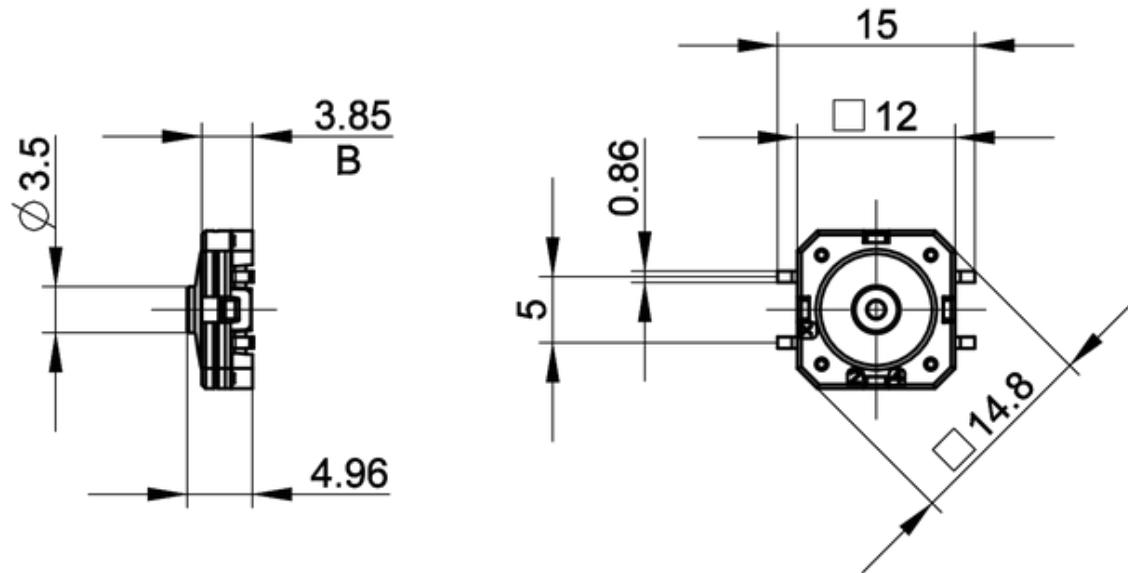
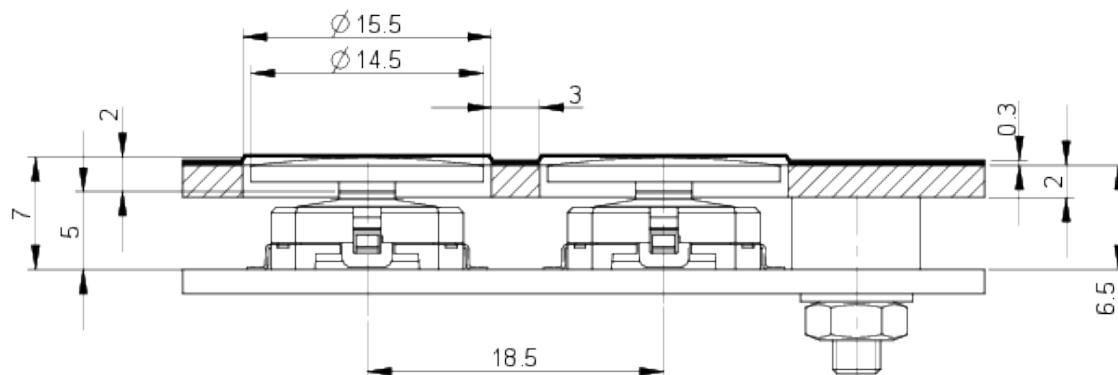
Outside dimension, length	12 mm
Outside dimension, width	12 mm
Installation height	4.95 ± 0.1 mm
Grid, min.	12.50 x 15.24 mm

> mechanical data

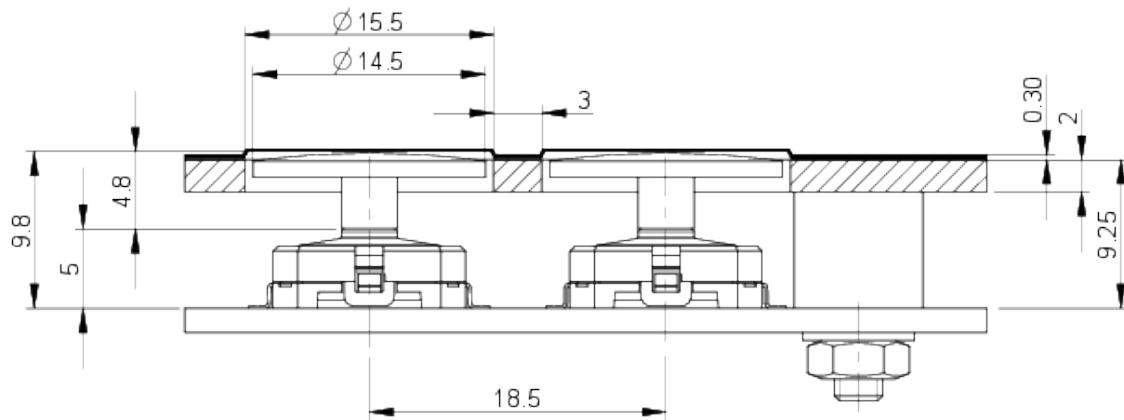
Actuation function	momentary contact function
Operating force, max.	8 N
Operating force, min.	3.6 ± 0.7 N
Switching travel	0.61 ± 0.15 mm
Bounce time at 10 mm/s	<5 ms
Contact function	1 NO
Contact system	Snap-action contact
	SPST - Single Pole Single Throw
Contact material	Gold
Solderability	Yes
Terminal 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**

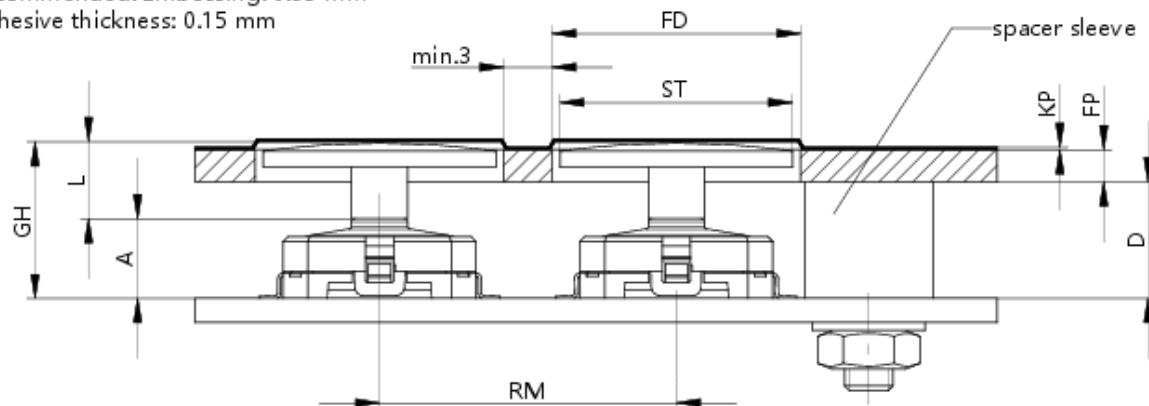
System drawing

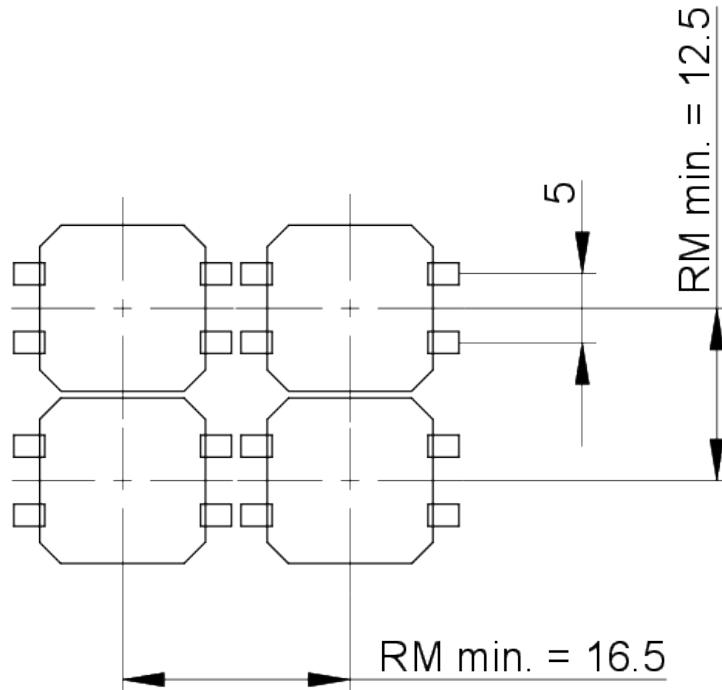
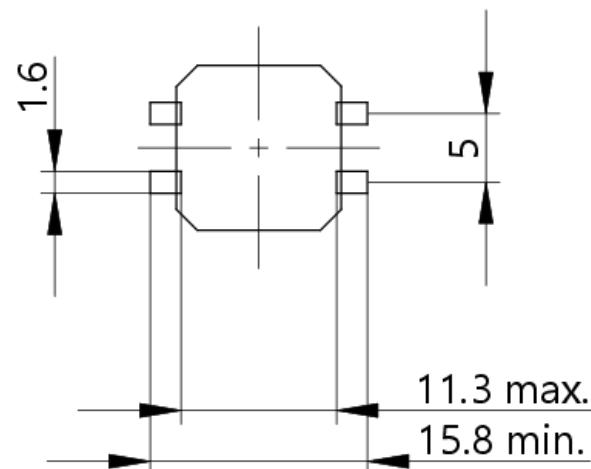


System drawing

SMT gullwing connection

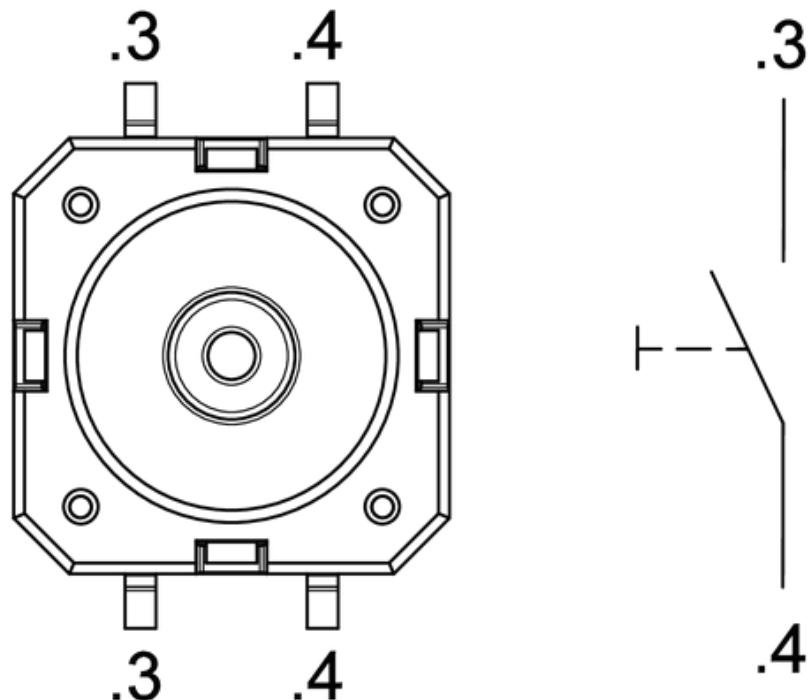
Recommended: Embossing: 0.35 mm
 Adhesive thickness: 0.15 mm



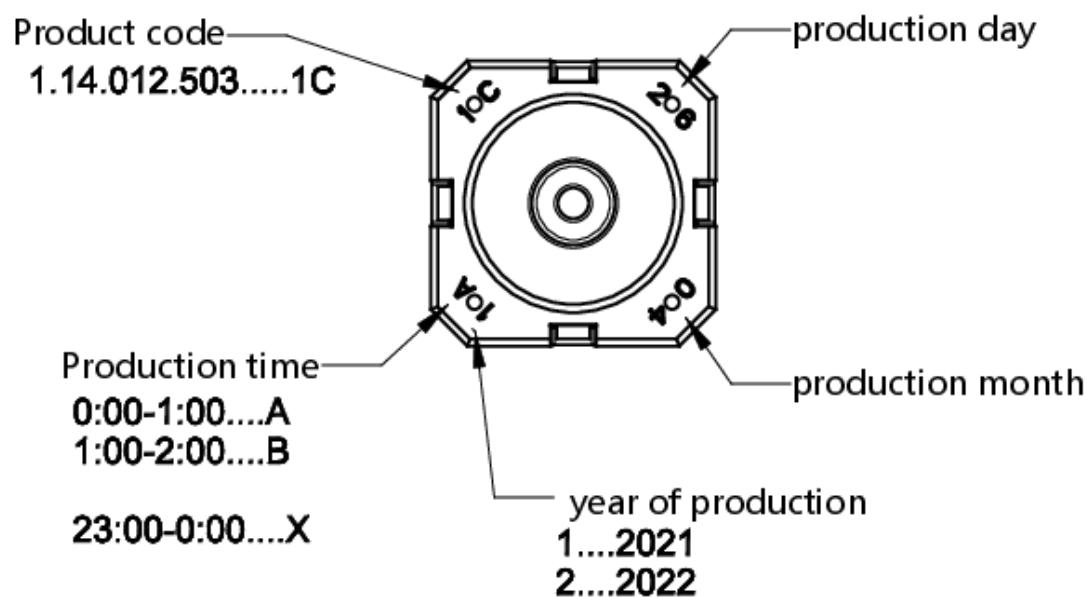
PCB drawing**PCB drawing**

PCB-Pad
component side

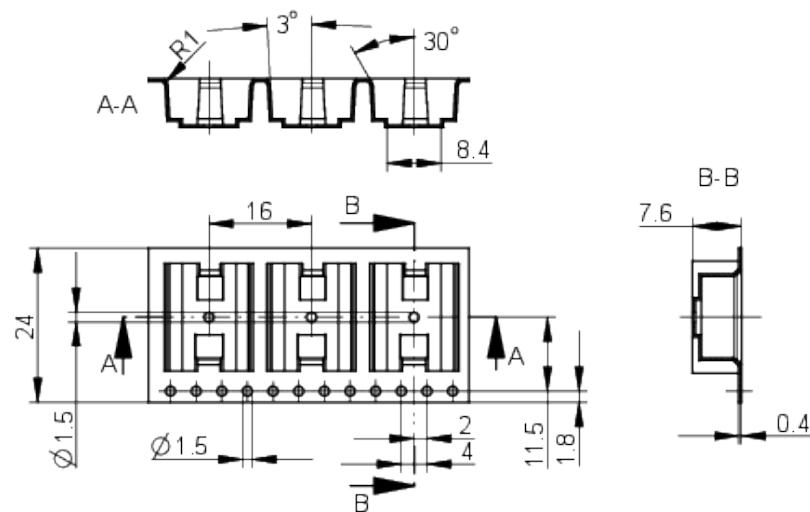
Schematic diagram



Product labeling drawing



Packaging drawing



The information in this data 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.

date: Jun 5, 2025 page: 7/9

RAFI GmbH & Co. KG

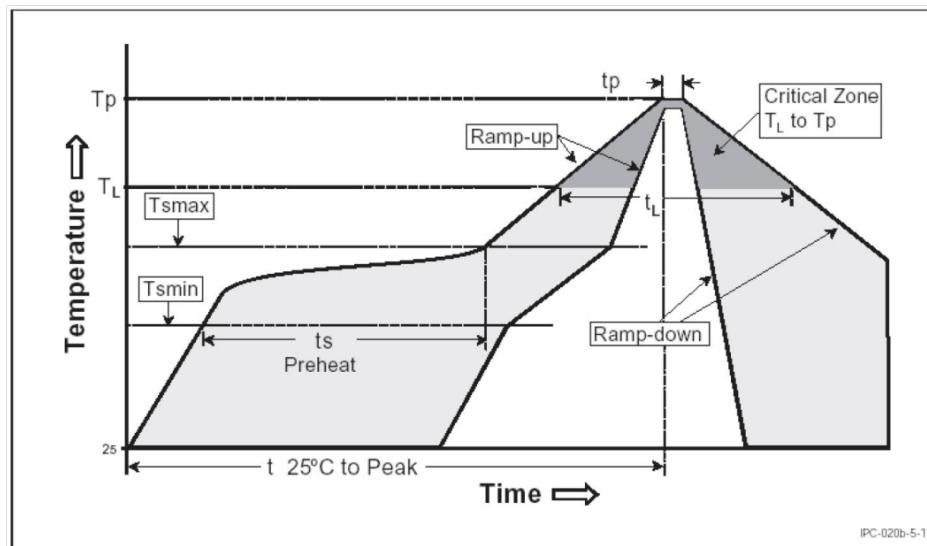
Ravensburger Str. 128-134
88276 Berg / Ravensburg
Germany
www.rafi-group.com,
info.headquarters@rafi-group.com

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.) (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.

RAFI GmbH & Co. KG
Ravensburger Str. 128-134, 88276 Berg / Ravensburg
GERMANY – www.rafi-group.com

page 1 of 1

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 completely hardened.

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

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.

RAFI GmbH & Co. KG

A RAFI Group company
Ravensburger Straße 128-134, 88276 Berg, Germany
P +49 751 89-0, F +49 751 89-1300
info.headquarters@rafi-group.com, rafi-group.com

page 1 of 1