Technisches Datenblatt

1.14.012.920/0000

RACON 12 S, SMT, 9,7 ± 2,5 N, 1 S



Haupt- / Anwendungsgebiete

- Messen-Steuern-Regeln
- Maschinen- und Anlagenbau
- Automotive
- Elektromedizin

Spezielle Features

- Goldkontakte, sicheres Schalten bei niedrigen Strömen
- Besonderes taktiles Feedback
- Unterschiedliche Betätigungskräfte
- Variable Bauhöhen durch Stößel
- Anschlusstechnik: SMT oder THT
- Traceability durch Produktkennzeichnung
- vergussfähig (getestete Medien siehe Downloads)

CE

Beschreibung

Unsere hochwertigen Kurzhubtaster RACON 12 – in den Abmessungen 12 x 12 mm – zeichnen sich durch einen unverwechselbaren Tastenklick, hohe Schaltsicherheit, ein dichtes Kontaktsystem und Vergussfähigkeit aus. Dadurch wurde der RACON zum Standard in vielen Branchen. Ob in Automotive-Applikationen, Systemen mit Tastenkappen oder Folientastaturen: der RACON überzeugt in der THT- oder SMT-Variante – auch in Ihrer Anwendung.

Die RACON 12 Kurzhubtaster können einzeln, in Reihen oder als Tastenfelder angeordnet werden. Für den Einsatz unter Folie sollten die RACON-Taster mit Stößeln kombiniert werden. Geeignet für die wichtigsten Lötverfahren.

- Wellen-Lötbad für THT-Versionen
- Reflow-Löten für SMT-Versionen
- Dampfphasen-Löten für SMT-Versionen
- Handlötung
- Verarbeitung der SMT-Ausführungen mit SMT-Bestückungsautomaten
- IMDS-Eintrag

Technische Daten

Allgemein

Farbe	blau
Arbeitstemperatur, min.	-40 °C
Arbeitstemperatur, max.	90 °C
Lagertemperatur, min.	-50 °C
Lagertemperatur, max.	90 °C
beleuchtbar	nein
Lötverfahren	Reflow

Direkte Links

- RAFI eCatalog

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Lötwärmebeständigkeit nach Norm	DIN EN 60068-2-58
Verpackung	Blister
Verpackungseinheit	750 Stück
Nettogewicht	1,5 g
Lebensdauer	65.000 Zyklen
B10	84.500 Zyklen
Schutzart frontseitig gem. DIN EN 60529	IP54 IPx7
Schutzart rückseitig gem. DIN EN 60529	IP54 IPx7
MSL Moisture Sensitivity Level	1
Schadgasprüfung nach Norm	ja
MOQ Auftrag	750 Stück
RoHS konform	ja
REACH konform	ja
Material der Komponente	Elastomer
Produktcode	EZ

Einbaumaße

Außenmaß Länge	12 mm
Außenmaß Breite	12 mm
Einbauhöhe	5,05 ± 0.1 mm
Raster, min.	12.50 x 15.24 mm

Mechanische Kennwerte

Betätigungsfunktion	tastend
Betätigungskraft, max.	18 N
Betätigungskraft, min.	9,7 ± 2.5 N
Schaltweg	0,73 ± 0.12 mm
Kontaktfunktion	1 S
Kontaktsystem	Sprungkontakt SPST - Single Pole Single Throw
Kontaktwerkstoff	Gold
Lötbarkeit	Ja
Anschluss rückseitig	SMT

Elektrische Kennwerte

Schaltspannung, min.	0,02 V
Schaltspannung, max.	35 V
Schaltstrom, min.	0,00001 A
Schaltstrom, max.	0,1 A
Schaltleistung, max.	1 W

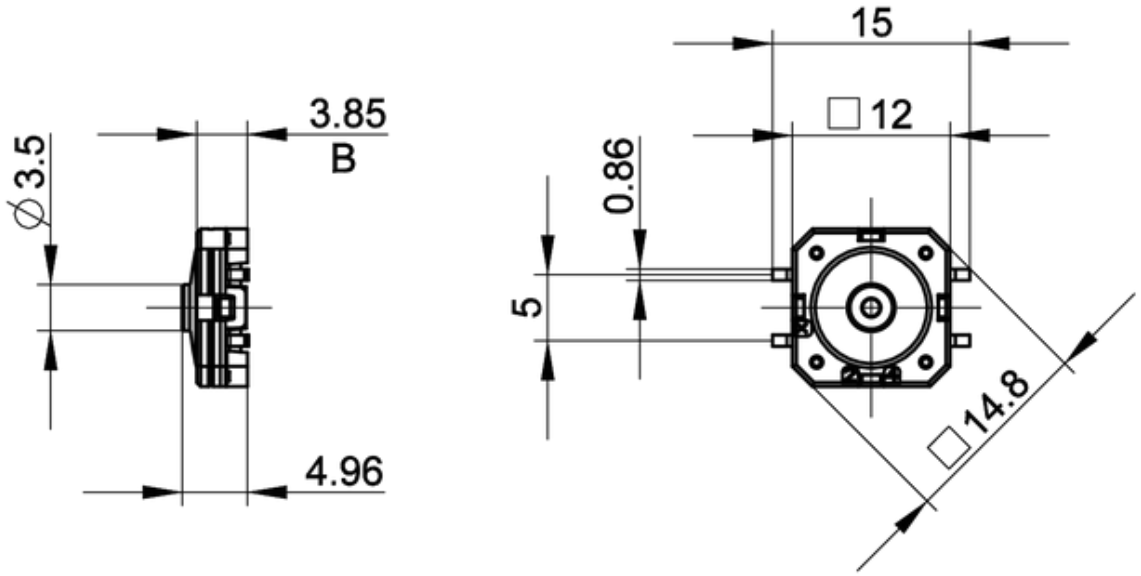
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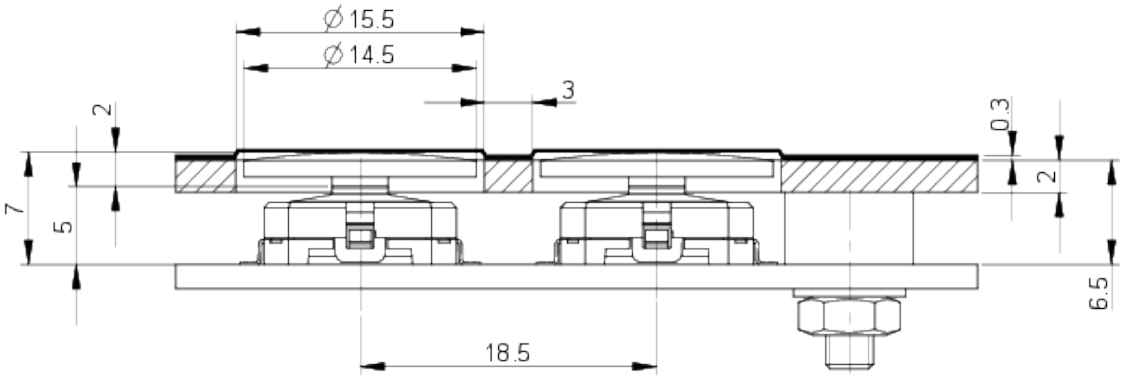
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Zeichnungen

Maß-Zeichnungen



System-Zeichnung



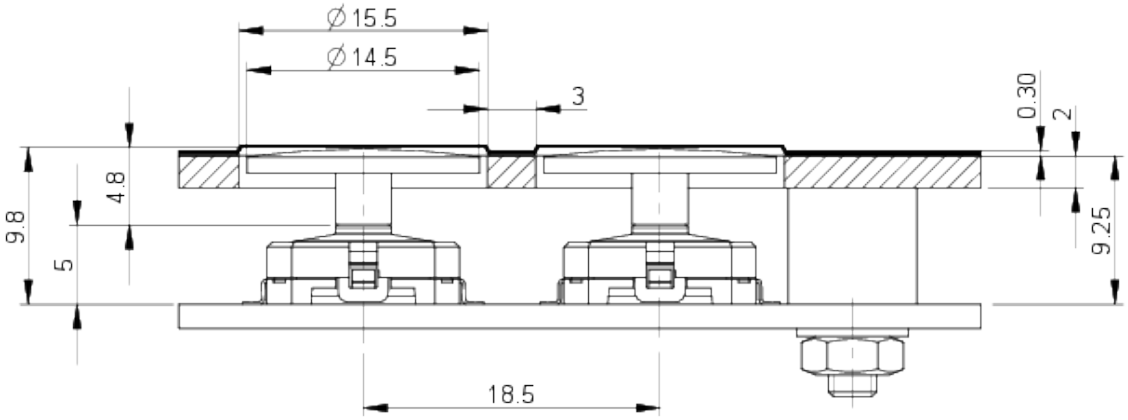
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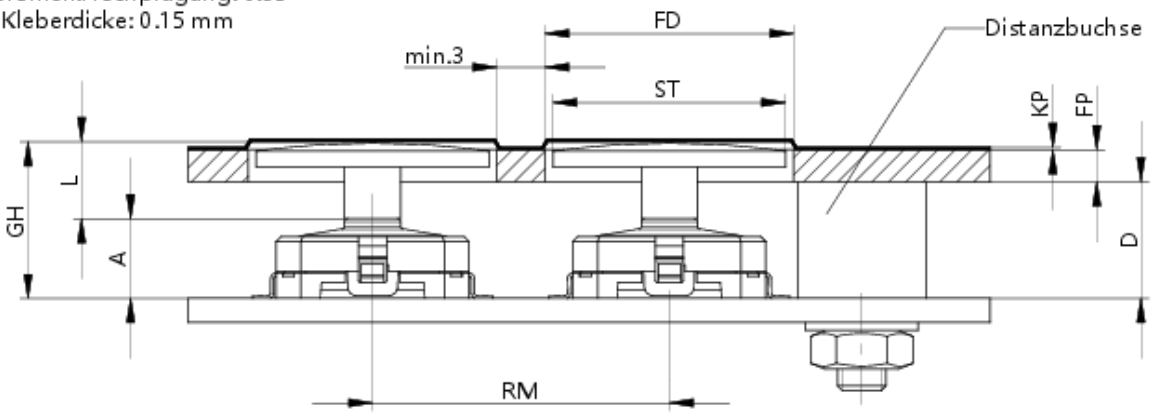
System-Zeichnung



System-Zeichnung

SMT-Gullwing-Anschluss

Empfohlen:Hochprägung: 0.35 mmKleberdicke: 0.15 mm

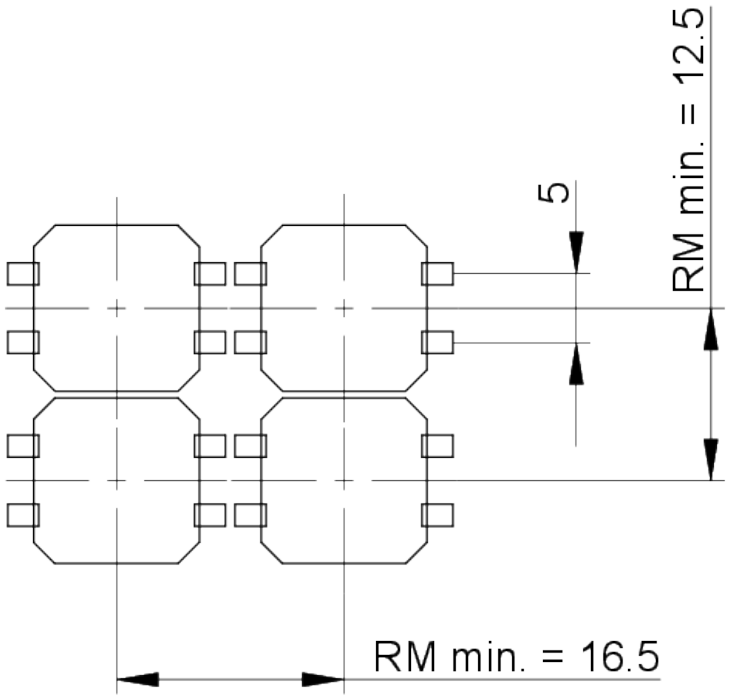


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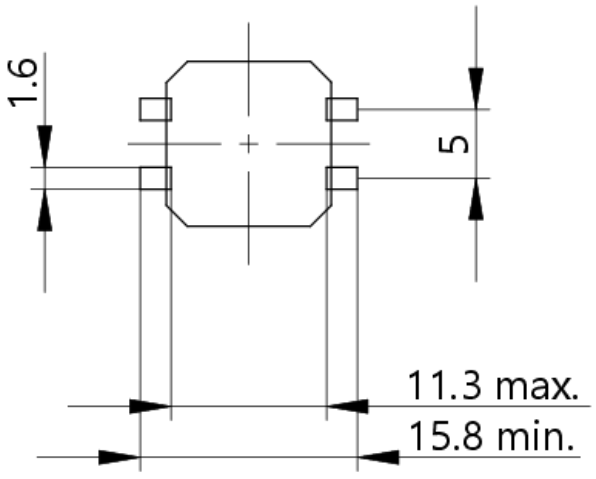
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Leiterplatten-Zeichnung



Leiterplatten-Zeichnung



PCB-Pad

Bestückungsseite

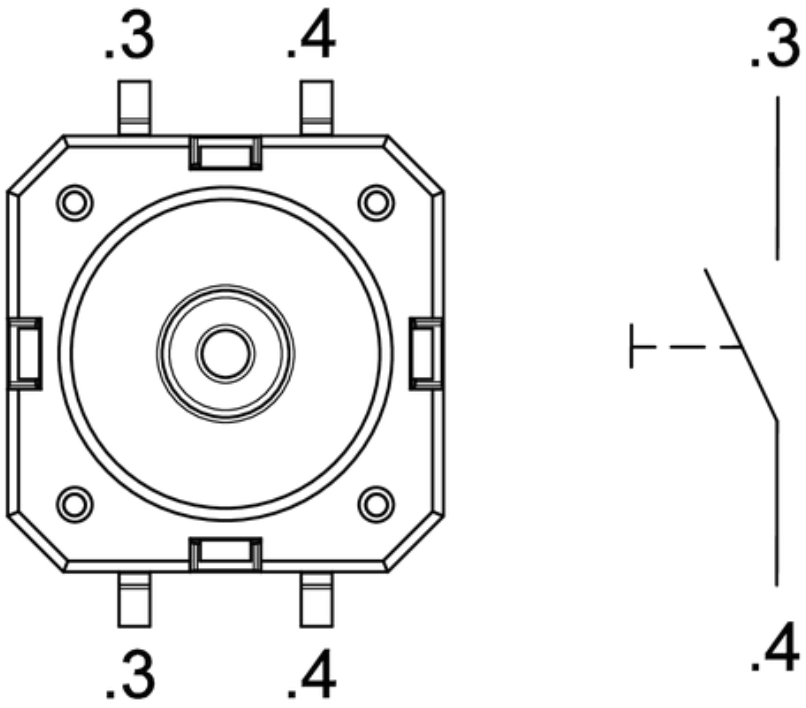
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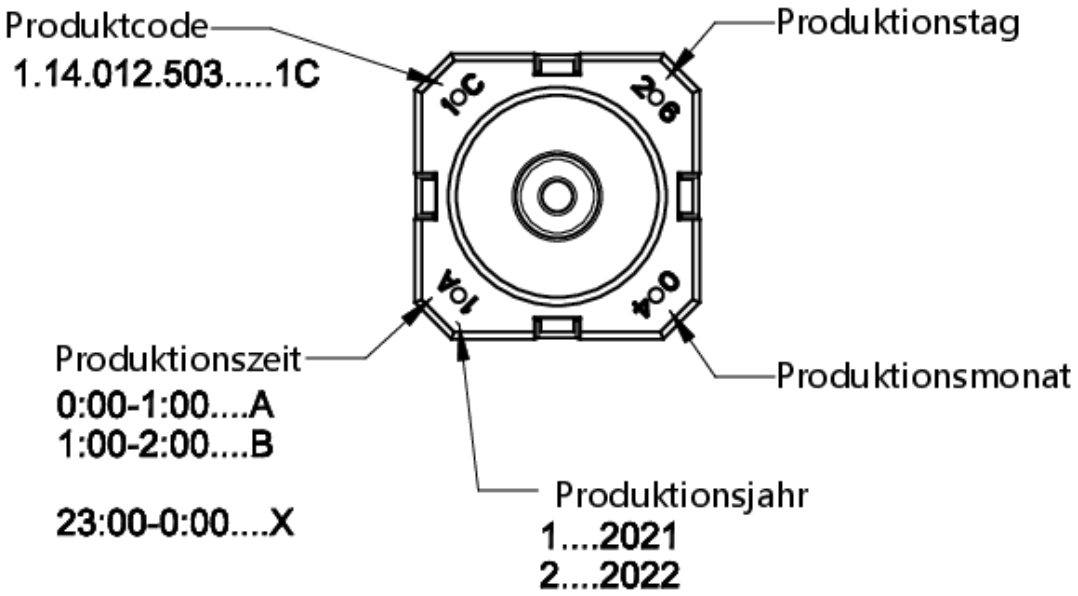
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Schaltschema-Zeichnung



Produktkennzeichnung-Zeichnung



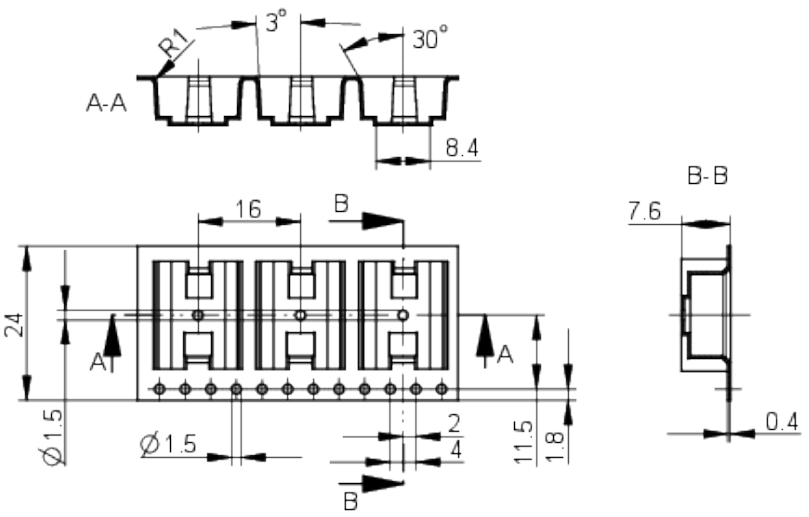
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Verpackungs-Zeichnung



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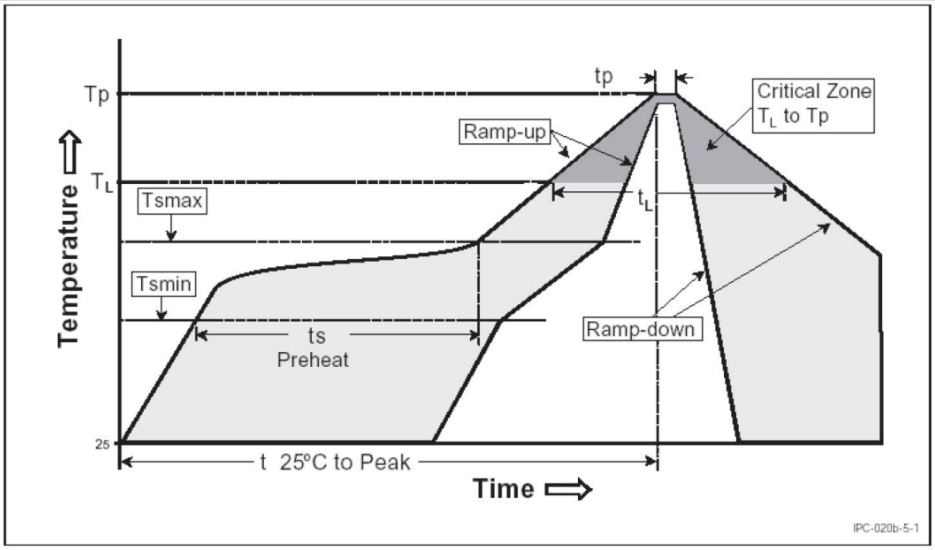
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Montage

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}) Maximum temperature (T_{smax}) Time (from min. to max.) (ts)	 150°C 200°C 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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Medium Robust Electronics

Publication date: July 25, 2022

RACON 12 S

Valid for all variants RACON 12 S, 1.14.012.5XX-9XX

Approved 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.

Approved circuit board protection

- **Lackwerke Peters GmbH & Co.KG** — **ELPEGUARD® SL 1307**

Important note
If the tactile switch is completely painted, the paint may peel off the elastomer of the tactile switch during the first few actuations. Press the tactile switch only after the paint has hardened.
We recommend leaving out the elastomer area when painting to prevent detachment.

- **TIEFCO Coating Company** — **3M™ Novec™ 1700**

Important note
After coating, the contact resistance can increase. After repeated actuation, the contact resistance drops again under 100 mΩ.

General remark:
The potting, varnish and nano medium must be used in accordance with the manufacturer's technical data sheet. Actuation of the tactile switch only after the potting compound, varnish and nano medium has hardened.

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

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