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SOLUTIONS WITH PASSION

RACON 8 - Short-travel keyswitch

product code (F1)
production shift (1)
production year (2002)
production day (21.)
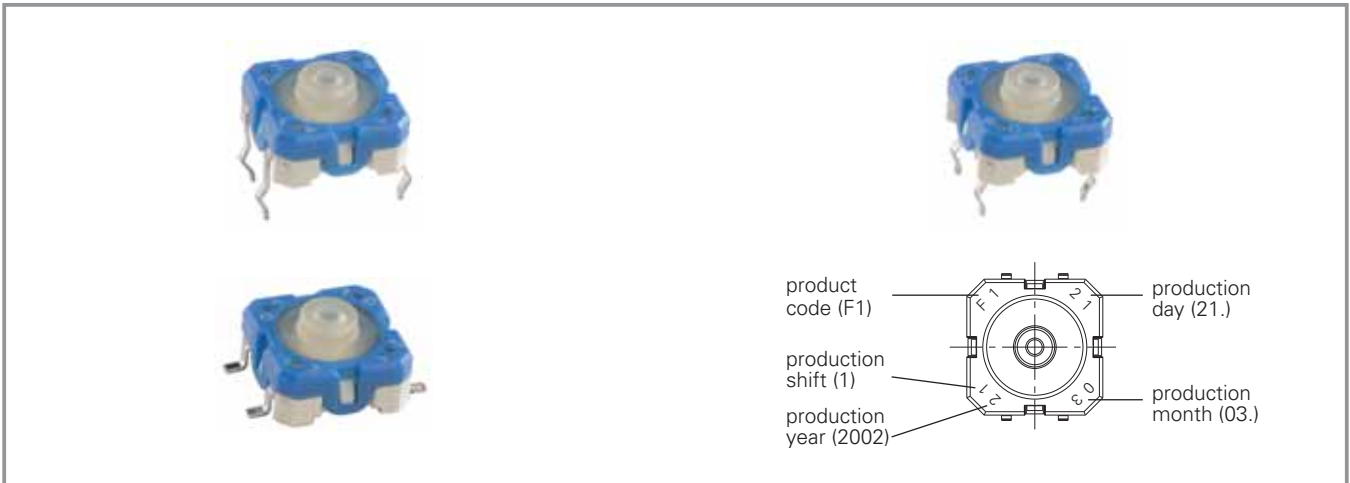production month (03.)

General Data

RACON 8 short-travel keyswitches offer an extremely high switching reliability while needing very little space. They can be arranged as single keys, in rows or key blocks.
When arranged under an overlay, RACON keyswitches should be combined with plungers.

The features at a glance:
• Suitable for the most common soldering methods
  - Wave soldering bath for THT versions
  - Reflow soldering for SMT version
  - Vapour phase soldering for SMT versions
  - Manual soldering
• SMT version suitable for processing with an automatic SMT assembly machine
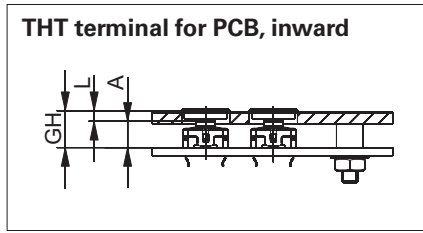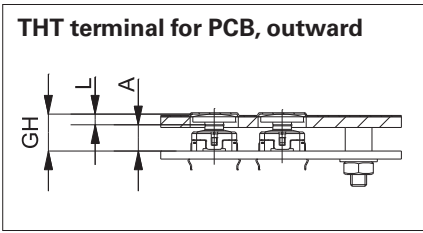• IMDS listed
You can download actual product information from our internet site www.rafi.de / Catalogues and Downloads
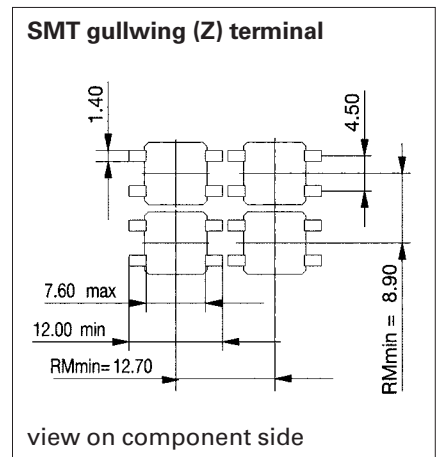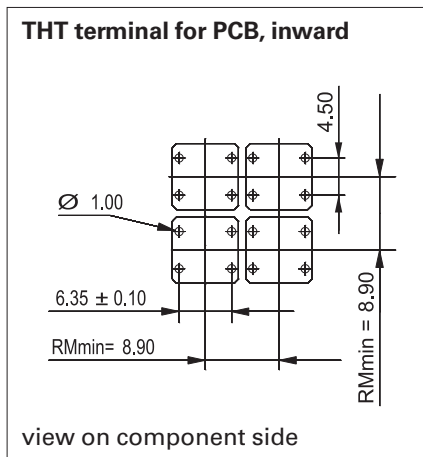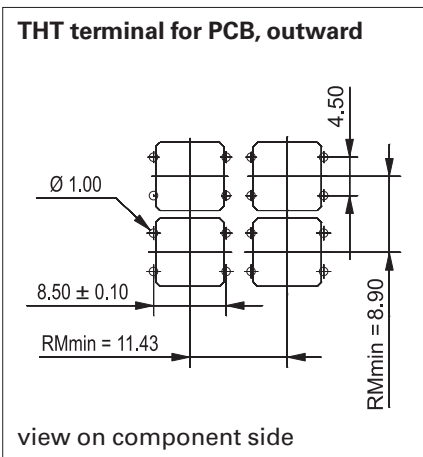
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RACON

Technical Data

Dimensions
Length of housing	8.4 mm
Width of housing	8.4 mm
Height of housing	see order block

Mechanical design
Mounting	soldering
Terminals	see order block
Contact system	snap-action contact
Contact arrangement	1 NO
Contact materials	Au
Illumination	no

Mechanical characteristics
Operating force	$3.3^{\pm0.6}$ N
Switching travel	$0.34^{\pm0.1}$ mm

Electrical characteristics
Rated voltage min.	0.02 V
Rated voltage max.	35 V

Rated current min.	0.01 mA
Rated current max.	100 mA
Rated power max. (ohmic load)	1 W
Contact resistance when new max.	100 mΩ
Insulation resistance	10^9 Ω

Other specifications
Ambient temp. operating min.	-40 °C
Ambient temp. operating max.	+90 °C
Resistance to environment	DIN EN 60068-2 -14, -30,-33 and -78
Operating life	1,000,000
Solderability / Solder heat resistance	see order block
Flammability of materials	UL 94 HB
Packing	see order block
Produkt code	see order block

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RACON 8, Typical System Assembly with Plunger under Overlay

THT terminal for PCB, outward

THT terminal for PCB, inward

SMT gullwing (Z) terminal

Variable	Declaration	THT terminal outward	THT terminal inward	SMT-terminal
A	Height of keyswitch		$A = 4.90^{+/- 0.1 \text{ mm}}$	
GH	Overall height		GH = A + L	GH = A + L + 0.1 mm
L	Length of plunger		L = GH - A	L = GH - A - 0.1 mm

RACON 8, PCB Hole Pattern, Smallest Grid

THT terminal for PCB, outward

Ø 1.00
4.50
8.50 ± 0.10
RMmin = 11.43
RMmin = 8.90

view on component side

THT terminal for PCB, inward

Ø 1.00
4.50
6.35 ± 0.10
RMmin = 8.90
RMmin = 8.90

view on component side

SMT gullwing (Z) terminal

1.40
4.50
7.60 max
12.00 min
RMmin = 12.70
RMmin = 8.90

view on component side

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RACON 8, SMT Terminal, Tape and Reel Drawing

6.6 ±0.2
8.7±0.2
C-D
1.5₊₀.₁
12.0±0.1
A
0.4
A-B
8.7±0.2
24.0±0.3
11.5±0.1
2.0±0.1
1.5±0.1
4.0±0.1
1.75±0.1
B
5.2±0.2
(10x4)=40.0±0.2
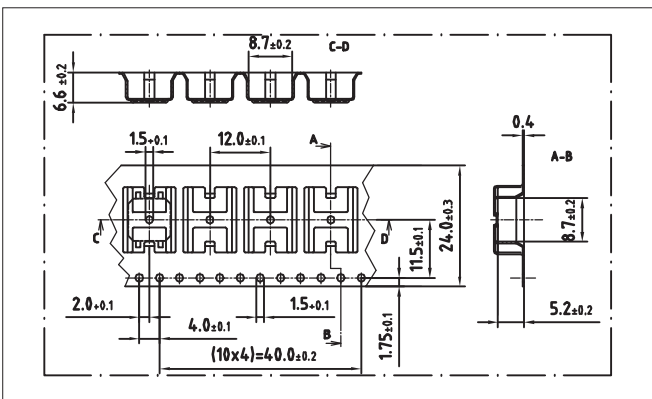
Circuit Diagram RACON 8   Typical Force-Travel Diagram

RACON 8 1.14 100.50x
Typische F-s - Verlauf / Typical F-s diagram

Switching symbols acc.
to IEC 617 form X
(twice interrupting)
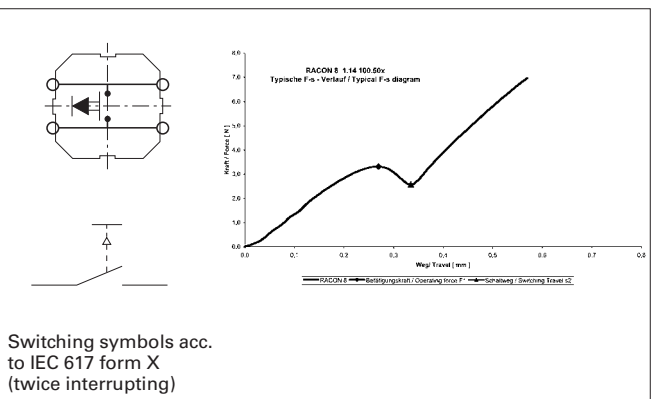
Typical accessories RACON 8 - Short-travel keyswitch

Description	Photo	Order no.	Additional accessories see page
Spacer, round, length 6.25 mm, red		**5.30.759.034/0000**	2 - 239, 4 - 82, 5 - 30
Plunger round		**5.46.167.311/0209**	4 - 32
RK 90 - Keycap body, for lenses 9 x 9 mm		5.55.103.265/1013	4 - 93

For other plungers, refer to the chapter „RACON special accessories"; for keycaps, refer to the chapter „RK 90".
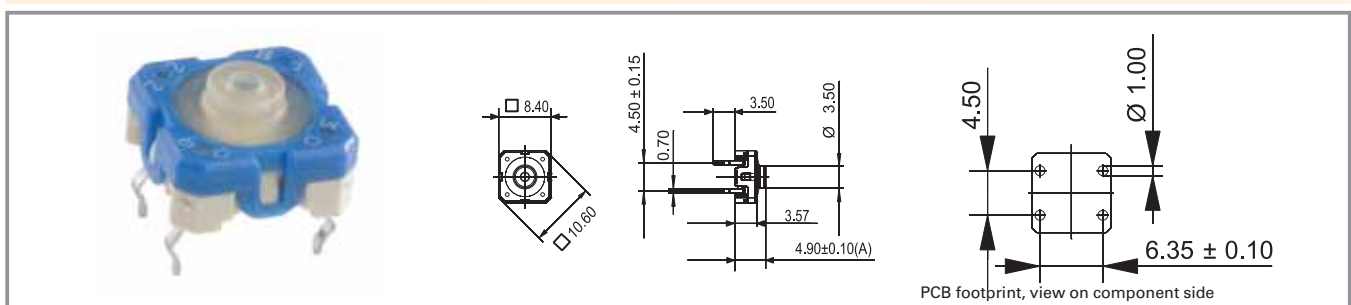
RACON 8 - Short-travel keyswitch, THT outward
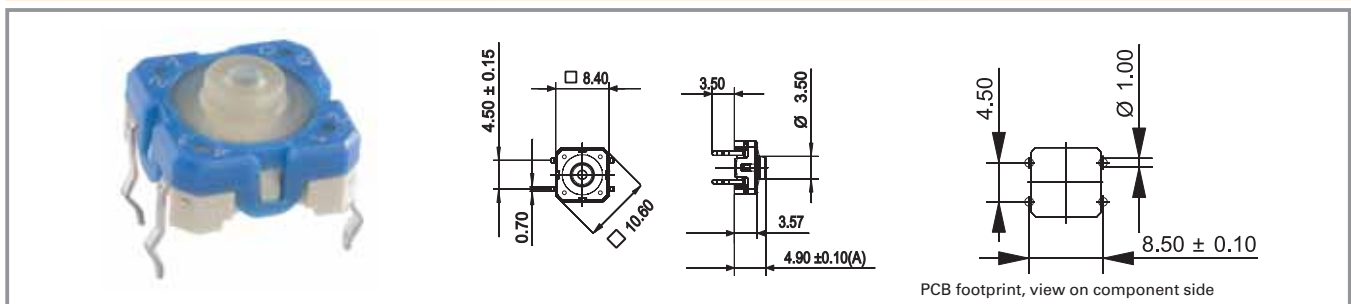
PCB footprint, view on component side

Terminals	Operating force	Solderability / Solder heat resistance	Produkt code	Packing	Order no.
THT outward	$3.3^{\pm0.6}$ N	E DIN IEC 600 68-2-20	A1	tubes à 60 piece	**1.14.100.501/0000**

Technical data see page 4 - 18

For keycaps refer to chapter „RK 90"; plungers see „RACON special accessories".

RACON 8 - Short-travel keyswitch, THT inward

PCB footprint, view on component side

Terminals	Operating force	Solderability / Solder heat resistance	Produkt code	Packing	Order no.
THT inward	$3.3^{\pm0.6}$ N	E DIN IEC 600 68-2-20	B1	tubes à 60 piece	**1.14.100.502/0000**

Technical data see page 4 - 18

For keycaps refer to chapter „RK 90"; plungers see „RACON special accessories".

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RACON

Stock items are marked by **bold printed order numbers.**

RACON 8 - Short-travel keyswitch, SMT gullwing (Z) terminals
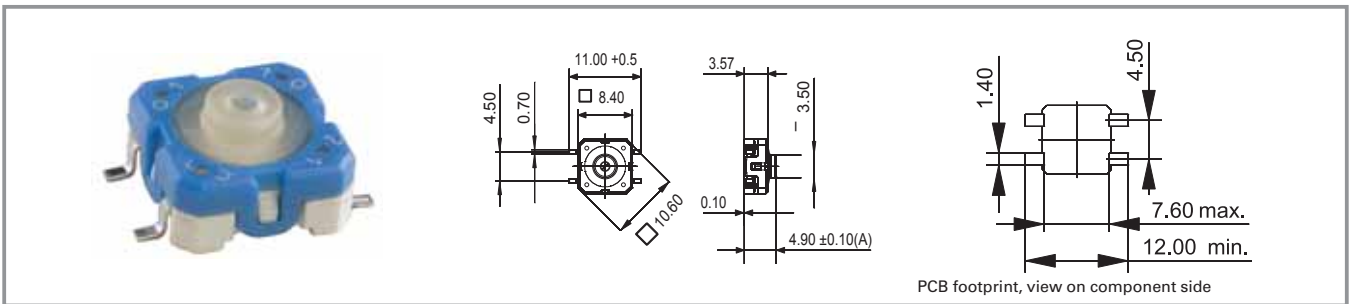
PCB footprint, view on component side

Terminals	Operating force	Solderability / Solder heat resistance	Produkt code	Packing	Order no.
SMT Gullwing (Z) terminals	3.3±0.6 N	E DIN IEC 600 68-2-58	C1	tape and reel à 1000 pieces	**1.14.100.503/0000**

Technical data see page 4 - 18

For keycaps refer to chapter „RK 90", plungers see „RACON special accessories".

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