

Tact Switches



Specifications:

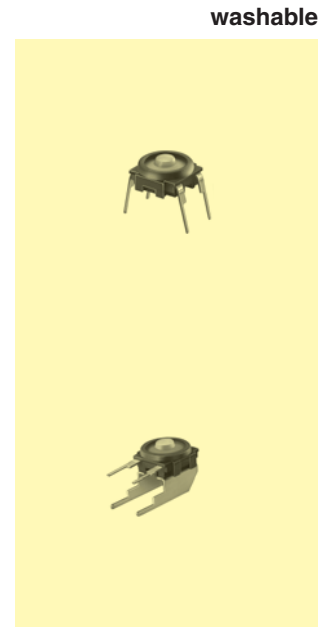
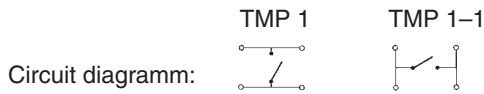
Contact rating:	24 V DC, 20 mA; max. 0,5 W
Contact resistance:	< 100 mΩ
Insulation resistance:	> 1000 MΩ at 100 V DC
Dielectric strength:	250 V, 50 Hz for the duration of 1 minute
Operating temperature:	- 40° to + 85° C
Mechanical life:	minimum 1 000 000 operations
Contacts:	gold-plated over nickel barrier
Travel:	0,75 ±0,25 mm
Operating force:	4,5 ±1,0 N
Terminals:	PC terminals, tin-plated over nickel barrier
Material:	case: PBT (UL 94 V-0), blue, TMP 1-1: red button: silicon rubber, ivory; caps: PC meets UL 94 V-0
Mounting:	on pc-board
Soldering conditions:	auto-soldering – max.: 5 sec, 270° C

Models: Switching functions

TMP 1 off – mom

TMP 1-1

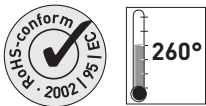
TMP 1 – R off – mom



Accessories and mounting dimensions:

Caps

grey	KTT 107			grey	KTT 207		
				light grey	KTT 217		
				red	KTT 209		



Tact Switches for SMT

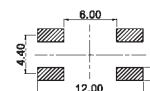
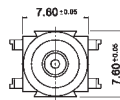
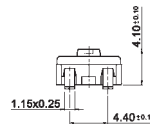
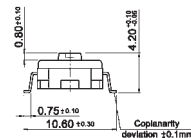
Specifications:

Contact rating:	24 V DC, 20 mA; max. 0,5 W
Contact resistance:	< 100 mΩ
Insulation resistance:	> 1000 MΩ at 100 V DC
Dielectric strength:	250 V, 50 Hz for the duration of 1 minute
Operating temperature:	- 40° to + 85° C
Mechanical life:	minimum 1 000 000 operations
Contacts:	gold-plated over nickel barrier
Travel:	0,75 ±0,25 mm
Operating force:	4,5 ±1,0 N
Terminals:	tin-plated over nickel barrier
Material:	case: PA meets UL 94 V-0, black, TMPS 1-1: white button: silicon rubber, ivory;
Mounting:	on pc-board, SMD

Models: Switching functions

TMPS 1 off - mom

TMPS 1-1



Layout



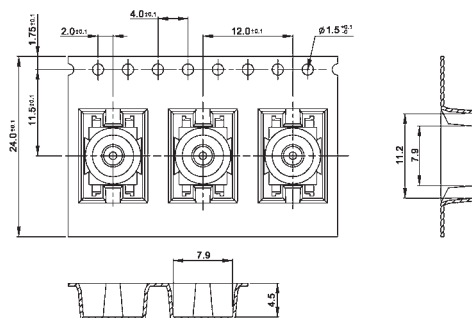
Circuit diagramm:



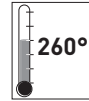
Packing:

TMPS 1, TMPS 1-1 50 pieces in stick

TMPS 1T, TMPS 1-1T 1 200 pieces/reel



Tact Switches



Specifications:

Contact rating:	42 V AC/DC, 100 mA
Contact resistance:	< 100 mΩ
Insulation resistance:	> 1000 MΩ bei 100 V DC
Dielectric strength:	250 V DC, 50 Hz for the duration of 1 minute
Operating temperature:	-40° to +80° C
Mechanical life:	1 000 000 operations
Contacts:	gold-plated
Terminals:	terminal pin, copper alloy, gold-plated
Water proofing:	IP 67
Material:	case: PA6, washable button: TPE-S
Mounting:	on PC-board, TSSE 12 S: SMD

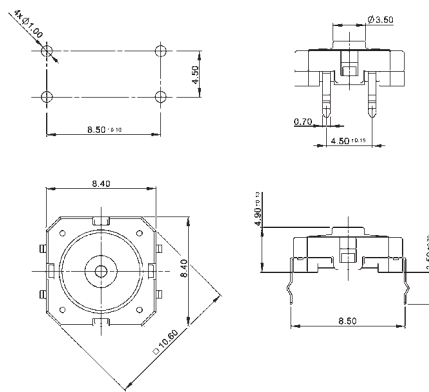
3

Models:

Switching functions

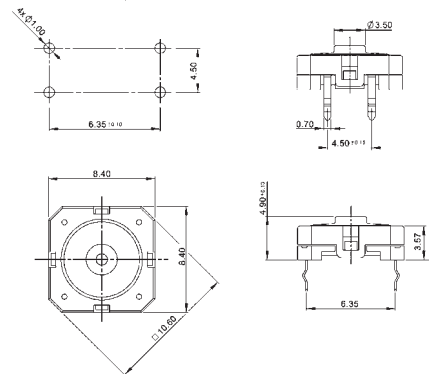
TSE 8 S

off - mom



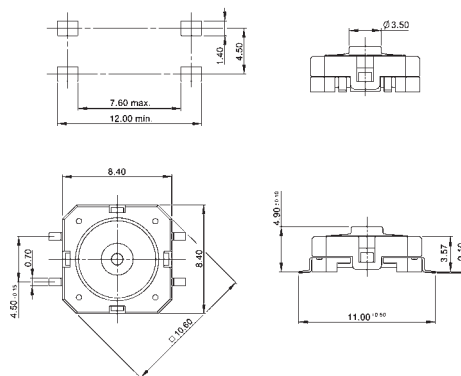
TSE 8 S-1

off - mom



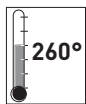
TSSE 8 S

off - mom



washable





Tact Switches

Specifications:

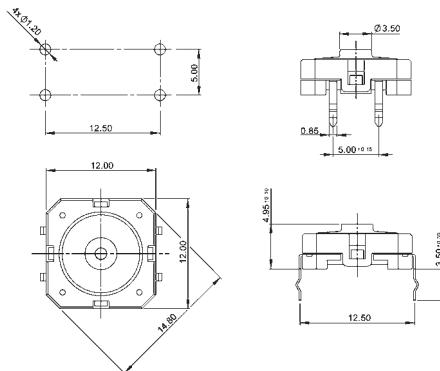
Contact rating:	42 V AC/DC, 100 mA
Contact resistance:	< 100 mΩ
Insulation resistance:	> 1000 MΩ bei 100 V DC
Dielectric strength:	250 V DC, 50 Hz for the duration of 1 minute
Operating temperature:	-40° to +80° C
Mechanical life:	1 000 000 operations
Contacts:	gold-plated
Terminals:	terminal pin, copper alloy, gold-plated
Water proofing:	IP 67
Material:	case: PA46 / PA6T, washable button: silicon caoutchouc
Mounting:	on PC-board, TSSE 12 S: SMD

Models:

Switching functions

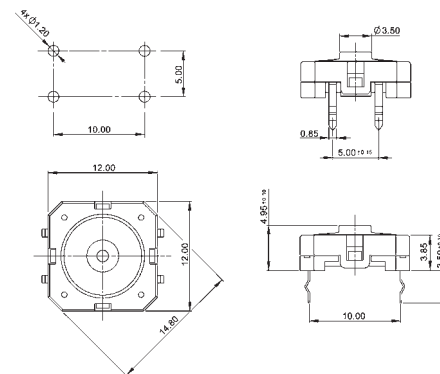
TSE 12 S

off - mom



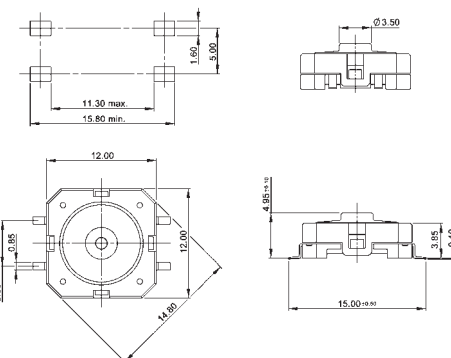
TSE 12 S-1

off - mom



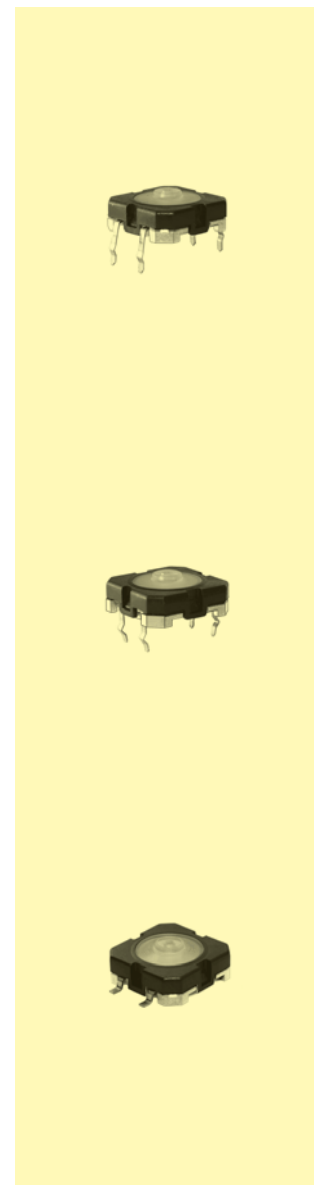
TSSE 12 S

off - mom

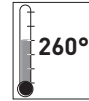


washable

3



Tact Switches for SMT

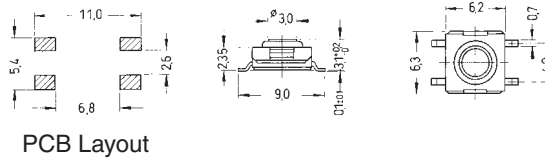


Specifications:

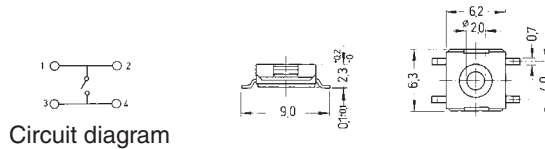
Contact rating:	12 V DC, 50 mA
Contact resistance:	< 100 mΩ
Insulation resistance:	> 100 MΩ at 500 V DC
Dielectric strength:	250 V, 50 Hz for the duration of 1 minute
Operating temperature:	- 40° to + 85° C
Electrical life:	TSSE 66/68 minimum 100 000 cycles TSSE 65/67/69 minimum 500 000 cycles
Operating force:	see ordering code
Contacts:	phosphor bronze, silver-plated
Terminals:	brass, silver-plated
Material:	cover: stainless steel base: high-temp. nylon meets UL 94 V-0, washable stem: TSSE 66: nylon – TSSE 65/67/68/69: silicone rubber
Mounting:	on pc-board – SMD
Packing:	on tapes – see ordering code

Models:

TSSE 66



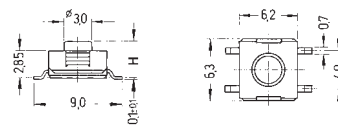
TSSE 68



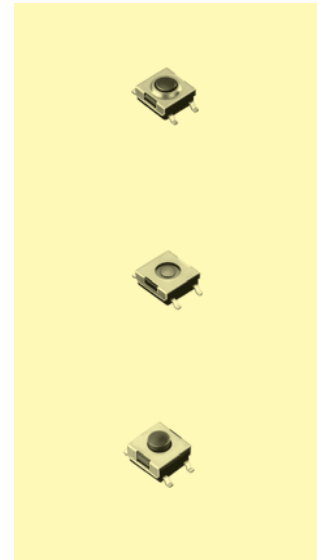
TSSE 65

TSSE 67

TSSE 69



washable



Ordering code:

TSSE

Dimension H

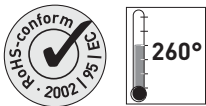
<input type="checkbox"/> 5	3,5 mm, travel: 0,45 ± 0,2	brown	(N) / 1900 pieces/reel
<input type="checkbox"/> 5	3,5 mm, travel: 0,45 ± 0,2	red	(R) / 1900 pieces/reel
<input type="checkbox"/> 5	3,5 mm, travel: 0,45 ± 0,2	transparent	(T) / 1900 pieces/reel
<input type="checkbox"/> 6	3,1 mm, travel: 0,25 + 0,2/- 0,1	brown	(N) / 2000 pieces/reel
<input type="checkbox"/> 7	5,2 mm, travel: 0,45 ± 0,2	brown	(N) / 900 pieces/reel
<input type="checkbox"/> 7	5,2 mm, travel: 0,45 ± 0,2	red	(R) / 900 pieces/reel
<input type="checkbox"/> 7	5,2 mm, travel: 0,6 ± 0,2	transparent	(T) / 900 pieces/reel
<input type="checkbox"/> 8	2,3 mm, travel: 0,25 + 0,2/- 0,1	silver	(S) / 2000 pieces/reel
<input type="checkbox"/> 9	3,8 mm, travel: 0,45 ± 0,2	red	(R) / 1900 pieces/reel
<input type="checkbox"/> 9	3,8 mm, travel: 0,45 ± 0,2	brown	(N) / 1900 pieces/reel
<input type="checkbox"/> 9	3,8 mm, travel: 0,6 ± 0,2	transparent	(T) / 1900 pieces/reel

Colour of stem

for operating force:

<input type="checkbox"/> S	1,6 N, silver
<input type="checkbox"/> N	1,6 N, brown
<input type="checkbox"/> R	2,6 N, red
<input type="checkbox"/> T	3,6 N, transparent

further types on request



Tact Switches for SMT

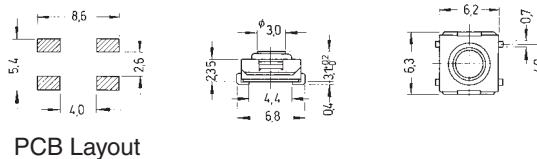
Specifications:

Contact rating:	12 V DC, 50 mA
Contact resistance:	< 100 mΩ
Insulation resistance:	> 100 MΩ at 500 V DC
Dielectric strength:	250 V, 50 Hz for the duration of 1 minute
Operating temperature:	- 40° to + 85° C
Electrical life:	TSSE 66-J/68-J: minimum 100 000 cycles TSSE 65-J/67-J/69-J: minimum 500 000 cycles
Operating force:	see ordering code
Contacts:	phosphor bronze, silver-plated
Terminals:	brass, silver-plated
Material:	cover: stainless steel base: high-temp. nylon meets UL 94 V-0, washable stem: TSSE 66 J: nylon – TSSE 65/67/68/69 J: silicone rubber
Mounting:	on pc-board – SMD
Packing:	on tapes – see ordering code

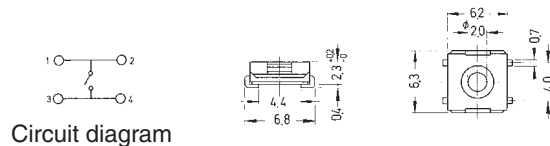
3

Models:

TSSE 66 □-J



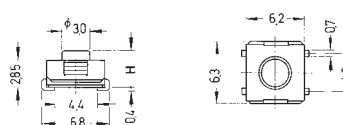
TSSE 68 □-J



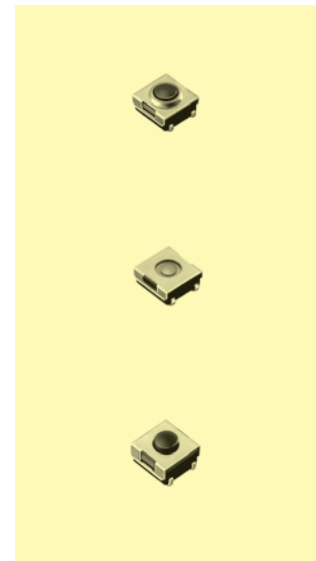
TSSE 65 □-J

TSSE 67 □-J

TSSE 69 □-J



washable



Ordering code:

TSSE □ □-J

Dimension H

65	3,5 mm, travel: 0,45 ± 0,2	brown	(N) / 1800 pieces/reel
65	3,5 mm, travel: 0,45 ± 0,2	red	(R) / 1800 pieces/reel
65	3,5 mm, travel: 0,45 ± 0,2	transparent	(T) / 1800 pieces/reel
66	3,1 mm, travel: 0,25 + 0,2/- 0,1	brown	(N) / 1900 pieces/reel
67	5,2 mm, travel: 0,45 ± 0,2	brown	(N) / 900 pieces/reel
67	5,2 mm, travel: 0,45 ± 0,2	red	(R) / 900 pieces/reel
67	5,2 mm, travel: 0,6 ± 0,2	transparent	(T) / 900 pieces/reel
68	2,3 mm, travel: 0,25 + 0,2/- 0,1	silver	(S) / 2000 pieces/reel
69	3,8 mm, travel: 0,45 ± 0,2	red	(R) / 1800 pieces/reel
69	3,8 mm, travel: 0,45 ± 0,2	brown	(N) / 1800 pieces/reel
69	3,8 mm, travel: 0,6 ± 0,2	transparent	(T) / 1800 pieces/reel

Colour of stem

for operating force:

S	1,6 N, silver
N	1,6 N, brown
R	2,6 N, red
T	3,6 N, transparent

further types on request

Tact Switches

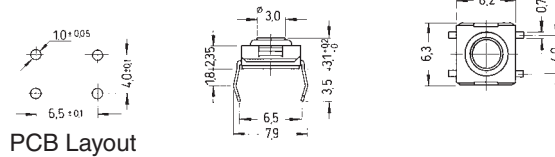


Specifications:

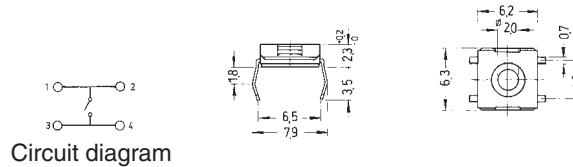
Contact rating:	12 V DC, 50 mA
Contact resistance:	< 100 mΩ
Insulation resistance:	> 100 MΩ at 500 V DC
Dielectric strength:	250 V, 50 Hz for the duration of 1 minute
Operating temperature:	- 40° to + 70° C
Electrical life:	TSE 66/68 minimum 100 000 cycles TSE 69 minimum 500 000 cycles
Operating force:	see ordering code
Contacts:	phosphor bronze, silver-plated
Terminals:	PC terminals brass, silver-plated
Material:	cover: stainless steel base: high-temp. nylon meets UL 94 V-0, washable stem: TSE 66: nylon – TSE 68/69: silicone rubber
Water proofing:	IP 57
Mounting:	on pc-board
Soldering conditions:	hand-soldering – max.: 30 W, 2 sec, 320° C auto-soldering – max.: 5 sec, 260° C subject to PCB 1,6 mm thickness
Packing:	75 pcs/tube

Models:

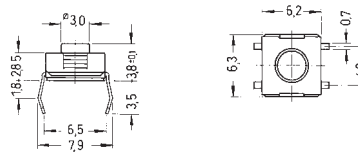
TSE 66 □



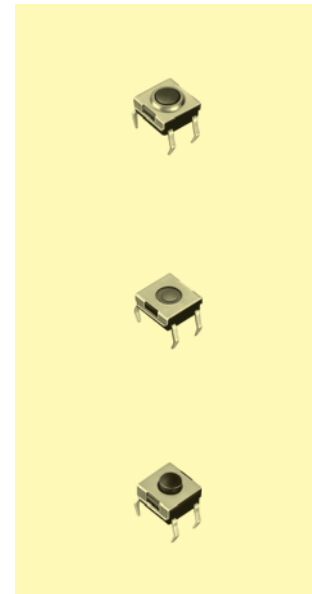
TSE 68 □



TSE 69 □

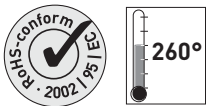


washable



Ordering code:

TSE □ □ □	
<p>Dimension</p> <p>66 3,1 mm, travel: 0,25 + 0,2/- 0,1 brown (N)</p> <p>68 2,3 mm, travel: 0,25 + 0,2/- 0,1 silver (S)</p> <p>69 3,8 mm, travel: 0,45 ± 0,2 red (R)</p> <p>69 3,8 mm, travel: 0,45 ± 0,2 brown (N)</p>	<p>Colour of stem for operating force:</p> <p>S 1,6 N, silver</p> <p>N 1,6 N, brown</p> <p>R 2,6 N, red</p>

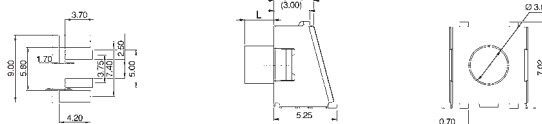


Specifications:

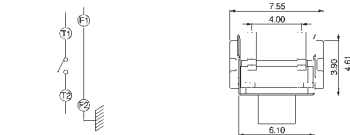
Contact rating:	12 V DC, 50 mA
Contact resistance:	< 100 mΩ
Insulation resistance:	> 100 MΩ
Dielectric strength:	250 V AC (50 Hz or 60 Hz) for 1 minute
Operating temperature:	- 25° to + 70° C
Operating force:	see ordering code
Mechanical life:	minimum 500 000 cycles
Cover:	nickel, silver-plated
Case:	high-temp. PA 9T UL 94 V-0, black
Stem:	silicone
Contacts:	phosphor bronze, silver-plated
Terminals:	brass, silver-plated
Water proofing:	IP 57
Packing:	on tapes – see ordering code

Models:

TSSE 6 -RA

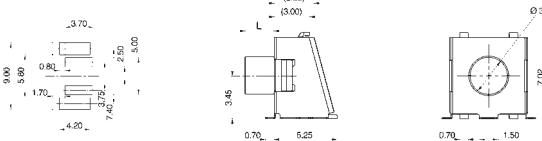


PCB Layout



Circuit diagram

TSSE 6 -RA-1

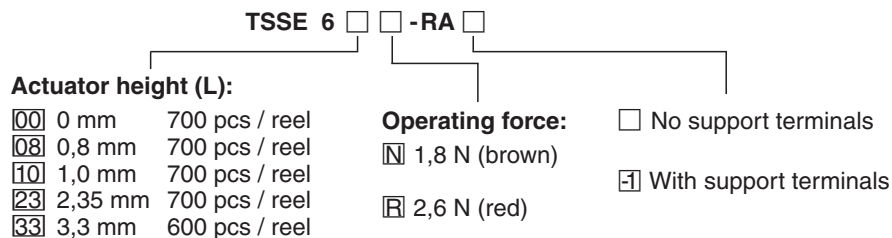


PCB Layout

washable



Ordering code:



Further types on request