

PHAP SERIES

TACT SWITCHES

Selection guide and specifications

*This range of tact switches
is subject to change.
Consult factory before
making a choice.*

SELECTION GUIDE

Mounting	Case format	Button height from PCB	Ground. tab	Horizontal mounting	Caps	Packaging	Series	Pages
Surface mount	4,2 x 4,2 mm	1,5 mm	-	-	-	◆ ✱	PHAP3390	43
	6 x 6 mm	1,6 mm	yes	-	-	◆ ✱	PHAP3380	44
	6,2 x 6,2 mm	2,6 to 3,4 mm	yes	-	-	◆ ✱	PHAP3370	45-46
	6 x 3,5 mm	4,3 and 5 mm	-	-	-	◆ ✱	PHAP3360	47
Through-hole	6 x 3,5 mm	4,3 and 5 mm	yes	yes	-	✱	PHAP3360	47
	6 x 6 mm	4,3 to 13 mm	yes	yes	yes	✱	PHAP3300	48-49
	7,2 x 7,2 mm - sealed	4,35 to 13 mm	yes	yes	-	✱	PHAP3350	50
	10 x 10 mm - sealed	13 mm	-	-	-	✱	PHAP3350	50
	12 x 12 mm	4,3 to 12 mm	yes	-	yes	✱	PHAP3320	51
Long terminals	6,1 x 6,1 mm	4,3 and 5 mm	-	-	-	*	PHAP3300	49

◆ Tape and reel (SMT)

✱ Bags

* Tape

SPECIFICATIONS

Series	PHAP3390 PHAP3380	PHAP3370	PHAP3360	PHAP3300	PHAP3350	PHAP3320
Performances						
Current/voltage rating	50mA 12VDC					
Contact resistance	100 mΩ max.					
Insulation resistance	100 MΩ min.					
Dielectric strength	250 VAC min. (1 minute)					
Electrical life (cycles)	70.000	75.000	30.000	100.000	100.000	100.000
Operating force	1,6N ± 0,5N	1,6N +0,5/-0,3N	1,8N ± 0,5N	1,6N ± 0,5N	2N ± 0,3N	1,6N ± 0,5N
Travel	0,20/ 0,25 mm	0,25 mm	0,25 mm	0,25 mm	0,50 mm	0,30 mm
Operating temperature	-20°C to +70°C					
Storage temperature	-30°C to +80°C					
Vibrations	10-500 Hz / 10 g					
IR reflow soldering	240°C for 20 seconds max.			-		
Wave soldering	255°C for 5 seconds max.					
Manual soldering	300°C for 3 seconds max.					

Dimensions : First dimensions are in mm while inches are shown as bracketted numbers.



Packaging unit : 1.000 pieces and multiples, except for tape and reel packaging (see following pages).

PHAP3390 SERIES

SMT TACT SWITCHES

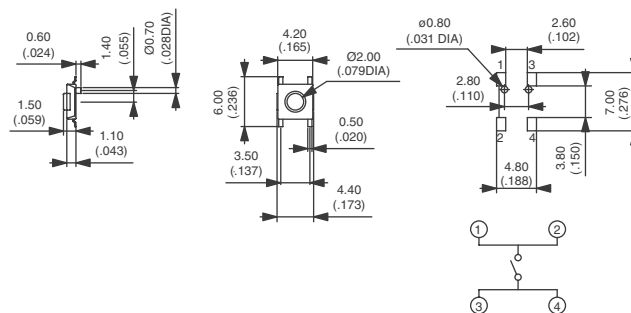
Microminiature and ultra-low profile

- Ultra-compact size for board space saving : 4,2 x 4,2 mm case, 1,5 mm button height from PCB
- Reflow solderable
- With or without positioning pins
- For tape and reel packaging, add "R" at the end of model number.

With positioning pins



Model number
PHAP3390

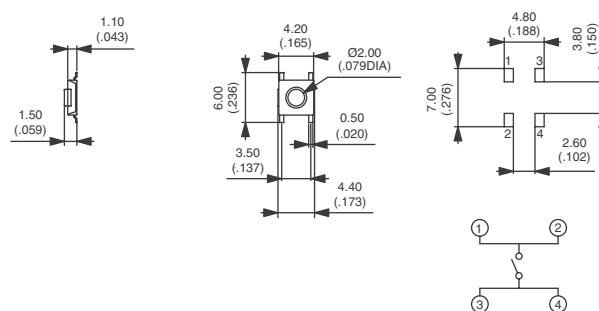


Operating force : 1,6N $\pm$ 0,5N - Travel : 0,20 mm

Without positioning pins



Model number
PHAP3391



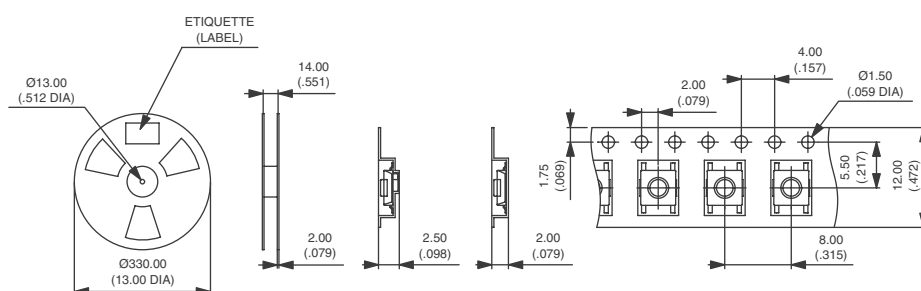
Operating force : 1,6N $\pm$ 0,5N - Travel : 0,20 mm

PACKAGING

To order a product with tape and reel packaging, add "R" at the end of its model number.

Example : PHAP3390R.

Quantity per reel : 3.400 pieces



PHAP3380 SERIES

SMT TACT SWITCHES

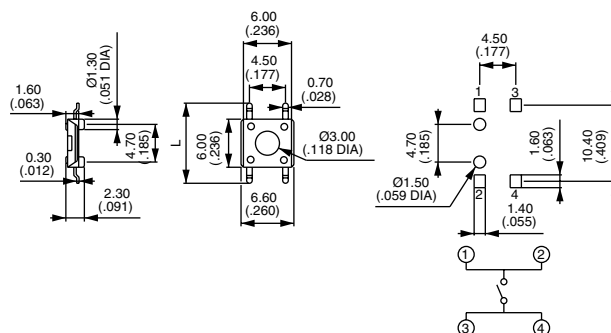
Ultra-low profile

- Ultra-compact size for board space saving : 6 x 6 mm case, 1,6 mm button height from PCB
- Reflow solderable
- Types for iron soldering (L = 10 mm)
- With positioning pins
- With or without grounding tab for protection against electrostatic discharges
- For tape and reel packaging, add "R" at the of model number.

Without grounding tab



Model No	Dim. «L»
PHAP3381	8 mm
PHAP3382	10 mm

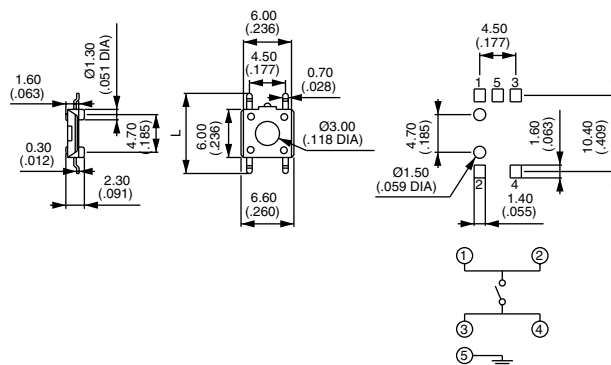


Operating force : 1,6N $\pm$ 0,5N - Travel : 0,25 mm

With grounding tab



Model No	Dim. «L»
PHAP3383	8 mm
PHAP3384	10 mm



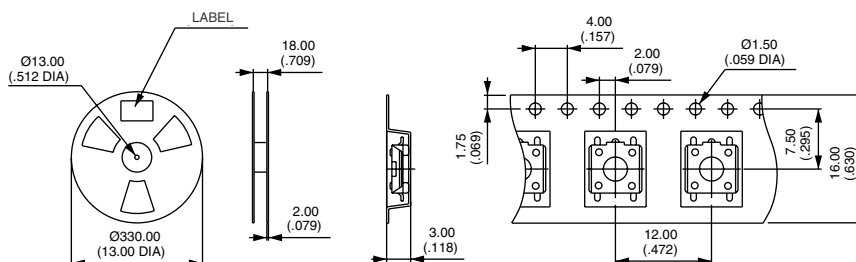
Operating force : 1,6N $\pm$ 0,5N - Travel : 0,25 mm

PACKAGING

To order a product with tape and reel packaging, add "R" at the end of its model number.

Example : PHAP3383R.

Quantity per reel : 2.200 pieces



PHAP3370 SERIES

SMT TACT SWITCHES

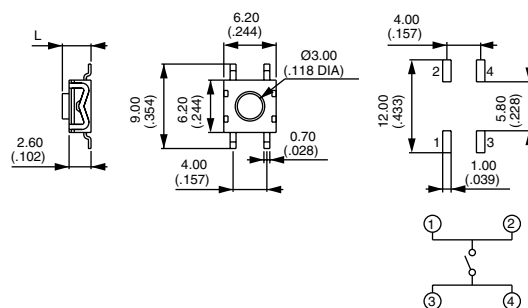
Low profile

- Ultra-compact size for board space saving : 6,2 x 6,2 mm case, 2,6 to 3,4 mm button height from PCB
- Reflow solderable
- With grounding tab for protection against electrostatic discharges
- Models with external terminals type G or internal terminals type J
- For tape and reel packaging, add "R" at the end of model number.

External terminals type G (gullwing)



Model No	Dim. «L»
PHAP3371	2,6 mm
PHAP3371A	3,4 mm

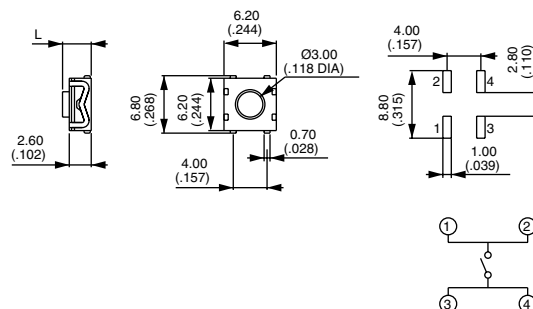


Operating force : 1,6N + 0,5N/-0,3N - Travel : 0,25 mm

Internal terminals type J - tape and reel packaging



Model No	Dim. «L»
PHAP3372R	2,6 mm
PHAP3372AR	3,4 mm



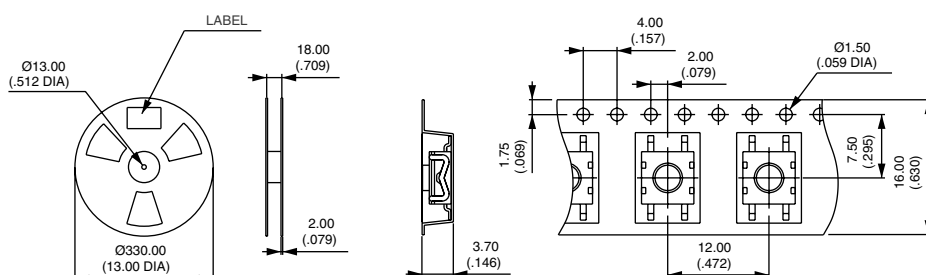
Operating force : 1,6N + 0,5N/-0,3N - Travel : 0,25 mm

PACKAGING

To order a product with tape and reel packaging, add "R" at the end of its model number.

Example : PHAP3372R.

Quantity per reel : 1.600 pieces



PHAP3370 SERIES

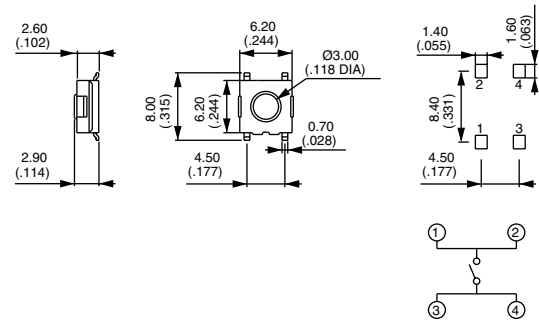
SMT TACT SWITCHES

Low profile

Button height from PCB : 2,9 mm



Model No
PHAP3373

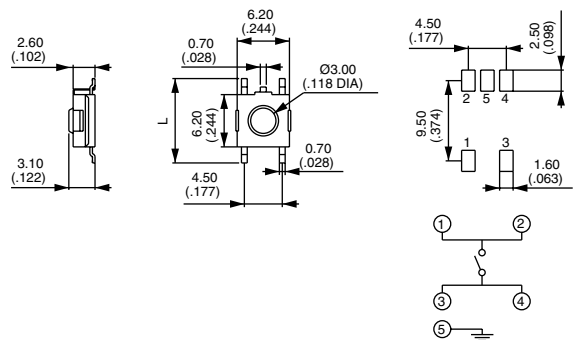


Operating force : 1,6N + 0,5N/-0,3N - Travel : 0,25 mm

Button height from PCB : 3,1 mm - with grounding tab



Model No	Dim. «L»
PHAP3374	8 mm



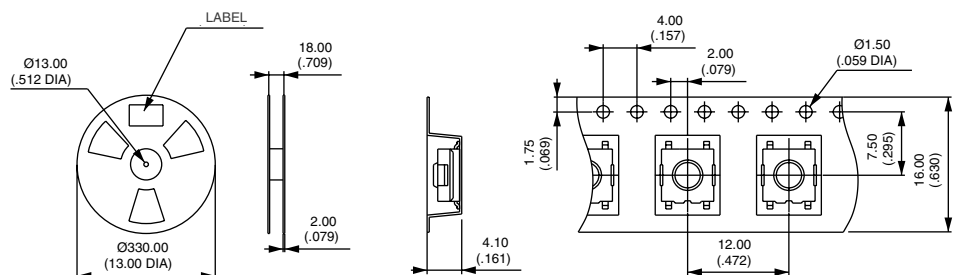
Operating force : 1,6N + 0,5N/-0,3N - Travel : 0,25 mm

PACKAGING

To order a product with tape and reel packaging, add "R" at the end of its model number.

Example : PHAP3373R.

Quantity per reel : 1.700 pieces



PHAP3360 SERIES

TACT SWITCHES

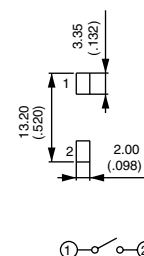
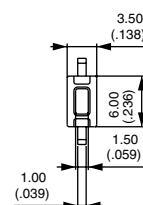
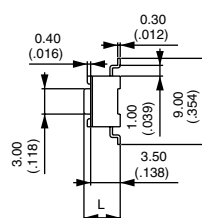
Microminiature

- SMT or through-hole
- Ultra-compact size for board space saving : 6 x 3,5 mm case, 4,3 or 5 mm button height from PCB
- Crimped terminals for direct mounting onto PCB
- Moulded-in terminals for wave soldering

Surface mount



Model No	Dim. «L»
PHAP3361	4,3 mm
PHAP3361A	5,0 mm

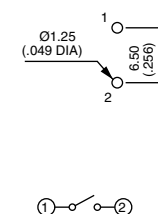
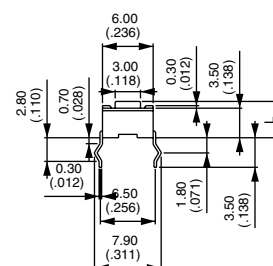
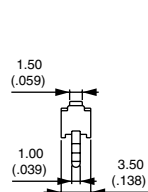


Operating force : 1,8N $\pm$ 0,5N - Travel : 0,25 mm

Straight terminals



Model No	Dim. «L»
PHAP3362	4,3 mm
PHAP3362A	5,0 mm

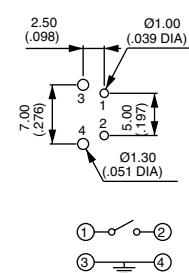
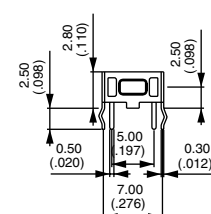
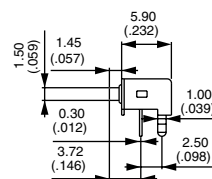


Operating force : 1,8N $\pm$ 0,5N - Travel : 0,25 mm

Horizontal mounting



Model No
PHAP3363



Operating force : 1,8N $\pm$ 0,5N - Travel : 0,25 mm

PHAP3300 SERIES

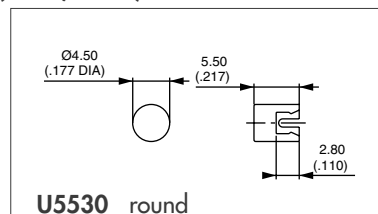
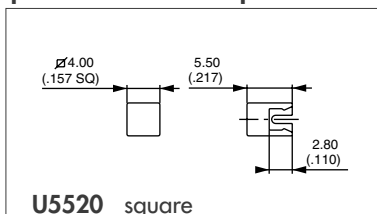
THROUGH-HOLE TACT SWITCHES

6 x 6 mm case

- 4,3 to 13 mm button height from PCB
- Excellent tactile feedback (snap dome)
- Crimped terminals for direct mounting onto PCB
- With or without grounding tab for protection against electrostatic discharges
- Moulded-in terminals for wave soldering
- Caps for model with square actuator (L = 2,4 mm) :

Cap colours :

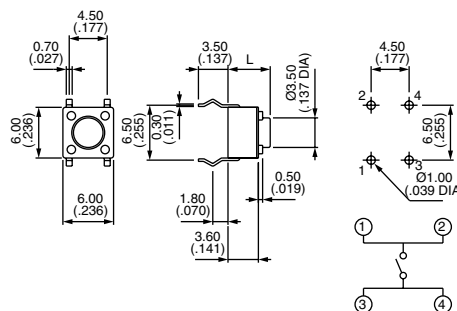
1 : blue - 2 : black - 3 : green - 5 : yellow
6 : red - 7 : ivory



Straight terminals



Model No	Dim. «L»	Actuator colour
PHAP3301	4,3 mm	black
PHAP3301A	5,0 mm	black
PHAP3301B	9,5 mm	black
PHAP3301C	8,0 mm	white
PHAP3301D	13,0 mm	black
PHAP3301E	7,3 mm	ivory
PHAP3301F	8,5 mm	grey

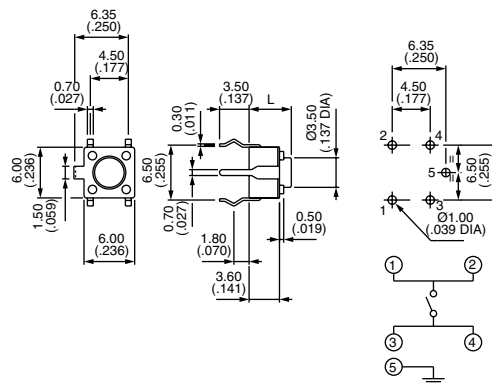


Operating force : 1,6N ± 0,5N - Travel : 0,25 mm

Straight terminals - with grounding tab



Model No	Dim. «L»	Actuator colour
PHAP3302	4,3 mm	black
PHAP3302A	5,0 mm	black
PHAP3302B	9,5 mm	black
PHAP3302C	8,0 mm	white
PHAP3302D	13,0 mm	black
PHAP3302E	7,3 mm	ivory

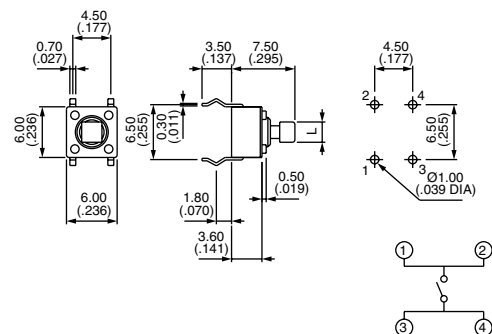


Operating force : 1,6N ± 0,5N - Travel : 0,25 mm

Straight terminals - square actuator



Model No	Dim. «L»	Actuator colour
PHAP3303	2,4mm	blue
PHAP3303A	2,8 mm	black



Operating force : 1,6N ± 0,5N - Travel : 0,25 mm

PHAP3300 SERIES

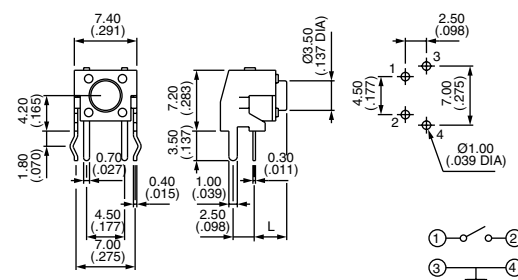
THROUGH-HOLE TACT SWITCHES

6 x 6 mm case

Horizontal mounting



Model No	Dim. «L»	Actuator colour
PHAP3305	3,15 mm	black
PHAP3305A	3,85 mm	black
PHAP3305B	8,35 mm	black
PHAP3305C	6,85 mm	white
PHAP3305D	11,85 mm	black
PHAP3305E	6,15 mm	ivory

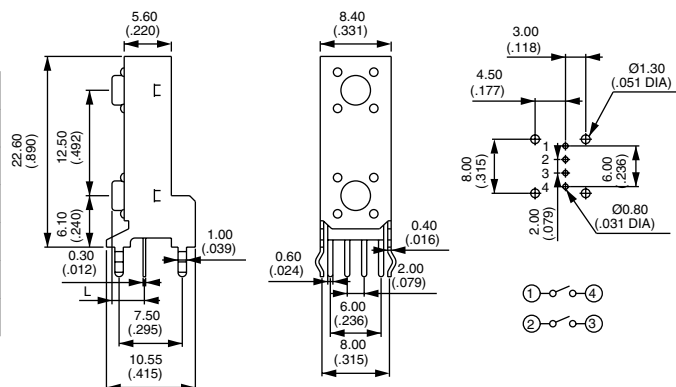


Operating force : $1,6N \pm 0,5N$ - Travel : 0,25 mm

Horizontal mounting of 2 tact switches



Model No	Dim. «L»	Actuator colour
PHAP3306	3,15 mm	black
PHAP3306A	3,85 mm	black
PHAP3306B	8,35 mm	black
PHAP3306C	6,85 mm	white
PHAP3306D	11,85 mm	black
PHAP3306E	6,15 mm	ivory

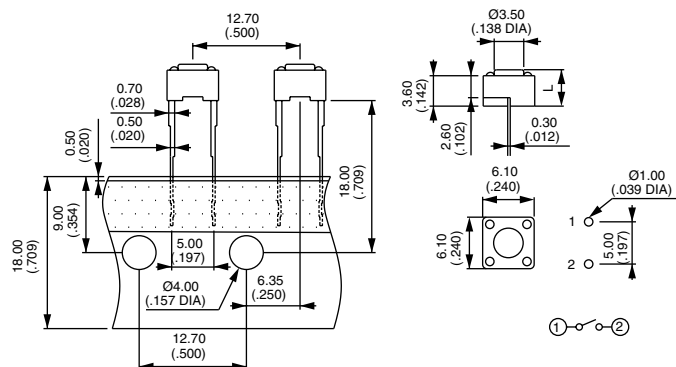


Operating force : $1,6N \pm 0,5N$ - Travel : 0,25 mm

Long straight terminals + tape



Model No	Dim. «L»
PHAP3307	4,3 mm
PHAP3307A	5,0 mm

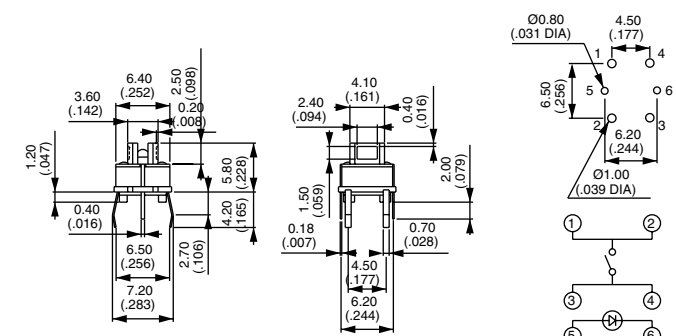


Operating force : $1,6N \pm 0,5N$ - Travel : 0,25 mm
Quantity per tape : 1.000 pieces

Straight terminals + LED



Model No	LED colour
PHAP3308	-
PHAP3308R	red
PHAP3308G	green
PHAP3308Y	yellow



Operating force : $1,6N \pm 0,5N$ - Travel : 0,25 mm
LED : 20mA max. at 25°C

PHAP3350 SERIES

THROUGH-HOLE TACT SWITCHES

Sealed - 7,2 x 7,2 mm or 10 x 10 mm case

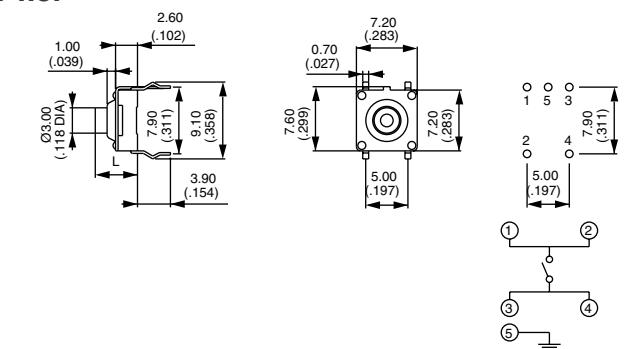
- Dust and splash proof
- Crimped terminals for direct mounting onto PCB
- With or without grounding tab for protection against electrostatic discharges
- Moulded-in terminals for wave soldering

7,2 x 7,2 mm case - straight terminals - grounding or not



Grounding	Dim. «L»
PHAP3350	5,0 mm
PHAP3350A	9,0 mm
PHAP3350B	13,0 mm

Non grounding	Dim. «L»
PHAP3351	5,0 mm
PHAP3351A	9,0 mm
PHAP3351B	13,0 mm

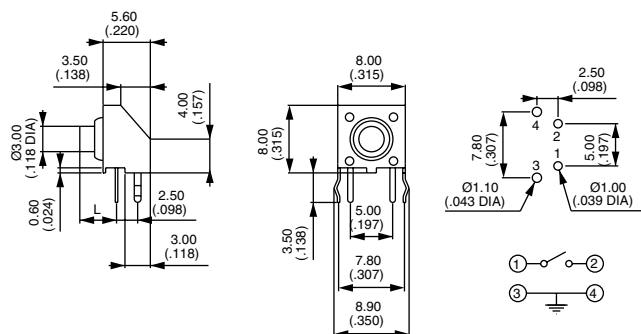


Operating force : $2N \pm 0,3N$ - Travel : 0,50 mm

7,2 x 7,2 mm case - right angle terminals



Model No	Dim. «L»
PHAP3352	4,35 mm
PHAP3352A	8,35 mm
PHAP3352B	12,35 mm

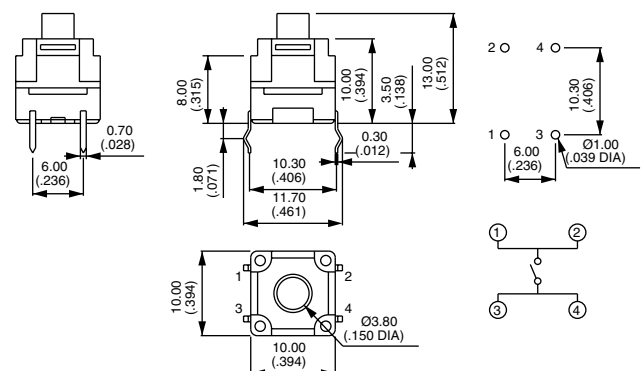


Operating force : $2N \pm 0,3N$ - Travel : 0,50 mm

10 x 10 mm case - straight terminals



Model No
PHAP3353



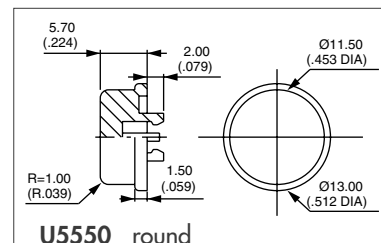
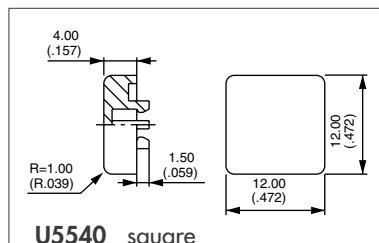
Operating force : $1,6N \pm 0,5N$ - Travel : 0,50 mm

PHAP3320 SERIES

THROUGH-HOLE TACT SWITCHES

12 x 12 mm case

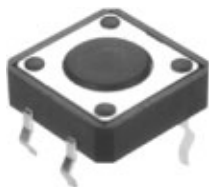
- 4,3 to 12 mm button height from circuit
- Excellent tactile feedback (snap-dome)
- Crimped terminals for direct mounting onto PCB
- Moulded-in terminals for wave soldering
- Caps for model PHAP3321 :



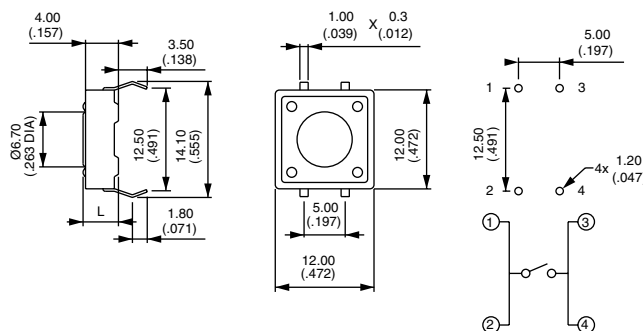
Cap colours :

1 : blue - 2 : black - 3 : green - 5 : yellow
6 : red - 7 : ivory

Straight terminals - short actuator



Model No	Dim. «L»
PHAP3320	4,3 mm
PHAP3320A	7,5 mm

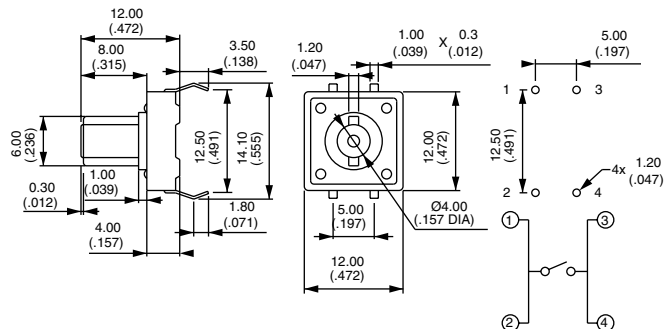


Operating force : 1,6N $\pm$ 0,5N - Travel : 0,30 mm

Straight terminals - long keyed actuator



Model No
PHAP3320B

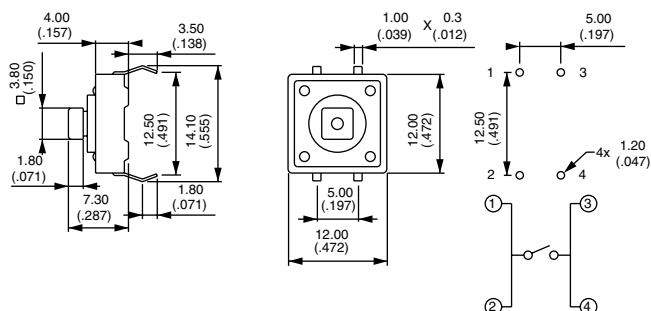


Operating force : 1,6N $\pm$ 0,5N - Travel : 0,30 mm

Straight terminals - square actuator



Model No
PHAP3321



Operating force : 1,6N $\pm$ 0,5N - Travel : 0,30 mm