

# K12

## High Performance Key Switches

### Features/Benefits

- **Excellent tactile feel**
- **Wide choice of LED colors, travel and actuator forces**
- **High reliability / long life**
- **Sealed version available**
- **Designed for low-level switching**
- **Double stroke version available**
- **Detector version available**

### Typical Applications

- **Automotive**
- **Off-road transportation**
- **Industrial electronics**
- **Computers & network equipment**



### Construction:

FUNCTION: momentary

DISTANCE BETWEEN BUTTON CENTERS:  
min. 11 (0.433) K12C = 13 (0.512)

TERMINALS: PC pins, tinned

MOUNTING: Locating pins; K12D, K12G and K12P additionally  
with snap-in housing

### Mechanical

TOTAL TRAVEL: 1 mm, 1.5 mm, 2 mm

SWITCHING TRAVEL: 0.6 mm\*

OPERATING FORCE: 1.5 N OD without snap-point as detector  
switch, 2.5 N, 3.5 N, 5 N, 3.5/7 N, 6/12 N. Additional  
operating force 7N, 9N and 20N, available on request.

PROTECTION CLASS: K12C IP 67 (dust tight, protected against  
the effects of immersion in water; other versions IP 40)

\* Additional switching travel (with pre-travel) available by request.

### Electrical

SWITCHING POWER MIN./MAX.: 0.02mW/3 W

SWITCHING VOLTAGE MIN./MAX.: 2 V DC / 30 V DC

SWITCHING CURRENT MIN./MAX.: 10  $\mu$ A / 100 mA

DIELECTRIC STRENGTH (50 Hz, 1 min):  $\geq$  500 V

OPERATING LIFE with max. switching power:  $\geq$  10<sup>6</sup> operations

K12G & K12GO: operating life of second switch 5 x 10<sup>4</sup> operations,  
operating life K12C and version with more than 6N (7N, 9N 20N)  
please consult factory.

CONTACT RESISTANCE: Initial  $\leq$  50 m $\Omega$

INSULATION RESISTANCE:  $\geq$  10<sup>10</sup>  $\Omega$

BOUNCE TIME:  $\leq$  1 ms

Operating speed 400 mm/s (15.75/s)

### Environmental

OPERATING TEMPERATURE: -40°C to 85°C.

STORAGE TEMPERATURE: -40°C to 95°C.

### Process

SOLDERABILITY:

Max. soldering time and temperature: 5 s at 260°C

### How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



#### Series

- K12A** No snap-in pegs
- K12AL** No snap-in pegs with central LED
- K12P** With snap-in pegs
- K12PL** With central LED
- K12C** Sealed contact with rubber cap (IP 67)
- K12GO** Two-step switch without side LED holder
- K12GOL** K12GO with central LED

#### Cap Color

- NONE** version with LED, version C
- BK** Black cap – No LED

#### LED Color

- NONE** No LED
- GN** Green
- YE** Yellow
- OG** Orange
- RD** Red
- WH** White
- BU** Blue

#### Standard LED Code

- NONE** No LED
- L306** Green
- L327** Yellow
- L315** Orange
- L352** Red
- L302** White
- L328** Blue

#### Travel\*

- 1** 1 mm (0.039)
- 1.5** 1.5 mm (0.059)
- 2** 2 mm (0.079)

#### Operating Force\*\*\*

- 1.5N OD** 1.5 N without snap-point
- 2.5N** 2.5 N
- 3.5N** 3.5 N
- 5N** 5 N
- 3.5/7N** 3.5/7 N\*\*
- 6/12N** 6/12 N\*\*

#### Contact Arrangement

- NONE** SPST NO (STD)
- 1R** SPST NC (Special request)

\* K12C – 1mm MAX

K12 with LED – 1.5 mm MAX

\*\* K12G & K12GO version only

\*\*\* Additional operating force: 7N, 9N, 20N available on request

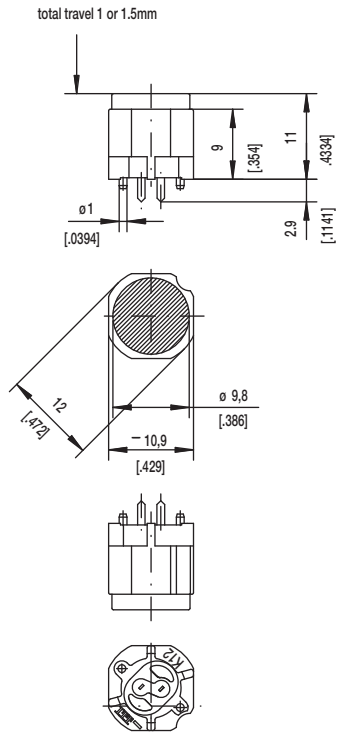


Dimensions are shown: mm (inch)  
Specifications and dimensions subject to change

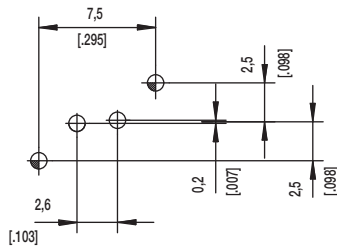
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SERIES

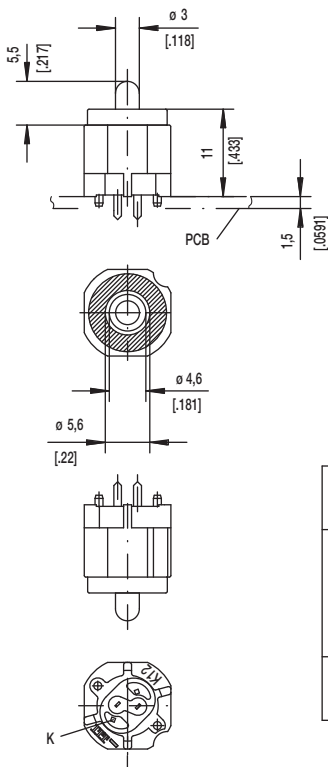
K12A



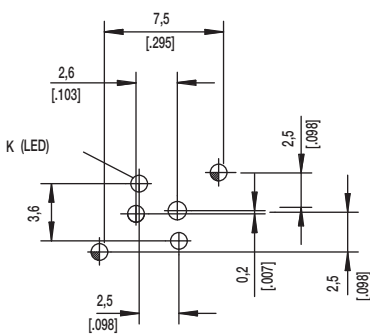
PCB LAYOUT, MOUNTING SIDE



K12AL



PCB LAYOUT, MOUNTING SIDE



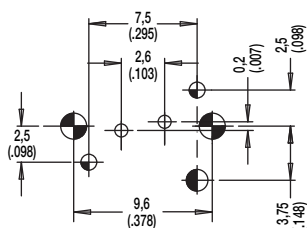
	1,1 <sup>+0,05</sup>	2x	2x	center hole		
	0,9 ±0,05		2x	LED	ø0,5 (.020)	Sn
		2x	2x	switch	0,7x0,2 (.028x.081)	Sn
Hole	ø	Without	with LED	Discription	Terminal Section	Surface



Dimensions are shown: mm (inch)  
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K12P

K12P

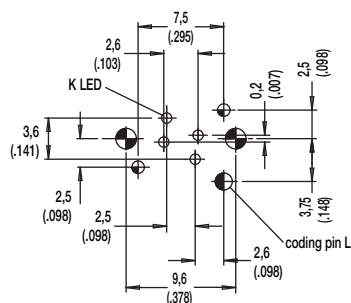


center of actuation area (notice LED)







Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	snap-in		
	1,6 (.062)	1x	coding hole (L,M,N)		
	1,1 (.043)	2x	center hole		Sn
	0,9 (.035)	2x	switch	0.7 x 0.2 (.028 x .081)	Sn

## K12PL



center of actuation area (notice LED)



Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	snap-in		
	1,6 (.062)	1x	coding hole (L,M,N)		
	1,1 (.043)	2x	center hole		Sn
	0,9 (.035)	2x	LED	m0.5 (.020)	Sn
		2x	switch	0.7 x 0.2 (.028 x .081)	



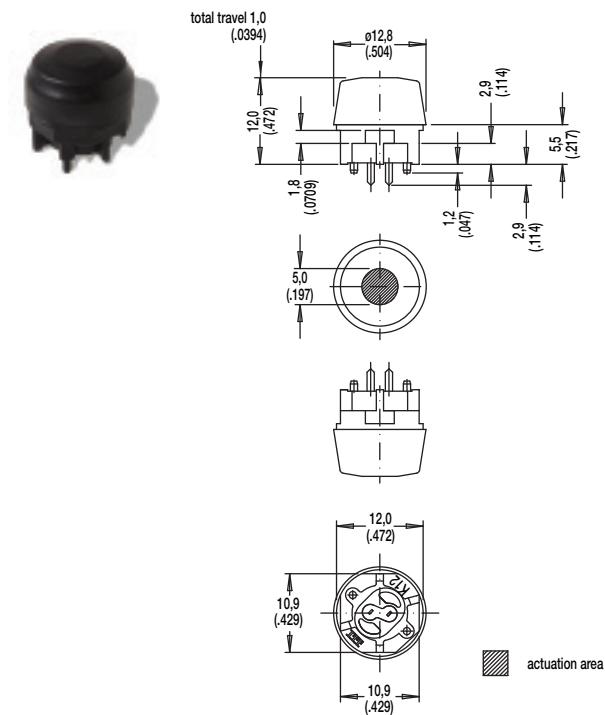
First Angle  
Projection

Dimensions are shown: mm (inch)  
Specifications and dimensions subject to change

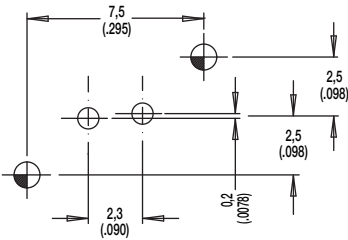
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**K12C** SEALED CONTACT WITH RUBBER CAP (IP 67)



PCB LAYOUT, MOUNTING SIDE



SCHEMATIC	
A	R

Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,1 (.043)	2x	center hole		
	0,9 (.035)	2x	switch	0.7 x 0.2(.0275 x .0787)	Sn

# K12

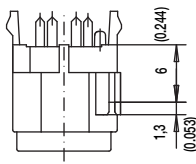
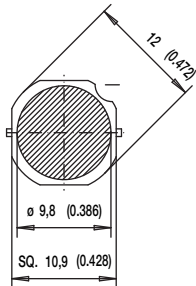
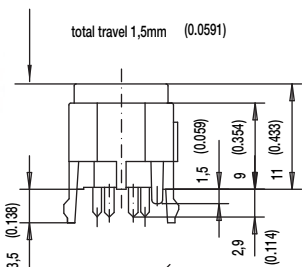
## High Performance Key Switches

SERIES

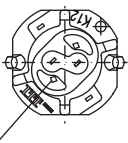
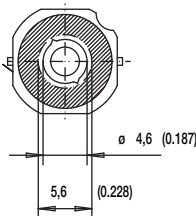
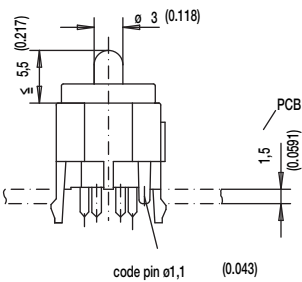
K12G0  
K12GOL



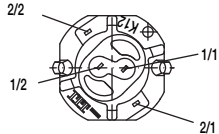
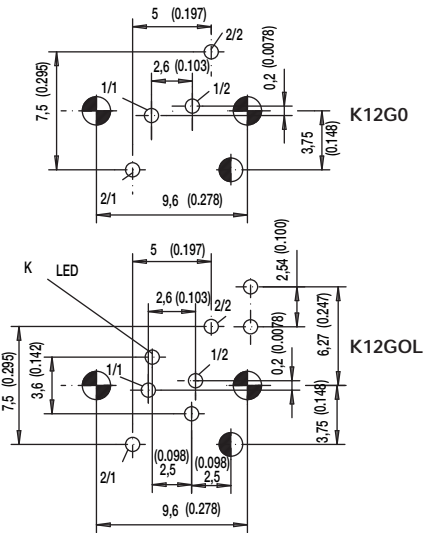
K12G0



K12GOL



PCB LAYOUT, MOUNTING SIDE



actuation area

SCHEMATIC	
K12G	K12GL

Hole	Ø	Without LED	With LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	2x	snap-in		
	1,6 (.062)	1x	1x	code		
	0,9 (.035)		2x	2 LED		Sn
			2x	LED	m0.5 (.020)	Sn
		2x	2x	switch 2	0.7 x 0.3 (.028 x .012)	Sn
		2x	2x	switch 1	0.7 x 0.2 (.028 x .081)	Sn



First Angle  
Projection

Dimensions are shown: mm (inch)  
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# K12

## High Performance Key Switches

### CAP COLOR

OPTION CODE	COLOR
<b>NONE</b>	Version with LED
<b>BK</b>	Black

### LED COLOR

OPTION CODE	COLOR
<b>NONE</b>	Models without LED
<b>GN</b>	Green
<b>YE</b>	Yellow
<b>OG</b>	Orange
<b>RD</b>	Red
<b>WH</b>	White
<b>BU</b>	Blue

STANDARD LED CODE	COLOR
<b>NONE</b>	Models without LED
<b>L306</b>	Green
<b>L327</b>	Yellow
<b>L315</b>	Orange
<b>L352</b>	Red
<b>L302</b>	White
<b>L328</b>	Blue

### TRAVEL

- 1** 1 mm  
**1.5** 1.5 mm  
**2** 2 mm

### OPERATING FORCE

OPTION CODE	OPERATING FORCE
<b>1.5N OD</b>	1.5 N, 150g without snap-point
<b>2.5N</b>	2.5 N, 250g
<b>3.5N</b>	3.5 N, 350g
<b>5N</b>	5 N, 500g
<b>3.5/7N</b>	3.5/7 N, 350/700g
<b>6/12N</b>	6/12 N, 600-1200g



E

Key Switches



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