

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; 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.

Packaging

Bulk in boxes of 250 pieces (version C, GO or GOL) or 300 pieces (version A, AL, P or PL)

Electrical

SWITCHING POWER MIN./MAX.: 0.02mW/3 W
SWITCHING VOLTAGE MIN./MAX.: 2 V DC / 30 V DC
SWITCHING CURRENT MIN./MAX.: 10 μ A /100 mA
DIELECTRIC STRENGTH (50 Hz, 1 min): ≥ 500 V
OPERATING LIFE with max. switching power: $\geq 10^6$ operations
K12G & K12GO; operating life of second switch 5×10^4 operations,
operating life K12C and version with more than 6N (7N, 9N 20N)
please consult factory.
CONTACT RESISTANCE: Initial ≤ 50 m Ω
INSULATION RESISTANCE: $\geq 10^{10} \Omega$
BOUNCE TIME: ≤ 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:
Wave soldering, compatible with lead free soldering profile
Hand soldering, 350°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.

Note: Some of the configurations may not be available or could require some development.



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 |
| K12GOL | K12GO with central 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 |

Cap Color

- None** version with LED, version C
BK Black cap – No LED
YE Yellow cap - No LED
RD Red cap – No LED
GY Gray cap – No LED

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** |

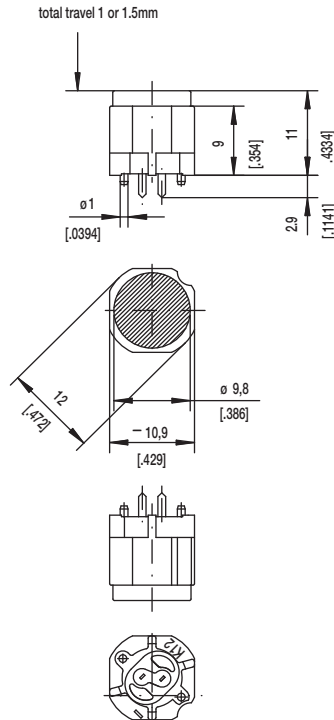
Contact

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

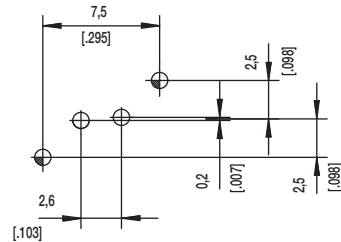
- * K12C – 1mm MAX
- K12 with LED – 1.5 mm MAX
- ** K12G & K12GO version only
- *** Additional operating force: 7N. 9N available on request

K12

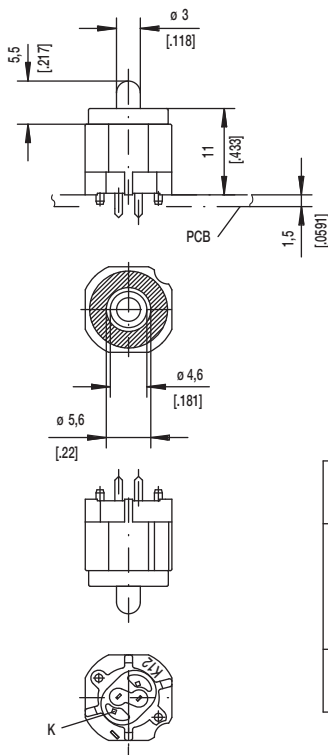
K12A without snap in



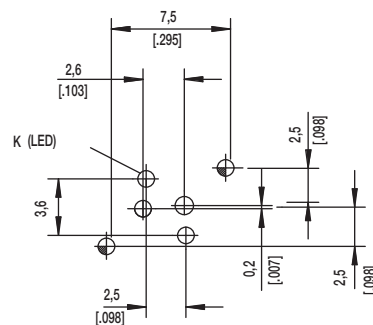
PCB LAYOUT, MOUNTING SIDE



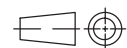
K12AL



PCB LAYOUT, MOUNTING SIDE



	1,1 ^{+0,05}	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



First Angle Projection

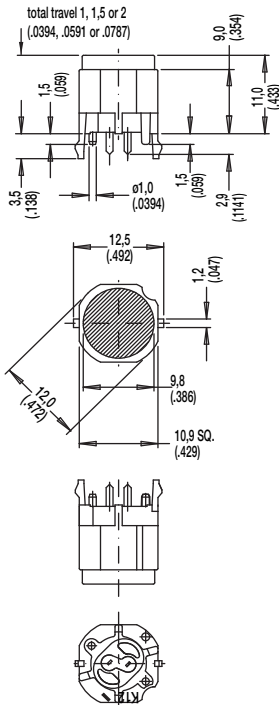
Dimensions are shown: mm
Specifications and dimensions subject to change

K12

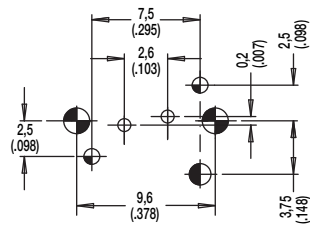
High Performance Key Switches

SERIES

K12P with snap in



PCB LAYOUT, MOUNTING SIDE

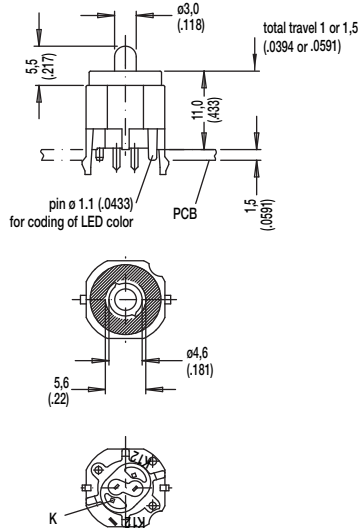


center of actuation area (notice LED)

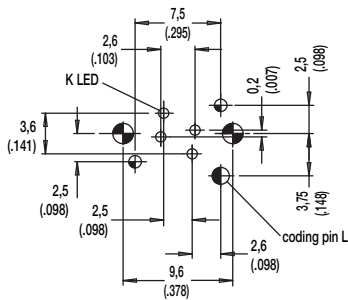


Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	snap-in		
	1,6 (.062)	1x	coding hole (L,M,N)		
	1,1 (.043)	2x	center hole		Sn
	0,9 (.035)	2x	switch	0.7 x 0.2 (.028 x .081)	Sn

K12PL



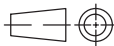
PCB LAYOUT, MOUNTING SIDE



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)	



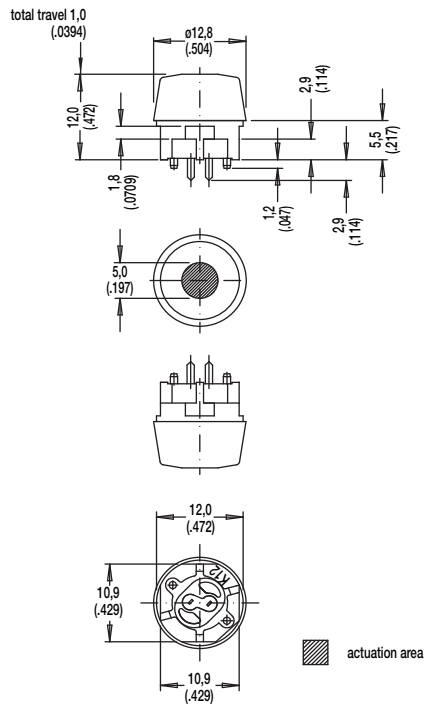
First Angle
Projection

Dimensions are shown: mm
Specifications and dimensions subject to change

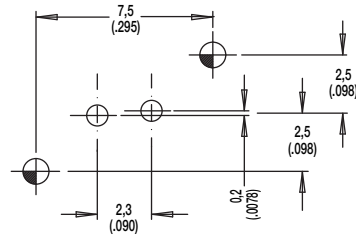


K12 High Performance Key Switches

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



D

Key Switches



First Angle Projection

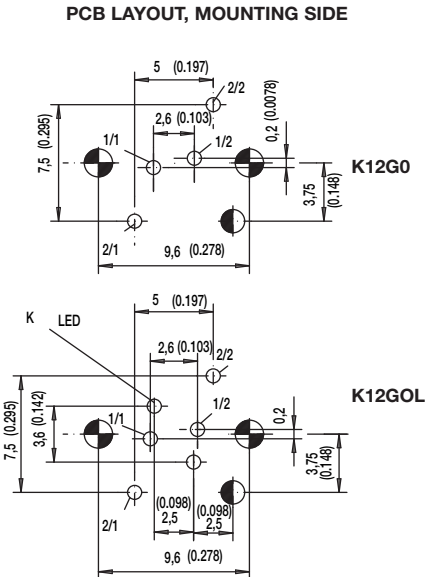
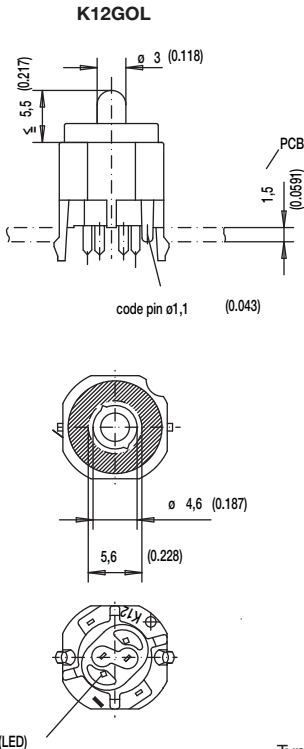
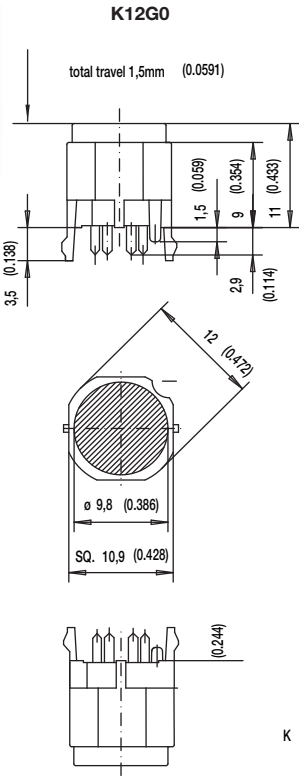
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K12

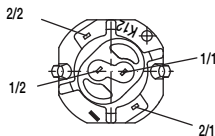
High Performance Key Switches

SERIES

K12GO
K12GOL



Type K12G and K12GL
see drawing: 844-9001-601 or 844-900-1601 with LED holder by 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	m0.5 (.020)	Sn
			2x	LED		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
Specifications and dimensions subject to change

www.ck-components.com

K12

OPTION CODE	COLOR
NONE	Version with LED
BK	Black - no LED
YE	Yellow - no LED
RD	Red - no LED
GY	Gray - no LED

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

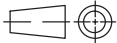
STANDARD LED CODE	COLOR
NONE	Models without LED
L306	Green
L327	Yellow
L315	Orange
L352	Red
L302	White
L328	Blue

1 1 mm
1.5 1.5 mm
2 2 mm

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



Key Switches



First Angle Projection

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