

K12 Series

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**
- **Joysticks**



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 or GO) 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 mA /100 mA

DIELECTRIC STRENGTH (50 Hz, 1 min): ≥ 500 V

OPERATING LIFE

For all K12 versions up to 6N with max. switching power: $\geq 10^6$ operations

For all K12/K12C versions from 7N to 20N with max. switching power: please consult factory

For K12G & K12GO with max. switching power: $\geq 5 \times 10^4$ operations

CONTACT RESISTANCE: Initial ≤ 50 m Ω

INSULATION RESISTANCE: $\geq 10^{10}$ Ω

BOUNCE TIME: ≤ 1 ms; Operating speed 100 mm/s (3.94/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.

K 1 2															
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		LED Color NONE No LED GN Green YE Yellow OG Orange RD Red WH White		Standard LED Code NONE No LED LV306 Green LV327 Yellow LV315 Orange LV352 Red LV302 White		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



14 Jan 22



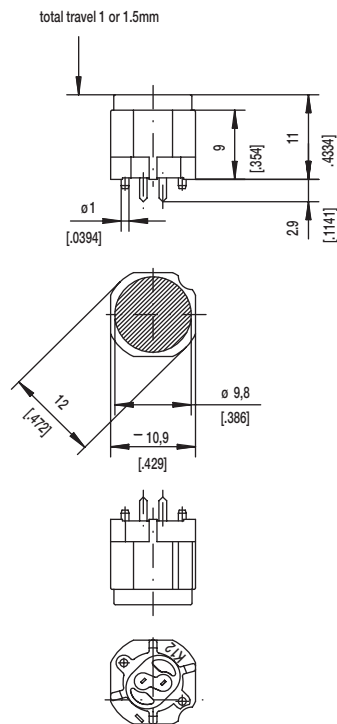
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Key Switches

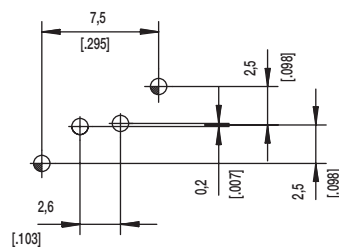
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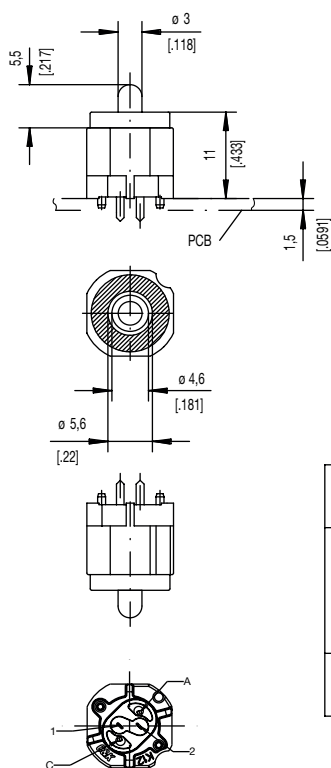
K12A without snap in



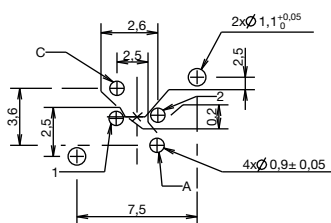
PCB LAYOUT, MOUNTING SIDE



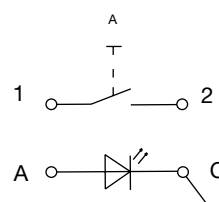
K12AL



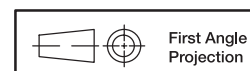
PCB LAYOUT, MOUNTING SIDE



ELECTRICAL GRAPH



	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	Description	Terminal Section	Surface



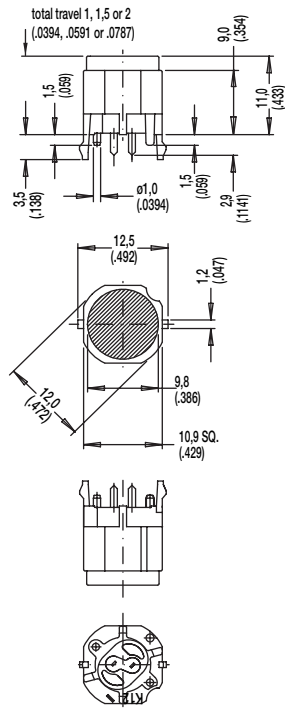
First Angle
Projection

Dimensions are shown: mm
Specifications and dimensions subject to change

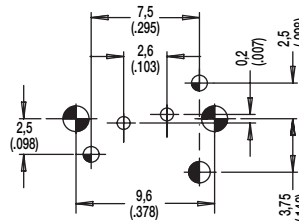
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SERIES

K12P with snap in



PCB LAYOUT, MOUNTING SIDE

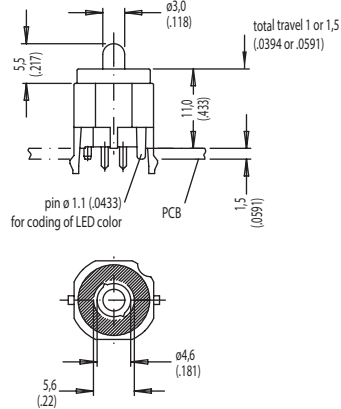


center of actuation area (notice LED)

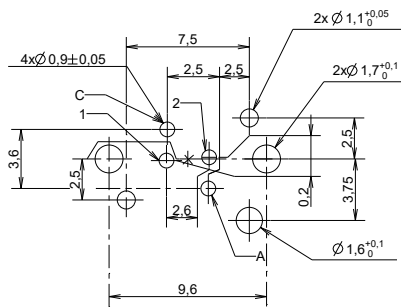


Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	snap-in		
	1,6 (.062)	1x	coding hole (L,M,N)		
	1,1 (.043)	2x	center hole		Sn
	0,9 (.035)	2x	switch	0.7 x 0.2 (.028 x .081)	Sn

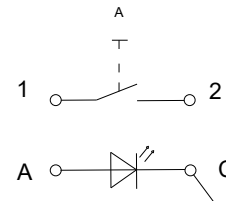
K12PL



PCB LAYOUT, MOUNTING SIDE



ELECTRICAL GRAPH



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)	



Dimensions are shown: mm

Specifications and dimensions subject to change

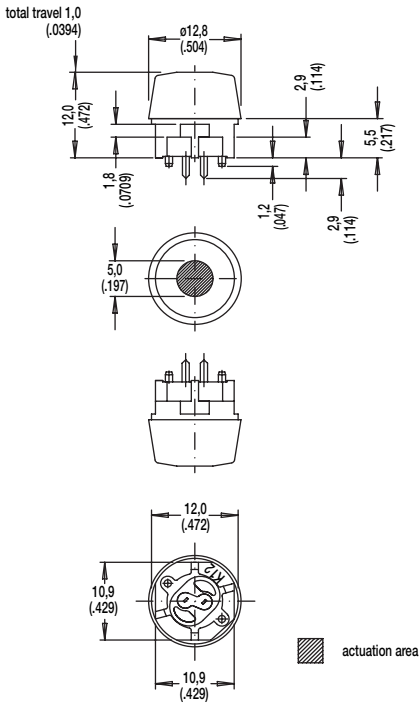
www.ckswitches.com

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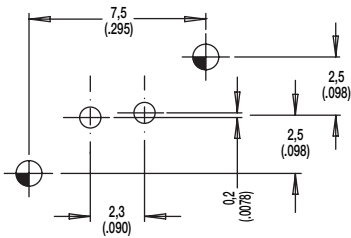
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K12C SEALED CONTACT WITH RUBBER CAP (IP 67)



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

Key Switches

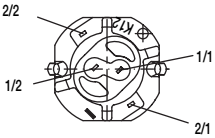
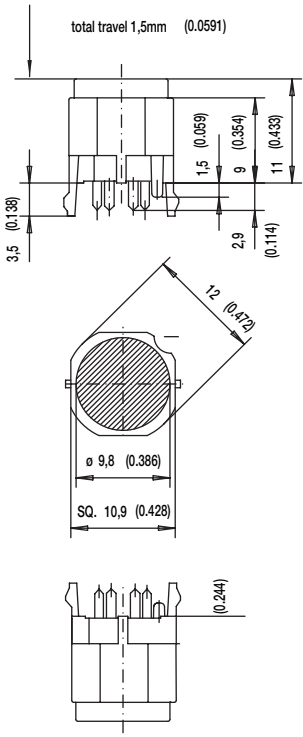


K12 Series

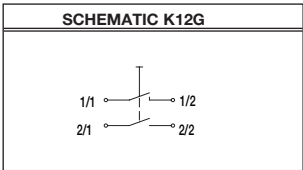
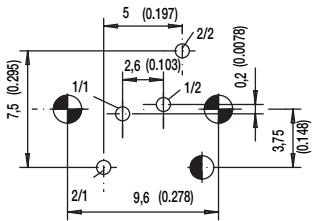
High Performance Key Switches

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K12GO



PCB LAYOUT, MOUNTING SIDE



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

High Performance Key Switches

[illegible]

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

The diagram shows a horizontal sequence of nodes connected by arrows. The nodes are represented as rectangles, some of which are divided into smaller sections. The sequence starts with a node divided into two sections, followed by a single-section node, then a two-section node, a single-section node, another two-section node, and finally a four-section node. Arrows connect each node to the next one in the sequence.

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

STANDARD LED CODE	COLOR
NONE	Models without LED
LV306	Green
LV327	Yellow
LV315	Orange
LV352	Red
LV302	White

1 1 mm
1.5 1.5 mm
2 2 mm



D

Key Switches

```

graph LR
    Node1[Data | Pointer] --> Node2[Data | Pointer]
    Node2 --> Node3[Data | Pointer]
    Node3 --> Node4[Data | Pointer]
    Node4 --> Null[Null]
  
```

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

CONTACT ARRANGEMENT OPTION

1R SPST NC (SPECIAL REQUEST FOR NORMALLY CLOSED OPTION)



Dimensions are shown: mm
Specifications and dimensions subject to change

Mouser Electronics

Authorized Distributor

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C&K Switches:

[K12ABK15N](#) [K12ABK1.52.5N](#) [K12GO NT 1.5 3.5-7N](#) [K12C BK 1 2.5N](#) [K12C 1 5N](#) [K12P BK 1.5 5N](#) [K12P BK 2 2.5N](#) [K12P BK 1 5N](#) [K12ABK11.5N0D](#) [K12ABK21.5N](#) [K12ABK22.5N](#) [K12ABK23.5N](#) [K12ALBU15NL328](#) [K12ALGN1.55NL306](#) [K12ALWH1.55NL302](#) [K12G0BK248.5N.5130CN](#) [K12G0LGN1.5612NL306](#) [K12G0LWH1.5612NL302](#) [K12PBK11.5N](#) [K12PBK13.5N1R](#) [K12PBK15N1R](#) [K12PL0G1.55NL315](#) [K12PL0G11.5N0DL315](#) [K12PLBU12.5NL328](#) [K12PLGN1.52.5NL306](#) [K12PLGN1.55NL306](#) [K12PLRD1.55NL352](#) [K12PLWH1.55NL302](#) [K12PLWH15NL302](#) [K12ABK12.5N1R](#) [K12ABK15N1R](#) [K12AGN1.52.5N](#) [K12AGY15N](#) [K12AGY1.52.5N](#) [K12ARD12.5N](#) [K12ARD15N](#) [K12ARD1.52.5N](#) [K12AYE12.5N](#) [K12AYE15N](#) [K12AYE1.52.5N](#) [K12AH11.5N](#) [K12AH12.5N](#) [K12AH1.52.5N](#) [K12AK11.5N](#) [K12AK12.5N](#) [K12AK1.51.5N](#) [K12AK1.55N](#) [K12ALGN15NL306](#) [K12ALRD15NL352](#) [K12ALYE15NL327](#) [K12DLYE12.5NL327](#) [K12G0BK2612N.5](#) [K12PBK12.5N](#) [K12PD](#) [K12PL0G15NL315](#) [K12C12.5N](#) [K12A BK 1.5 5N](#) [K12DL YE 1 5N L327](#) [K12KKK BK](#) [K12D BK 1 5N](#) [K12P BK 1 3.5N](#) [K12PO BK 2 6N .8 200CN](#) [K12PL YE 1.5 5N L327](#) [K12PYE25N](#) [K12PLGN15NLV306](#) [K12P0BK24N.8](#) [K12G0LYE1.5612NL327](#) [K12G0NT1.53.57N](#) [K12ALWH1.55NLV302](#) [K12PLGN1.52.5NLV306](#) [K12ALRD15NLV352](#) [K12ALGN15NLV306](#) [K12ALYE15NLV327](#) [K12PLWH1.35N.5LV302](#) [K12PLWH15NLV302](#) [K12ALGN1.55NLV306](#) [K12PL0G1.55NLV315](#) [K12PLBU12.5NLV328](#) [K12ALRD1.39N.5LV352](#) [K12PLRD15NLV352](#) [K12ALBU15NLV328](#) [K12PLWH1.53.5NLV302](#) [K12PLGN1.55NLV306](#) [K12PLWH1.55NLV302](#) [K12PLRD1.55NLV352](#) [K12PL0G15NLV315](#) [K12PLYE1.55NLV327](#) [K12PYE23.5N](#) [K12PL0G11.5N0DLV315](#) [K12PLYE15NLV327](#) [K12ABK1.55N](#) [K12DBK15N](#) [K12ABK12.5N](#) [K12PBK23.5N](#) [K12PBK25N](#) [K12CBK12.5N](#) [K12C15N](#) [K12PBK15N](#) [K12PBK22.5N](#) [K12PBK13.5N](#)