

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**
- **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 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: $\geq 10^{10}$ 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.

Series	Cap Color	LED Color	Travel*	Operating Force***	Standard LED Code	Contact Arrangement
K12A No snap-in pegs	NONE version with LED, version C	NONE No LED	1 1 mm (0.039)	1.5N OD 1.5 N without snap-point	NONE No LED	NONE SPST NO (STD)
K12AL No snap-in pegs with central LED	BK Black cap - No LED	GN Green	1.5 1.5 mm (0.059)	2.5N 2.5 N	LV306 Green	1R SPST NC (Special request)
K12P With snap-in pegs	YE Yellow cap - No LED	YE Yellow	2 2 mm (0.079)	3.5N 3.5 N	LV327 Yellow	
K12PL With central LED	RD Red cap - No LED	OG Orange		5N 5 N	LV315 Orange	
K12C Sealed contact with rubber cap (IP 67)	GY Gray cap - No LED	RD Red		3.5/7N 3.5/7 N**	LV352 Red	
K12GO Two-step switch		WH White		6/12N 6/12 N**	LV302 White	
		BU Blue			LV328 Blue	

* K12C - 1mm MAX

K12 with LED - 1.5 mm MAX

** K12G & K12GO version only

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

Dimensions are shown: mm

Specifications and dimensions subject to change



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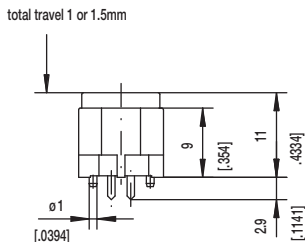
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Key Switches

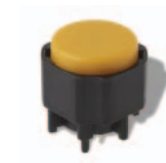
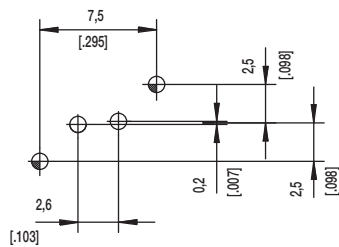
K12

High Performance Key Switches

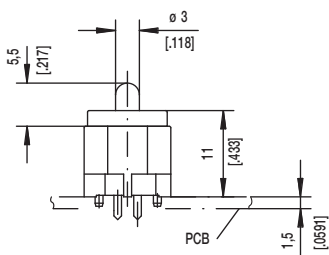
K12A without snap in



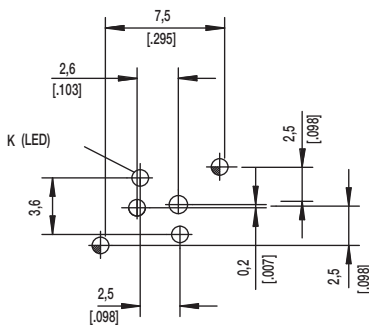
PCB LAYOUT, MOUNTING SIDE



K12AL



PCB LAYOUT, MOUNTING SIDE



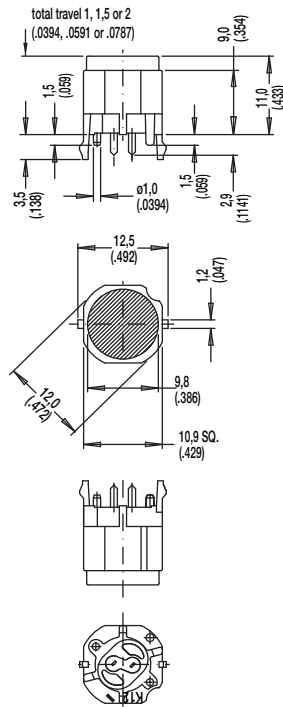
	1,1 ^{+0,05}	2x	2x	center hole		
	0,9 ±0,05		2x	LED	ø0,5 (.020)	Sn
		2x	2x	switch	0,7x0,2 (.028x.081)	Sn
Hole	ø	Without	with LED	Discription	Terminal Section	Surface



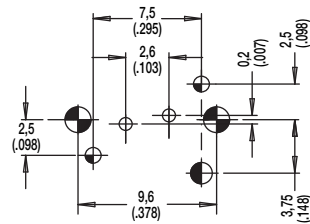
Dimensions are shown: mm
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K12

K12P with snap in



PCB LAYOUT, MOUNTING SIDE

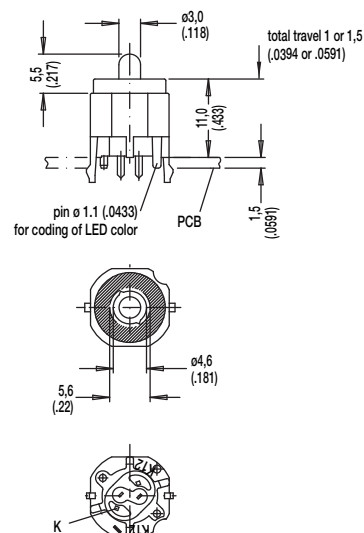


center of actuation area (notice LED)

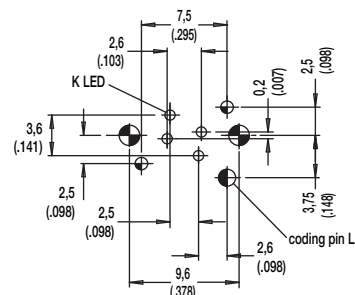


Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	snap-in		
	1,6 (.062)	1x	coding hole (L,M,N)		
	1,1 (.043)	2x	center hole		Sn
	0,9 (.035)	2x	switch	0.7 x 0.2 (.028 x .081)	Sn

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)	

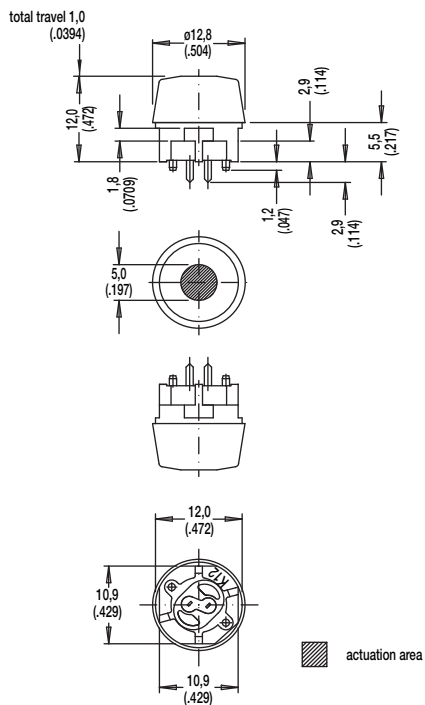


Dimensions are shown: mm
dimensions subject to change

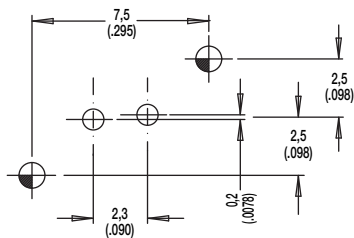
High Performance Key Switches

SERIES

K12C SEALED CONTACT WITH RUBBER CAP (IP 67)



PCB LAYOUT, MOUNTING SIDE



SCHEMATIC	
A	R
	

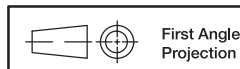
Hole	Ø	Without LED	Description	Terminal Section	Surface
 	1,1 (.043)	2x	center hole		
	0,9 (.035)	2x	switch	0.7 x 0.2(.0275 x .0787)	Sn

Key Switches



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D-12



Dimensions are shown: mm
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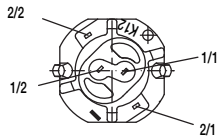
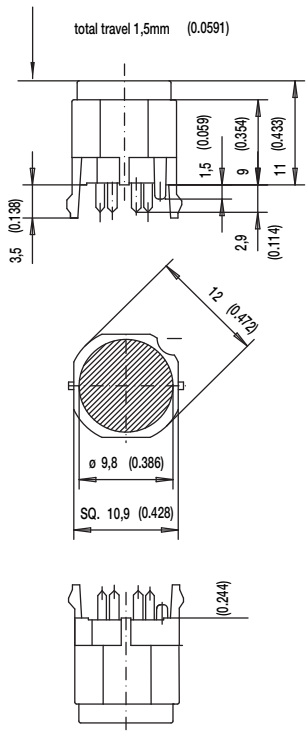
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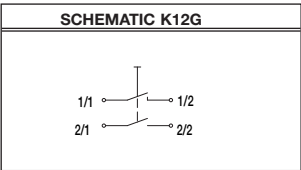
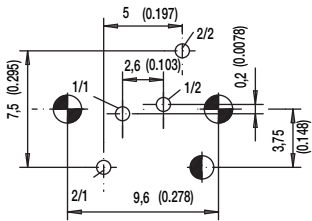
High Performance Key Switches

SERIES

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
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K12

[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 illustrates a linked list structure. It consists of five nodes connected sequentially by arrows. Each node is represented as a rectangle divided into two parts: a data field and a pointer field. The first node has a black data field and a black pointer field. The second node has a white data field and a black pointer field. The third node has a white data field and a white pointer field. The fourth node has a white data field and a white pointer field. The fifth node has a white data field and a white pointer field. The arrows indicate the flow from the pointer field of one node to the data field of the next node.

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
LV306	Green
LV327	Yellow
LV315	Orange
LV352	Red
LV302	White
LV328	Blue

A diagram showing a linear sequence of nodes. On the left, there are three black rectangular nodes connected by horizontal lines. These connect to a central white rectangular node with a vertical line down its middle. From the right side of this central node, two branches emerge: one with a single white rectangular node, and another with three white rectangular nodes. All nodes are connected by horizontal lines.

1 1 mm
1.5 1.5 mm
2 2 mm



D

Key Switches

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 Components:

[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](#) [K12PBK1.51.5N0D](#) [K12PBK1.51.5N0D1R](#) [K12PBK1.52.5N](#) [K12PBK1.53.5N](#) [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](#) [K12G0BK1.53.57N](#) [K12G0BK1.5612N](#) [K12G0BK2612N.5](#) [K12PBK12.5N](#) [K12PBK21.5N0D](#) [K12PBK1.59N](#) [K12PD](#) [K12PL0G15NL315](#) [K12C12.5N](#) [K12GO BK 1.5 6/12N](#) [K12A BK 1.5 5N](#) [K12P BK 2 5N](#) [K12P BK 2 1.5N OD](#) [K12PL YE 1 5N L327](#) [K12GO BK 1.5 3.5/7N](#) [K12A BK 1 2.5N](#) [K12G BK 1.5 3.5/7N](#) [K12PL GN 1 5N L306](#) [K12P BK 2 3.5N](#) [K12AK 1 5N](#) [K12DL YE 1 5N L327](#) [K12KKK BK](#) [K12PF 1.5 20N .3](#) [K12D BK 1 5N](#) [K12PL RD 1 5N L352](#) [K12GO BK 2 6/12N .5](#) [K12P BK 1 3.5N](#) [K12G BK 1.5 6/12N](#) [K12AH 1 5N](#) [K12A BK 2 5N](#) [K12PO BK 2 6N .8 200CN](#) [K12PL YE 1.5 5N L327](#)