

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 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	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	NONE No LED GN Green YE Yellow OG Orange RD Red WH White BU Blue	1 1 mm (0.039) 1.5 1.5 mm (0.059) 2 2 mm (0.079)	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**	NONE No LED LV306 Green LV327 Yellow LV315 Orange LV352 Red LV302 White LV328 Blue	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

Dimensions are shown: mm

Specifications and dimensions subject to change



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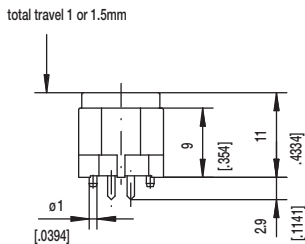
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Key Switches

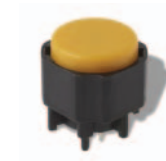
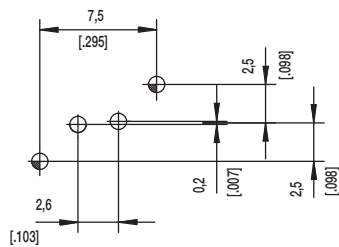
K12

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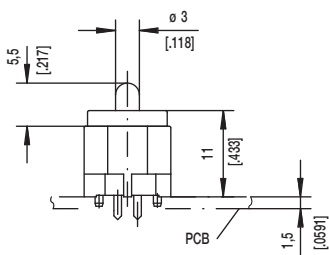
K12A without snap in



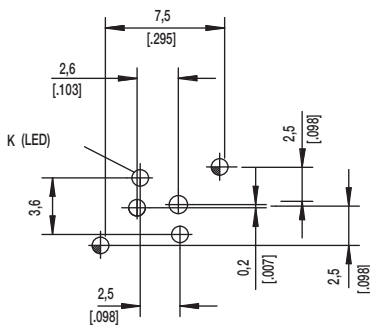
PCB LAYOUT, MOUNTING SIDE



K12AL



PCB LAYOUT, MOUNTING SIDE



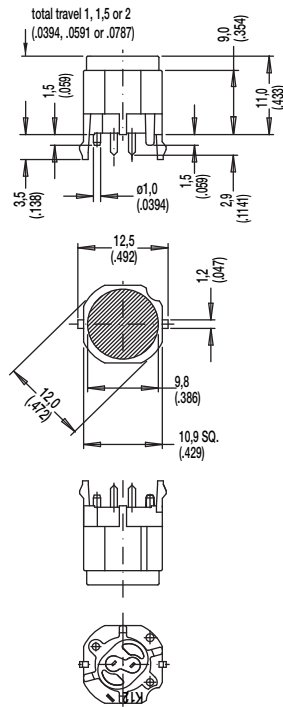
	1,1 ^{+0,05}	2x	2x	center hole		
	0,9 ±0,05		2x	LED	ø0,5 (.020)	Sn
		2x	2x	switch	0,7x0,2 (.028x.081)	Sn
Hole	ø	Without	with LED	Discription	Terminal Section	Surface



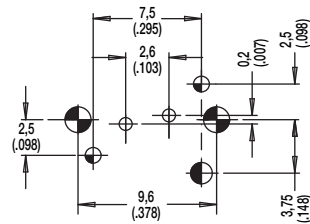
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K12

K12P with snap in



PCB LAYOUT, MOUNTING SIDE

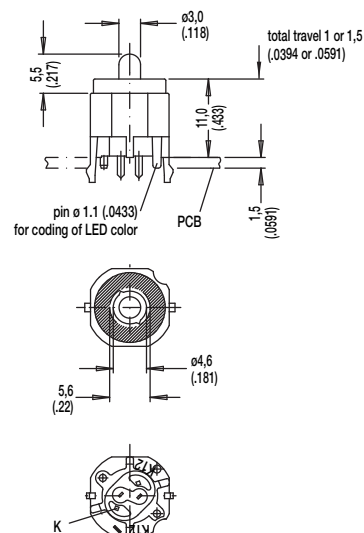


center of actuation area (notice LED)

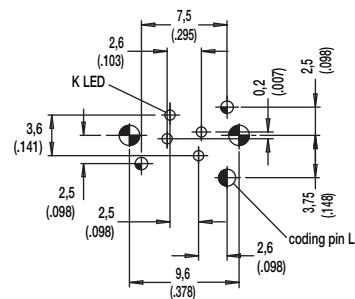


Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	snap-in		
	1,6 (.062)	1x	coding hole (L,M,N)		
	1,1 (.043)	2x	center hole		Sn
	0,9 (.035)	2x	switch	0.7 x 0.2 (.028 x .081)	Sn

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)	

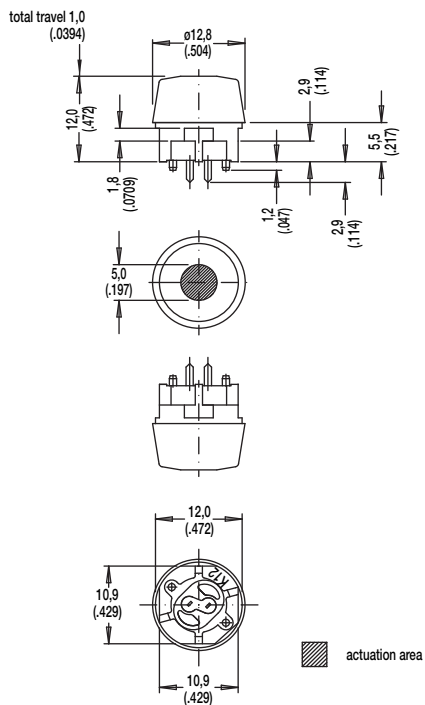


Dimensions are shown: mm
dimensions subject to change

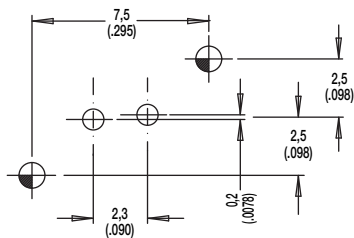
High Performance Key Switches

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

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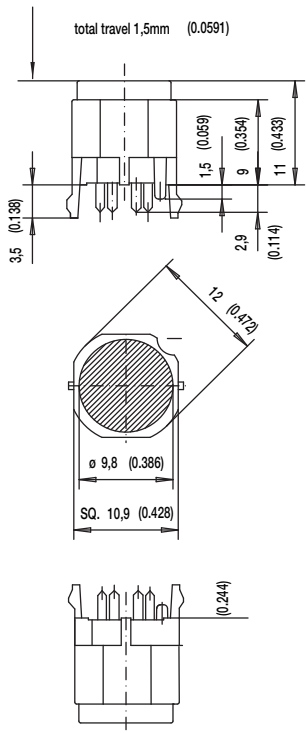
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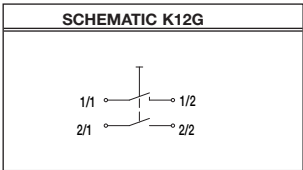
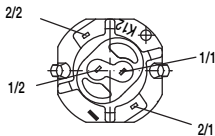
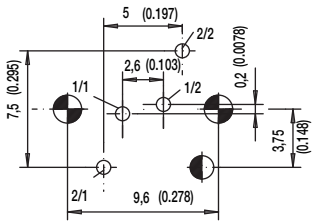
High Performance Key Switches

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		
$\oplus$	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



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

1 1 mm
1.5 1.5 mm
2 2 mm



The diagram illustrates a linked list structure. It consists of four nodes, each represented by a rectangle divided into two parts: a data field (left) and a pointer field (right). The nodes are connected sequentially by arrows pointing from the pointer field of one node to the data field of the next node. The pointer field of the last node points to a null value, represented by a small square with a diagonal line through it.

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
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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](#)