

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



15 Nov 18

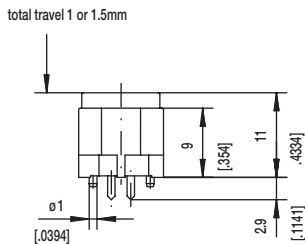


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Key Switches

K12

K12A

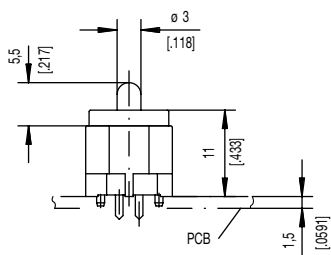


Technical drawing of a stepped shaft with the following dimensions and tolerances:

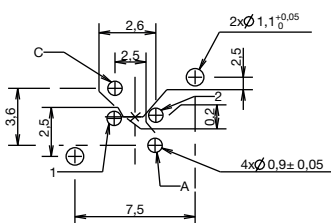
- Total length: 7,5 [±0,295]
- Step 1 (left): Diameter 2,6 [±0,103], length 0,2 [±0,007]
- Step 2 (middle): Diameter 2,5 [±0,008], length 2,5 [±0,008]
- Step 3 (right): Diameter 2,5 [±0,008], length 2,5 [±0,008]



K12AL



PCB LAYOUT, MOUNTING SIDE



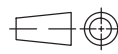
ELECTRICAL GRAPH

A

1 2

A C

	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



Dimensions are shown: mm
dimensions subject to change

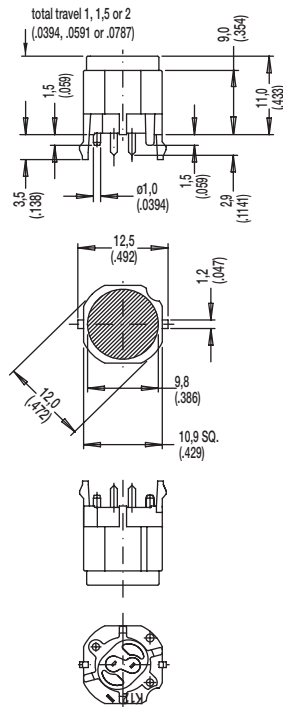
www.ckswitches.com

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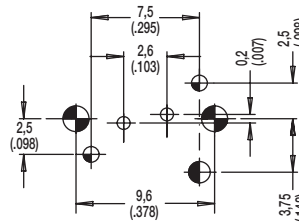
High Performance Key Switches

SERIES

K12P with snap in



PCB LAYOUT, MOUNTING SIDE

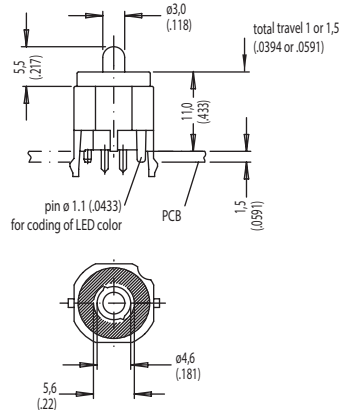


center of actuation area (notice LED)

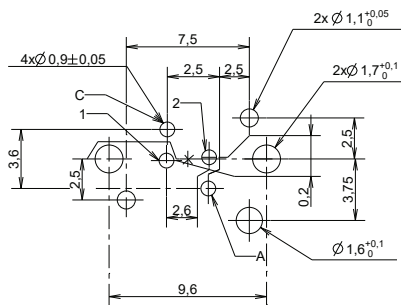


Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	snap-in		
	1,6 (.062)	1x	coding hole (L,M,N)		
	1,1 (.043)	2x	center hole		Sn
	0,9 (.035)	2x	switch	0.7 x 0.2 (.028 x .081)	Sn

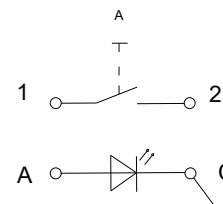
K12PL



PCB LAYOUT, MOUNTING SIDE



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
	0,9 (.035)	2x	switch	0.7 x 0.2 (.028 x .081)	Sn



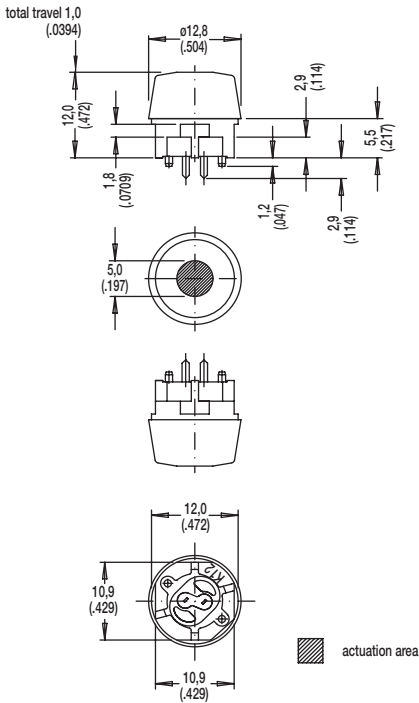
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Specifications and dimensions subject to change

K12

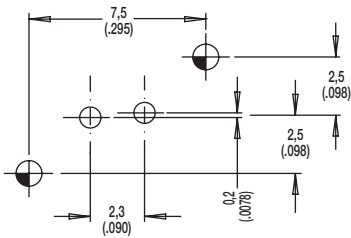
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K12C SEALED CONTACT WITH RUBBER CAP (IP 67)



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

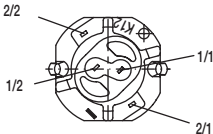
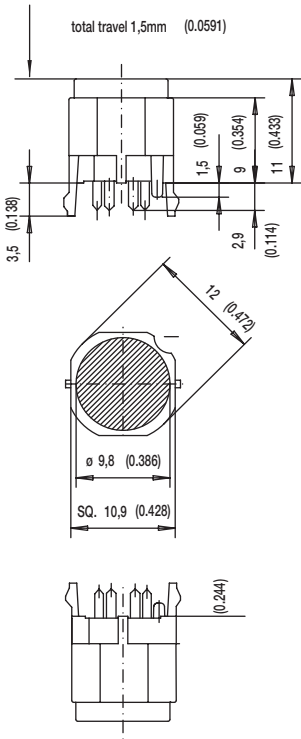


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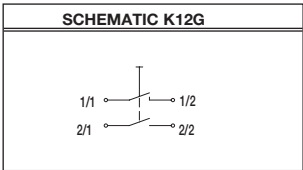
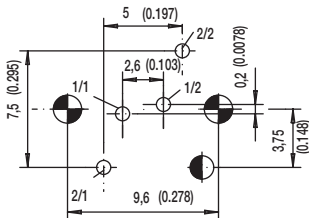
High Performance Key Switches

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



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High Performance Key Switches

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



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)



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Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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