

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 µA / 100 mA
 DIELECTRIC STRENGTH (50 Hz, 1 min): ≥ 500 V
 OPERATING LIFE with max. switching power: ≥ 10⁶ operations
 K12G & K12GO; operating life of second switch 5 x 10⁴ operations,
 operating life K12C and version with more than 6N (7N, 9N 20N)
 please consult factory.
 CONTACT RESISTANCE: Initial ≤ 50 mΩ
 INSULATION RESISTANCE: ≥ 10¹⁰ 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



29 jan 15

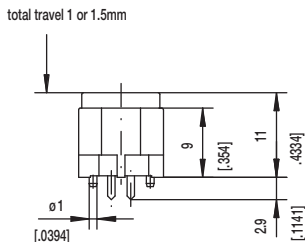


D

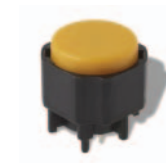
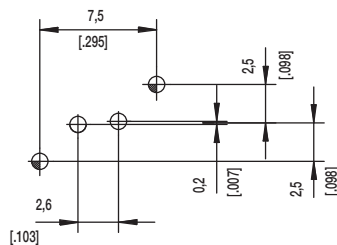
Key Switches

K12

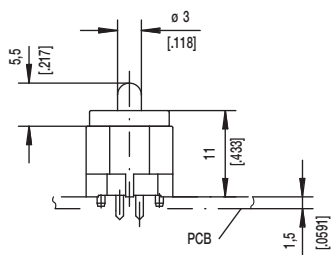
K12A



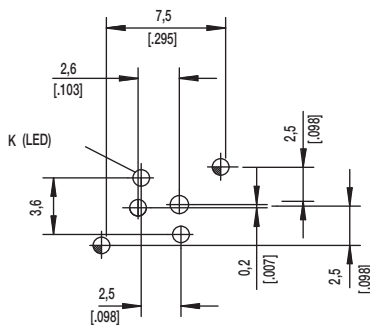
PCB LAYOUT, MOUNTING SIDE





K12AL



PCB LAYOUT, MOUNTING SIDE



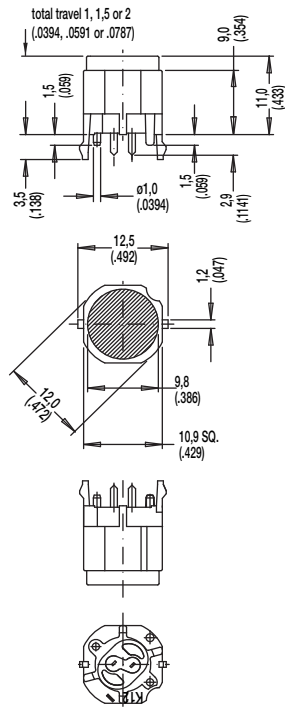
	1,1 ^{+0,05}	2x	2x	center hole		
	0,9 ±0,05		2x	LED	ø0,5 (.020)	Sn
		2x	2x	switch	0,7x0,2 (.028x.081)	Sn
Hole	ø	Without	with LED	Discription	Terminal Section	Surface



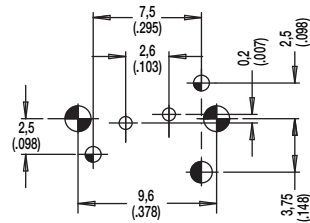
Dimensions are shown: mm
Specifications and dimensions subject to change

K12

K12P with snap in







PCB LAYOUT, MOUNTING SIDE

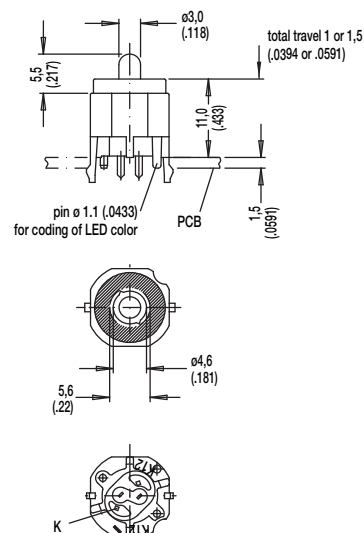


center of actuation area (notice LED)

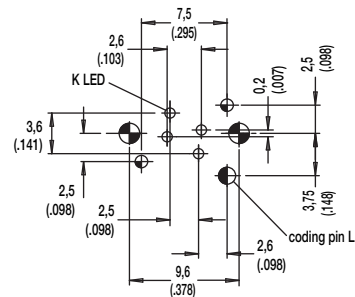


Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,7 (.069)	2x	snap-in		
	1,6 (.062)	1x	coding hole (L,M,N)		
	1,1 (.043)	2x	center hole		Sn
	0,9 (.035)	2x	switch	0.7 x 0.2 (.028 x .081)	Sn

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)	



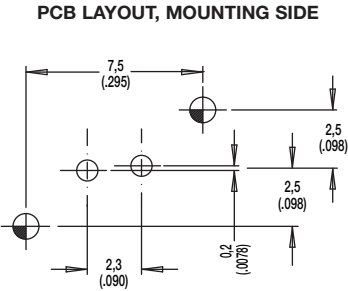
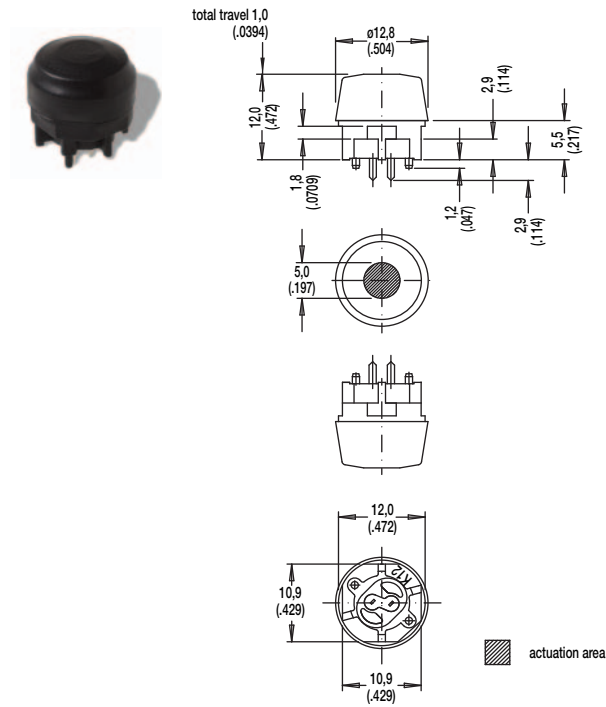
Dimensions are shown: mm
Specifications and dimensions subject to change

K12

High Performance Key Switches

SERIES

K12C SEALED CONTACT WITH RUBBER CAP (IP 67)



SCHEMATIC	
A	R

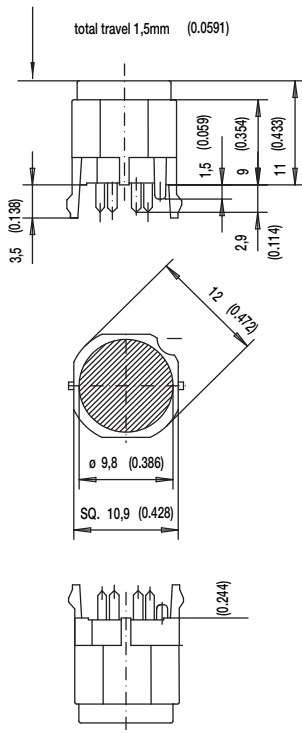
Hole	Ø	Without LED	Description	Terminal Section	Surface
	1,1 (.043)	2x	center hole		
	0,9 (.035)	2x	switch	0.7 x 0.2(.0275 x .0787)	Sn

K12

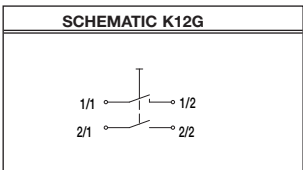
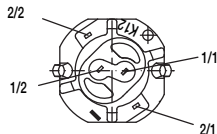
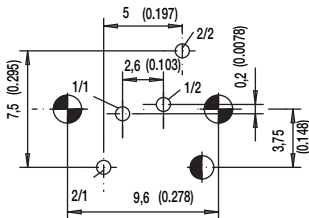
High Performance Key Switches

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		
ϕ	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



Dimensions are shown: mm
Specifications and dimensions subject to change

K12

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

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

A diagram of a linked list with 6 nodes. The first three nodes are black, and the last three are white. The fourth node is highlighted with a red border.

1 1 mm
1.5 1.5 mm
2 2 mm



A diagram of a linked list with four nodes. The first three nodes are black, and the fourth is white. The white node has a pointer to a small white node, which is also white.

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