K12 Series
High Performance KeySwitches

Specifications

Function	Momentary
Terminals	PC pins, tinned
Mounting	Locating pins; K12G and K12P additionally with snap-in housing

Electrical Characteristics

Switching Power	0.02 VA/ 3VA
Switching Voltage	2V / 30V[1]
Switching Current	10 mA /100 mA[1]
Dielectric Strength	≥ 500 Vrms
Operatiing Life (with Max. switching power)	For all K12 versions up to 6N: ≥ 10^6 operations For all K12C versions up to 9N: ≥ 10^5 operations For all K12GO versions: ≥ 10^4 operations For all K12GO LL versions: ≥ 4 x 10^5 operations For higher actuation forces, please consult factory
Contact Resistance	Initial ≤ 50 mΩ
Insulation Resistance	≥ 10^{10} Ω
Bounce Time	≤ 1 ms; Operating speed 100 mm/s

Note:
1. Min/Max

Environmental Characteristics

Operating Temperature	-40˚C to 85˚C
Storage Temperature	-40˚C to 95˚C

Process

Solderability	Single wave soldering compatible with lead free soldering profile. Hand soldering 350˚C/3s

Description

With a wide choice of LED colors, travels and actuator forces available, the K12 High Performance Keyswitch is perfect for off-road vehicles, joysticks, armrests, material handling remote controls, industrial/medical electronics. The K12 is designed for low-level switching and is made to last. It can be sealed for environmental protection, and is available in double stroke or detect versions as well.

Features & Benefits

- Excellent tactile feel
- Wide choice of LED colors, travels and actuator forces
- High reliability / long life
- Sealed version available
- Designed for low-level switching
- Double stroke version available
- Detect version available

Applications

- Off-road transportation
- Joysticks and Armrests
- Remote controls
- Medical electronics
- Electro-surgical instruments
- Industrial electronics

K12 Series
High Performance KeySwitches

Mechanical Characteristics

Total Travel	1 mm, 1.5 mm, 2 mm
Switching Travel	0.6 mm[1]
Operating Force	1.5 N OD without snap-point as detect switch, 2.5 N, 3.5 N, 5 N, 9 N, 3.5/7 N, 6/12 N. Additional operating force 7N and 20N, available on request
Protection Class	K12C IP 67 (dust tight, protected against the effects of immersion in water; other versions IP 40)
Packaging	Bulk in boxes of 250 pieces (version C or GO) or 300 pieces (version A, AL, P or PL)

Note:
1. Additional switching travel (with pre-travel) available by request.

Sub-Series	K12A	K12AL	K12P	K12PL	K12C	K12GO
Size (mm) L x W x H or Ø x H	12x12x11	12x12x11	12x12x11	12x12x11	Ø12.8x12	12x12x11
Pole / Throws	SPST	SPST	SPST	SPST	SPST	DPST
Snap-in pegs	Without	Without	With	With	Without	With
IP Rating	IP40	IP40	IP40	IP40	IP67	IP40
Illumination	No	Yes	No	Yes	No	No

Ordering Number

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.

K12xx - xx - xx - xx - xx - xxxxx - xx

Series
K12A: No snap-in pegs
K12AL: No snap-in pegs with central LED
K12P: With snap-in pegs
K12PL: With snap-in pegs, with central LED
K12C: Sealed with rubber cap (IP 67)
K12GO: Two-step switch with snap-in pegs

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

LED Color
NONE: No LED
GN: Green
RD: Red
WH: White

Travel[1]
1: 1 mm
1.5: 1.5 mm
2: 2 mm

Operating Force[3]
1.5N OD: 1.5 N without snap-point
2.5N: 2.5 N
3.5N: 3.5 N
9N: 9 N
3.5/7N: 3.5 N/7 N2
3.5/7N: 3.5 N/7 N LL2 (Long Life version)
6/12N: 6 N/12 N2
6/12N: 6 N/12 N LL2 (Long Life version)

Standard LED Code
NONE: No LED
LL4232: Green
LL42NE: Red
LV302: White
L801: Red-Green (bicolore)
Other colors: please consult factory

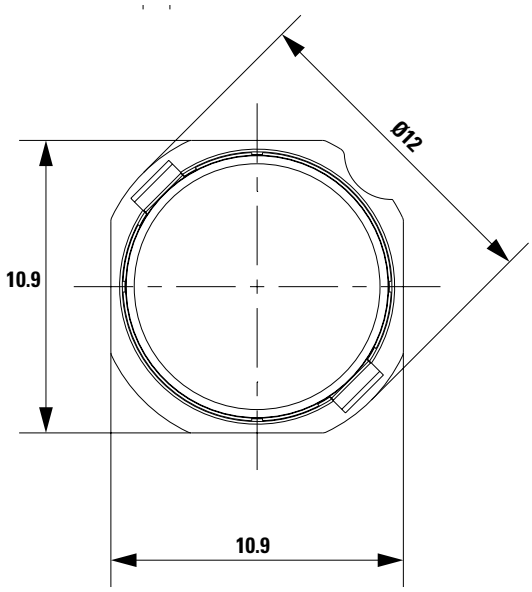
Contact Arrangment
NONE: SPST NO (STD)
1R: SPST NC (Special request)

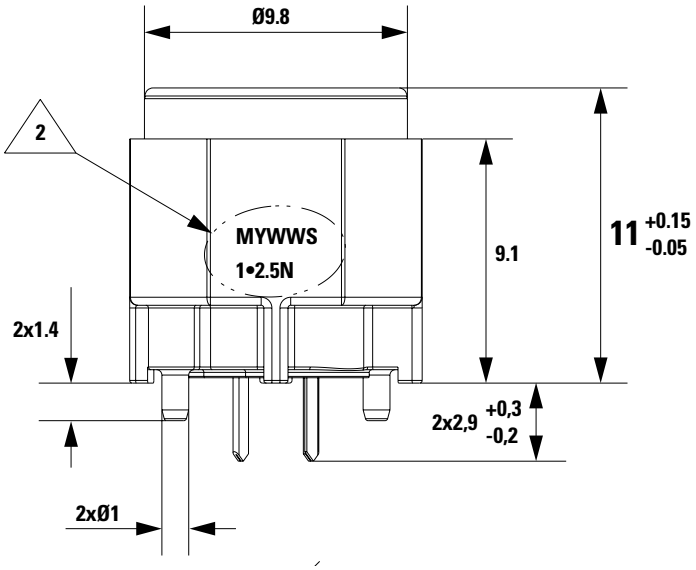
Notes:
Some of the configurations may not be available or could require some development.
1. K12C – 1mm max., K12 with LED – 1.5 mm max.
2. K12GO version only
3. Additional operating force 7N and 20N on request

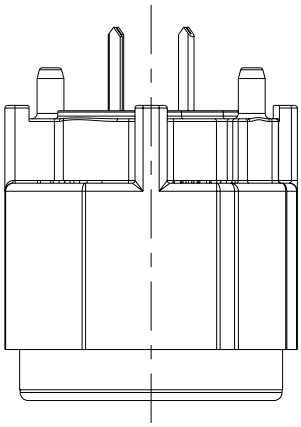
K12 Series
High Performance KeySwitches

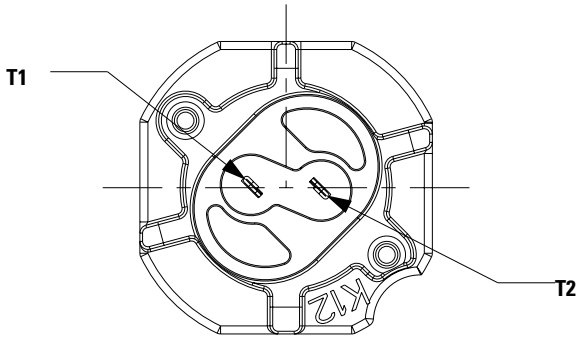
Dimensions (mm)

K12A
Without Snap

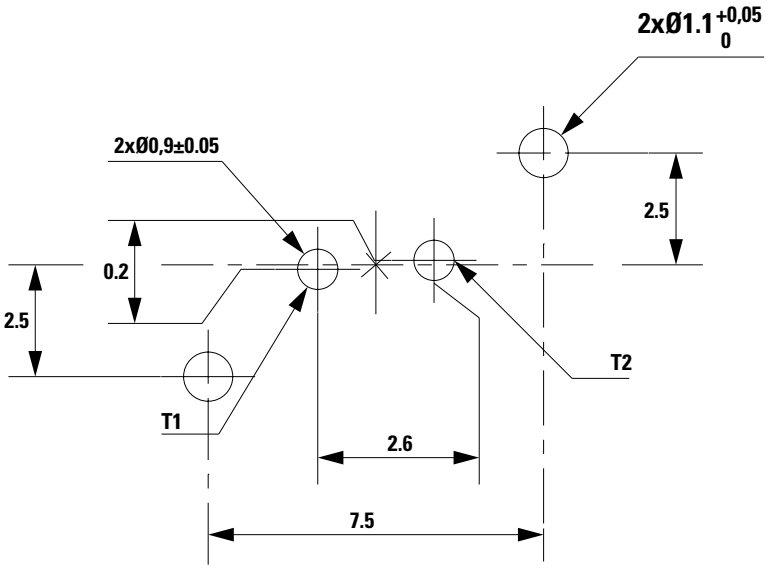








RECOMMENDED LAYOUT

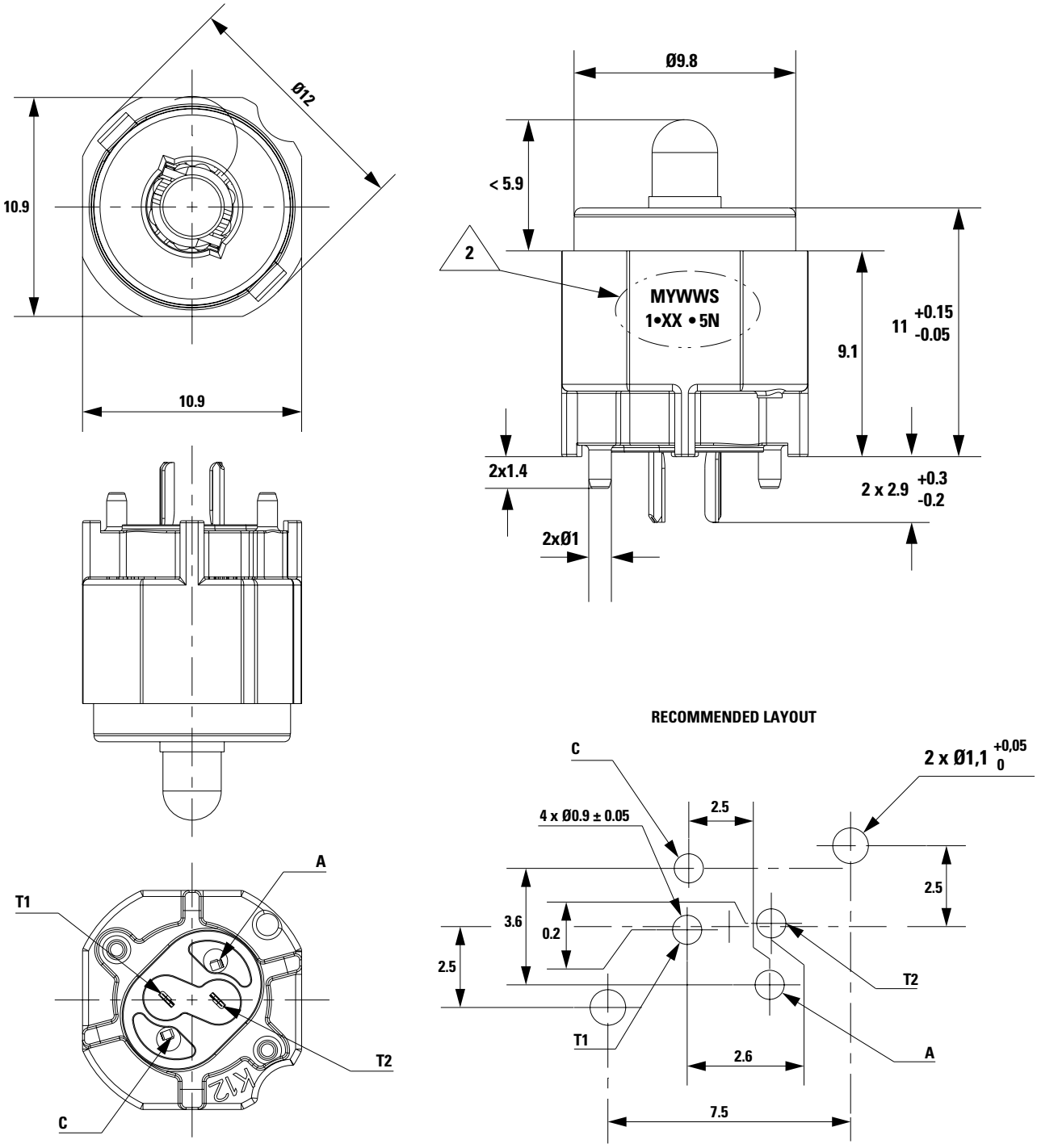


Revised: BA.11/01/24

K12 Series
High Performance KeySwitches

Dimensions (mm)

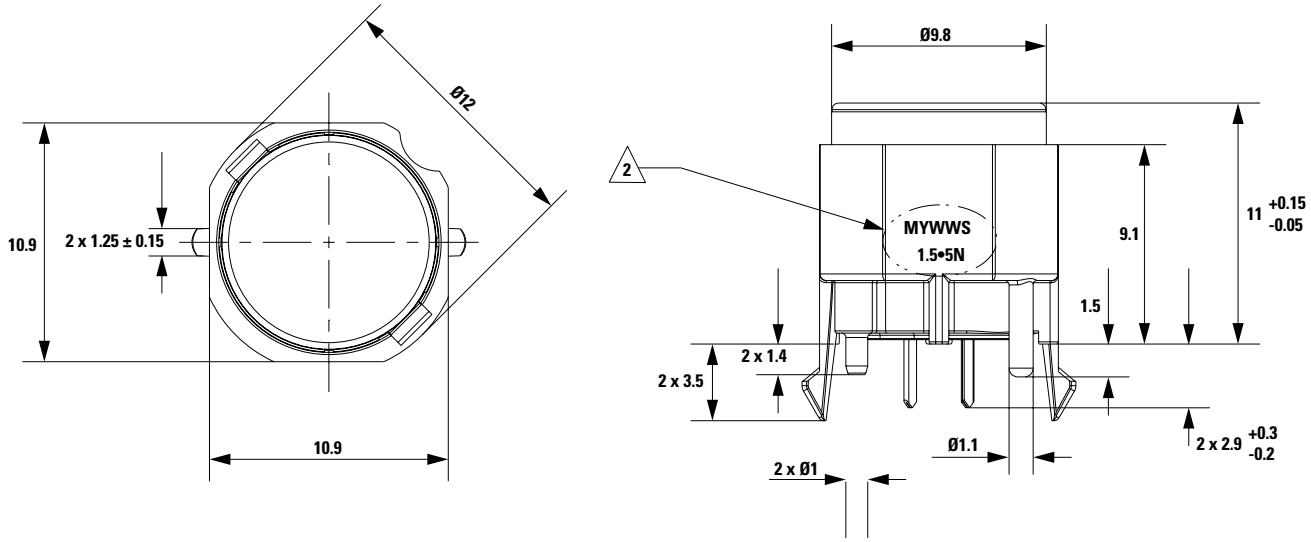
K12AL

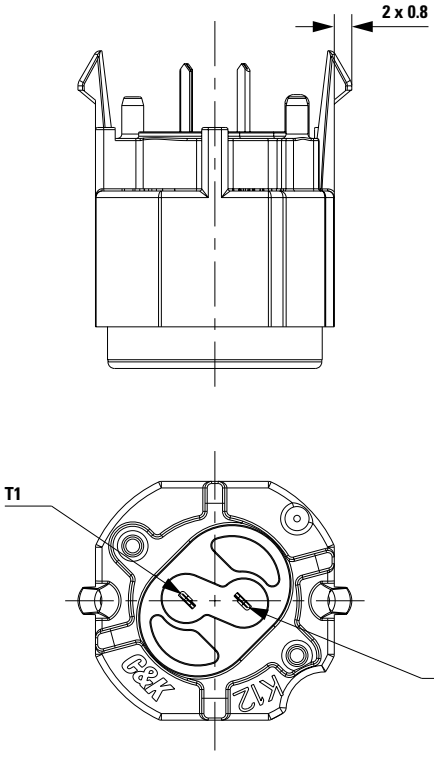


K12 Series
High Performance KeySwitches

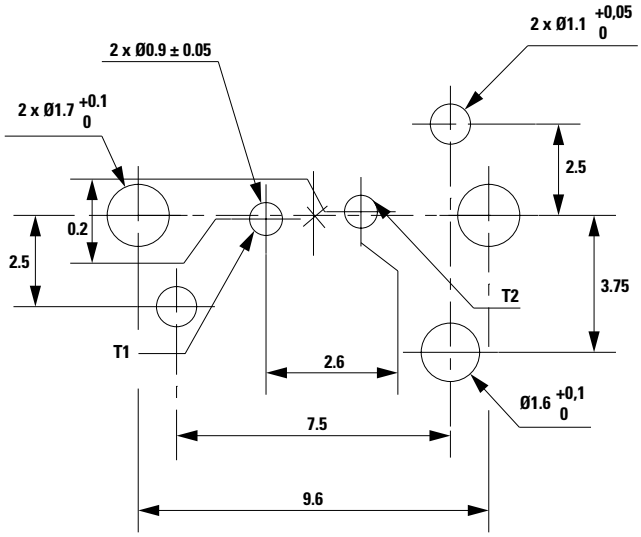
Dimensions (mm)

K12P
With Snap





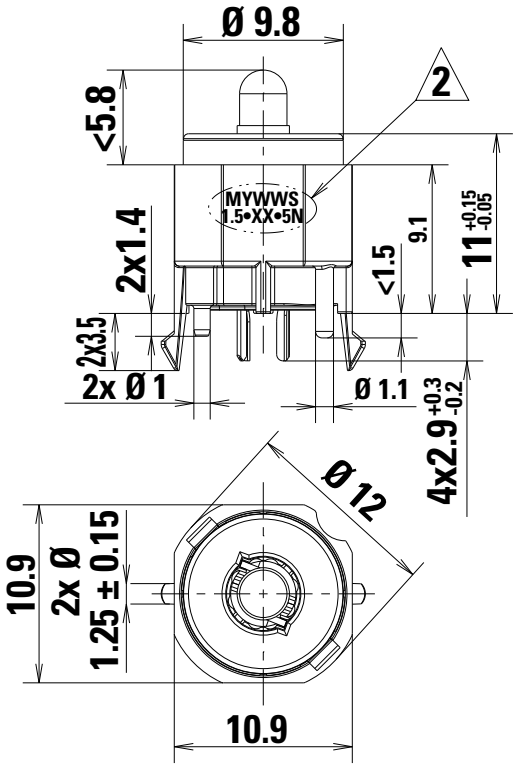
Recommended Layout



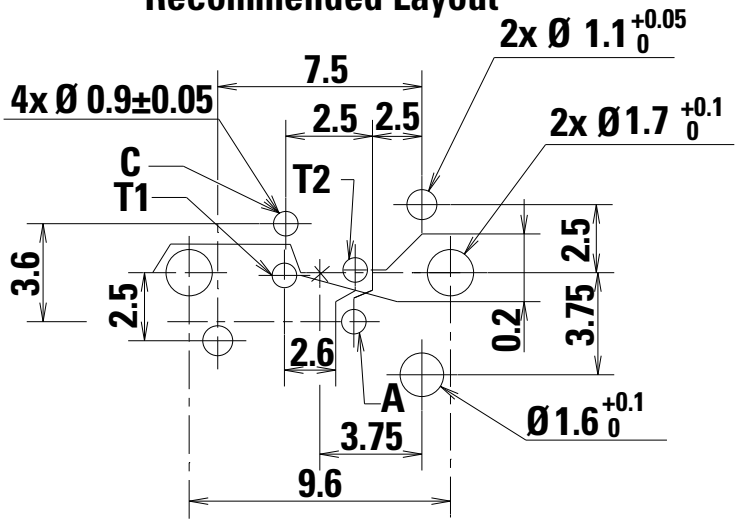
K12 Series
High Performance KeySwitches

Littelfuse | C&K Switches

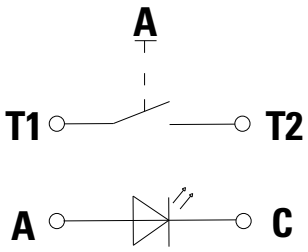
Dimensions (mm)
K12PL

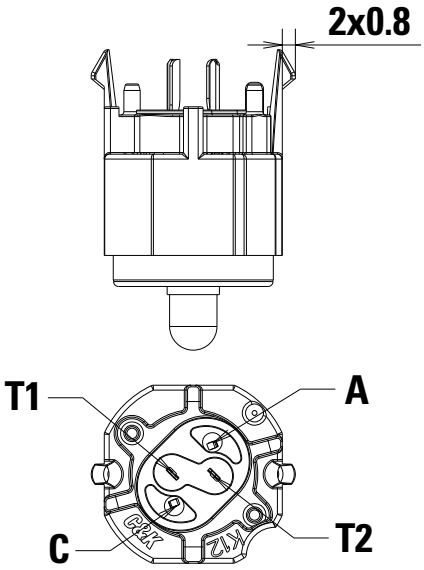


Recommended Layout



Electrical Graph



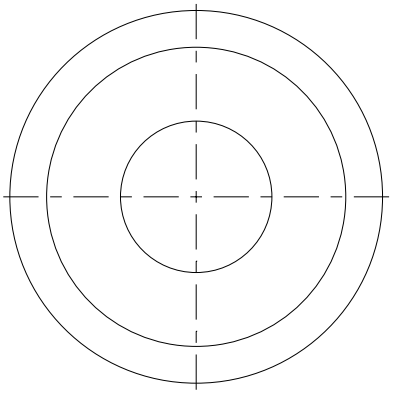


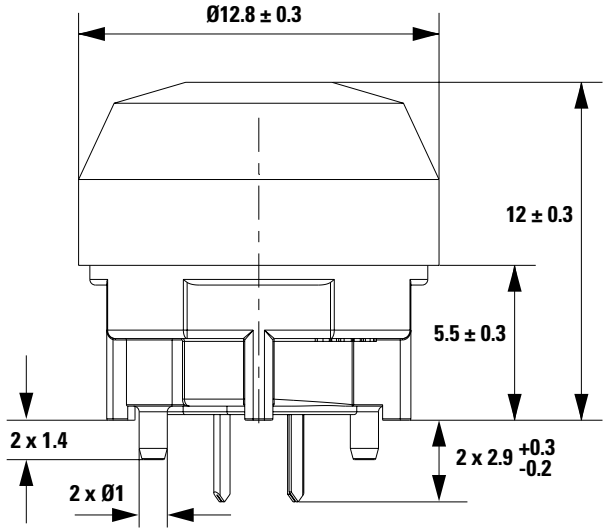
Revised: BA.11/01/24

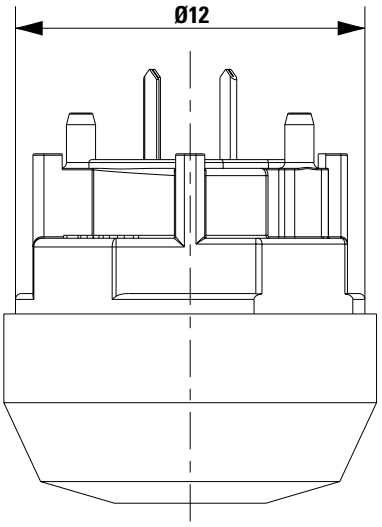
K12 Series
High Performance KeySwitches

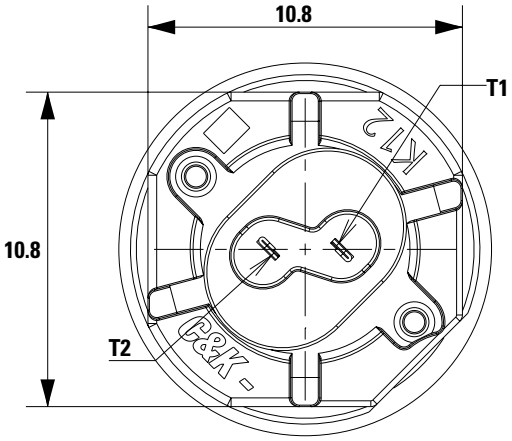
Dimensions (mm)

K12C
Sealed contact with rubber cap (IP 67)

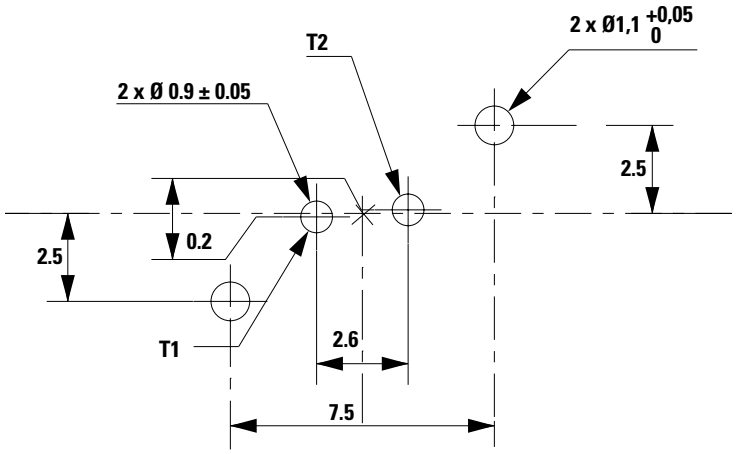






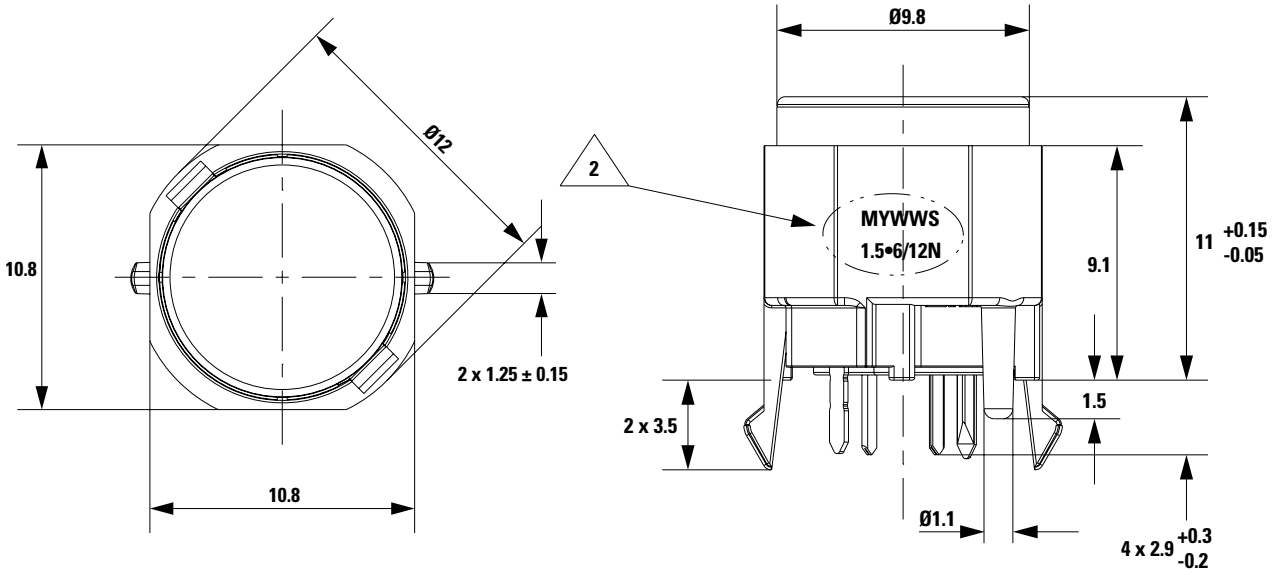


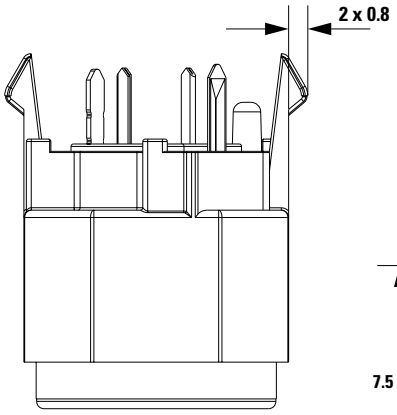
RECOMMENDED LAYOUT



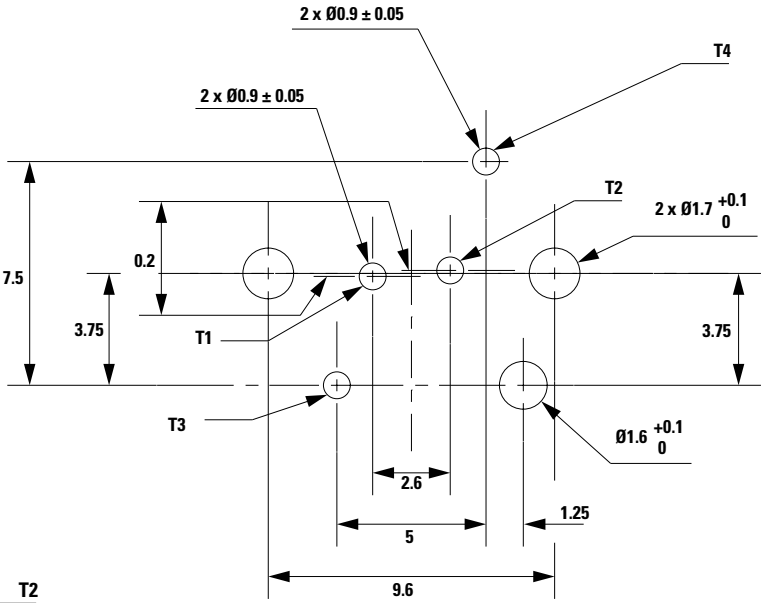
K12 Series
High Performance KeySwitches

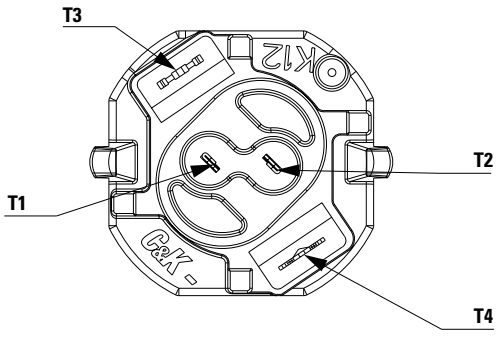
Dimensions (mm)
K12GO





RECOMMENDED LAYOUT





Revised: BA.11/01/24