

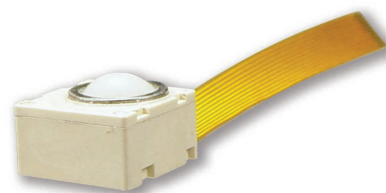
# Miniature all-direction scanning switch - Trackball

## Features/Benefits

- 8 mm ball ergonomic design allows ease of use in all directions
- Positive tactile feedback
- Integrated lighting (up to 2 LEDs)
- Extensive lighting color choice
- Customized number of pulses per rotation
- Sealed IP54
- ESD protected

## Typical Applications

- Mobile phones
- Remote controls
- Navigation systems
- Keyboards, notebooks, PC mouse
- Cameras, camcorders
- PDA's
- Game controllers



## Construction

FUNCTION: All-direction scanning + select  
 CONTACT TYPE: Normally open  
 TERMINALS: Flex with 11 terminals

## Mechanical

SCANNING  
 ROTATING FORCE: 0.35 N ± 0.1 N  
 SELECT  
 SELECTING FORCE: 2.2 N ± 25%  
 TACTILE FEELING: ≥ 30%  
 ELECTRICAL TRAVEL (Te): 0.24 mm ± 0.05 mm  
 SIMULTANEITY (Tm - Te): ≤ 0.12 mm  
 TOTAL TRAVEL: 0.33 mm ± 0.05 mm

## Physical Data

DIMENSIONS & LAYOUT: According to drawing on next page  
 MASS: 1.2g ± 0.1g

## Electrical (select function)

MAXIMUM POWER: 0.20 VA  
 MIN./MAX. VOLTAGE.: 20 mVdc - 32 Vdc  
 MIN./MAX. CURRENT: 1.0 mA - 50mA  
 DIELECTRIC STRENGTH: > 200 Vrms  
 CONTACT RESISTANCE: < 1000 mΩ  
 BOUNCE TIME: ≤ 3ms  
 CAPACITY: ≤ 5pF

## Environmental

OPERATING TEMPERATURE: -30°C to +85°C  
 RELATIVE HUMIDITY: 90 to 95% HR  
 According to NF EN 60068-2-30  
 SCANNING OPERATING LIFE: 300,000 cycles in each 4 main directions  
 SELECT OPERATING LIFE: ≥ 500,000 cycles  
 VIBRATIONS: 10 to 500Hz - 5G - 23 min. per axis  
 MECHANICAL SHOCKS: According to NF EN 60068-2-27  
 OVERLOAD: 20 N  
 CORROSION: 48 hours  
 According to NF EN 60068-2-11

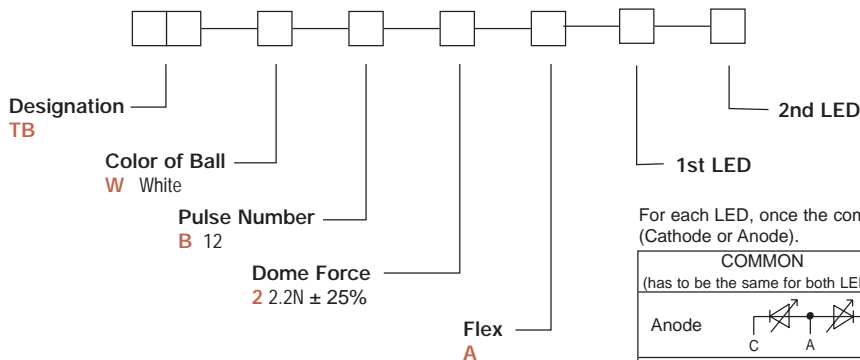
## Additional Data: Storage and handling environment

PACKAGING CONDITIONS: Standard ITT trays  
 TRANSPORT CONDITIONS: According to specification NF H00-060  
 STORAGE TEMPERATURE: -30°C to +85°C  
 SHEAR TEST (SWITCH/PCB): N/A

**NOTE:** Specifications listed above are for switches with standard options.  
 For information on specific and custom switches, consult Customer Service Center.

## How To Order

To order, simply select desired option from each category and place in the appropriate box. For additional options not shown in catalog, consult our Customer Service Center.



For each LED, once the common wiring is defined (Cathode or Anode).

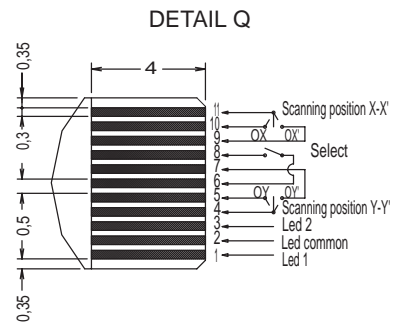
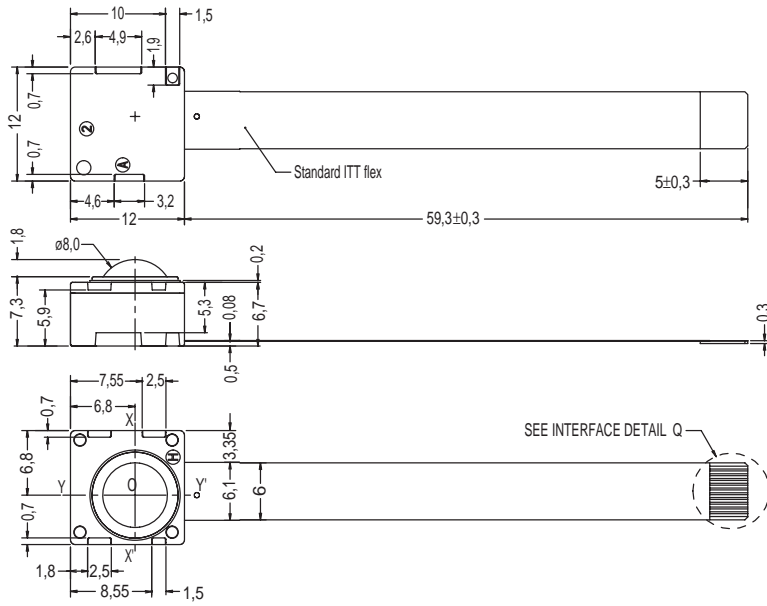
COMMON (has to be the same for both LEDs)		Reference	Status
Anode		0	No LED
C		1	Green
A		2	Orange
Cathode		0	No LED
A		G	Green
C		A	Orange



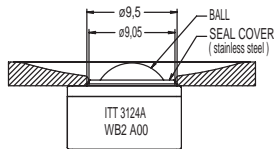
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Navigation



## INTEGRATION EXAMPLE



Each piece is date code printed:

1st Line: **3124A** = 3 is Year, 124 is day in the year, A is shift identification

2nd Line: **WB2 A00** = Reference of the product.