

*R. E. Alchomik 50's 7.10.08*

# 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 (standard)

MAXIMUM PULSE DURATION	100 μs
MINIMUM PULSE WIDTH	20 μs @ 100 Hz
MINIMUM CONTACT CURRENT	10 mA @ 5V
OPERATING CURRENT	10 mA @ 5V
CONTACT RESISTANCE	≤ 100 Ω
BOUNCE TIME	≤ 50 μs
CAPACITY	≤ 5 pF

## Environmental

OPERATING TEMPERATURE	-25°C to 70°C
RELATIVE HUMIDITY	45% to 95% RH
SCANNING OPERATING LIFE	100,000 cycles
SELECT OPERATING LIFE	100,000 cycles
VIBRATIONS	10 to 100 Hz @ 1.0 mm/s <sup>2</sup> RMS
MECHANICAL SHOCKS	200 g
OVERLOAD	400 mA
CORROSION	According to IEC 60068-2-11

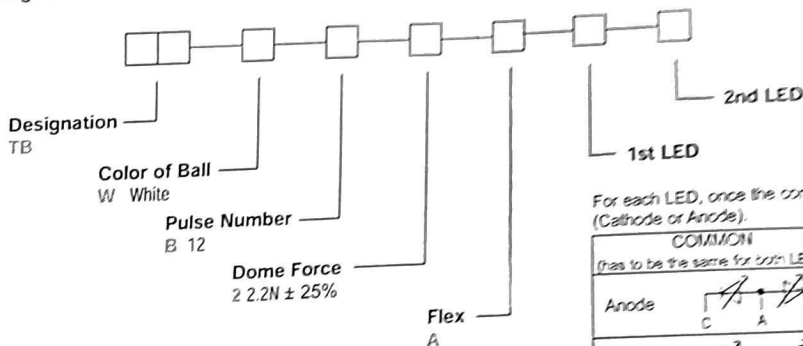
## Additional Data:

PACKAGING CONTAINERS	Standard ITT trays
TRANSPORT CONDITIONS	According to specification IEC 60068-2-32
STORAGE TEMPERATURE	-25°C to 70°C
SHEAR TEST (SWITCHING):	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.

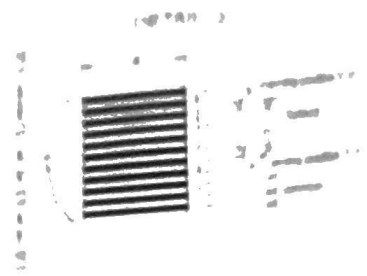
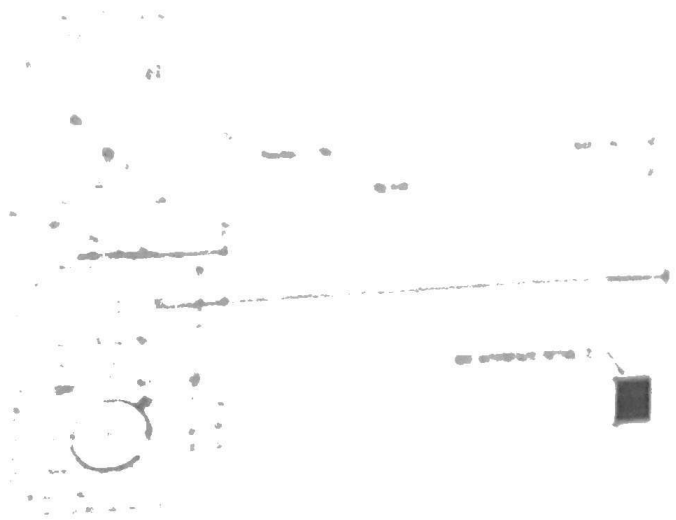
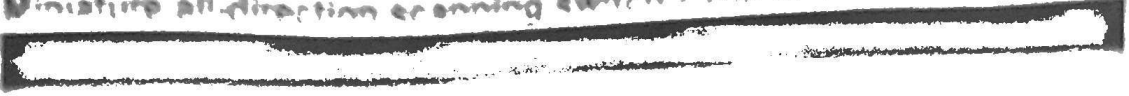


For each LED, once the common wiring is defined (Cathode or Anode).

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



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Navigation

## APPLICATION EXAMPLE



Our state-of-the-art trackball  
 is available in 12 and 18mm diameters in the  
 size 6 and 8 and configurations  
 for use with 5VDC and 3VDC of the product