THB Series
Miniature Thumbstick



Description

The THB is a miniature thumbstick switch featuring a versatile, high-quality dual axis lever with integrated center select switch. It meets the reliability requirements demanded by premium controller products including high end drones, gaming peripherals, and industrial controllers. Featuring a high activation force and a small form factor, the new THB series combines a small package with improved ergonomics that provides premium performance to its users and accommodates a wide range of customers.

Features & Benefits

- 2 axis, multi-direction operation
- 2,000,000 life cycle for toggle
- Center select momentary switch
- Small package size

Applications

- Gaming peripherals
- Remote Control Vehicles
- Mini-joystick
- Thumb control
- Navigation control
- Industrial control
- Heavy equipment

Mechanical Specifications

Pattern of Actuator Movment	Toggle cross-wide and in a circle
Full Stroke Actuation Stop Strength	> 3.1 kgf (3 seconds minimum)
Pull Strength of the Actuator	> 5 kgf (3 seconds minimum)
Actuation Force	120 +/- 50 gf (12 +/- 5mN*M of Torque)
Accuracy of Return to Actuator Release Position	±3°
Toggle Angle of Operation	26° max. angle from vertical through full circular range of motion
Operating Life	1,000,000 cycles minimum (center switch) 2,000,000 cycles minimum (thumbstick toggle)

Environmental Characteristics

Operating Temperature	-10°C to 70°C
Storage Temperature	-30°C to 80°C

Packaging

Tray	60 Units

Electrical Characteristics

Total Resistance (Potentiomaters)	10kΩ ± 20% initial Within ± 20% of initia values for 10,000 cycles
Resistance Potentiometers	Percentage of the voltage of terminal 1-2 to the voltage of terminal 1-3
Rated Voltage	50 VAC or 5 VDC
Rated Power	0.05 A @ 12 VDC
Contact Noise	Noise < 10% of operating voltage
Voltage Divider	39.6 - 60.4%
Insulation Resistance	> 100 MΩ
Withstanding Voltage	No arcing or breakdown

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.

THB - x - x - 1 - x - x

Rotational Torque
0: 120 gf¹cm

Shaft Material & Height
0: Plastic 7.75mm

Total Resistance & Taper
1: 10kΩ (Linear B taper)

Switch Option
P: Center Pushbutton 7N

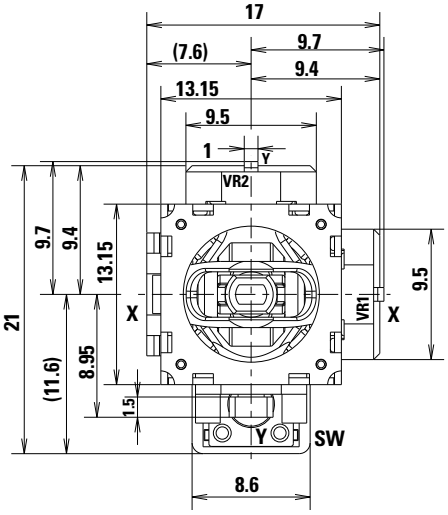
Special Feature
NONE: Terminals Tin plated
S: Terminals Silver plated

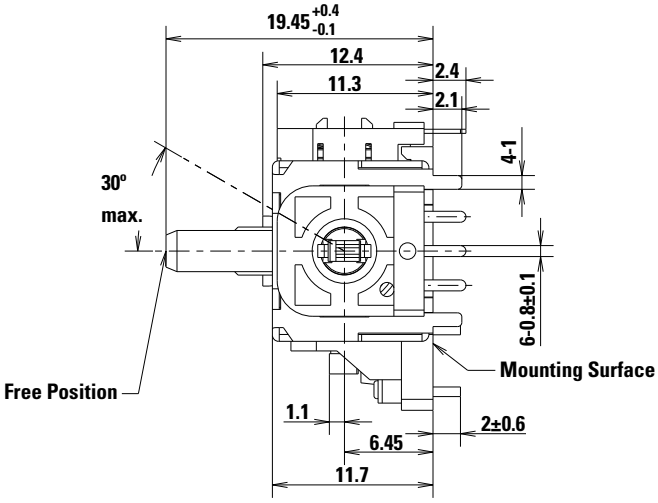
Notes:
1. Please note some option codes are mutually exclusive. Consult factory if you have any questions

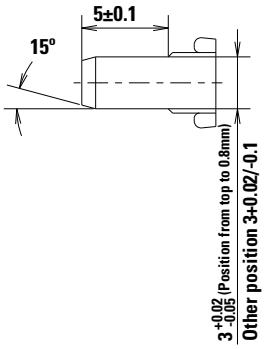
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Revised: VL 03/04/26

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Dimensions (in mm)
THB001P

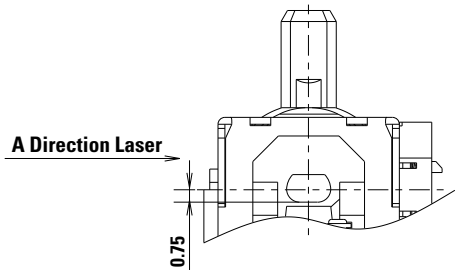


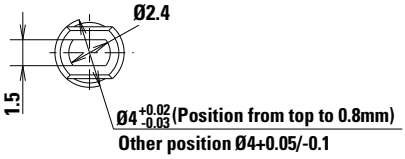


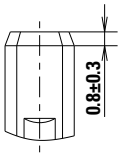




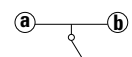
A Direction Laser Schematic Diagram



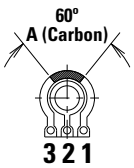


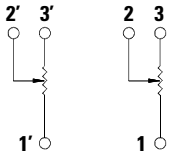


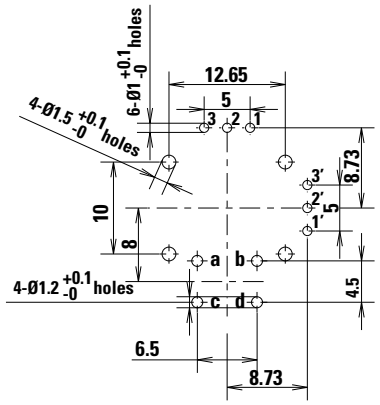
Rocker Head Dimension (4:1)



Circuit Diagram







PCB installation holes
Unspecified dimension tolerance: ±0.1

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