

O50 IP68 Series Trackballs

FEATURES

- IP68 Waterproof
- PS/2, USB or Quadrature Output
- No Maintenance, no moving parts
- Anti-vandal features
- ESD safe operation
- Self drainage and Flush through facility



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2



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The **O50 Series** of trackballs uses solid state Optical Navigation Technology in place of the traditional mechanical assembly of conventional trackballs. The only moving part in the entire assembly is the ball, whose movement is sensed directly without the need for shafts, separate encoders and opto-couplers. The optical sensors measure changes in position on a surface by optically acquiring sequential images of the surface and mathematically determining the direction and magnitude of movement between these sequential images.

An optical beam of a specific wavelength is focused precisely onto the finely patterned area of the ball to be read and the resultant reflections are directed through lenses onto the optical sensors for the capture of the sequential images. Rotation of the ball results in electronic outputs from the optical sensors which are further processed to produce the mainstream protocol interfaces such as USB, PS/2 and Quadrature.

VERSIONS:

Free running Ball; Minimal ball tracking force (10 grams), Picture 1

Fixed Friction/Scrapper Ring; Slightly increased ball tracking force (approx. 80 grams), Picture 2

Variable friction ring with removable ball; ball tracking force can be set from loose (10 grams) to high (120 grams) in 4 steps; ball can be removed, Picture 3

SPECIFICATIONS

MECHANICAL:

Ball: Epoxy resin, 50.8mm
Ball Colour: Metallic charcoal grey
Tracking Force: see above

ELECTRICAL:

Supply Voltage: 3.6V to 5.5V
Supply Current: 110mA typical/ 150mA maximum

ENVIRONMENTAL:

Operating Temperature: 0°C to +55°C
Storage Temperature: -25°C to +85°C
ESD: > 15KV air discharge and contact
Impact: > 10 Joules
Lifetime: > 5 million ball revolutions
Sealing: IP68 (tested submerged at 2m depth for 24 hours)

ORDERING INFORMATION

	No Friction control	Fixed, scrapper ring	Removable top plate
Quadrature output	O50-70020D	O50-70021D	O50-70024D
PS/2 & USB output	O50-76020D	O50-76021D	O50-76024D