

The E50 Series desktop trackball is an extremely high specification device that incorporates the latest IP68 technology. The trackball combines the patented optical trackball technology with the new hall-effect scroll wheel to provide a fully waterproof desktop trackball solution. To compliment these two technologies the trackball also includes left, middle, and right switch functionality as found in all conventional desktop trackballs/mice making the E50 trackball a complete human interface solution for control of a cursor.

In the standard configuration the E50 Series is supplied with a black soft touch case, USB and PS/2 output, and a grey scroll wheel. The ergonomical trackball is available as desktop or as panel mount unit. The freestanding desktop device optimises desk space when compared to a mouse. The panel mount unit has been designed as part of OEM keyboards and consoles.

MECHANICAL SPECIFICATIONS

UNIT

Weight ~500 grams
Case material PC/ABS
Case colour/finish Black/soft touch

TRACKBALL MODULE

Ball size/material Ø50.8mm (2")/Epoxy resin, metallic grey

Tracking force 30-80 grams – PTFE seal

Ball load 200N (20Kg) maximum downward pressure for

2 minutes @ 20°C

Resolvable ball speed 30 IPS (inches per second)

Tracking engine Infra-red optical navigation technology Removable ring style/colour Bayonet style locking ring/black

SCROLL WHEEL

Wheel diameter Ø25mm Wheel material PC/ABS

Wheel colour Grey – various colours available

Encoding technology Hall effect Magnet strength N42

Detent-scrolling force 30 grams nominal Switch actuation force 275 ± 125 grams force

LEFT/RIGHT SWITCH

Switch actuation force 150 ± 50 grams force

FEATURES

- Certificate of Conformity fully compliant with IEC60945
- Sealing to IP68 (fully waterproof)
- Infra-red optical navigation technology
- Integrated IP68 hall-effect scroll wheel
- Integrated left, middle and right switch functionality
- Large 50mm ball for precise cursor movement
- Removable ball for easy cleaning
- Outputs: USB & PS/2 (auto select)Smooth operation in rugged environments



ORDER INFO

desktop	E50-76A31D-M000
panel mount	E50-76A2AD-M004

Output: PS/2 & USB Combo



ELECTRICAL SPECIFICATIONS

Protocol USB & PS/2 (auto-select)
Supply voltage 4.4V to 5.25V DC
Supply current 100mA Max.

Trackball resolution 1200 counts per ball revolution @ 1 IPS (inches per second) +/- 10%

2400 counts per ball revolution @ 5 IPS (inches per second) +/- 10%

Scroll wheel resolution 24 counts per wheel revolution

Output connector USB "A" type connector with 2 metre cable

Mating output connector Standard USB "A" type socket

ENVIRONMENTAL SPECIFICATIONS

Operating temperature $0^{\circ}\text{C to } +55^{\circ}\text{C (IEC } 60068-2-1, IEC60068-2-2)$ Storage temperature $-40^{\circ}\text{C to } +85^{\circ}\text{C (IEC } 60068-2-1, IEC60068-2-2)$ Operating humidity 93% RH @ 40°C , non-condensing (IEC 60068-2-78) Storage humidity 10%-95% non-condensing (IEC 60068-2-78)

Vibration 2g, 10-500Hz, 1 octave/min, 10 sweep cycles (IEC 60068-2-6)

Operating Shock 15g/11ms, ½ sine, 3 shocks in +ve and –ve direction, all 3 axes (IEC 60068-2-27)

Mechanical lifetime 1 million ball revolutions

MTBF in excess of 80,000 hours (MIL-STD-217F)

ESD 15kV air-discharge and 8kV contact discharge (IEC 61000-4-2)
EMC Radiated immunity - limits according to level 3 of IEC 61000-4-3

Radiated emissions to EN55022 class B

Sealing capability IP68

The E50 trackball provides conventional X and Y axis cursor movement with an additional Z-axis scroll wheel. The Z-axis scroll wheel provides scroll/zoom and middle button capabilities for more effective navigation in complex user interfaces and operating systems (please note the function of the scroll wheel is software dependent). The trackball also features a removable retention ring enabling the user to remove the ball for servicing and maintenance purposes.



MANUFACTURED

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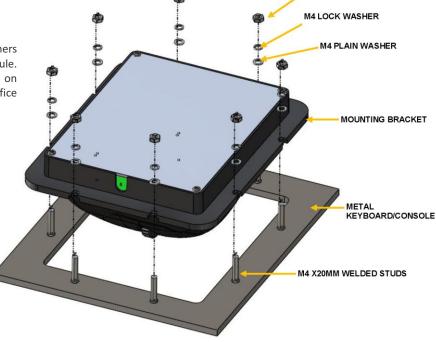


INSTALLATION PANEL MOUNT UNIT

The E50 Series, panel mount, ergonomic trackball module has been designed to be installed into the back of a user interface panel, ke console. The following mounting arrangement is recommended;

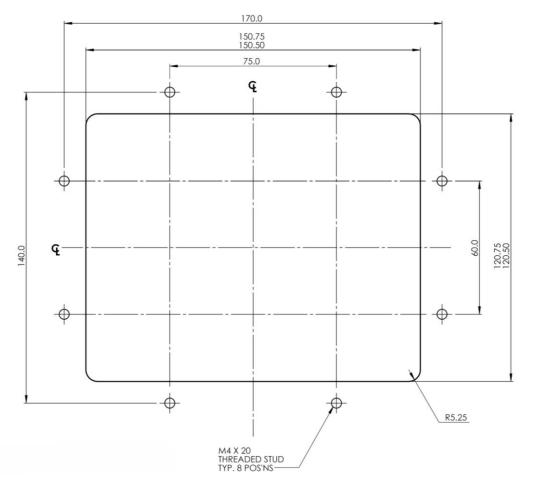
- •1 x 5mm thick metal panel
 - The metal panel shall have 8 x M4 threaded studs (M4 x 20mm) spot welded to the underside of the metal panel. The metal panel shall have a cut-out as detailed in section 8 of this datasheet.
- •8 x M4 plain washers*
- •8 x M4 nuts*
- *8 x M4 lock washers*

*Please note that the fixings and fasteners are not supplied with the E50 Series module. Custom mounting brackets are available on request - please contact your local sales office for more information.



M4 NUT

RECOMMENDED PANEL CUT-OUT - PANEL MOUNT UNIT

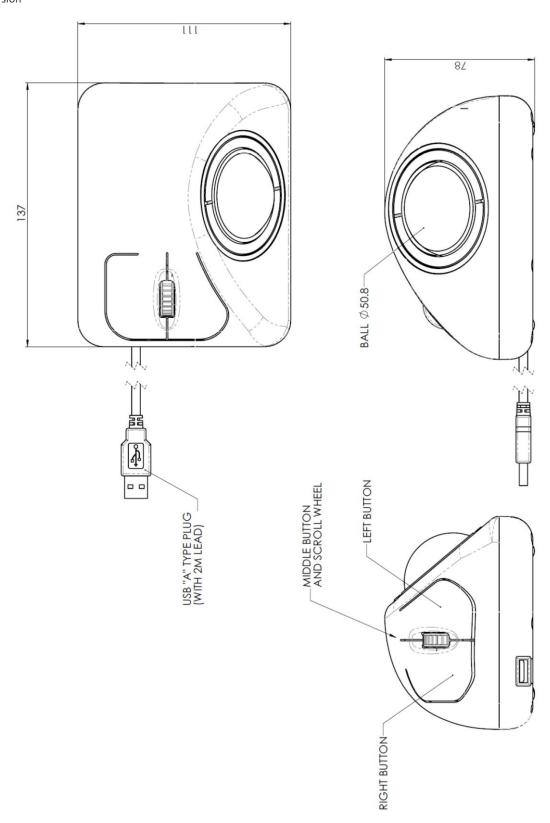






DIMENSIONAL DRAWING Desktop version





Dimensional drawing specifies factory default orientation. All dimensions are in mm unless otherwise stated. Tolerances +/- 0.2mm unless otherwise stated

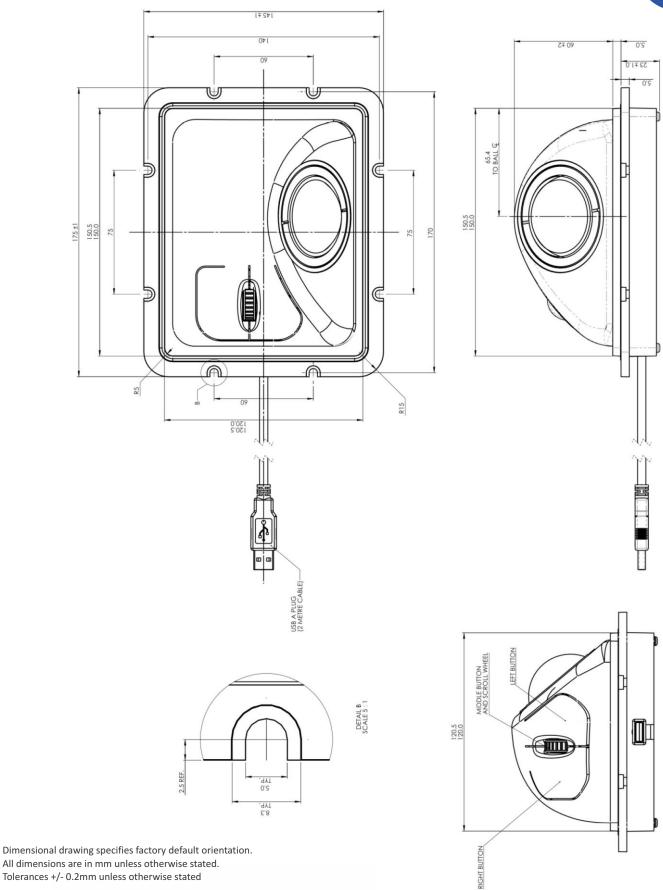


E50-M



DIMENSIONAL DRAWING

Panel mount version



The company reserves the right to alter without prior knowledge the specification or design of any standard product or service.