

LP100 series

Low profile miniature trackball

Distinctive features and specifications



- ☐ 1" ball diameter
- ☐ Panel mount design
- ☐ Available in black or backlit illumination
- ☐ Several protocol options
- ☐ Additional button strips available
- ☐ Environmental Protection Classification (IP Rating): contact factory

MECHANICAL

- Ball Diameter: 1.00" (25.40mm)
- Ball Rotation: Continuous in all directions
- Tracking Force: 15g (0.35oz)
- Weight: 33.5g (1.18oz)
- Life Cycle (ball rotations): 5 million
- Operating Temperature: -40°C to +85°C (-40°F to +185°F)

PROTOCOL OPTIONS AND ELECTRICAL SPECIFICATIONS

- USB: Input: 4.00V – 5.25V @ 25mA max
(+30mA for backlit illumination option)
Output: USB 1.1
- PS/2 (2/3BTN PS/2): Input: 5.00V @ 25mA max
(+30mA for backlit illumination option)
Output: CMOS/TTL
- Quadrature: Input: 5.00V @ 30mA max
(+30mA for backlit illumination option)
Output: Quadrature Waveforms

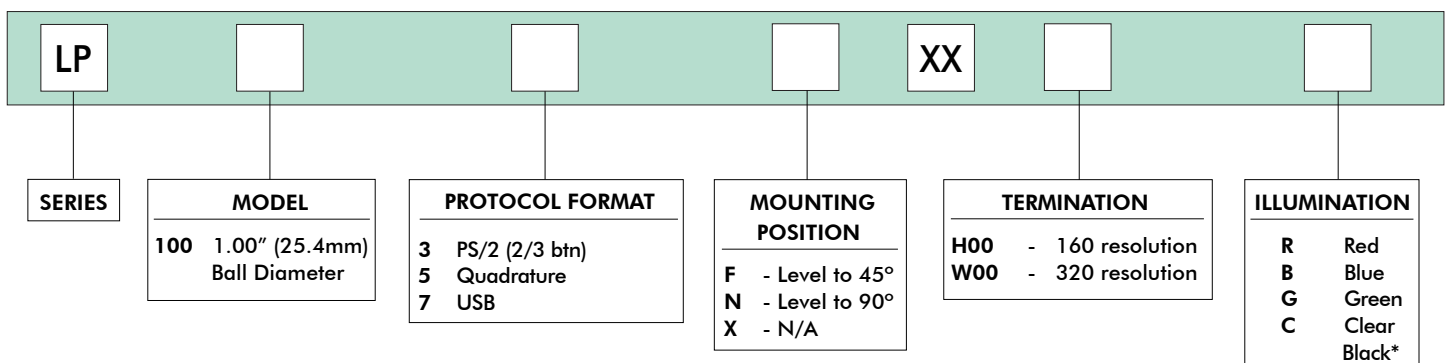
CONFIGURATION OPTIONS

- LED backlighting: Red, Blue, Green or Clear through a translucent Thermostat resin ball
- Additional pushbutton switch: Two, three or four* buttons (* USB only) – see Button Strips
- Connector cables
- Conformally coated PCB

MOUNTING OPTIONS

- 180° horizontal to 90° vertical – please specify when ordering.

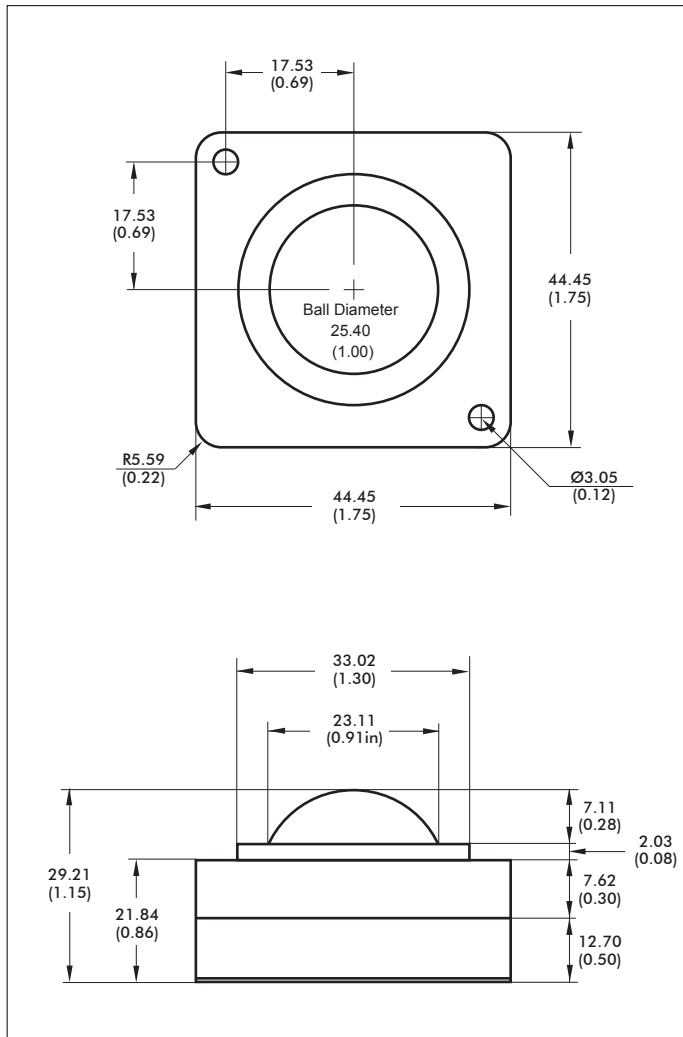
NOTE: All values are nominal.



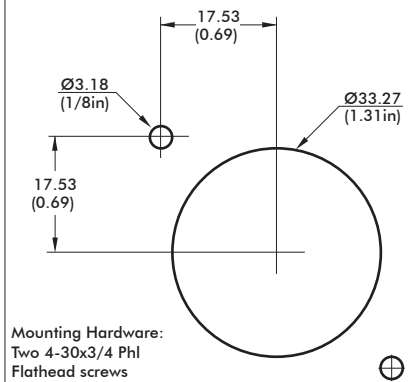
*Non-illuminated

LP100 series

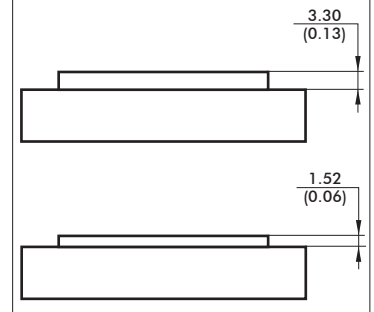
Low profile miniature trackball



MOUNTING CUTOUT DIMENSIONS



OTHER AVAILABLE PANEL DIMENSIONS*



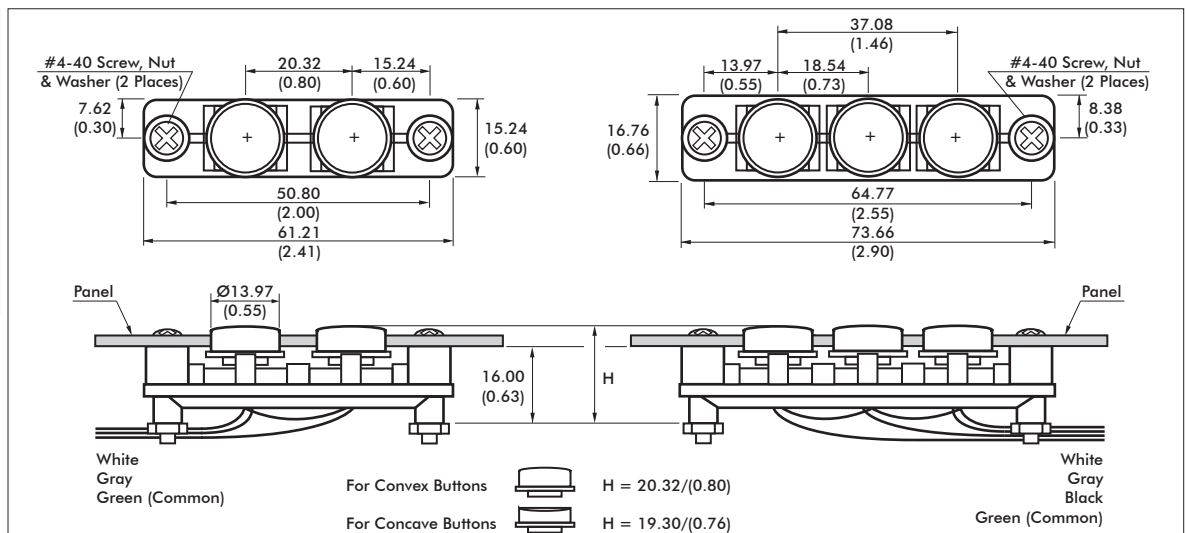
NOTES:

All dimensions are in mm/(inch).

* Please specify panel thickness with your order.

BUTTON STRIP FEATURES

- Two, three, or four* (*USB only) buttons
- Tactile feedback
- Normally open momentary contact switch
- 5 million lifecycles rating at 500mA at 12VDC
- Black or gray button caps
- Choice of convex or concave design



NOTE: All dimensions are in mm/(inch).

Note: The company reserves the right to change specifications without notice.

LP150 series

Low profile trackball

Distinctive features and specifications



- ☐ 1.5" ball diameter
- ☐ Panel mount design
- ☐ Available in black or backlit illumination
- ☐ Several protocol options
- ☐ Additional button strips available
- ☐ Environmental Protection Classification (IP Rating): contact factory

MECHANICAL

- Ball Diameter: 1.50" (38.10mm)
- Ball Rotation: Continuous in all directions
- Tracking Force: 10g (0.35oz)
- Weight: 118.5.5g (4.18oz)
- Life Cycle (ball rotations): 5 million
- Operating Temperature: -40°C to +85°C (-40°F to +185°F)

CONFIGURATION OPTIONS

- LED backlighting: Red, Blue, Green or Clear through a translucent Thermostat resin ball
- Additional pushbutton switch: Two, three or four* buttons (* USB only) – see Button Strips
- Connector cables
- Conformally coated PCB

PROTOCOL OPTIONS AND ELECTRICAL SPECIFICATIONS

- USB: Input: 4.00V – 5.25V @ 25mA max (+30mA for backlit illumination option)
Output: USB 1.1
- PS/2 (2/3BTN PS/2): Input: 5.00V @ 25mA max (+30mA for backlit illumination option)
Output: CMOS/TTL
- Microsoft Serial*: Input: DTR/RTS @ 14 mA max (+30mA for backlit illumination option)
Output: RS-232, Serial
- Quadrature: Input: 5.00V @ 30mA max (+30mA for backlit illumination option)
Output: Quadrature Waveforms
- Sun Workstation: Input: 5.00V @ 30mA max (+30mA for backlit illumination option)
(Mouse Systems Serial) Output: CMOS/TTL

MOUNTING OPTIONS

- 180° horizontal to 90° vertical – please specify when ordering.

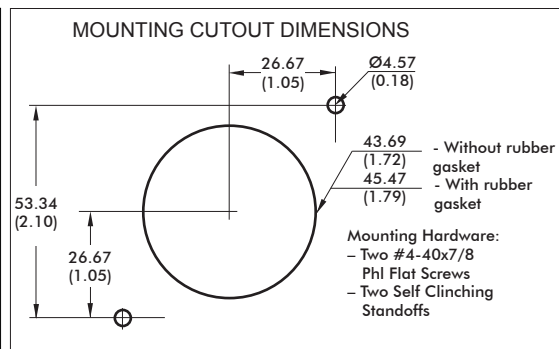
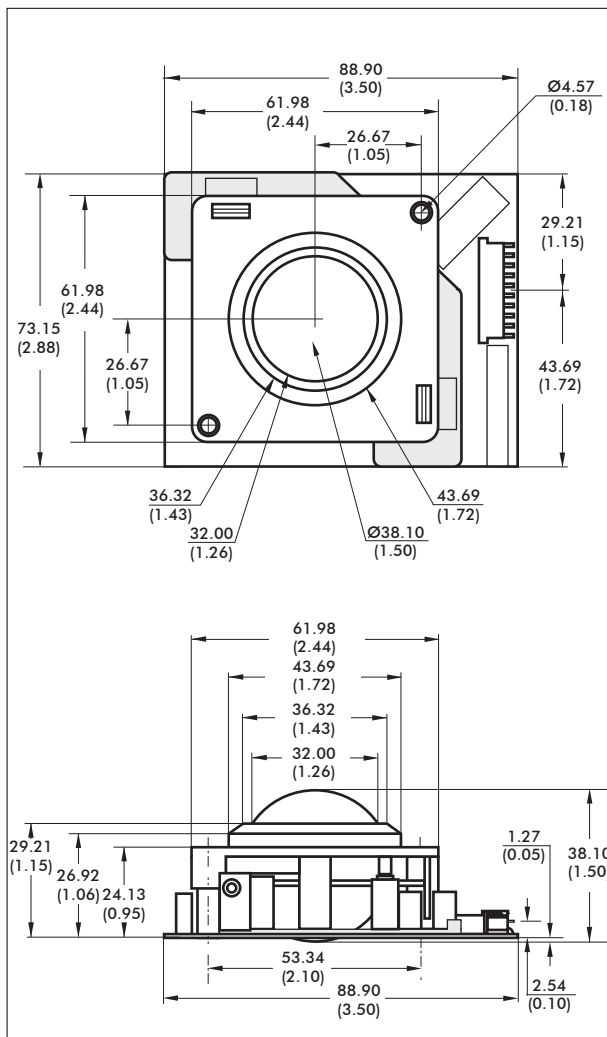
NOTE: * = Microsoft Serial Interface requires a 5V supply for the LED backlighting option.
All values are nominal.

LP						
SERIES	MODEL	PROTOCOL FORMAT	MOUNTING POSITION	RESOLUTION	POWER REQUIREMENT	ILLUMINATION
150	1.50" Diameter (38.1mm)	1 Microsoft (2 btn Serial) 3 PS/2 (2/3 btn) 5 Quadrature 6 SUN Workstations 7 USB	F - Level to 45° N - Level to 90° X - N/A	10 - 120 resolution 20 - 240 resolution 30 - 480 resolution	V00 5V Regulated R00 RS-232* (DTR & RTS)	R Red B Blue G Green C Clear Black*

*Microsoft Protocol only *Non-illuminated

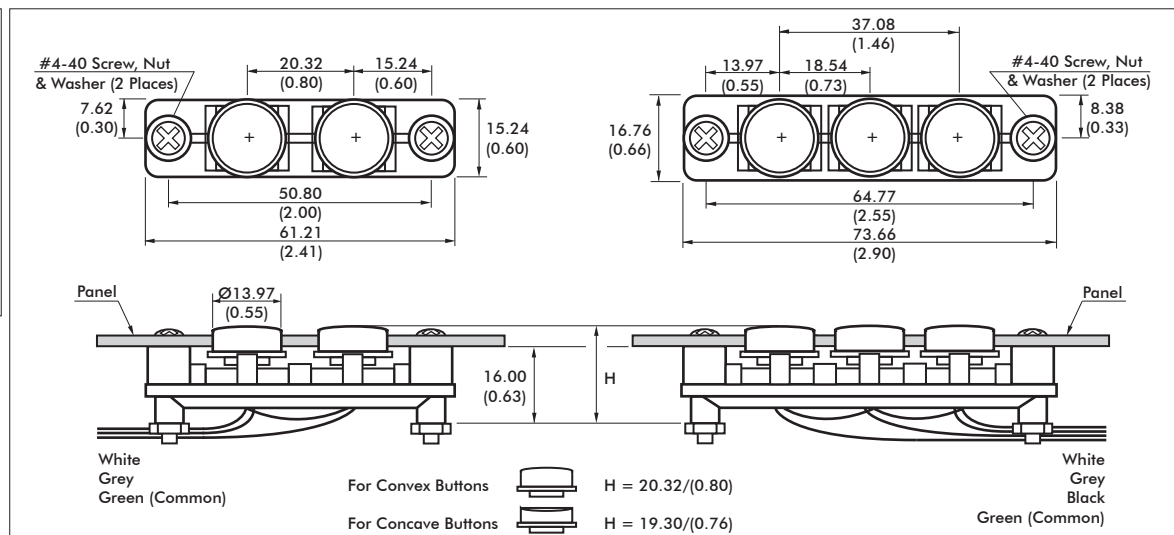
LP150 series

Low profile trackball



BUTTON STRIP FEATURES

- Two, three, or four* (*USB only) buttons
- Tactile feedback
- Normally open momentary contact switch
- 5 million lifecycles rating at 500mA at 12VDC
- Black or gray button caps
- Choice of convex or concave design



NOTE: All dimensions are in mm/(inch).

Note: The company reserves the right to change specifications without notice.

P200 series

Panel mount trackball

Distinctive features and specifications



- ☐ 2" ball diameter
- ☐ Panel mount design
- ☐ Available in black or backlit illumination
- ☐ Several protocol options
- ☐ Additional button strips available
- ☐ Environmental Protection Classification (IP Rating): contact factory

MECHANICAL

- Ball Diameter: 2.00" (50.80mm)
- Ball Rotation: Continuous in all directions
- Tracking Force: 10g (0.35oz)
- Weight: 257.5g (9.07oz)
- Life Cycle (ball rotations): 5 million
- Operating Temperature: -40°C to +85°C (-40°F to +185°F)

CONFIGURATION OPTIONS

- LED backlighting: Red, Blue, Green or Clear through a translucent Thermostat resin ball
- Additional pushbutton switch: Two, three or four* buttons (* USB only) – see Button Strips
- Connector cables
- Conformally coated PCB

PROTOCOL OPTIONS AND ELECTRICAL SPECIFICATIONS

- **USB:** Input: 4.00V – 5.25V @ 25mA max (+30mA for backlit illumination option)
Output: USB 1.1
- **PS/2 (2/3BTN PS/2):** Input: 5.00V @ 25mA max (+30mA for backlit illumination option)
Output: CMOS/TTL
- **Microsoft Serial*:** Input: DTR/RTS @ 14 mA max (+30mA for backlit illumination option)
Output: RS-232, Serial
- **Quadrature:** Input: 5.00V @ 30mA max (+30mA for backlit illumination option)
Output: Quadrature Waveforms
- **Sun Workstation:** Input: 5.00V @ 30mA max (Mouse Systems Serial) (+30mA for backlit illumination option)
Output: CMOS/TTL

MOUNTING OPTIONS

- 180° horizontal to 90° vertical – please specify when ordering.

NOTE: * = Microsoft Serial Interface requires a 5V supply for the LED backlighting option.
All values are nominal.

Series	Model	Protocol Format	Mounting Position	Resolution	Power Requirement	Illumination
P	200 2.00" (50.8mm) Ball Diameter	1 Microsoft (2 btn Serial) 3 PS/2 (2/3 btn) 5 Quadrature 6 SUN Workstations 7 USB	F - Level to 45° N - Level to 90° X - N/A	10 - 160 resolution 20 - 320 resolution 30 - 640 resolution	V00 5V Regulated R00 RS-232* (DTR & RTS)	R Red B Blue G Green C Clear Black*

*Microsoft Protocol only

*Non-illuminated

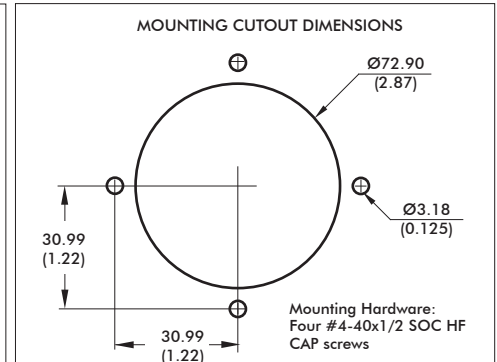
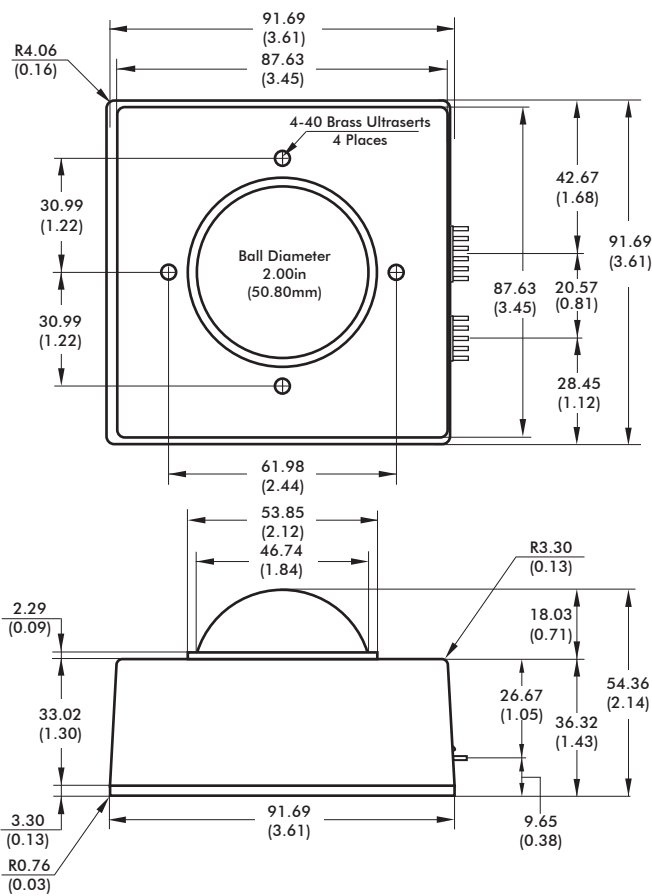
Note: The company reserves the right to change specifications without notice.

APEM

www.apem.com

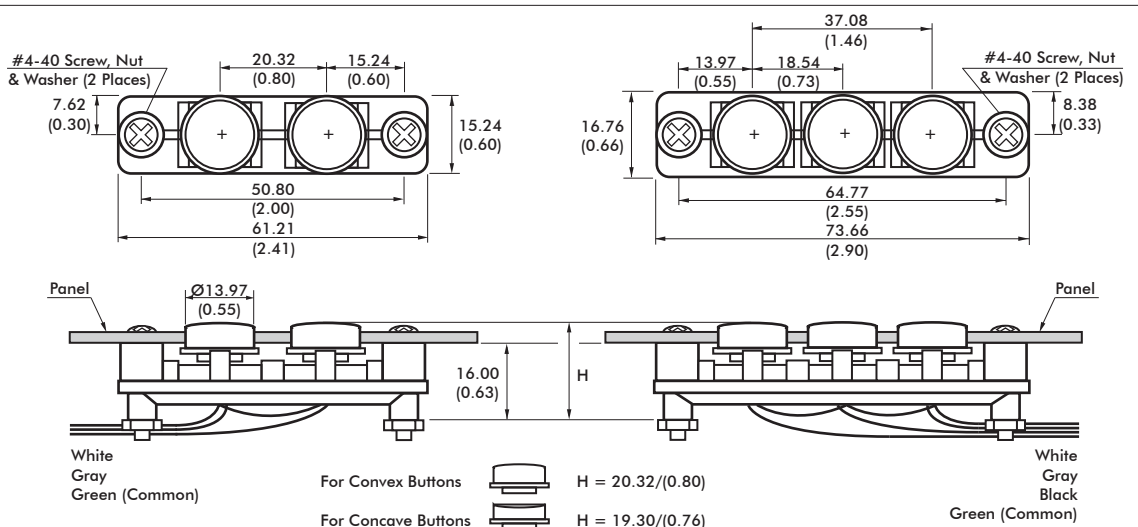
P200 series

Low profile trackball



BUTTON STRIP FEATURES

- | | |
|--|--|
| <ul style="list-style-type: none"> • Two, three, or four* (*USB only) buttons • Tactile feedback • Normally open momentary contact switch | <ul style="list-style-type: none"> • 5 million lifecycles rating at 500mA at 12VDC • Black or gray button caps • Choice of convex or concave design |
|--|--|



NOTE: All dimensions are in mm/(inch)

Note: The company reserves the right to change specifications without notice.

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