

## P38 Compact Series – Panel Mount Quadrature Trackerball

### DESCRIPTION

The P38 Compact Series are high specification, professional Trackerballs for use in demanding environments.

High-grade stainless steel shafts and bearings ensure a solid and precise pointer control while the patented floating seal technology limits ingress of aqueous solutions and particulates.

A choice of top plate and chassis configurations are available to provide various options on sealing, backlighting, bezel diameters and installation. The unit has been designed to be back of panel mounted as part of OEM keyboards and consoles.



### FEATURES AND APPLICATIONS

- Optional sealing to IP65 (NEMA 6)
- Outputs: Quadrature
- Smooth operation in rugged environments
- Stainless steel shafts and bearings
- Various top plate configurations providing sealing and tracking force options
- Backlit ball options
- Custom connector options
- Optional anti-vandal kit
- For use in medical, kiosk and industrial applications
- OEM custom solutions available

### SPECIFICATIONS

#### Mechanical

Weight	95 grams (phenolic/polyester ball) 275 grams (stainless steel ball)
Ball	Ø38.10 mm (1"), phenolic/polyester or AISI 440 stainless steel
Tracking force	10 grams nominal continuous – unsealed (IP40) 50-70 grams nominal continuous – sealed (IP65)
Housing material	ABS in black
Mounting position	Horizontal to 60° (IP65 sealed) Horizontal to 30° (non-sealed)
Sealing material	PTFE composite IP65 rated (qualified @ 25°C static)
Optional bezel material	AISI 316 stainless steel (optional)

#### Electrical

Protocol	Quadrature
Supply voltage	5V D.C. ± 5%
Supply current	10mA typical
Resolution	241 pulses per ball revolution (965 counts per ball revolution)
Output connector	8 Way JST, right-angled header, part no: S8B-PH-SM3-TB
Mating output connector	8 Way JST connector, part no: PH, CR or KR types

#### Environmental

Operating temperature	0°C to +65°C
Storage temperature	-40°C to + 85 °C
Humidity	30% min, 95% max, non-condensing
Vibration	6-500Hz at 49m/s <sup>2</sup> in all 3 axes
Shock	100g vertical axis, 40g horizontal axis
Lifetime	10 million ball revolutions (non sealed) >2 million ball revolutions – (sealed)
Impact	10 Joules (with anti-vandal Kit)
ESD	12kV air-discharge and 6kV contact discharge.

**CONNECTION DETAILS**

Connection is made to the P38 Trackerball by means of latching JST connectors (or equivalent).

Tables 1 to 2 highlight the connection details. Custom connections are available (please contact your local sales office for further details).

**Output connector:**

Pin Number	Quadrature
1	X1
2	X2
3	Y1
4	Y1
5	+5V D.C.
6	-
7	-
8	0V

*Table 1 Output connections*

Description: 8 way, 2mm pitch, right-angled connector

Manufacturer: JST (or equivalent)

Part No: S8B-PH-SM3-TB

Mating connector: PH, CR or KR types

**Backlight connector (optional):**

Pin Number	Function
1	+5V D.C.
2	0V

*Table 2 Backlight connections*

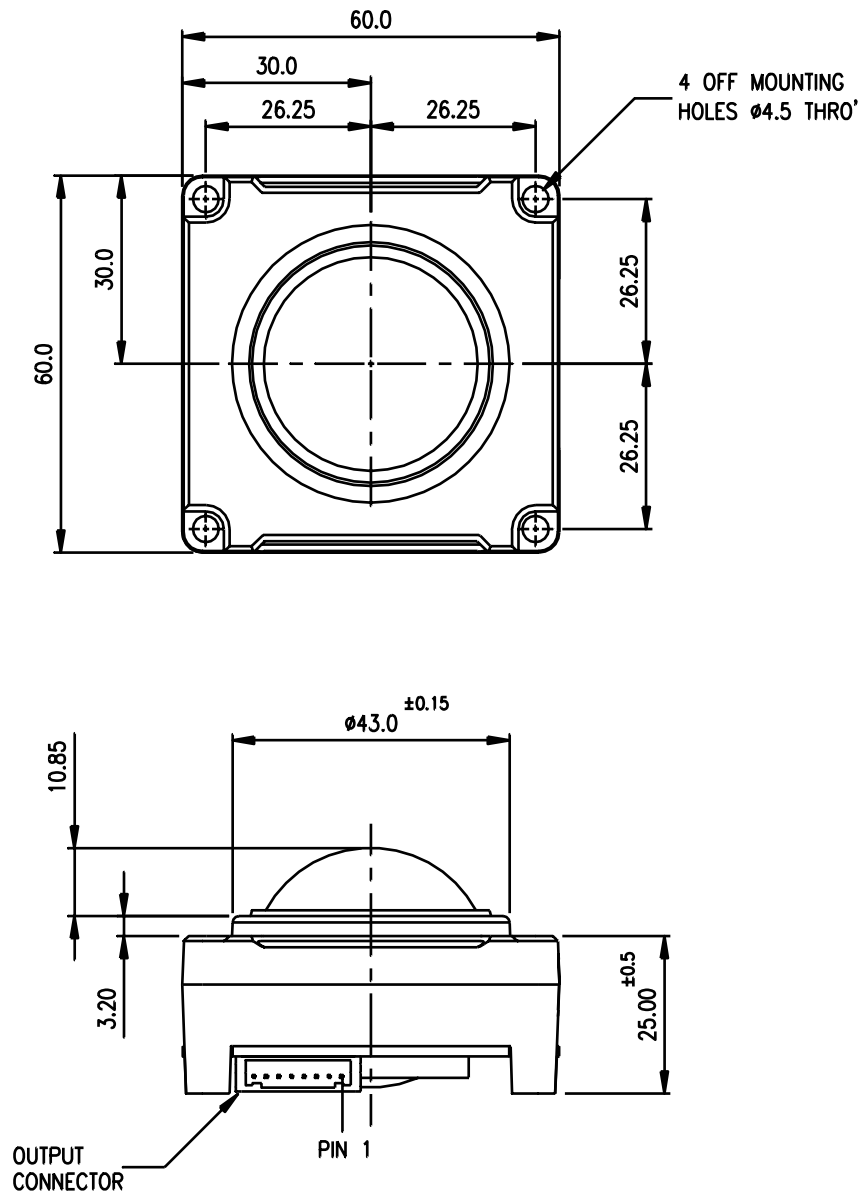
Description: 2 way, 2mm pitch, right-angled connector

Manufacturer: Molex

Part No: 22-05-7028

Mating connector: Molex 22-01-1023

## DIMENSION DRAWING



Dimensional drawing specifies factory default orientation.

All dimensions are in mm unless otherwise stated.

Tolerances +/- 0.2mm unless otherwise stated

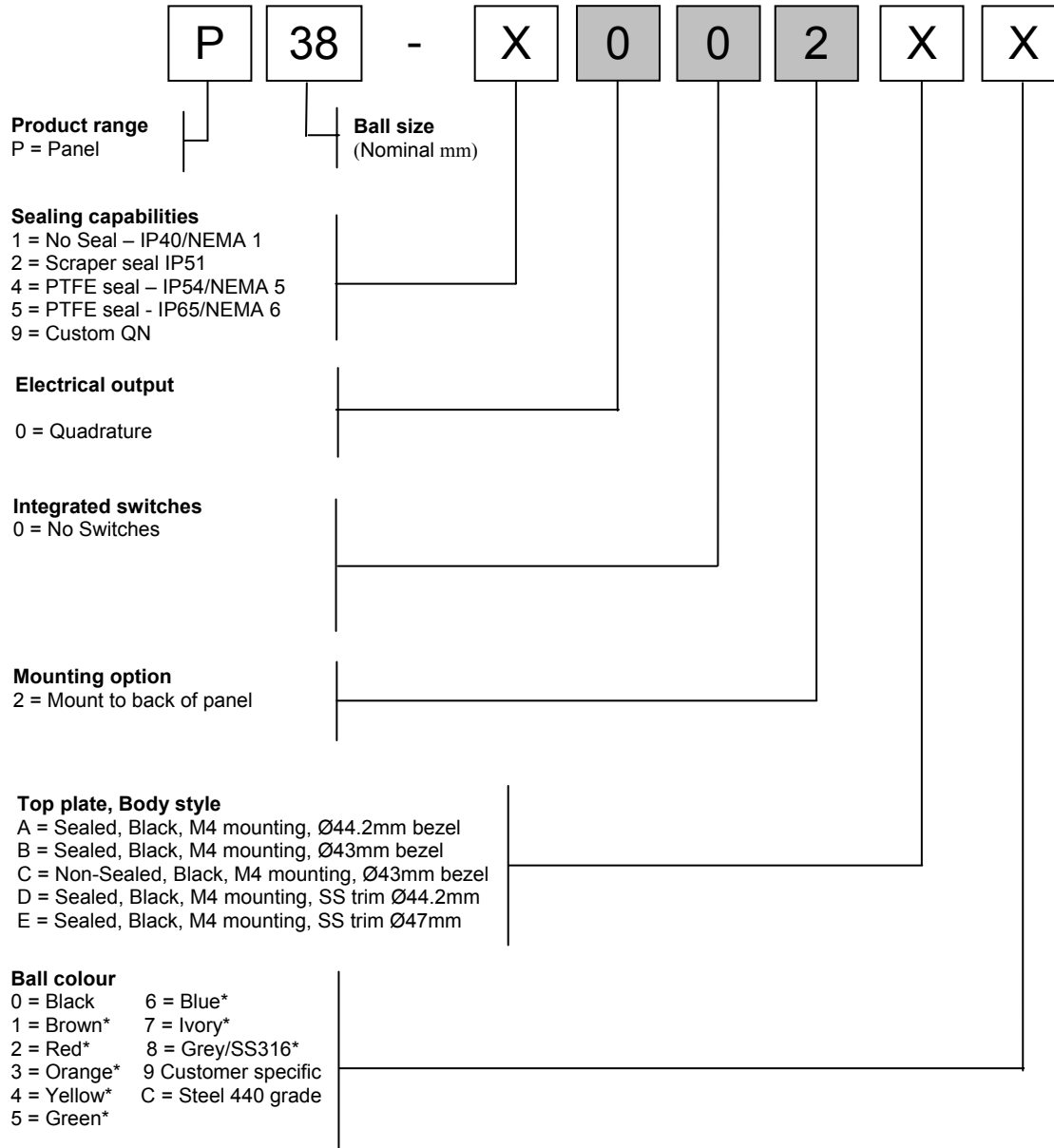
Please note that an IGES model is available on request. Please contact your local sales office for more information.

**OPTIONAL ANTI-VANDAL KIT**

This optional back plate enables the unit to absorb a very high level of abuse/impact. When mounted correctly by the end-user, the back plate will limit any hostile impacts subjected to the device during operation in public access points. The back plate provides protection for shafts, bearings and other components within the unit and ensures continual functionality under demanding conditions. Typical applications include public information kiosks and consoles. The kit includes all necessary fasteners (see datasheet DS38301 for mounting details).

(Please contact sales for further details/specifications).

Product ordering code **P38-XXXXXX**. Please construct your standard product ordering code by selecting the numbers and letters to suit your specification:



\*Non standard colour – MOQ and lead-time may apply

**Ordering Example:**

**P38-5002B0:** Panel 38mm, sealed IP65, Quadrature output, no switches, mount to back of panel, sealed (black), black ball.

**OPTIONAL EXTRAS**

- Anti-vandal option (See datasheet DS38301)
- Stainless steel trim
- Backlit ball (Various Colours)
- Optional ball Colours (MOQ applies)
- Customer specific colour matching (MOQ applies)

**Contact your local distributor for further details on product variants and custom specifications.**