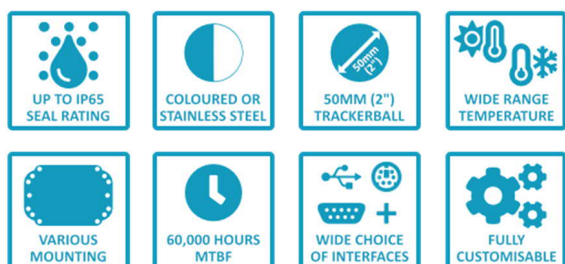


Fully customisable TB_50 Series Trackball



Overview

Our TB_50 50mm (2") rugged Trackball is enclosed in an IP65 and NEMA 4 front sealed casing. This prevents foreign substances from damaging the internal circuitry. Our industrial-grade Trackball is compatible with a wide range of computer interfaces. This includes USB, PS2, and SUN interface compatibility. Clients can opt for the device interface needed in their industry. See all of the specifications below, and if something isn't listed that you may require, contact us and let us know as we may already have the solution you need!



General Specifications

MECHANICAL

Ball Material	Phenolic Resin
Ball Colour	Black
Ball Size	50mm (2")
Resolution	200 pulses/ball revolution
Tracking Force	<50gms (nominal)
Ball Revolutions	>6 million
Mounting	Fixing holes to allow mounting at any angle to horizontal
Dimensions (mm)	See Dimensions on Page 2
Weight (g)	0.26Kg

ELECTRICAL AND ELECTRONIC

Supply Voltage	5V DC $\pm$ 5%
Supply Current	<12mA (PS2 / RS232) / <20mA (USB / PS2)
Interface	USB / PS2 / AT / RS232 / RS422 / RS485 / XT / TTL / DEC / SUN

ENVIRONMENTAL

Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +85°C
Relative Humidity	95% non-condensing
IP Seal Level	IP65

Connector Details

QUADRATURE SWITCH ASSEMBLY CONNECTIONS

PIN NO	1	2	3	4
Description	GND	S3 (R)	S2 (M)	S1 (L)

Connector type JST S4B-PH-K. Mating connector JST 04CR-6H

QUADRATURE OUTPUT CONNECTIONS (6 WAY)

PIN NO	1	2	3	4	5	6
Description	GND	Y1	Y2	X1	X2	VCC

Connector type JST S6B-PH-K. Mating connector JST 06CR-6H

QUADRATURE TRACKSBALL CONNECTOR DETAILS

PIN NO	1	2	3	4	5	6	7	8	9
Description	VCC	X1	X2	Y1	Y2	S1 (L)	S2 (M)	S3 (R)	GND

Connector type JST S9B-PH-K. Mating connector JST 09CR-6H

PROTOCOL SWITCH ASSEMBLY CONNECTIONS

PIN NO	1	2	3	4
Description	S1 (L)	S2 (M)	S3 (R)	GND

Connector type JST S4B-PH-K. Mating connector JST 04CR-6H

PS2 / RS232 CONNECTOR DETAILS

PIN NO	1	2	3	4	5	6	7	8	9
Description	RS232 Tx	RS232 Rx	DTR	RTS	-	GND	VCC	PS2 CLOCK	PS2 DATA

Connector type JST S9B-PH-K. Mating connector JST 09CR-6H

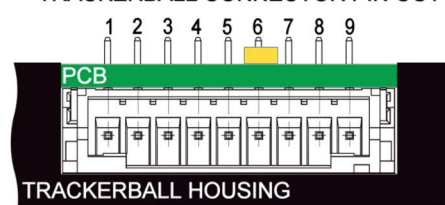
PS2 / USB CONNECTOR DETAILS

PIN NO	1	2	3	4	5	6	7	8	9
Description	CONNECT TO PIN 3 FOR PS/2 **	-	CONNECT TO PIN 1 FOR PS/2 **	-	-	GND	VCC	PS2 CLOCK / USB DATA+	PS2 DATA / USB DATA-

**Please note in order to use the Trackball with PS/2 interface, a loopback must be connected between Pins 1 & 3 detailed above. Without this loopback the Trackball will work in USB interface.

Connector type JST S9B-PH-K. Mating connector JST 09CR-6H

TRACKERBALL CONNECTOR PIN OUT





Protocol DIP-switch Settings

PS2 / RS232 TRACKSBALL VERSION

SWITCH NO	DESCRIPTION	DIP SWITCH SETTINGS
1	Protocol Select	See Protocol Table
2	X / Y Orientation Select	Switches Select Axis + / -
3	Baud Rate Select	See Baud Rate Table
4	Baud Rate Select	X / Y Orientation Select
5	-	-
6	X / Y Orientation Select	Changes X Axis for Y Axis
7	Middle Switch Latching	Off Selects Latching Off / On Selects Latching On
8	Protocol Select	See Protocol Table

PROTOCOL TABLE

DIP SWITCH 1	DIP SWITCH 8	PROTOCOL SET
On	Off	PS2
On	Off	Microsoft
Off	On	Sun
Off	Off	Mouse Systems

BAUD RATE TABLE

DIP SWITCH 3	DIP SWITCH 4	BAUD RATE SET
On	On	1200
On	Off	2400
Off	On	4800
Off	Off	9600