

P55 Series PANEL TRACKERBALL

Specifications

Mechanical

Weight	370gms
Ball	Thermoset Phenolic, 57mm, 2_"
Tracking Force	15gms Nominal continuous – no seal (IP40)
Ball Load	200N Maximum downward pressure (20Kg) @ 20°C
Ball Rotation	Continuous and reversible – any direction
Ball Speed	200 RPM maximum
Housing Material	ABS
Transducers	Photo-optical encoders with LED's
Mounting Position	Horizontal to 30°

Electrical

Standard Output Connector	9 way Molex 22-27-2091
Resolution	200 pulses per ball revolution (other options available upon request)
Switches	3 switch support - Left, Middle, Right
Supply Voltage (Quad, PS/2)	5 V DC +/- 5%
Supply Voltage (RS232)	+/- 12 V DC
Supply Current	Protocol format 16ma typical
Optional Backlight	+5 V DC, 100ma

Environmental

Operating Temperature	-5°C to +70°C
Storage Temperature	-10°C to + 85 °C
Humidity	30% min, 95% max, non-condensing
Vibration	5 G, 2-5Khz any plane
Shock	50Gs - duration 11ms
Lifetime	>10 million ball revolutions

Electrical Connections

Please refer to the option 'B' in the Product Ordering Code table.

Pin No.	CONNECTOR 1A				CONNECTOR 1B			
	General Output (Standard)	RS232 Output	PS/2 Output	Sun Systems	General Output	RS232 Output	PS/2 Output	Sun Systems
1	DTR/CLK	DTR	CLK	TX	TX	TX	-	TX
2	TX	TX	-	-	RX	RX	-	-
3	RX	RX	-	-	DTR/CLK	DTR	CLK	-
4	-	-	-	-	RTS/+5 V	RTS	-	-
5	GND	-	GND	GND	GND	GND	GND	GND
6	+5 V	-	+5 V	+5 V	DATA	-	DATA	-
7	RTS	RTS	-	-	+5 V	-	+5 V	+5 V
8	+5 V	-	-	-	-	-	-	-
9	DATA	-	DATA	-	-	-	-	-
10	GND	GND	-	-	GND	-	-	-

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Pin Number	CON 2A	CON 2B
	Quadrature Output (standard connector)	Quadrature Output (optional)
1	VCC (+5 V DC)	X1
2	X1	X2
3	X2	Y1
4	Y2	Y2
5	Y1	
6	S1	
7	S2	+5 V DC
8	S3	
9	GND	
10	GND	GND

Connectors for 1A & 2A - Standard fit on Trackerball Circuit Assembly:

Communication interface for host: Molex PN: 22-27-2101 10 way 2.54mm (0.1"). KK Friction Lock Connector

Mating Connector: Molex 10 way KK 0.1" PN 22-01-1103 or equivalent.

Connectors for 1B & 2B - Optional fit on Trackerball Circuit Assembly:

Communication interface for host: 10 way 2.0mm JST Type PH Right Angle. Shrouded Header (S10B-PH-SM3-TB) Connector

Mating Connector: 10 way PH, KR, KRD & CR Connectors.

Configuration Options

DIP SWITCH CONFIGURATIONS			
Pin No.	Function	Off	On
1	No function	-	-
2	Baud rate select	See table below	See table below
3	Baud rate select	See table below	See table below
4	Protocol Mode	See table below	See table below
5	Middle button latch enable	Latch OFF	Latch ON
6	Cursor tracking rate enabled	Linear	Ballistic (exponential)
7	Protocol mode	See table below	See table below
8	Output signal forced to TTL	Standard output	Output at TTL level

Default factory setting - Switches: Switch 7 ON, all other switches OFF.

PROTOCOL SELECT			
Protocol	Switch 4	Switch 7	Switch 8
Auto Detect - PS/2, Mouse Systems	OFF	OFF	OFF
SUN Systems	OFF	OFF	ON
Auto Detect - Microsoft (RS232), PS/2	OFF	ON	OFF
Mouse Systems/SUN	ON	OFF	OFF
DEC/ MM	ON	ON	ON

Note: Protocol must only be changed with the device powered off.

BAUD RATE CONFIGURATION		
Baud Rate	Switch 2	Switch 3
1200	OFF	OFF
2400	OFF	ON
4800	ON	OFF

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9600	ON	ON
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Note: Baud rate must only be changed with the device powered off.