

R50

Specification

Mechanical

Weight	1 Kilogram (Phenolic ball unit) 1.4 Kilogram (Stainless Steel Ball unit)
Ball	Thermoset Phenolic or Stainless steel, 50 mm, 2"
Tracking Force	10 grams Nominal Continuous – No seal (IP40) 15 grams Nominal Continuous – Felt seal (IP51) 50 grams Nominal Continuous – PTFE seal (IP65) 60 grams Nominal Continuous – (IP65) Stainless steel ball
Ball load	200N Maximum downward pressure (20 Kg) at 20°C
Ball rotation	Continuous and reversible – any direction
Ball speed	200 RPM max
Housing material	Case – coated steel (Pearl white) Finger plate – Polyester membrane on Aluminium
Transducer	Photo – optical encoders with LED
Mounting Position	Horizontal to 30° (non – sealed units) Horizontal to 70° (sealed)

Electrical

Standard output connector	2-meter Screened lead to PS/2 6 way Mini Din
Converter	PS/2 to converter block to RS232 9 pin 'D'
Resolution (Quadrature) (Protocol)	155 pulses per ball revolution 310/155 pulses per ball revolution – Switch selectable (Other options available upon request)
Switches	3 switches Left, Middle, and Right.
Supply Voltage (PS/2) (RS232)	5 V DC +/- 12V DC
Supply current	10 mA typical
Optional backlighting	+ 5 V DC, 100 mA

Environmental

Operating temperature	0°C to +70°C
Storage temperature	-25°C to + 85 °C
Humidity	30% min, 95% max, non condensing
Vibration	5G, 2-5 KHz any plane
Shock	100G's – duration 11mS
Lifetime	> 10 million ball revolutions – non sealed > 2 million ball revolution – seal life

Standard Product Options

<p>A Top Plate Sealing</p> <p>1 No seal in top plate (IP40) 2 PTFE scrapper seal (IP51) 3 Felt seal (IP51) 4 PTFE seal (IP54) 5 PTFE seal (IP65)</p>	<p>B Electrical Output</p> <p>0 Quadrature 6 Universal Interface – PS/2, USB 7 Multi Protocol interface PS/2, RS232 (MS & Microsoft) Sun 8 Sun Systems</p>	<p>C Integrated Switches</p> <p>3 Three switches</p>
<p>D Mounting</p> <p>3 Free Standing</p>	<p>E Top Plate / Body Style</p> <p>1 Metal box</p>	<p>F Ball Colour</p> <p>0 Black 8 Stainless Steel 9 Backlit Blue</p>

Product Ordering Code R50 – ABCDEF. Please fill in letters A – F using numbers from the table above

Configuration

Multi Protocol interface and Sun systems			
Switch	Function	Off	On
1	Protocol Mode	Microsoft RS232 / PS/2	Mouse systems / Sun *
2	N/A		
3	N/A		
4	Double tracking rate	2:1	1:1
5*	VX3 – Virtual 3 axis function (Sun Mode : Baud rate selection)	Feature Enabled 1200	Feature Disabled 9600
6	Smart button – Button lock	Feature Enabled	Feature Disabled
7	N/A		
8	TTL output levels	Standard output	TTL level / Sun

* If switch 1 is on (in Sun / Mouse systems Mode), Switch 5 functions as a baud rate selector.
 Default setting 1,2,3,5,6,8 ON all others OFF

Universal interface			
Switch	Function	Off	On
1	N/A		
2	N/A		
3	VX3 – Virtual 3 axis function	Feature Enabled	Feature Disabled
4	Double tracking rate	Feature Enabled	Feature Disabled