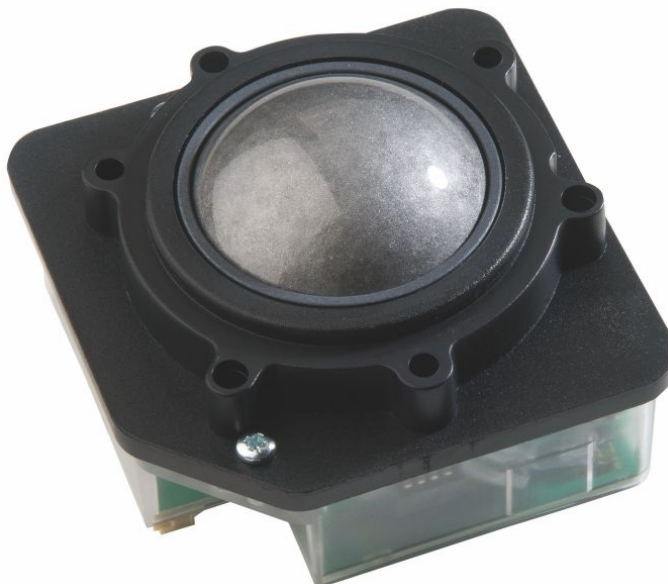


## Datenblatt

### Kunststofftrackball mit Infrarot-Abtastung

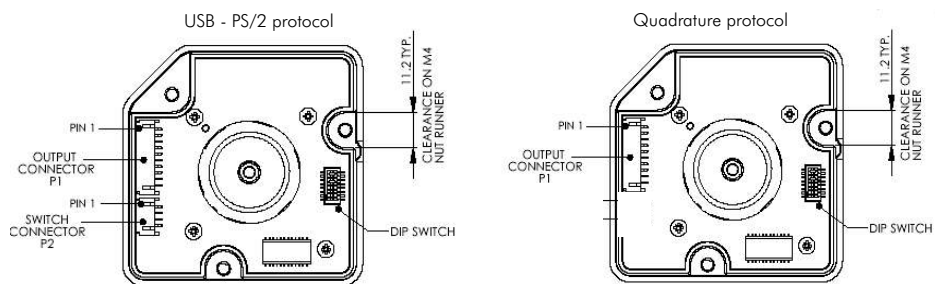
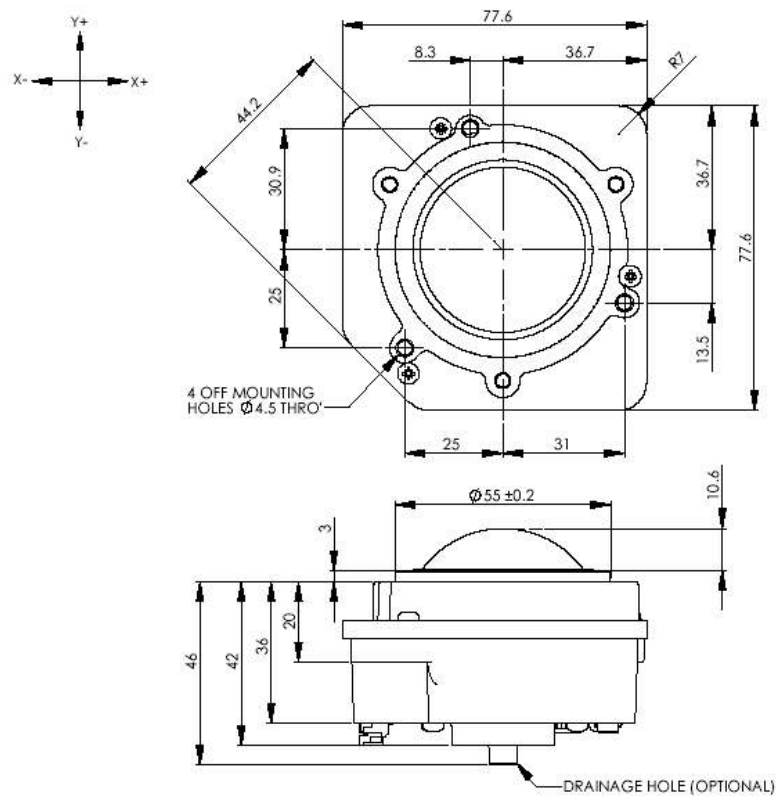
L50



<b>Bezeichnung</b>	L50
<b>Ausführung</b>	OEM-Einbaumodul
<b>Cursorsteuerung</b>	Kunststofftrackball
<b>Technologie</b>	Infrarot-Optik
<b>Balldurchmesser</b>	50,8 mm
<b>Ballmaterial</b>	Epoxydharz
<b>Gehäusematerial</b>	Kunststoff
<b>Schutzgrad</b>	IP68
<b>Betriebstemperatur</b>	0°C ... +55°C
<b>Abmessungen</b>	77,6 x 77,6 x 59,6 mm
<b>Schnittstelle</b>	PS2/USB, Matrix
<b>Zusatzfunktion</b>	herausnehmbare Kugel für einfache Reinigung
<b>Zertifizierung</b>	CE
<b>Artikelnummer</b>	L50-70020D, L50-76020D, L50-70021D, L50-76021D, TKH-TB50L, TKH-TB50LF10, TKH-TB50LF80
<b>Einsatzbereich</b>	Industrie, Gerätebau

**DIMENSIONAL DRAWING**

Dimensions for free running and fixed friction/scrapper devices

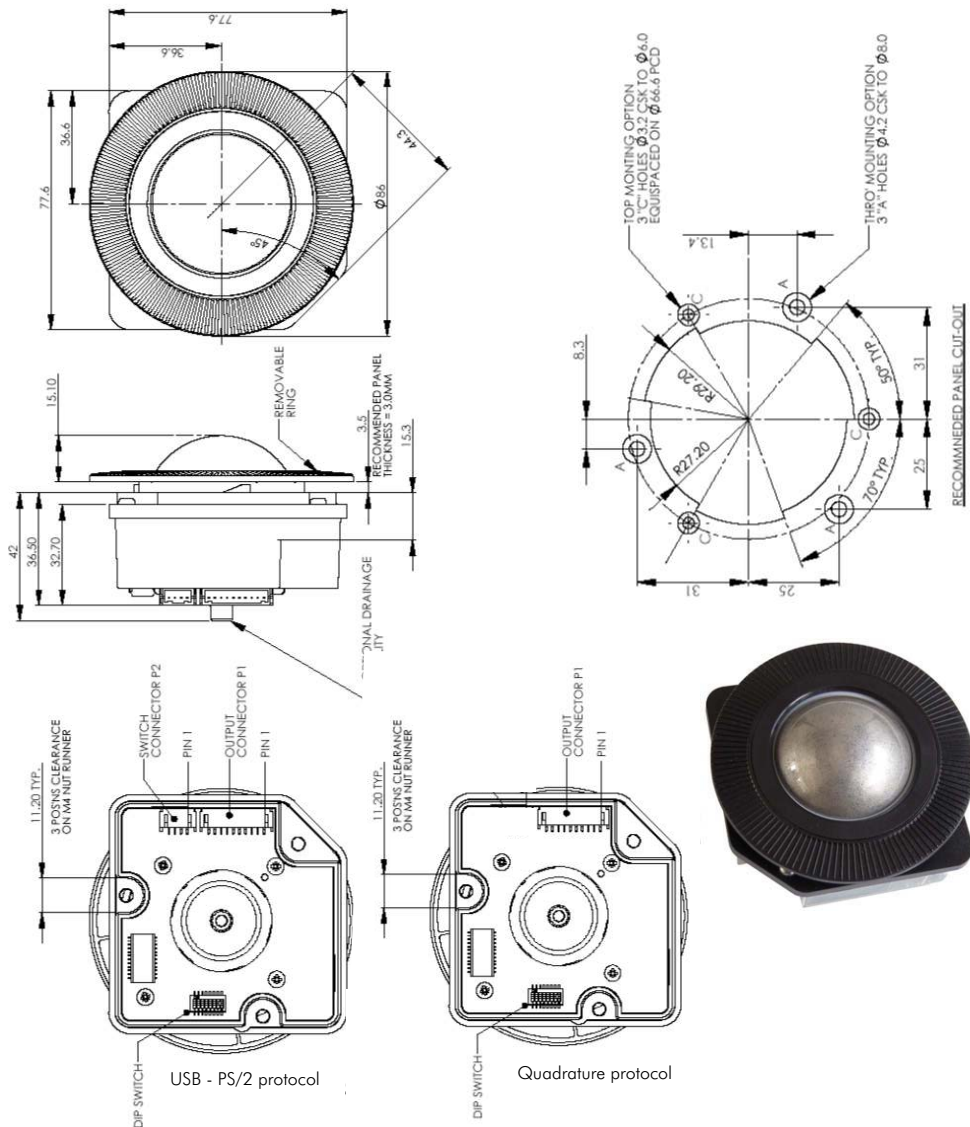


The company reserves the right to alter without prior knowledge the specification or design of any standard product or service.

**Datenblatt**  
**Kunststofftrackball mit Infrarot-Abtastung**  
**L50**

**DIMENSIONAL DRAWING**

Dimensions for Variable Friction / Removable Ball device



The company reserves the right to alter without prior knowledge the specification or design of any standard product or service.

**CONNECTION DETAILS QUADRATURE OUTPUT**

Output Connector : P1

Description: 10 Way JST, right-angled header.  
 Manufacturer: JST (or equivalent)  
 Part No: S10B-PH-SM3-TB  
 Mating connector: PH, CR or KR types (e.g. PHR-6)

Pin Number	Quadrature
1	X1
2	X2
3	Y1
4	Y2
5	EARTH
6	EARTH
7	5V D.C
8, 9	See note 1
10	0V

Note 1 : Pin to be left floating (unconnected)

**CONNECTION DETAILS PS/2 - USB OUTPUT**

Output Connector : P1

Description: 10 Way JST, 2 mm pitch, right-angled header.  
 Manufacturer: JST (or equivalent)  
 Part No: S10B-PH-SM3-TB  
 Mating connector: PH, CR or KR types

Pin Number	USB/PS/2
1, 2, 3 or 4	See note 1
5	EARTH
6	EARTH
7	5V D.C
8	PS/2 Data, D-
9	PS/2 Clock, D+
10	0V

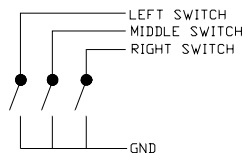
Note 1 : Pin to be left floating (unconnected)

Switch Input Connector : P2

Description: 4-way JST, right-angled header.  
 Manufacturer: JST (or equivalent)  
 Part No: S4B-PH-SM3-TB  
 Mating connector: PH, CR or KR types

Pin Number	Function
1	Left switch
2	Middle switch
3	Right switch
4	0V

Switch Schematic



**OPTIONAL LEAD ASSEMBLIES**

Standard Lead assemblies for connection to the L50 unit are available. Other lead assemblies can also be supplied to customer specifications.

Part Number	Leads / Adapters	Description
OC5010160	Output cable USB	1,6 m shielded cable with USB type A plug
OC6010160	Output cable PS/2	1,6 m shielded cable with 6 pin mini DIN plug
IC040035	Switch Input	4 way JST style - bare wires, 35 cm long
IC101035	Interconnection	Interconnection cable, 35 cm long for quadrature output

**CONFIGURATION**

The L50 trackball provides features that may be selected using the DIP switch located on the printed circuit board. This table details the assigned function of each switch.

DIP Switch Functions quadrature Trackballs

DIP Switch	Function	OFF	ON
1	Orientation 1 Setting	See Figure. 1	See Figure. 1
2	Orientation 2 Setting	See Figure. 1	See Figure. 1
3	N/A	N/A	N/A
4	N/A	N/A	N/A
5	N/A	N/A	N/A
6	N/A	N/A	N/A
7	N/A	N/A	N/A
8	N/A	N/A	N/A

Factory default setting: All DIP switches OFF

DIP Switch Functions PS/2 - USB Trackballs

DIP Switch	Function	OFF	ON
1	Orientation 1 Setting	See Figure. 1	See Figure. 1
2	Orientation 2 Setting	See Figure. 1	See Figure. 1
3	VX3 - Virtual 3 Axis Function	Feature disabled	Feature enabled
4	Smart Feature	Feature disabled	Feature enabled
5	Tracking mode	Ballistic tracking	Linear tracking
6	Factory setting	Must be OFF	Must be OFF
7	N/A	N/A	N/A
8	N/A	N/A	N/A

Factory default setting: All DIP switches OFF

Orientation

The orientation function allows the user to mount the L50 Series trackball device in one of four positions (see figure. 1 below). The orientation of the device is determined by the direction in which the output connector is facing (when viewed from the top of Trackerball device). The direction of the connector is indicated by the arrow. The Trackerball orientation can be selected to accommodate customer requirements for connector location and wiring.

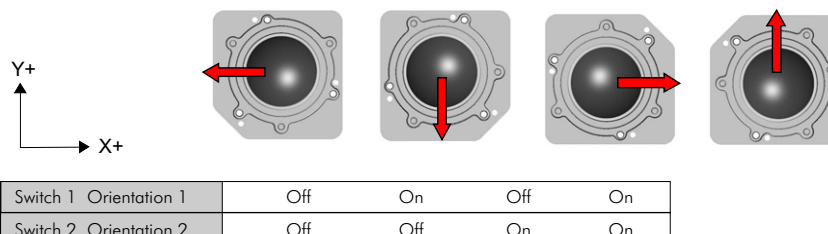


Figure.1 Mounting Orientations

### CONFIGURATION

#### VX3™

VX3 is patent protected facility that provides the same 2 modes of functionality as a scroll wheel on a 3-axis mouse.

Operation:

- Press middle button once to latch scroll mode one (e.g. dynamic pan feature);
- Press middle button again to latch scroll mode two (e.g. 3<sup>rd</sup> axis zoom feature);
- Further middle button presses toggles between scroll mode one and scroll mode two;
- Press either left or right buttons to cancel feature and resume normal X-Y cursor operation

#### Smart Switch

A patent protected button latch facility.

Operation:

- Press right button for 3 seconds or more to enable;
- Once enabled, pressing any button for approximately 1 second latches that button on;
- Press any button momentarily to de-latch;
- Disabled with a further press of the right button for 3 seconds or more;

#### Tracking Mode

Ballistic Tracking: Intuitive tracking algorithm to provide increased cursor resolution when tracking fast whilst retaining the original resolution for tracking accurately at slow speeds.

Linear Tracking: No tracking algorithm. 1200 counts per ball revolution maintained at all tracking speeds.

### ORDER INFO

OUTPUT	DRAINING	FREE RUNNING	FIXED FRICTION RING	REMOVABLE BALL
Quadrature	No draining	<b>L50-70020D</b>	<b>L50-70021D</b>	<b>L50-70024D</b>
	Self draining	<b>L50-70025D</b>	<b>L50-70026D</b>	<b>L50-70027D</b>
PS/2 & USB	No draining	<b>L50-76020D</b>	<b>L50-76021D</b>	<b>L50-76024D</b>
	Self draining	<b>L50-76025D</b>	<b>L50-76026D</b>	<b>L50-76027D</b>

NSI stock types : L50-70021D / L50-76020D / L50-76021D / L50-76024D / L50-76027D

### OPTIONAL EXTRAS

- Optional Ball Colours (MOQ applies)
- Customer Specific Colour Matching (MOQ applies)
- Custom lead Assemblies