

TW-50-IP65 Plastic Trackball Module

Heavy duty module with 50 mm ball

**Description****Features**

- 50 mm plastic [Trackball](#) for modular installation in a tough ABS/polycarbonate housing
- The patented scraper ring enables the ball to be [IP54 \(NEMA 2\)](#) when moving or [IP65 \(NEMA 4\)](#) static
- For industrial, medical or common data input as well as for kiosk infoterminals or aerospace industry.
- Beside the plastic ball we offer also a high gloss high-grade steel ball (mechanical technology) as well as an epoxy resin ball (optical technology)
- Please you consider also the installation version with high-grade steel front plate and integrated metal switches, as you can see in the cross-reference.

The manual can be downloaded. Please click below.

Output Connector (J1):

Pin	Quadrature Ausgang	PS/2	USB
1	X1	X1	X1
2	X2	X2	X2
3	Y1	Y1	Y1
4	Y2	Y2	Y2
5	-	-	-
6	-	-	-
7	VCC (+5VDC)	+5VDC	VCC
8	-	DATA	D-
9	-	CLOCK	D+
10	GND	GND	GND

Input Connector for Switches (J2):

Pin	Function
1	Left Switch
2	Middle Switch
3	Right Switch
4	GND

Power Supply for optional Backlight Power:

Pin	Function
1	+5VDC
2	0V

Configuration with DIP-Switches:

DIP-Switch	Function	Off	On
1	Orientation 1	see diagram	see diagram
2	Orientation 2	see diagram	see diagram
3	VX3 - virtual 3 axis function	enabled	disabled
4	Double tracking rate	2:1	1:1
5-7	-	-	-
8	-	-	-

Explanation for VX3:

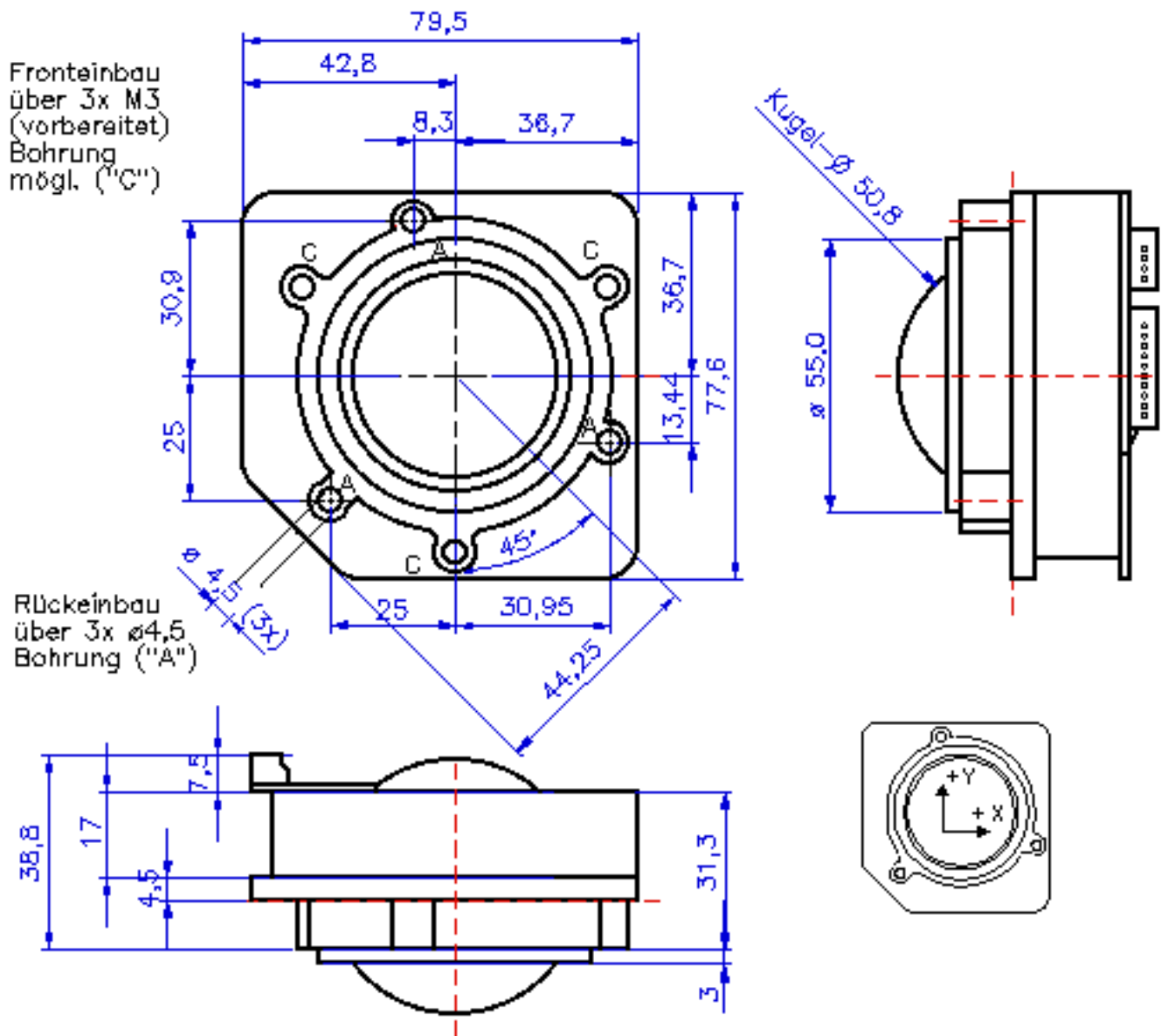
The 3rd Axis (VX3) can be of practical use for example in CAD Applications. In combination with the middle button the CAD-Program switches into PAN and ZOOM Mode, so that in a direction of rotation of the Trackball according to 3rd Axis is headed for. Repeated pressing of the middle key toggles between PAN and ZOOM Mode. Pressing either the left or right buttons to return to normal mode.

Orientation-Setting:

Multi-Interface	9 o'clock	12 o'clock	3 o'clock	6 o'clock
Orientation 1	On	On	Off	Off
Orientation 2	On	Off	On	Off

Explanation for Orientation:

View from top of Trackball: Is the 10-pole. Female connector on left side (9 o'clock - as seen on the following technic-drawing), then the Dip-switches are to be adjusted according to above table. In the example: USB-Version: Dip-1 and -2 On. In order to rotate a quarter clockwise (12 o'clock), then DIP 1 is ON and DIP 2 is OFF and so on.



Specification

Mechanical data

Dimensions:	79,50 x 77,60 x 51,1 mm
Weight:	,270 kg
Housing:	Plastic
Degree of Protection:	IP65 & IP54
Color:	black

Electric Data

Additional Interface:	for mouse Quadratur
Operating Voltage:	$5 \pm 0,25$ V

Environment

Operating Temperature:	from -0 °C to +70 °C
Storage Temperature:	from -25 °C to +85 °C
Humidity:	30% min., 95% max., not condensing


Additional Information

Ball material:	Thermoset Phenolic or Polyester
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Ball colour:	black (opt. yellow or backlit blue)
Tracking force:	10/25/50 g kontinuierlich - at IP40/51/65
Ball load:	200 N downward pressure
Ball speed:	200 RPM
Transducers:	photo-optical encoders with LED's
Mounting position:	horizontal to 30° (non-sealed) horizontal to 90° (sealed)
Resolution (Quadrature-Output):	155 Pulses per revolution
Resolution (Protocol-Output):	310/155 Pulses per Revolution (per DIP switch)
External switch inputs:	3 switch support - left, middle, right (only available in protocoll version!)
Optional Backlight- Trackball :	+5VDC, 100mA
Vibration:	5 Gs, 2-5KHz any plane
Shock:	100 Gs, duration 11ms
Lifetime:	> 10 Mio. Ball revolution - non-sealed > 2 Mio. Ball revolution - sealed

Order No.	Article	
TW1077	TW-50-IP65-USB+PS/2	with onboard controller USB + PS/2

Accessories

Order No.	Article	
ZK1220	Kabel-PS2	cable PS/2
ZK1290	USB Anschlusskabel, ca. 2,5m Länge	cable for USB
ZK1297	Kabel-PS2	cable PS/2 for use with PS/2 +RS232 Trackball-Contr.
ZK1245	Kabel zum Anschluss von 2 Tasten (L+R) an Trackball mit integriertem Controller	Cable Left+Right Mouseswitch - > Controller
ZK1342	Kabel zum Anschluss von 3 Tasten (L+R) an Trackball mit integriertem Controller	Cable Left+Right Mouseswitch - > Controller
ZT1043	ZTS- M19 Metalltaste 	M19 Zink-Druckguss Taster
ZT1091	M19-Edelstahl	M19 Edelstahl Taster

Links

Click!	Titel
	TW-50-IP65 Stainless Steel Trackball Module Heavy duty module with 50 mm ball (IP65 static)
	TW-50-IP65 Optical Trackball with Epoxy Resin Ball Optical trackball with 50 mm diameter, IP 65 Protection (static)
	TW-Series Trackball Modules Optical or Mechanical Trackballs in different sizes
	TVG-Series Stainless Steel Frontplates with integrated Mouse Modules Vandalproof Series with Trackball or Touchpad and customized Frontplate.

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