



TKH-Series

Possibilities of Industrial Cursor Control

The devices of this category are cursor control systems for rugged environments. They include mice, mechanical and optical trackballs, touchpads, mouse buttons and joysticks.

Trackball

The various trackball types can either be directly integrated into the system or they can be used as stand-alone mounting types for the corresponding application. Which of the two options is selected by the user, depends on the respective operational environment. Our range includes mechanical and optical trackballs which are available as plastic or metal versions. We also offer different variants with regard to the protection level. Cursor control by using a trackball is the most popular alternative to the computer mouse.

Touchpad

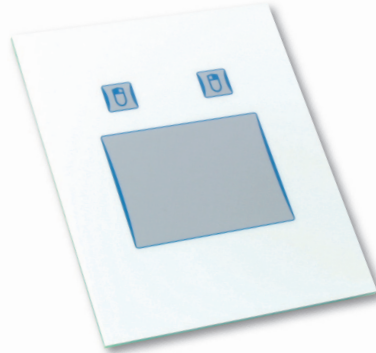
In particular for notebook users, touchpads offer a familiar tactile feedback. Basically, the application of touchpads allows to achieve the highest degrees of protection, since the complete surface is sealed.

Joystick

A further mounting option is the OEM joystick. The standard version of the joystick features two axes, a cursor stick with integrated mouse button and a compact and robust housing according to the protection level IP65. Due to the extremely precise navigation, the device is ideally suited for the application in medical engineering, automation, as well as in control systems of monitoring cameras. The product decision depends on the one hand on the technical requirements to be met by the device, and on the other hand on the operating preferences of the user. Furthermore, for all technologies, customized solutions are offered as well.



TKH-TB38b-MODUL - Front Mounting Version



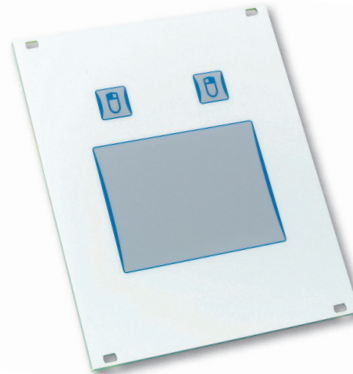
TKH-TOUCHb-MODUL - Front Mounting Version



TKH-JSTb-MODUL - Front Mounting Version



TKH-TB38b-FP - Rack Mounting Version



TKH-TOUCHb-FP - Rack Mounting Version



TKH-TB50-AL-NAT-FP - Rack Mounting Version

Technical data for trackball, touchpad and joystick version

Switching technology:	Gold plated domes
Switching force:	3.0 N
Switch travel:	0.6 mm
Switching cycles:	Approx. 1 Mio. (per key)
Trackball lifetime:	3 Mio. revolutions
Mounting type:	FP: front panel with mounting Boreholes for 19" cassette-mounting MODUL: front panel with threaded bolts
Front panel material:	FR4 (Epoxy glass resin)
Operating temp.:	0 °C to +70 °C
Storage temp.:	0 °C to +70 °C

Technical data for 50 mm trackball version

Switching technology:	Carbon contact technology
Switching force:	1.2 N
Switch travel:	1.2 mm
Switching cycles:	Approx. 3 Mio. (per key)
Trackball lifetime:	3 Mio. revolutions
Mounting type:	FP: front panel with mounting Boreholes for 19" cassette-mounting
Front panel material:	Aluminium
Operating temp.:	0 °C to +70 °C
Storage temp.:	0 °C to +70 °C



Cat.No.	Product description	Pointing device	Protection level ¹	Dimensions (mm)	Weight
Front mounting					
KH02005	TKH-TB38b-MODUL-PS/2	Trackball, 38 mm	IP65 ¹	135.0 x 110.0 x 28.0	260 g
KH02006	TKH-TB38b-MODUL-USB	Trackball, 38 mm	IP65 ¹	135.0 x 110.0 x 28.0	260 g
KH02009	TKH-TOUCHb-MODUL-PS/2	Touchpad	IP65	135.0 x 110.0 x 10.0	150 g
KH02010	TKH-TOUCHb-MODUL-USB	Touchpad	IP65	135.0 x 110.0 x 10.0	150 g
KH16209	TKH-JSTb-MODUL-USB	Joystick	IP65	135.0 x 110.0 x 37.4	280 g



Rack mounting					
KH02003	TKH-TB38b-FP-PS/2	Trackball, 38 mm	IP65 ¹	135.0 x 110.0 x 28.0	260 g
KH02004	TKH-TB38b-FP-USB	Trackball, 38 mm	IP65 ¹	135.0 x 110.0 x 28.0	260 g
KH02007	TKH-TOUCHb-FP-PS/2	Touchpad	IP65	135.0 x 110.0 x 10.0	150 g
KH02008	TKH-TOUCHb-FP-USB	Touchpad	IP65	135.0 x 110.0 x 10.0	150 g
KH06521	TKH-TB50-AL-NAT-FP-PS/2	Trackball, 50 mm	IP65 ¹	128.4 x 160.3 x 48.6	600 g
KH09433	TKH-TB50-AL-NAT-FP-USB	Trackball, 50 mm	IP65 ¹	128.4 x 160.3 x 48.6	600 g

Other layouts, configurations and interfaces on request

¹IP65 (front), IP54 (dynam.)



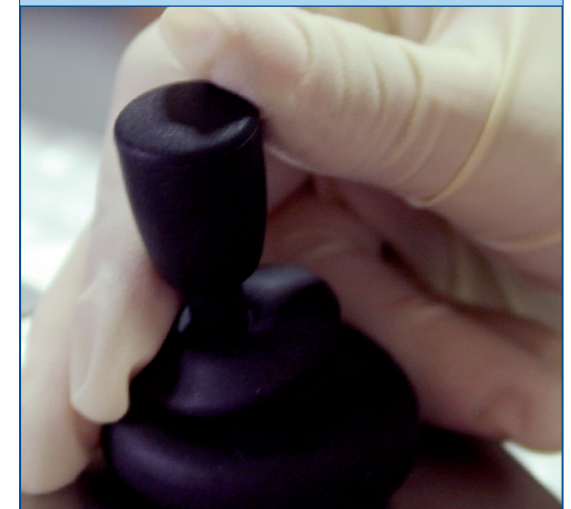
Other input devices and technologies:

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Technical data of the integrated touchpad

Operating principle:	capacitive
Resolution:	100-300 dpi
Dimensions:	65 x 49 mm
Active surface:	59 x 42 mm



Precise cursor control under difficult industrial conditions