

Professional Data Input Systems

Made in Germany

InduKey[®]
Industrial Input Devices





made
in
Germany

InduKey is one of the global leaders in the development and manufacture of data input systems. As a technology-oriented company we offer the complete range of professional operation components and devices. We provide standard products as well as customized solutions particularly for sectors such as engine building, tool building, automation, traffic and medical engineering.

Our services range from development, comprehensive design and production processes to the complete production maturity of product lines. Due to the high degree of vertical integration, InduKey is able to manufacture small and medium quantities of high-quality and specifically designed data input systems. This also applies to OE M production. In this field we are a competent and responsible partner for long-term projects.

Our work focuses on the compliance with high quality standards meeting the complex requirements of our customers. A consistent quality assurance concept ranging from procurement to satisfied customers forms the basis for this.

Due to technical know-how, experience from challenging projects and excellently qualified employees InduKey has become a dynamic and innovative company. Therefore, one of our core competencies is being able to offer an adequate solution for the respective task.

Since its foundation in 1996 InduKey has been manufacturing its products in the German facility. The company is certified according to ISO 9001:2008. Due to a global distribution network our products are available all over the world.

The following sectors benefit from our know-how:

- Engine building
- Automation
- Vehicle manufacturing
- Tool building
- Medical engineering
- Chemical industry
- Food industry
- Electrical engineering
- Industrial control systems
- POS/ POI

On the www.indukey.com website you can find a technology-specific and detailed product presentation, technical information as well as product and company news.

Internet-linkage:

Each topic is provided with a link located in the top line of each page. This link enables fast access to up-to-date contents. In addition to downloading the current catalogue further information brochures and data sheets are available online as well.



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Head office, Treuen, Germany



Data input technology Made-in-Germany



Hand made custom input solutions

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i The products in this catalogue are accompanied by one or more symbols. These visualizations provide information about the different features and additional functions. Meaning of the individual symbols:



IP-rating: Provides information about dust protection and protection against ingress of water



Underwaterproof: Is an in-company test standard by InduKey (see p. 68) which exceeds the highest protection level with regard to keyboards: IP68.



Edge protection: A deeper recess in the mounting plate enhances the protection of the foil against mechanical delamination on the edges.



Antimicrobial properties: The surface material contains silver ions which prevent bacteria and germs from growing



Lighting function: Backlight of the operating panel in order to make keys and their marking visible in poor visibility conditions.



EX-accredited: Devices which can securely be used in explosion-prone areas. Those devices are conform to the so called EX-standard.



Wireless: RF-based wireless data transfer



Integrated cursor control: Trackball, touchpad, mouse button, joystick



Mounting type: Housing optionally with VESA boreholes, front mounting, rack mounting

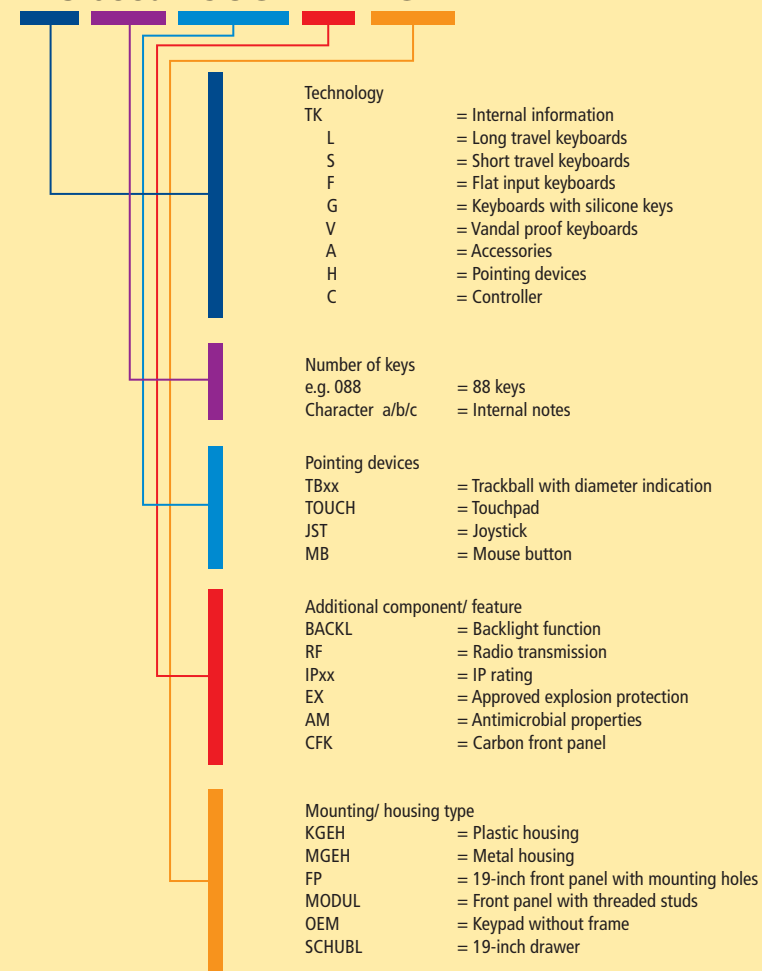


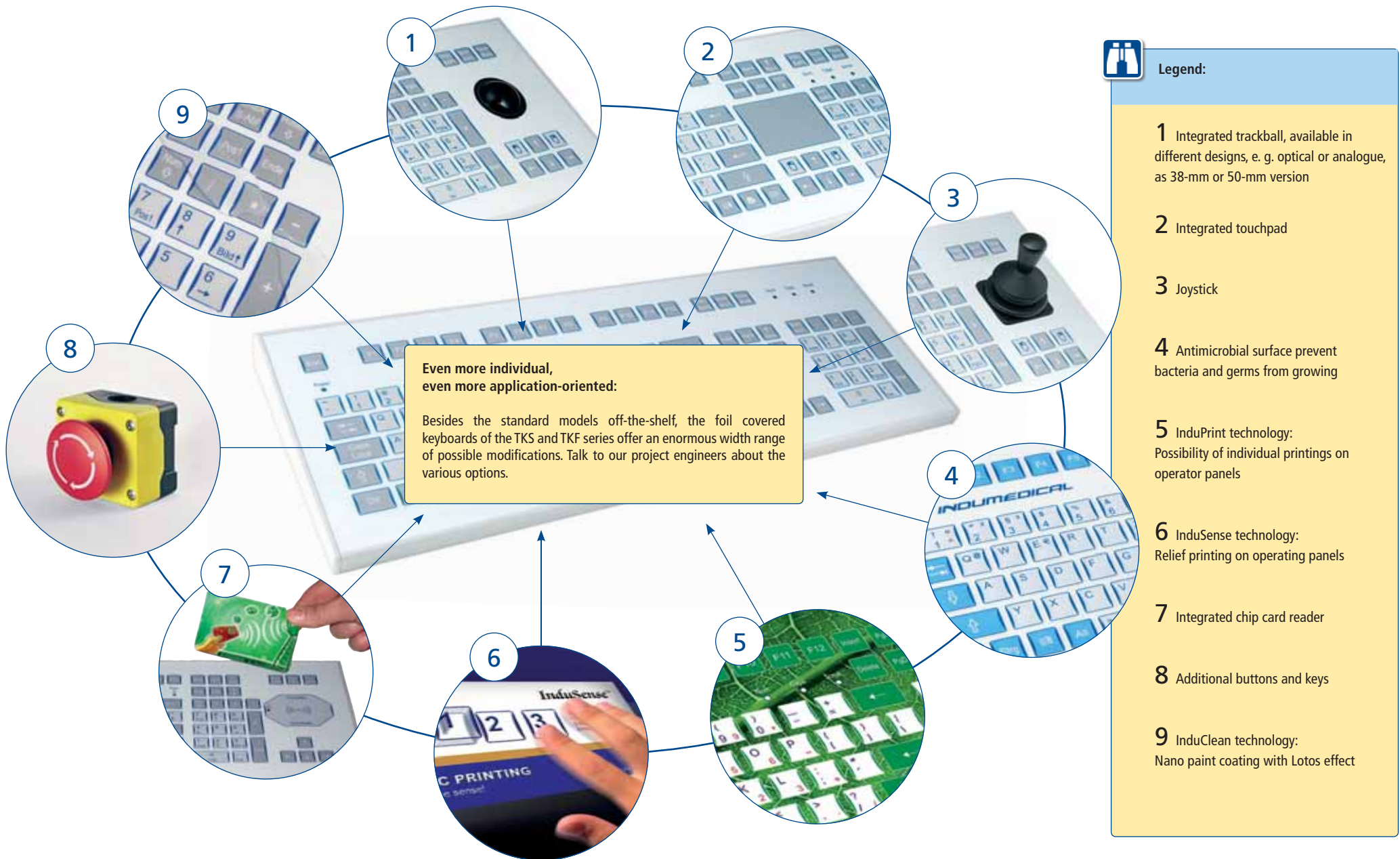
Interfaces: Respective available standard configuration



Modifications: Individual customisation of standard devices possible

TKS-088a-TOUCH-AM-KGEH







TKS Series

Our TKS series has demonstrated its value under difficult environmental conditions for more than a decade. Many of the devices sold at the beginning are still in use. As a result, our product line relaunch we are presenting to you in this catalogue for the first time is based on solid, sophisticated preconditions.

The new TKS series we are offering parallel to the existing series refers to the housing versions at first. A main improvement is the simplified modular design. The precise advantage for our customers is the faster availability, the cost saving realisation of special requests and the improved design of the housing. Other than the previous series, the housings now have a standardized construction height.

However, the striking modification of the models is the new design of the user interface. The colour and graphic design is based on a scientific ergonomic concept which facilitates the user's visual orientation. For the haptic orientation, the keys have pressed edges; so the fingers are guided to the respective key.

The models of the new TKS housing series are available from September 2011. They are marked with the letter "c" in the product designation (e.g. TKS-105c-KGEH).

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new  **TKS-105c-KGEH**

We introduce for the first time: The technically revised and redesigned successor of the TKS-105a-KGEH series (page 10)! The user interface of this new keyboard generation received a comprehensive facelift. Now, the identification of the symbols is clearly optimised; the layout appears clearly structured. Another characteristic is the improved design of the housing in terms of ergonomics. Adapted to the development of taste, the contours are rounded and pass smoothly into straight lines. The height of the corpus is lower than the previous models.

TKS-105c-KGEH-keyboards are the maximum sized housing models available in terms of dimensions. They offer the user a generously user interface and as a result they are suitable for the installation into all systems offering enough space.

In addition to the key only versions, models with integrated touchpad or 39-mm-trackball are also available.



new  **TKS-104c / TKS-088c-KGEH**

All optimizations and innovations of the 105-key-housing keyboards also apply to these models. Contrary to the 105-key-housing version, these are more compact keyboards. With a width of 382.6 mm, they are also 100 mm smaller. The reason for this is the increased demand in space saving system elements in mechanical and plant engineering. In spite of the compact dimensions, these models have the same complete key-functionality as a traditional full-layout keyboard.

In addition to the key-only versions, models with integrated touchpad or 39-mm-trackball are also available.



new   **INDUMEDICAL™**
TKS-088c-TOUCH-AM-KGEH

The TKS-088a-KGEH known under the brand name of InduMedical receives a revised replacement product with this model. Thereby, the functionality of the antimicrobial effect persists. In contrast, the design of the user interface and the housing has been optimized. Clear lines and a visually appealing key layout offer the user an optimum ease of use.



Figure: radio decoder included in delivery

new   **TKS-105c-TB38-RF-KGEH**

Foil covered, cordless short travel keyboard in a sturdy plastic housing with trackball and integrated radio control decoder.

- Multi-channel ready (more than 100 systems usable synchronously within the transmission range)
- Long battery life by automatic standby-switching mechanism

Technical data KGEH-versions

Switching technology:	short travel keys	Housing design:	plastic housing (KGEH)
Switching force:	2.6 N	Housing material:	ABS
Switch travel:	0.3 mm	Operating temp.:	-25 °C to +70 °C ¹
Switching cycles:	approx. 3 Mio. (per key)	Storage temp.:	-25 °C to +80 °C ³



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
KS18231	TKS-105c-KGEH-PS/2-US	none	IP65	482.6 x 184.6 x 34.9	1300 g
KS18233	TKS-105c-KGEH-USB-US	none	IP65	482.6 x 184.6 x 34.9	1300 g
KS18235	TKS-105c-TB38-KGEH-PS/2-US	Trackball, 38 mm	IP65 ²	482.6 x 184.6 x 41.7	1400 g
KS18237	TKS-105c-TB38-KGEH-USB-US	Trackball, 38 mm	IP65 ²	482.6 x 184.6 x 41.7	1400 g
KS18239	TKS-105c-TOUCH-KGEH-PS/2-US	Touchpad	IP65	482.6 x 184.6 x 34.9	1300 g
KS18241	TKS-105c-TOUCH-KGEH-USB-US	Touchpad	IP65	482.6 x 184.6 x 34.9	1300 g
KS18259	TKS-105c-TB38-RF-KGEH-PS/2-US	Trackball, 38 mm	IP65 ²	482.6 x 184.6 x 41.7	1400 g
KS18261	TKS-105c-TB38-RF-KGEH-USB-US	Trackball, 38 mm	IP65 ²	482.6 x 184.6 x 41.7	1400 g
KS18243	TKS-104c-KGEH-PS/2-US	none	IP65	382.6 x 184.6 x 34.9	1000 g
KS18245	TKS-104c-KGEH-USB-US	none	IP65	382.6 x 184.6 x 34.9	1000 g
KS18247	TKS-088c-TB38-KGEH-PS/2-US	Trackball, 38 mm	IP65 ²	382.6 x 184.6 x 41.7	1100 g
KS18249	TKS-088c-TB38-KGEH-USB-US	Trackball, 38 mm	IP65 ²	382.6 x 184.6 x 41.7	1100 g
KS18251	TKS-088c-TOUCH-KGEH-PS/2-US	Touchpad	IP65	382.6 x 184.6 x 34.9	1000 g
KS18253	TKS-088c-TOUCH-KGEH-USB-US	Touchpad	IP65	382.6 x 184.6 x 34.9	1000 g
KS18255	TKS-088c-TOUCH-AM-KGEH-PS/2-US	Touchpad	IP65	382.6 x 184.6 x 34.9	1000 g
KS18257	TKS-088c-TOUCH-AM-KGEH-USB-US	Touchpad	IP65	382.6 x 184.6 x 34.9	1000 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

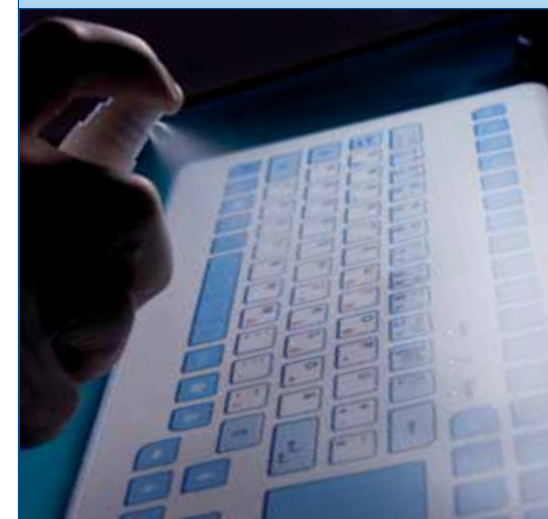
² IP65 (front), IP54 (dynam.)

³ Wireless version: -10 °C to +50 °C



Learn more about further housing and mounting versions of the TKS series:

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50-mm trackball version	Page 15, 19
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TKS-088c-InduMedical keyboards are available as a touchpad version. Without renouncing an integrated cursor control, the surface is completely closed and can be entirely cleaned and disinfected.

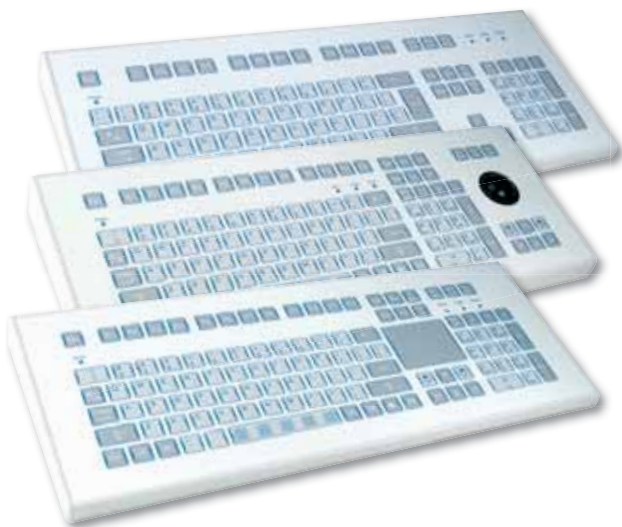


Figure: radio decoder included in delivery



INDUMEDICAL
Antimicrobial: TKS-088-TOUCH-AM-KGEH

The keyboard, also known as *InduMedical* is equipped with an antimicrobial surface. Thus, the growth and spread of micro-organisms is prevented. It is especially suitable for the application in hospitals, medical practices as well as other applicational areas which are sensitive to hygiene.



TKS-105a-KGEH / TB38-KGEH / TOUCH-KGEH

This keyboard is the base model of the successful TKS type series. It is based on high-quality electromechanic short travel keys and provides an excellent, tactile feedback and a long service life. The closed surface is resistant to water, dust, and other substances which can be found in the industry. As a housing version, it comes with the usual MFII layout of a customary PC keyboard.

TKS-105a-TB38-KGEH and TKS-105a-TOUCH-KGEH are the two versions with integrated trackball or touchpad as mouse pointing device.

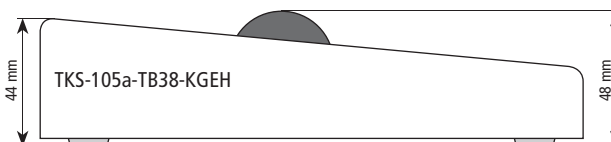
Side views (sketched representation):



Wireless keyboard: TKS-105a-TB38-RF-KGEH

Foil covered short travel keyboard in rugged plastic housing with trackball and integrated radio-control-based decoder.

- Multi-channel capable (more than 100 systems synchronously usable in transmission range)
- Long battery life by automatic standby-switching mechanism
- Only to be used with the described battery type and the included battery charger



For example realizable on request:

- Other country layouts (standard: DE and US)
- Customized change of colour
- Integration of your company logo
- VESA-compatible mounting holes



TKS-030-KGEH / TKS-030-TOUCH-KGEH

Compact short travel keyboard in a solid plastic housing with 30 keys. In addition to various function keys, the alphanumeric layout offers a second function level.

Technical data KGEH-versions

Switching technology:	short travel keys	Housing design:	plastic housing (KGEH)
Switching force:	2.6 N	Housing material:	ABS
Switch travel:	0.3 mm	Operating temp.:	-25 °C to +70 °C ¹
Switching cycles:	approx. 3 Mio. (per key)	Storage temp.:	-25 °C to +80 °C ³



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
KS07211	TKS-105a-KGEH-PS/2-US	none	IP65	480 x 182 x 34	1400 g
KS09451	TKS-105a-KGEH-USB-US	none	IP65	480 x 182 x 34	1400 g
KS08271	TKS-105a-TB38-KGEH-PS/2-US	Trackball, 38 mm	IP65 ²	480 x 182 x 44	1600 g
KS09453	TKS-105a-TB38-KGEH-USB-US	Trackball, 38 mm	IP65 ²	480 x 182 x 44	1600 g
KS07216	TKS-105a-TOUCH-KGEH-PS/2-US	Touchpad	IP65	480 x 182 x 34	1400 g
KS09455	TKS-105a-TOUCH-KGEH-USB-US	Touchpad	IP65	480 x 182 x 34	1400 g
KS15267	TKS-105a-TB38-RF-KGEH-PS/2-US ²	Trackball, 38 mm ²	IP65 ²	480 x 182 x 44	1550 g
KS14026	TKS-105a-TB38-RF-KGEH-USB-US ²	Trackball, 38 mm ²	IP65 ²	480 x 182 x 44	1550 g
KS07201	TKS-104a-KGEH-PS/2-US	none	IP65	372 x 182 x 34	1150 g
KS09506	TKS-104a-KGEH-USB-US	none	IP65	372 x 182 x 34	1150 g
KS08261	TKS-088a-TB38-KGEH-PS/2-US	Trackball, 38 mm	IP65 ²	372 x 182 x 44	1300 g
KS09508	TKS-088a-TB38-KGEH-USB-US	Trackball, 38 mm	IP65 ²	372 x 182 x 44	1300 g
KS07206	TKS-088a-TOUCH-KGEH-PS/2-US	Touchpad	IP65	372 x 182 x 34	1150 g
KS09510	TKS-088a-TOUCH-KGEH-USB-US	Touchpad	IP65	372 x 182 x 34	1150 g
KS03213	TKS-088-TOUCH-AM-KGEH-PS/2-US	Touchpad	IP65	372 x 182 x 34	1150 g
KS13209	TKS-088-TOUCH-AM-KGEH-USB-US	Touchpad	IP65	372 x 182 x 34	1150 g
KS07351	TKS-030-KGEH-PS/2-US	none	IP65	125 x 150 x 31	450 g
KS07352	TKS-030-KGEH-USB-US	none	IP65	125 x 150 x 31	450 g
KS09222	TKS-030-TOUCH-KGEH-PS/2-US	Touchpad	IP65	195 x 151 x 31	550 g
KS14003	TKS-030-TOUCH-KGEH-USB-US	Touchpad	IP65	195 x 151 x 31	550 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

² IP65 (front), IP54 (dynam.)

³ Wireless version: -10 °C to +50 °C



Learn more about further housing and mounting versions of the TKS series:

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Joystick version	Page 13, 15



In addition to the antimicrobial protection the keyboard can also be disinfected and wiped. The InduMedical is sealed to IP65 standard making it impervious to dust and liquids and comes with a rugged ABS case.



Optical 50-mm trackball: TKS-105a-TB50oF80-MODUL



Integrated joystick: TKS-105a-JSTb-MODUL



**Integrated USB-Port
to connect external devices**

- USB 2.0
- USB-plug protection cap (IP65)
- Optional:
external voltage source,
500mA
- Not included: power pack
- Specified plug:
-Min. 5V / 700mA
-NES/J25, NES/J250, XNES/J250

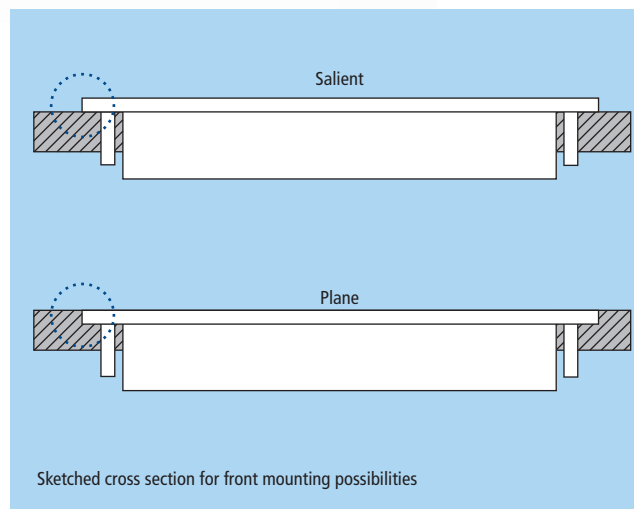
TKS-105a-TB50XF50-MODUL-USBPORT



Front Mounting

The front mounting of a keyboard is the kind of systems integration which is most widely used in the field of engine and tool building. The input device is firmly linked to the system; if it is accordingly mounted, a plane surface of the operating panel is the result.


The front mounting is performed by means of threaded fastening bolts which are installed on the rear side of the keyboard front panel. The keyboard is embedded into the mounting surface of the system and is screwable in place. A gasket reliably prevents liquids and dust from entering the carrier system. In order to create the cut-out, a cutting template can be used. For the mounting of the keyboard, the studs can be screwed by nuts. In order to protect the circuit board of the keyboard, the back of the keyboard is equipped with a metal protective tray.



Technical data MODUL-versions

Switching technology:	short travel keys	Housing design:	front panel with threaded bolts
Switching force:	2.6 N	Front panel material:	aluminium
Switch travel:	0.3 mm	Operating temp.:	-25 °C to +70 °C ¹
Switching cycles:	approx. 3 Mio. (per key)	Storage temp.:	-25 °C to +80 °C



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
KS07241	TKS-105a-MODUL-PS/2-US	none	IP65	482.6 x 177.8 x 23.0	1200 g
KS09490	TKS-105a-MODUL-USB-US	none	IP65	482.6 x 177.8 x 23.0	1200 g
KS08308	TKS-105a-TB38-MODUL-PS/2-US	Trackball, 38 mm	IP65 ³	482.6 x 177.8 x 48.0	1300 g
KS09498	TKS-105a-TB38-MODUL-USB-US	Trackball, 38 mm	IP65 ³	482.6 x 177.8 x 48.0	1300 g
KS01201	TKS-105a-TB50oF80-MODUL-PS/2-US ²	Trackball, 50 mm ²	IP65 ³	482.6 x 177.8 x 48.0	1600 g
KS01203	TKS-105a-TB50oF80-MODUL-USB-US ²	Trackball, 50 mm ²	IP65 ³	482.6 x 177.8 x 48.0	1600 g
KS07246	TKS-105a-TOUCH-MODUL-PS/2-US	Touchpad	IP65	482.6 x 177.8 x 23.0	1200 g
KS09502	TKS-105a-TOUCH-MODUL-USB-US	Touchpad	IP65	482.6 x 177.8 x 23.0	1200 g
KS15003	TKS-105a-JSTb-MODUL-PS/2-US	Joystick	IP65	482.6 x 177.8 x 48.0	1450 g
KS15005	TKS-105a-JSTb-MODUL-USB-US	Joystick	IP65	482.6 x 177.8 x 48.0	1450 g
KS07231	TKS-104a-MODUL-PS/2-US	none	IP65	370.0 x 180.0 x 23.0	1000 g
 KS18357	TKS-105a-TB50XF50-MODUL-USBPORT-USB-US	Trackball, 50 mm ²	IP65 ³	482.6 x 177.8 x 48.0	1500 g
KS09512	TKS-104a-MODUL-USB-US	none	IP65	370.0 x 180.0 x 23.0	1000 g
KS08312	TKS-088a-TB38-MODUL-PS/2-US	Trackball, 38 mm	IP65 ³	370.0 x 180.0 x 43.0	1100 g
KS09520	TKS-088a-TB38-MODUL-USB-US	Trackball, 38 mm	IP65 ³	370.0 x 180.0 x 43.0	1100 g
KS07236	TKS-088a-TOUCH-MODUL-PS/2-US	Touchpad	IP65	370.0 x 180.0 x 23.0	1000 g
KS09524	TKS-088a-TOUCH-MODUL-USB-US	Touchpad	IP65	370.0 x 180.0 x 23.0	1000 g
Compact layout					
KS08461	TKS-030-MODUL-PS/2-US	none	IP65	141.0 x 157.0 x 15.4	300 g
KS08466	TKS-030-MODUL-USB-US	none	IP65	141.0 x 157.0 x 15.4	300 g
KS02031	TKS-030-TOUCH-MODUL-PS/2-US	Touchpad	IP65	141.0 x 196.0 x 15.4	400 g
KS14001	TKS-030-TOUCH-MODUL-USB-US	Touchpad	IP65	141.0 x 196.0 x 15.4	400 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

² Optical Trackball

³ IP65 (front), IP54 (dynam.)



Learn more about further housing and mounting versions of the TKS series:

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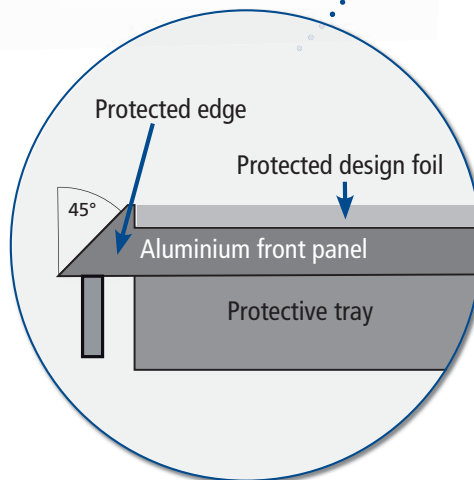
Stay bolts which are installed on the rear side of the keyboard front panel allow for a mounting of the keyboard to the respective mounting surface. A cutting template can help to create the mounting cut-out.



Front Mounting with Edge Protection

In contrast to the conventional front mount models (see p. 12), those front mounting variants have a heightened revolving edge. The edge protection is realized by a deeper milling of the front panel.

The reason for this variation is an increased protection of the front foil. Especially with regard to keyboards which are not plane mounted, it may be possible that the foil comes off on the edges and borders. Particularly with regard to machines and plants in mechanically demanding areas, the edge protection ensures a long durability of the device.



TKS-105b-TB38-MODUL



TKS-105b-TB50oF80-MODUL



Compact: TKS-030b-MODUL

Technical data: MODUL-versions with edge protection

Switching technology:	short travel keys	Housing design:	front panel with threaded bolts
Switching force:	2.6 N	Front panel material:	aluminium
Switch travel:	0.3 mm	Operating temp.:	-25 °C to +70 °C ¹
Switching cycles:	approx. 3 Mio. (per key)	Storage temp.:	-25 °C to +80 °C



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
KS13021	TKS-105b-MODUL-PS/2-US	none	IP65	482.6 x 177.8 x 23.0	1200 g
KS13023	TKS-105b-MODUL-USB-US	none	IP65	482.6 x 177.8 x 23.0	1200 g
KS13026	TKS-105b-TB38-MODUL-PS/2-US	Trackball, 38 mm	IP65 ³	482.6 x 177.8 x 48.0	1300 g
KS13028	TKS-105b-TB38-MODUL-USB-US	Trackball, 38 mm	IP65 ³	482.6 x 177.8 x 48.0	1300 g
KS14006	TKS-105b-TB50oF80-MODUL-PS/2-US ²	Trackball, 50 mm ²	IP65 ³	482.6 x 177.8 x 48.0	1600 g
KS14008	TKS-105b-TB50oF80-MODUL-USB-US ²	Trackball, 50 mm ²	IP65 ³	482.6 x 177.8 x 48.0	1600 g
KS13031	TKS-105b-TOUCH-MODUL-PS/2-US	Touchpad	IP65	482.6 x 177.8 x 23.0	1200 g
KS13033	TKS-105b-TOUCH-MODUL-USB-US	Touchpad	IP65	482.6 x 177.8 x 23.0	1200 g
KS15007	TKS-105b-JSTb-MODUL-PS/2-US	Joystick	IP65	482.6 x 177.8 x 48.0	1450 g
KS15009	TKS-105b-JSTb-MODUL-USB-US	Joystick	IP65	482.6 x 177.8 x 48.0	1450 g
KS15011	TKS-104b-MODUL-PS/2-US	none	IP65	370.0 x 180.0 x 23.0	1000 g
KS15013	TKS-104b-MODUL-USB-US	none	IP65	370.0 x 180.0 x 23.0	1000 g
KS15015	TKS-088b-TB38-MODUL-PS/2-US	Trackball, 38 mm	IP65 ³	370.0 x 180.0 x 43.0	1100 g
KS15017	TKS-088b-TB38-MODUL-USB-US	Trackball, 38 mm	IP65 ³	370.0 x 180.0 x 43.0	1100 g
KS15019	TKS-088b-TOUCH-MODUL-PS/2-US	Touchpad	IP65	370.0 x 180.0 x 23.0	1000 g
KS15021	TKS-088b-TOUCH-MODUL-USB-US	Touchpad	IP65	370.0 x 180.0 x 23.0	1000 g
Compact layout					
KS14028	TKS-030b-MODUL-PS/2-US	none	IP65	141.0 x 157.0 x 15.4	300 g
KS14030	TKS-030b-MODUL-USB-US	none	IP65	141.0 x 157.0 x 15.4	300 g
KS14032	TKS-030b-TOUCH-MODUL-PS/2-US	Touchpad	IP65	141.0 x 196.0 x 15.4	400 g
KS14034	TKS-030b-TOUCH-MODUL-USB-US	Touchpad	IP65	141.0 x 196.0 x 15.4	400 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

² Optical trackball

³ IP65 (front), IP54 (dynam.)



Learn more about further housing and mounting versions of the TKS series:

Housing	Page 9, 11
Front mounting	Page 13
Rack mounting	Page 17, 19
Explosion protection	Page 27
Drawer	Page 17



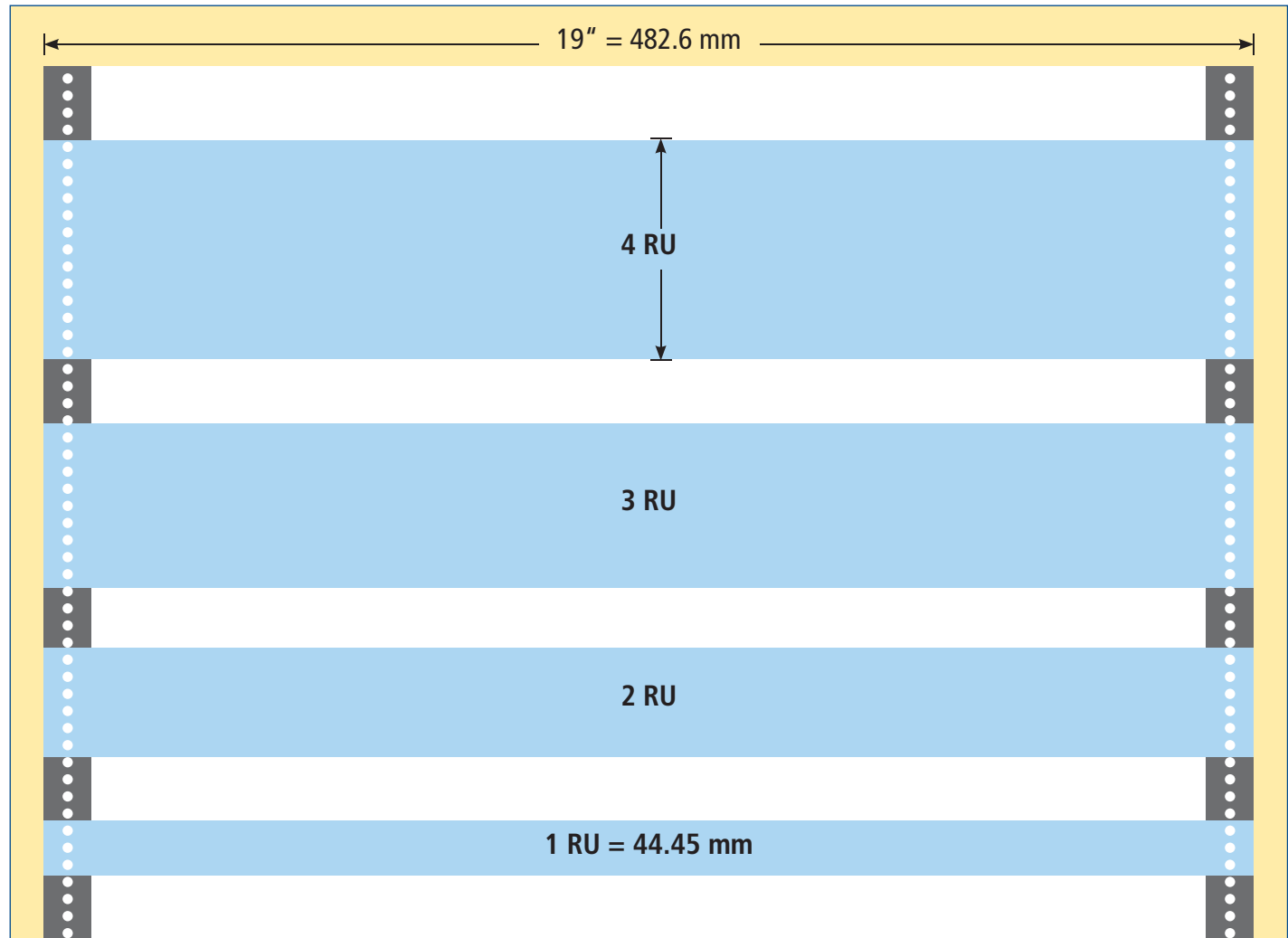
Front-mounted keyboards with edge protection secures the front foil against delamination due to mechanical influences. This product variant is called „b-variant“ at InduKey®; the „a-variant“ represents the conventional front mount model.



Rack Mounting:

One type of front mounting is the installation into industrial rack systems. In the majority of cases, these systems are subject to the 19" system. In this context, 19" or 482.6 mm refer to the width of the racks which can be stored on rails inside the cabinet; therefore they are extractable and retractable. The height of one cassette compartment fits to the standardisation as well. Here, rack units play a significant role. Those units, called RU, have a height of 1.75" or 44.45 mm per unit.

With the FP-series, InduKey has developed a product family of industrial keyboards which are precisely adapted to the specifications of the 19" system. All those keyboards have a width of 19"; according to the rack units, models with 1 (drawer version), 3 or 4 RU are available. The mounting of the industrial keyboards of the InduKey-FP-series is performed by means of boreholes on the front of the keyboard front panel. The keyboard front panel is connected to the frame of the rack by means of a screw.



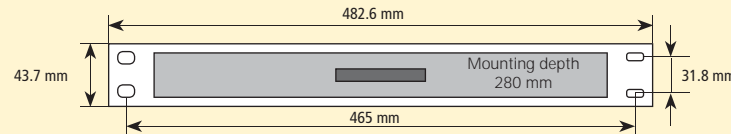
Graphic representation of the various rack units in a 19" rack



Technical data: version with drawer

Switching technology:	short travel keys
Switching force:	2.6 N
Switch travel:	0.3 mm
Switching cycles:	approx. 3 Mio. (per key)
Mounting type:	19" drawer (1 RU)
Front panel material:	aluminium
Interfaces:	PS/2; USB
Operating temp.:	-25 °C to +70 °C ¹
Storage temp.:	-25 °C to +80 °C

Front view ²:



i Technical data of the integrated touchpad

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

The extracted drawers are bendable up to approx. 15°!

Rugged keyboard/ drawer combination

This aesthetically appealing mounting variant of the TKS input system is suited for the use in 19" systems. Due to the low height of 1 RU (1 rack unit = 44.45 mm) it requires very little space. The extracted drawer has an angle of 15° which allows an easy operation in standing position.

Learn more about further housing and mounting versions of the TKS series:

Housing	Page 9, 11
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TKS-104a-SCHUBL
Drawer without integrated mouse pointing device



TKS-088a-TOUCH-SCHUBL
Drawer with integrated touchpad (capacitive)



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
KS07426	TKS-104a-SCHUBL-PS/2-US	none	IP65	482.6 x 280.0 x 43.7	5000 g
KS09528	TKS-104a-SCHUBL-USB-US	none	IP65	482.6 x 280.0 x 43.7	5000 g
KS07421	TKS-088a-TOUCH-SCHUBL-PS/2-US	Touchpad	IP65	482.6 x 280.0 x 43.7	5100 g
KS09530	TKS-088a-TOUCH-SCHUBL-USB-US	Touchpad	IP65	482.6 x 280.0 x 43.7	5100 g

Other layouts, configurations and interfaces on request

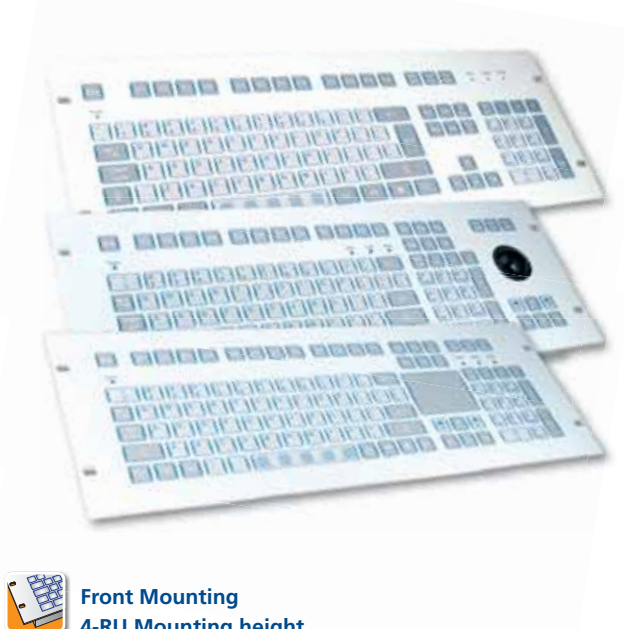
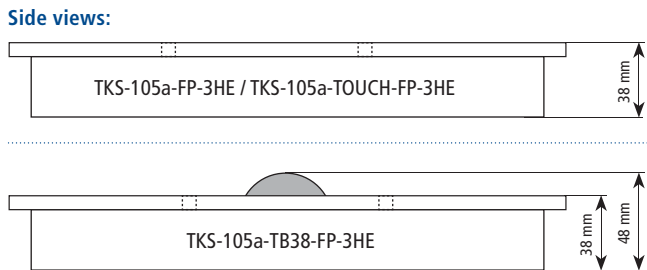
¹ Keyboards with pointing device: 0 °C to +70 °C



 **Front Mounting**
3-RU Mounting height

TKS-105a-FP-3HE
Those keyboards are ideally suited for the installation into the 19" systems. While 19" refers to the width of the device, one rack unit (RU) means 44.45 mm. This device possesses 3 RU = 133.35 mm.

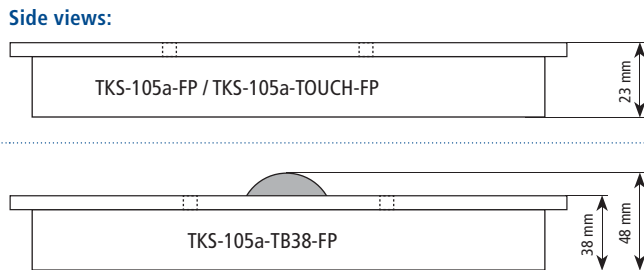
TKS-105a-TB38-FP-3HE and TKS-105a-TOUCH-FP-3HE
These models are the variations with integrated pointing devices. Therefore they are ideally suited for the installation into 19" systems, where the functionality of a mouse is required in addition.



 **Front Mounting**
4-RU Mounting height

TKS-105a-FP
Being technically identical with the TKS-105a-FP-3HE, this keyboard product family offers all features of a rugged industrial short travel keyboard with a front panel height of 4 RU - perfectly tailored to standardised 19" switch cabinets.

TKS-105a-TB38-FP and TKS-105a-TOUCH-FP
These models are the variations with integrated pointing devices.



 **Cassette Mounting**
3-RU Mounting height

TKS-030-FP
In addition to the integration method, you receive – with the same key layout – the model of the TKS-030-FP with mounting holes for the integration in 19-inch standard drawers as displayed here. This compact layout version consists of 30 keys.



Technical data: front panel versions (FP)

Switching technology:	short travel keys	Mounting type:	19" front panel with boreholes
Switching force:	2.6 N	Front panel material:	aluminium
Switch travel:	0.3 mm	Operating temp.:	-25 °C to +70 °C ¹
Switching cycles:	approx. 1 Mio. (per key)	Storage temp.:	-25 °C to +80 °C



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
3-RU Mounting Height					
KS09404	TKS-105a-FP-3HE-PS/2-US	none	IP65	482.6 x 133.5 (3 RU) x 38.0	900 g
KS09461	TKS-105a-FP-3HE-USB-US	none	IP65	482.6 x 133.5 (3 RU) x 38.0	900 g
KS09204	TKS-105a-TB38-FP-3HE-PS/2-US	Trackball, 38 mm	IP65 ³	482.6 x 133.5 (3 RU) x 38.0	1000 g
KS09474	TKS-105a-TB38-FP-3HE-USB-US	Trackball, 38 mm	IP65 ³	482.6 x 133.5 (3 RU) x 38.0	1000 g
KS09405	TKS-105a-TOUCH-FP-3HE-PS/2-US	Touchpad	IP65	482.6 x 133.5 (3 RU) x 38.0	900 g
KS09482	TKS-105a-TOUCH-FP-3HE-USB-US	Touchpad	IP65	482.6 x 133.5 (3 RU) x 38.0	900 g
4-RU Mounting Height					
KS07221	TKS-105a-FP-PS/2-US	none	IP65	482.6 x 177.8 (4 RU) x 23.0	1200 g
KS09457	TKS-105a-FP-USB-US	none	IP65	482.6 x 177.8 (4 RU) x 23.0	1200 g
KS08304	TKS-105a-TB38-FP-PS/2-US	Trackball, 38 mm	IP65 ³	482.6 x 177.8 (4 RU) x 48.0	1300 g
KS09470	TKS-105a-TB38-FP-USB-US	Trackball, 38 mm	IP65 ³	482.6 x 177.8 (4 RU) x 48.0	1300 g
KS01205	TKS-105a-TB50oF80-FP-PS/2-US	Trackball, 50 mm ²	IP65 ³	482.6 x 177.8 (4 RU) x 48.0	1600 g
KS01207	TKS-105a-TB50oF80-FP-USB-US	Trackball, 50 mm ²	IP65 ³	482.6 x 177.8 (4 RU) x 48.0	1600 g
KS07226	TKS-105a-TOUCH-FP-PS/2-US	Touchpad	IP65	482.6 x 177.8 (4 RU) x 23.0	1200 g
KS09478	TKS-105a-TOUCH-FP-USB-US	Touchpad	IP65	482.6 x 177.8 (4 RU) x 23.0	1200 g
3-RU Compact Layout					
KS08460	TKS-030-FP-PS/2-US	none	IP65	128.6 x 111.6 x 16.0	200 g
KS08464	TKS-030-FP-USB-US	none	IP65	128.6 x 111.6 x 16.0	200 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

² Optical trackball

³ IP65 (front), IP54 (dynam.)



Learn more about further housing and mounting versions of the TKS series:

Housing	Page 9, 11
Front mounting	Page 13
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In the technical sector, „rack“ designates a frame for electrical devices which has a standardised width of 19“. Therefore, the InduKey® keyboards have a front panel width of precisely 482.6 mm in order to meet the requirements of this standardisation. In case of devices of smaller dimensions, such as the TKS-030-FP, a so called cassette mounting is performed in order to appropriately incorporate the device.



TKF Series

The models of the TKF series are suited for the application in rugged environments. The TKF keyboards differ to other foil covered industrial keyboards in the very flat mounting depth which is achieved by the application of metal domes of a low construction height, which are used as mechanical switch elements. Thus, the keyboards of this category are ideally suited for the installation into devices of a low mounting depth and compact dimensions.

Moreover, a good tactile feedback results from the switch travel of 0.55 mm. Particularly during the keyboard operation with gloves, the key feedback is well perceptible.

As pointing devices which are integrated into the keyboard, touchpads and trackballs are used.

The models of the TKF series are particularly used in the following application areas:

- Fittings of all kinds
- Medical equipment engineering
- Measuring and control technology
- Flat control desks
- Industrial PCs
- Control and observation stations
- Information terminals

Table of Contents

Housing Series

Plastic

TKF-085a-KGEH 23
 TKF-085a-TB38-KGEH 23
 TKF-085a-TOUCH-KGEH 23

Metal

TKF-085c-MGEH 23
 TKF-085c-TOUCH-MGEH 23

OEM-Series

TKF-085a-OEM 23

Front Mounting Series

With Metal Frame

TKF-085a-MODUL 25
 TKF-085a-TB38-MODUL 25
 TKF-085a-TOUCH-MODUL 25
 TKF-085b-MODUL 25
 TKF-085b-TB38-MODUL 25
 TKF-085b-TOUCH-MODUL 25

Rack Mounting Series

With Metal Frame

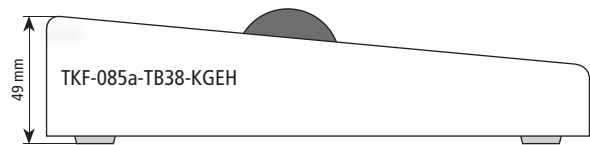
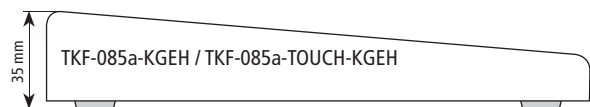
TKF-085a-FP 25
 TKF-085a-TB38-FP 25
 TKF-085a-TOUCH-FP 25
 TKF-085b-FP 25
 TKF-085b-TB38-FP 25
 TKF-085b-TOUCH-FP 25



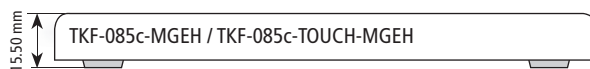
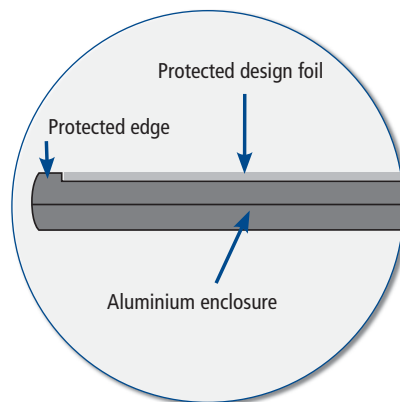


Due to its compact dimensions, the keyboard TKF-085a-KGEH in an ABS plastic housing is particularly space-saving.

TKF-085a-TB38-KGEH and TKF-085a-TOUCH-KGEH are the two variants with an integrated trackball or touchpad as pointing device.



InduStyle - TKF-085c-MGEH - With a height of 15.50 mm, the visually attractive keyboard InduStyle is an extremely flat desktop keyboard. In a housing which is completely made of aluminium, the keyboard combines long-lasting quality and functional reliability in rugged environments. As a feature, this housing version offers a deeper milling in order to optimally protect the foil edge. A deeper recess protects the design foil even better against delamination.



TKF-085a-TB38-KGEH



TKF-085a-TOUCH-KGEH



TKF-085c-TOUCH-MGEH



TKF-085a-OEM

This mounting variant can be integrated into systems by means of an adhesive foil on the rear side. The keyboard is flexibly usable, since no mechanical incorporation is required.

Technical data of the housing versions

Switching technology:	gold plated domes
Switching force:	3 N
Switch travel:	0.6 mm
Switching cycles:	approx. 1 Mio. (per key)
Material:	MGEH version: aluminium, metal housing KGEH version: ABS, plastic housing OEM version: FR4 (Epoxy glass resin)
Operating temp.:	-25 °C to +70 °C ¹
Storage temp.:	-25 °C to +80 °C



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
Plastic Housing					
KF08289	TKF-085a-KGEH-PS/2-US	none	IP65	274.00 x 138.00 x 35.00	700 g
KF09451	TKF-085a-KGEH-USB-US	none	IP65	274.00 x 138.00 x 35.00	700 g
KF08281	TKF-085a-TB38-KGEH-PS/2-US	Trackball, 38 mm	IP65 ²	350.00 x 138.00 x 49.00	900 g
KF09447	TKF-085a-TB38-KGEH-USB-US	Trackball, 38 mm	IP65 ²	350.00 x 138.00 x 49.00	900 g
KF08285	TKF-085a-TOUCH-KGEH-PS/2-US	Touchpad	IP65	350.00 x 138.00 x 35.00	700 g
KF09449	TKF-085a-TOUCH-KGEH-USB-US	Touchpad	IP65	350.00 x 138.00 x 35.00	700 g
Metal Housing					
KF02061	TKF-085c-MGEH-PS/2-US	none	IP65	261.00 x 116.00 x 15.50	750 g
KF02063	TKF-085c-MGEH-USB-US	none	IP65	261.00 x 116.00 x 15.50	750 g
KF02067	TKF-085c-TOUCH-MGEH-PS/2-US	Touchpad	IP65	335.50 x 116.00 x 15.50	1000 g
KF02069	TKF-085c-TOUCH-MGEH-USB-US	Touchpad	IP65	335.50 x 116.00 x 15.50	1000 g
OEM Adhesive Foil					
KF08226	TKF-085a-OEM-PS/2-US	none	IP65	245.50 x 107.50 x 10.00	200 g
KF13001	TKF-085a-OEM-USB-US	none	IP65	245.50 x 107.50 x 10.00	200 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

² IP652 (front), IP54 (dynam.)



Other industrial keyboards:

Foil covered industrial keyboards	Page 6
Explosion protected industrial keyboards	Page 26
Keyboards and mice for cleaning and disinfection	Page 30
Stainless steel/ carbon keyboards	Page 36
Keyboards with silicone keys	Page 40



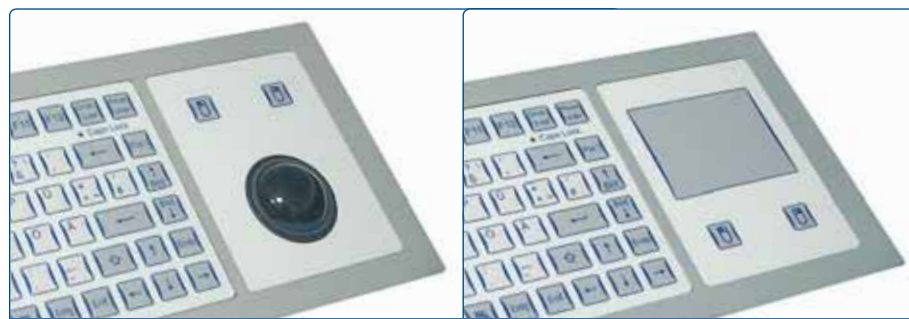
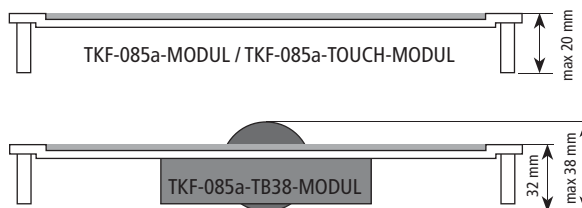
Flat input keyboard of the TKF-085a-Series integrated in a portable ultrasonic system for the measurement of blood flow.

With a protection level of IP65, the TKF-085a keyboards are protected against dust and liquids. They are easy to clean and to disinfect.



TKF-085a/b-MODUL - Front Mounting

TKF-085a/b-MODUL is a compact keyboard which is to be mounted. Threaded bolts on the rear side of the front panel allow an easy installation of the keyboard into systems. The metal frame of the "a-version" is an additional protection in case of rugged applications.

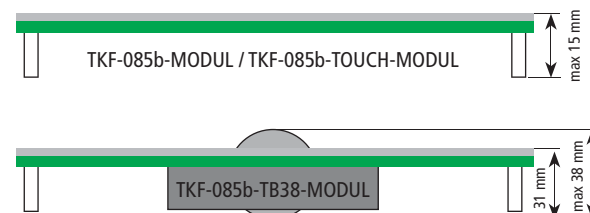


Each available with 38-mm trackball or touchpad



TKF-085a/b-FP - 19" Cassette Mounting

Due to the mounting bore holes, this compact keyboard is suited for the installation into 19" rack systems or switch cabinet systems. RU designated a rack unit (44.45 mm), HP a horizontal pitch (5.08 mm).



Each available with 38-mm trackball or touchpad

Technical data:

Switching technology:	Gold plated domes	Switching cycles:	approx. 1 Mio. (per key)	Mounting type:	see page 69
Switching force:	3 N	Front panel material:	a-version: Aluminium	Operating temp.:	-25 °C to +70 °C ¹
Switch travel:	0.6 mm		b-version: FR4 (Epoxy glass resin)	Storage temp.:	-25 °C to +80 °C



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
KF08266	TKF-085a-MODUL-PS/2-US	none	IP65	274.0 x 135.0 x 20.0	380 g
KF09433	TKF-085a-MODUL-USB-US	none	IP65	274.0 x 135.0 x 20.0	380 g
KF08258	TKF-085a-TB38-MODUL-PS/2-US	Trackball, 38 mm	IP65 ²	365.0 x 135.0 x 32.0	550 g
KF09439	TKF-085a-TB38-MODUL-USB-US	Trackball, 38 mm	IP65 ²	365.0 x 135.0 x 32.0	550 g
KF08262	TKF-085a-TOUCH-MODUL-PS/2-US	Touchpad	IP65	365.0 x 135.0 x 20.0	500 g
KF09443	TKF-085a-TOUCH-MODUL-USB-US	Touchpad	IP65	365.0 x 135.0 x 20.0	500 g
KF02001	TKF-085b-MODUL-PS/2-US	none	IP65	274.0 x 135.0 x 15.0	350 g
KF02003	TKF-085b-MODUL-USB-US	none	IP65	274.0 x 135.0 x 15.0	350 g
KF02021	TKF-085b-TB38-MODUL-PS/2-US	Trackball, 38 mm	IP65 ²	365.0 x 135.0 x 31.0	400 g
KF02023	TKF-085b-TB38-MODUL-USB-US	Trackball, 38 mm	IP65 ²	365.0 x 135.0 x 31.0	400 g
KF02031	TKF-085b-TOUCH-MODUL-PS/2-US	Touchpad	IP65	365.0 x 135.0 x 15.0	350 g
KF02033	TKF-085b-TOUCH-MODUL-USB-US	Touchpad	IP65	365.0 x 135.0 x 15.0	350 g



KF08231	TKF-085a-FP-PS/2-US	none	IP65	264.0 x 128.4 x 15.0	300 g
KF09405	TKF-085a-FP-USB-US	none	IP65	264.0 x 128.4 x 15.0	300 g
KF08248	TKF-085a-TB38-FP-PS/2-US	Trackball, 38 mm	IP65 ²	340.0 x 128.4 x 32.0	530 g
KF09425	TKF-085a-TB38-FP-USB-US	Trackball, 38 mm	IP65 ²	340.0 x 128.4 x 32.0	530 g
KF08252	TKF-085a-TOUCH-FP-PS/2-US	Touchpad	IP65	340.0 x 128.4 x 15.0	440 g
KF09429	TKF-085a-TOUCH-FP-USB-US	Touchpad	IP65	340.0 x 128.4 x 15.0	440 g
KF02011	TKF-085b-FP-PS/2-US	none	IP65	264.0 x 128.4 x 15.0	320 g
KF02013	TKF-085b-FP-USB-US	none	IP65	264.0 x 128.4 x 15.0	320 g
KF15001	TKF-085b-TB38-FP-PS/2-US	Trackball, 38 mm	IP65 ²	340.0 x 128.4 x 31.0	370 g
KF15003	TKF-085b-TB38-FP-USB-US	Trackball, 38 mm	IP65 ²	340.0 x 128.4 x 31.0	370 g
KF02041	TKF-085b-TOUCH-FP-PS/2-US	Touchpad	IP65	340.0 x 128.4 x 15.0	320 g
KF02043	TKF-085b-TOUCH-FP-USB-US	Touchpad	IP65	340.0 x 128.4 x 15.0	320 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

² IP65 (front), IP54 (dynam.)



Other industrial keyboards:

- Foil covered industrial keyboards Page 6
- Explosion protected industrial keyboards Page 26
- Keyboards and mice for cleaning and disinfection Page 30
- Stainless steel/ carbon keyboards Page 36
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Foil keyboard of the TKF-085b-Series in robust Ruggedized-PC for the toughest conditions

The Ruggedized-PC is suited for the use in extremely dirty, wet, vibration-exposed or dusty environments, such as e.g. in mining areas or on tunnel drilling machines, outdoors on construction machines or harbour facilities, in water works or saw mills, as well as in brickworks.



EX Series

The keyboards of this category are used in areas where a potentially explosive atmosphere occurs. This does not only apply to „classical“ explosion-prone areas such as tank farms or mines, but also increasingly to industrial environments. There are two possibilities to prevent an explosion – either the formation of an explosive atmosphere is prevented or the ignition of which. In most cases it is not possible to eliminate an explosive atmosphere. Consequently, the ignition of such a mixture must be avoided. This means that all devices, being a potential ignition source when used in explosion-prone areas, must be designed in such a way that an ignition is impossible. The keyboards of this category are completely certified and tested for the following protection zones:

Protection zone 1: Area in which a potentially explosive atmosphere composed of a mixture of air, combustible gases, vapours or mist may occasionally occur during normal operation.

Protection zone 2: Area in which a potentially explosive atmosphere composed of a mixture of air, combustible gases, vapours or mist does normally not, or only temporarily, occur during normal operation.

Protection zone 22: Area in which a potentially explosive atmosphere consisting of a cloud of combustible dust contained in the air does normally not, or only temporarily, occur during normal operation.

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TKS-105-EX-TOUCH-MGEH	29

Front Mounting Series

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TKS-105-EX-TOUCH-MODUL	29

With IP68 Protection

Keyboard	
TKG-105-EX-IP68-GREY	29
Mouse	
TKH-MAUS-EX-IP68-GREY-OPT	29





IP 65

Metal Housing

This explosion protected keyboard is available as housing variant. Due to the metal front panel and the stainless steel housing, the keyboard is extremely resistant. For this keyboard, a decoupling device for the galvanic isolation between the keyboard and the system is required. This barrier can be ordered as well.



IP 65

Front Mounting

This explosion protected keyboard, being a front panel model, can easily be integrated into systems by means of threaded bolts which are located on the rear side. Here again, a decoupling device for the galvanic isolation between the keyboard and the system is required which can be ordered as well.



IP 68

Entirely Covered Silicone Keyboard

This explosion protected keyboard and the explosion protected mouse are completely covered with silicone, which makes them entirely waterproof and dustproof. In order to be able to use the keyboard in explosion-prone areas, a decoupling device becomes necessary in this case as well.



Available as version with 50-mm trackball or touchpad



Available as version with 50-mm trackball or touchpad

IP 68



Optical silicone mouse: TKH-MAUS-EX-IP68-GREY-OPT

Technical data:

Switching technology: short travel keys
 Switching force: 2.6 N
 Switch travel: 0.3 mm
 Switching cycles: approx. 3 Mio. (per key)
 Front panel material: TKS version: aluminium
 TKG version: silicone
 Housing material: MGEH version: stainless steel
 Operating temp.: 0 °C to +50 °C
 Storage temp.: 0 °C to +60 °C
 Interface: PS/2

TKA Interface EX:

For this keyboard, a decoupling device for the galvanic isolation between the keyboard and the system is optionally required.



TKA-EX-VERSORGUNG-TKS-PS/2



TKA-INTERFACE-EX



Cat.No.	Product description	Pointing device	Protection level ¹	Dimensions (mm)	Weight
KS02011	TKS-105-EX-MGEH-US	none	IP65	508.0 x 213.0 x 52.0	5700 g
KS02013	TKS-105-EX-TB50-MGEH-US	Trackball, 50 mm	IP65 ¹	508.0 x 213.0 x 52.0	6000 g
KS02015	TKS-105-EX-TOUCH-MGEH-US	Touchpad	IP65	508.0 x 213.0 x 52.0	5800 g
KA09210	TKA-EX-VERSORGUNG-TKS-PS/2	Please order the EX keyboard interface separately.			



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
KS09220	TKS-105-EX-TB50-MODUL-US	Trackball, 50 mm	IP65 ¹	482.6 x 177.8 x 48.0	1600 g
KS09218	TKS-105-EX-TOUCH-MODUL-US	Touchpad	IP65	482.6 x 177.8 x 23.0	1200 g
KA09210	TKA-EX-VERSORGUNG-TKS-PS/2	Please order the EX keyboard interface separately.			



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
KG14046	TKG-105-EX-IP68-GREY-PS/2-US	none	IP68	387.0 x 150.0 x 22.0	1200 g
KA08201	TKA-INTERFACE-EX	Please order the EX interface separately.			

Mouse

KH14001	TKH-MOUSE-EX-IP68-GREY-OPT-PS/2	Optical mouse	IP68	126.0 x 63.0 x 33.0	250 g
KA08201	TKA-INTERFACE-EX	Please order the EX interface separately.			

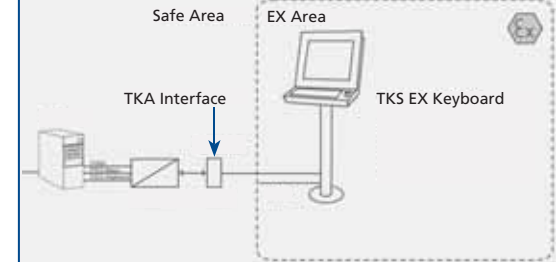
Other layouts, configurations and interfaces on request

¹IP65 (front), IP54 (dynam.)



Other industrial keyboards:

- Foil covered industrial keyboards Page 6
- Flat input keyboards Page 20
- Keyboards and mice for cleaning and disinfection Page 30
- Stainless steel/ carbon keyboards Page 36
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Data input devices as electromechanic devices, being a potential source of ignition, are subject to specific technical modifications and are furthermore confronted with demanding industrial environments.

For the operation in explosion-prone areas, the operating devices are at first separated from the system and from the remaining periphery, which are located in a safe area (see picture). For this, a so called barrier is used, which allows for the galvanic isolation of the two circuits. Without this barrier, the proper use of an explosion protected data input device is not possible. The distance between the operating element and the barrier can amount to up to 10.0 m.



InduProof Series

Waterproof, Disinfectable Input Devices

The keyboards and mice of this category are equipped with a closed silicone surface. Thus, they are completely protected against liquids and dust – the protection level is IP68.

These devices are particularly suited for environments which have to meet high hygienic requirements. Especially hospitals, laboratories, companies which are active in the fields of food and pharmaceutical production as well as manufacturers of microelectronic products benefit from the excellent features of these keyboards and mice. Since the devices are completely disinfectable and cleanable, bacteria and germs can be eliminated. In addition, some models possess antimicrobial properties, which attack

microbes that are located on the surface and inhibit their growth. The robust construction ensures a long service life. With some models, in addition to the mouse, a cursor control is available which is integrated into the keyboard.

The models of the IP68 family are particularly used in the following application areas and industries:

- Medical engineering
- Pharmaceuticals
- Chemical industry
- Food industry
- Clean room applications
- Military

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InduProof Advanced

TKG-104-MB-IP68-GREY 33
TKG-104-TOUCH-IP68-GREY 33

InduProof^{med}

TKG-105-MED-IP68-GREY 33
TKG-105-MED-IP68-BLACK 33

InduMouse

TKH-MOUSE-SCROLL-IP68-GREY-OPT 33
TKH-MOUSE-SCROLL-IP68-GREY-LASER..... 33
TKH-MOUSE-IP68-OPT-GREY..... 33
TKH-MOUSE-IP68-OPT-BLACK..... 33

InduProof¹

TKG-105-MB-IP68-GREY 35
TKG-105-MB-IP68-BLACK 35

InduProof²

TKG-105-IP68-GREY 35
TKG-105-IP68-BLACK 35

InduProof³

TKG-086-MB-IP68-GREY 35
TKG-086-MB-IP68-BLACK 35
TKG-086-MB-IP68-BACKL..... 35

Keyboard and Mouse Set

TKG-105-MED-IP68-BUNDLE-GREY..... 33
TKG-105-MED-IP68-BUNDLE-BLACK..... 33



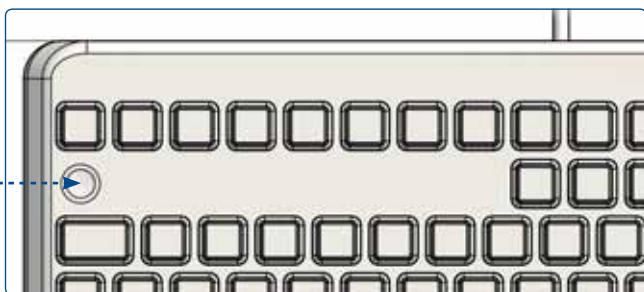
INDUPROOF
Advanced



 **UW -1** InduProof Advanced Keyboard

The models of the new InduProof generation are designed as desktop versions and are therefore operable on all even surfaces. Additionally, there are VESA boreholes on the rear side (75 mm matrix) which allow for a mounting of the keyboard on accordant fixtures.

ON/OFF switch: The disengagable electronic system allows for a complete cleaning even while the system is running!



InduProof^{med}



 **UW -1**  InduProof^{med} Keyboard

The silicone surface of this keyboard contains an agent which inhibits the growth of germs. Thus, these devices are suited for the use in areas which are sensitive to hygiene. A coating seals the surface and makes it resistant.



INDUMOUSE

InduMouse



IP 68 InduMouse Series

TKH-MOUSE-SCROLL-IP68-GREY-OPT

is the new generation of the InduMouse series. Thanks to a lateral waisting and a curvature for the palm, the ergonomics of this model are significantly improved. The low weight has a positive effect on the handling of the device. A novelty is the integrated scroll function through three keys at the front side of the mouse.

In spite of the IP68 protection degree and therefore the complete protection against dust and liquids, the new InduMouse is very easy to handle. As an alternative, our proven InduMouse is now also available with laser optics. Through this type of scanning, the use on reflecting surfaces such as glass or stainless steel is also possible.

TKH-MOUSE-IP68-OPT-GREY/BLACK

The first generation of the InduMouse mainly impresses with its sturdy construction. With its solid silicone body and a base plate made of metal, it is the right choice for rough industrial surroundings. Thanks to the optical scanning, the devices are completely closed. Here as well, a coating seals the surface resistantly.

Technical data	InduProof Advanced	InduProof ^{med}
Switching technology	Carbon contacts	Carbon contacts
Switching force	2 N	2 N
Switch travel	1.0 mm	1.0 mm
Switching cycles	approx. 3 Mio. (per key)	approx. 3 Mio. (per key)
Operating temp.	0°C to +70°C	-20°C to +70°C
Storage temp.	-25°C to +80°C	-25°C to +80°C

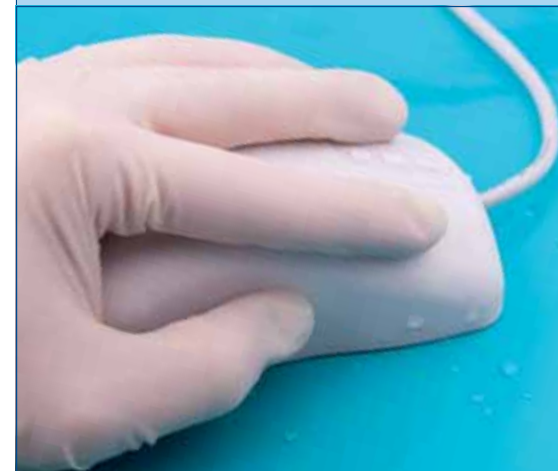
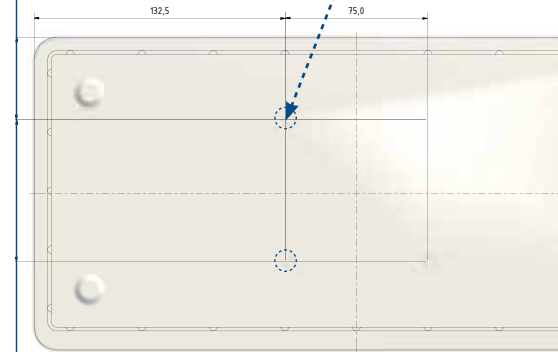
Cat.No.	Product description	Pointing device	Protection level	Dimensions (mm)	Weight	Colour
InduProof Advanced						
KG17226	TKG-104-MB-IP68-GREY-PS/2-US	Mousebutton	IP68	340.0 x 165.0 x 16.3	800 g	Grey
KG17204	TKG-104-MB-IP68-GREY-USB-US	Mousebutton	IP68	340.0 x 165.0 x 16.3	800 g	Grey
KG17224	TKG-104-TOUCH-IP68-GREY-PS/2-US	Touchpad	IP68	340.0 x 165.0 x 16.3	800 g	Grey
KG17202	TKG-104-TOUCH-IP68-GREY-USB-US	Touchpad	IP68	340.0 x 165.0 x 16.3	800 g	Grey
InduProof^{med}						
KG14011	TKG-105-MED-IP68-GREY-PS/2-US	none	IP68	385.0 x 160.0 x 21.0	1300 g	Grey
KG14013	TKG-105-MED-IP68-GREY-USB-US	none	IP68	385.0 x 160.0 x 21.0	1300 g	Grey
KG15001	TKG-105-MED-IP68-BLACK-PS/2-US	none	IP68	385.0 x 160.0 x 21.0	1300 g	Black
KG15003	TKG-105-MED-IP68-BLACK-USB-US	none	IP68	385.0 x 160.0 x 21.0	1300 g	Black
InduMouse						
KH17205	TKH-MOUSE-SCROLL-IP68-GREY-OPT-PS/2	Scroll mouse	IP68	116.0 x 62.0 x 38.6	160 g	Grey
KH16235	TKH-MOUSE-SCROLL-IP68-GREY-OPT-USB	Scroll mouse	IP68	116.0 x 62.0 x 38.6	160 g	Grey
KH18218	TKH-MOUSE-SCROLL-IP68-GREY-LASER-USB	Laser scroll mouse	IP68	116.0 x 62.0 x 38.6	160 g	Grey
KH01220	TKH-MOUSE-IP68-OPT-GREY-PS/2	Optical mouse	IP68	126.0 x 63.0 x 33.0	250 g	Grey
KH01221	TKH-MOUSE-IP68-OPT-GREY-USB	Optical mouse	IP68	126.0 x 63.0 x 33.0	250 g	Grey
KH02410	TKH-MOUSE-IP68-OPT-BLACK-PS/2	Optical mouse	IP68	126.0 x 63.0 x 33.0	250 g	Black
KH02408	TKH-MOUSE-IP68-OPT-BLACK-USB	Optical mouse	IP68	126.0 x 63.0 x 33.0	250 g	Black
TKG-105-MED-IP68-BUNDLE: Set consisting of keyboard (TKG-105-MED-IP68) and mouse (TKH-MOUSE-SCROLL-IP68) in grey						
KG16235	TKG-105-MED-IP68-BUNDLE-GREY-PS/2-US	Scroll mouse	IP68			Grey
KG16239	TKG-105-MED-IP68-BUNDLE-GREY-USB-US	Scroll mouse	IP68			Grey

Other layouts, configurations and interfaces on request



InduProof Advanced for VESA Mounting

If needed, boreholes on rear side for VESA mounting (75 x 75 mm) can be opened by means of „Push-Out“ from plastic bottom plate.



InduMouse: Mouse with 3 keys with scroll-function

InduProof



The Basic InduProof

TKG-105-MB-IP68-GREY / BLACK

The keyboard InduProof is the basic version of the successful InduProof Series. An integrated mouse button provides for the precise cursor control.



InduProof²



InduProof²

TKG-105-IP68-GREY / BLACK

The keyboard InduProof² is a silicone-covered keyboard in MFII-layout. Flattened key caps and mechanical short travel keys offer a pleasant tactile feedback. For perfect cursor control we recommend the InduMouse.



InduProof³



InduProof³

TKG-086-MB-IP68-GREY / BLACK

The keyboard InduProof³™ is equipped with an integrated mouse button. Also available as version with backlight which is dimmable in eight stages.



Technical data	InduProof	InduProof ²	InduProof ³
Switching technology	Short travel keys	Short travel keys	Gold plated domes
Switching force	2.6 N	2.6 N	3 N
Switch travel	0.3 mm	0.3 mm	0.6 mm
Switching cycles	approx. 3 Mio. (per key)	approx. 3 Mio. (per key)	approx. 2 Mio. (per key)
Operating temp.	0°C to +70°C	-20°C to +70°C	0°C to +70°C
Storage temp.	-25°C to +80°C	-25°C to +80°C	-25°C to +80°C



Cat.No.	Product description	Pointing device	Protection Level	Dimensions (mm)	Weight	Colour
InduProof						
KG09203	TKG-105-MB-IP68-GREY-PS/2-US	Mousebutton	IP68	387 x 146 x 27	1350 g	Grey
KG09205	TKG-105-MB-IP68-GREY-USB-US	Mousebutton	IP68	387 x 146 x 27	1350 g	Grey
KG01416	TKG-105-MB-IP68-BLACK-PS/2-US	Mousebutton	IP68	387 x 146 x 27	1350 g	Black
KG01418	TKG-105-MB-IP68-BLACK-USB-US	Mousebutton	IP68	387 x 146 x 27	1350 g	Black
InduProof²						
KG02003	TKG-105-IP68-GREY-PS/2-US	none	IP68	387 x 150 x 22	1200 g	Grey
KG02005	TKG-105-IP68-GREY-USB-US	none	IP68	387 x 150 x 22	1200 g	Grey
KG02434	TKG-105-IP68-BLACK-PS/2-US	none	IP68	387 x 150 x 22	1200 g	Black
KG02435	TKG-105-IP68-BLACK-USB-US	none	IP68	387 x 150 x 22	1200 g	Black
InduProof³						
KG13001	TKG-086-MB-IP68-GREY-PS/2-US	Mousebutton	IP68	320 x 145 x 22	1000 g	Grey
KG13003	TKG-086-MB-IP68-GREY-USB-US	Mousebutton	IP68	320 x 145 x 22	1000 g	Grey
KG13005	TKG-086-MB-IP68-BLACK-PS/2-US	Mousebutton	IP68	320 x 145 x 22	1000 g	Black
KG13007	TKG-086-MB-IP68-BLACK-USB-US	Mousebutton	IP68	320 x 145 x 22	1000 g	Black
KG13009	TKG-086-MB-IP68-BACKL-PS/2-US	Mousebutton	IP68	320 x 145 x 22	1000 g	Black
KG13011	TKG-086-MB-IP68-BACKL-USB-US	Mousebutton	IP68	320 x 145 x 22	1000 g	Black

Other layouts, configurations and interfaces on request



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TKV Series

Metal keyboards are used in areas requiring protection against vandalism. This especially applies to places where information terminals or info points are freely accessible to the public. As they are mostly unsupervised and available 24 hours a day, these so-called self-service kiosk systems are exposed to the great danger of mechanical impacts due to vandalism.

The advantage of metal keyboards used as data input devices in public space is that they are serviceable for a long period of time. Being equipped with a metal front panel and metal key caps, they do not only resist mechanical impacts occurring on the surface. As the bottom side of the key caps are provided with a lip, they cannot be levered out.

Moreover, the majority of the models provide an increased IP-protection level which additionally protects the keyboard against dust and liquids. This way, e.g. beverages which have been spilled over the keyboard, or dirt which reaches the device, cannot damage the electronic system of the keyboard.

Application areas of TKV keyboards:

- Kiosk systems
- Self-service machines
- Service terminals in public spaces
- Points-of-Sale
- Heavy industry

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The InduSteel Series
Robust Devices Made From Stainless Steel

InduSteel is a front-mounted keyboard with compact dimensions. Due to the large-scale key labeling, the symbols are well visible. The keyboards of this series are particularly suited for the application in public area, where solely contents for the user guidance are provided, such as information or internet terminals.

With regard to the cursor control, versions with an integrated trackball or touchpad are available. The **TKV-105-TB38V-MODUL**-variant is additionally equipped with a numeric keypad.



The InduDur Series
Lightweight Construction with Carbon

InduDur is the designation for the carbon keyboard series from InduKey. Those in-house developed devices are front-mounted keyboards with a front panel made of carbon; as switch elements, stainless steel keys are used.

Due to the characteristics of the carbonic material, carbon is the ideal material for data input devices: high solidity at a low weight, good processing properties, dimensional stability, and the possibility of the connection with other materials and components.



InduSteel³ with numeric keypad: TKV-105-TB38V-MODUL



InduSteel² with 38-mm trackball: TKV-068-TB38V-MODUL



InduSteel with touchpad: TKV-084-TOUCH-MODUL

Technical data:

Switching technology:	carbon contact technology	Mounting type:	front panel with threaded bolts
Switching force:	1.0 N	Operating temp.:	-25 °C to +70 °C ¹
Switch travel:	1.5 mm	Storage temp.:	-25 °C to +80 °C
Switching cycles:	approx. 10 Mio. (per key)		



Cat.No.	Product description	Pointing device ¹	Protection level	Dimensions (mm)	Weight
InduSteel ²					
KV14006	TKV-105-TB38V-MODUL-PS/2-US	Trackball ³ , 38 mm	IP65 ²	446 x 145 x 38	2650 g
KV14008	TKV-105-TB38V-MODUL-USB-US	Trackball ³ , 38 mm	IP65 ²	446 x 145 x 38	2650 g
KV17216	TKV-105-TOUCH-MODUL-PS/2-US	Touchpad	IP65	446 x 145 x 38	2600 g
KV17200	TKV-105-TOUCH-MODUL-USB-US	Touchpad	IP65	446 x 145 x 38	2600 g
InduSteel ²					
KV03005	TKV-068-MODUL-PS/2-US	none	IP65	300 x 125 x 26	1600 g
KV03007	TKV-068-MODUL-USB-US	none	IP65	300 x 125 x 26	1600 g
KV03001	TKV-068-TB38V-MODUL-PS/2-US	Trackball ³ , 38 mm	IP65 ²	375 x 125 x 36	2000 g
KV03003	TKV-068-TB38V-MODUL-USB-US	Trackball ³ , 38 mm	IP65 ²	375 x 125 x 36	2000 g
InduSteel					
KV13001	TKV-084-TOUCH-MODUL-PS/2-US	Touchpad	IP65	385 x 145 x 30	2100 g
KV13003	TKV-084-TOUCH-MODUL-USB-US	Touchpad	IP65	385 x 145 x 30	2100 g
KV01209	TKV-084-MODUL-PS/2-US	none	IP65	295 x 145 x 30	1700 g
KV01215	TKV-084-MODUL-USB-US	none	IP65	295 x 145 x 30	1700 g
KV01211	TKV-084-TB25V-MODUL-PS/2-US	Trackball ³ , 25 mm	IP65 ²	370 x 145 x 30	2200 g
KV01217	TKV-084-TB25V-MODUL-USB-US	Trackball ³ , 25 mm	IP65 ²	370 x 145 x 30	2200 g
InduDur - Carbon					
KV16217	TKV-068-CFK-MODUL-PS/2-US	none	IP65	300 x 125 x 25	640 g
KV16219	TKV-068-CFK-MODUL-USB-US	none	IP65	300 x 125 x 25	640 g
KV16225	TKV-068-TB38-CFK-MODUL-PS/2-US	Trackball ³ , 38 mm	IP65 ²	375 x 125 x 30	800 g
KV16227	TKV-068-TB38-CFK-MODUL-USB-US	Trackball ³ , 38 mm	IP65 ²	375 x 125 x 30	800 g
KV16332	TKV-068-TOUCH-CFK-MODUL-PS/2-US	Touchpad	IP65	375 x 125 x 27	900 g
KV16334	TKV-068-TOUCH-CFK-MODUL-USB-US	Touchpad	IP65	375 x 125 x 27	900 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

² IP652 (front), IP54 (dynam.)

³ Stainless steel trackball



Other industrial keyboards:

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The InduSteel² keyboards are used in the terminal of the company SOLIDD. With a lean layout of 68 clearly arranged keys, the stainless steel keyboard is oriented on the operation of web-focused applications.

The keyboard is protected against damage by means of the metal housing and key caps with lips, which secure the keys against being levered out. The surface of the keys has a trough-shaped design, so that the user experiences a pleasant feeling on the finger tips.



TKG-Series

Attractive with Regard to Functionality and Design

Those keyboards are equipped with a robust front panel which is combined with a silicone switching mat that is positioned beneath. The keys of the silicone mat are inserted through precisely milled openings in the front panel. The electrical switching impulse is triggered by carbon pills on the bottom side of the silicone keys. When the key is pressed, the pill hits the contact meander of the gold-plated printed circuit board beneath. The models of this category are available as compact versions or as versions with an integrated trackball or touchpad.

Keyboards of the TKG series are particularly used in the following industrial sectors:

- Robust operation terminals
- Military engineering
- Control and observation stations
- POS/ booth construction
- Digital signage technology
- Indoor conveying systems

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TKG-083b-TB38-MGEH 43
TKG-083b-TOUCH-MGEH 43

Front Panel Version

TKG-083b-MODUL 43
TKG-083b-TB38-MODUL 43
TKG-083b-TOUCH-MODUL 43

Front Panel Version in Silver-Look

TKG-083-MODUL-SILVER 43
TKG-083-TB38-MODUL-SILVER 43
TKG-083-TOUCH-MODUL-SILVER 43





Version with Metal Housing – MGEH

Those keyboards of the TKG Series are equipped with a solid and rugged metal housing. From the silicone keys which have been used here, a soft and almost noiseless keystroke is resulting. The keys are well perceptible for the user and are easy to use.



Version for Front Panel Mounting – MODUL

This front panel version is equipped with threaded bolts on the rear side for the easy installation into systems. Orientation is made easy by the variably coloured keys. The regular keypad is equipped with a numeric keypad-function.



Front Mounted Panel Version in Silver-Look – SILVER

This keyboard has been designed as an economically priced alternative to a stainless steel keyboard. Nevertheless, this keyboard is of comparable product quality. With their noble silver look, the models of the SILVER series offer robustness, input comfort and an appealing design.



Available as version with 38-mm trackball or touchpad



Available as version with 38-mm trackball or touchpad



Available as version with 38-mm trackball or touchpad

Technical data:

Switching technology:	carbon contact technology	Front panel material:	aluminium
Switching force:	1.2 N	Operating temp.:	-25 °C to +70 °C ¹
Switch travel:	1.2 mm	Storage temp.:	-25 °C to +80 °C
Switching cycles:	approx. 3 Mio. (per key)		

Cat.No.	Product description	Pointing device ¹	Protection level ²	Dimensions (mm)	Weight
Metal Housing					
KG15005	TKG-083b-MGEH-PS/2-US	none	IP65	345 x 165 x 35	1900 g
KG15007	TKG-083b-MGEH-USB-US	none	IP65	345 x 165 x 35	1900 g
KG14031	TKG-083b-TB38-MGEH-PS/2-US	Trackball ³ , 38 mm	IP65 ²	435 x 165 x 45	2450 g
KG14033	TKG-083b-TB38-MGEH-USB-US	Trackball ³ , 38 mm	IP65 ²	435 x 165 x 45	2450 g
KG14035	TKG-083b-TOUCH-MGEH-PS/2-US	Touchpad	IP65	435 x 165 x 35	2250 g
KG14037	TKG-083b-TOUCH-MGEH-USB-US	Touchpad	IP65	435 x 165 x 35	2250 g
Front Mounting					
KG14015	TKG-083b-MODUL-PS/2-US	none	IP65	305 x 134 x 20	500 g
KG14017	TKG-083b-MODUL-USB-US	none	IP65	305 x 134 x 20	500 g
KG14023	TKG-083b-TB38-MODUL-PS/2-US	Trackball ³ , 38 mm	IP65 ²	405 x 135 x 25	650 g
KG14025	TKG-083b-TB38-MODUL-USB-US	Trackball ³ , 38 mm	IP65 ²	405 x 135 x 25	650 g
KG14027	TKG-083b-TOUCH-MODUL-PS/2-US	Touchpad	IP65	405 x 135 x 20	600 g
KG14029	TKG-083b-TOUCH-MODUL-USB-US	Touchpad	IP65	405 x 135 x 20	600 g
KG00201	TKG-083-MODUL-SILVER-PS/2-US	none	IP65	305 x 134 x 20	500 g
KG00203	TKG-083-MODUL-SILVER-USB-US	none	IP65	305 x 134 x 20	500 g
KG00205	TKG-083-TB38-MODUL-SILVER-PS/2-US	Trackball ³ , 38 mm	IP65 ²	405 x 135 x 25	650 g
KG00207	TKG-083-TB38-MODUL-SILVER-USB-US	Trackball ³ , 38 mm	IP65 ²	405 x 135 x 25	650 g
KG00209	TKG-083-TOUCH-MODUL-SILVER-PS/2-US	Touchpad	IP65	405 x 135 x 20	600 g
KG00211	TKG-083-TOUCH-MODUL-SILVER-USB-US	Touchpad	IP65	405 x 135 x 20	600 g

Other layouts, configurations and interfaces on request

¹ Keyboards with pointing device: 0 °C to +70 °C

² IP65 (front), IP54 (dynam.)

³ Stainless steel trackball



Other industrial keyboards:

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Operating Terminal in Aerospace Exhibition

Used in multi-user-terminals, the keyboard provides access to interactive presentations. In a virtual spaceship, the user can rapidly set his course for the different planets, perform adventurous landing manoeuvres or get information about the celestial bodies he is about to head for.



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 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.



Mounting/ Housing Type:



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Rack MountingPage 46



Trackball



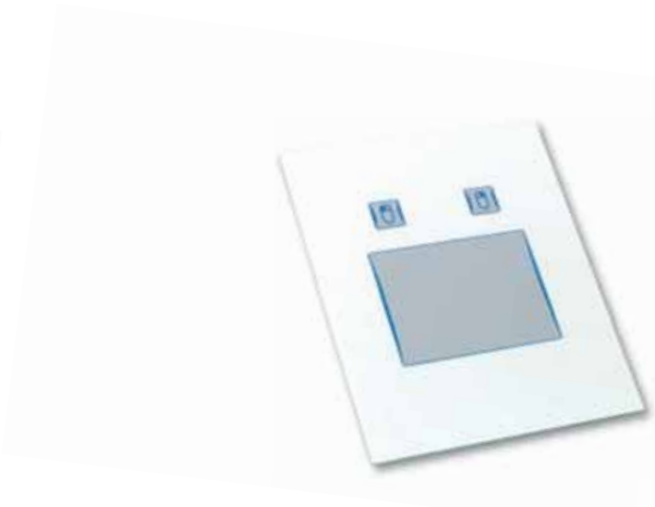
Touchpad



Joystick



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:

Keyboards for standard areas	Page 6
Decoder	Page 50
Accessories	Page 51
Customized solutions	Page 52

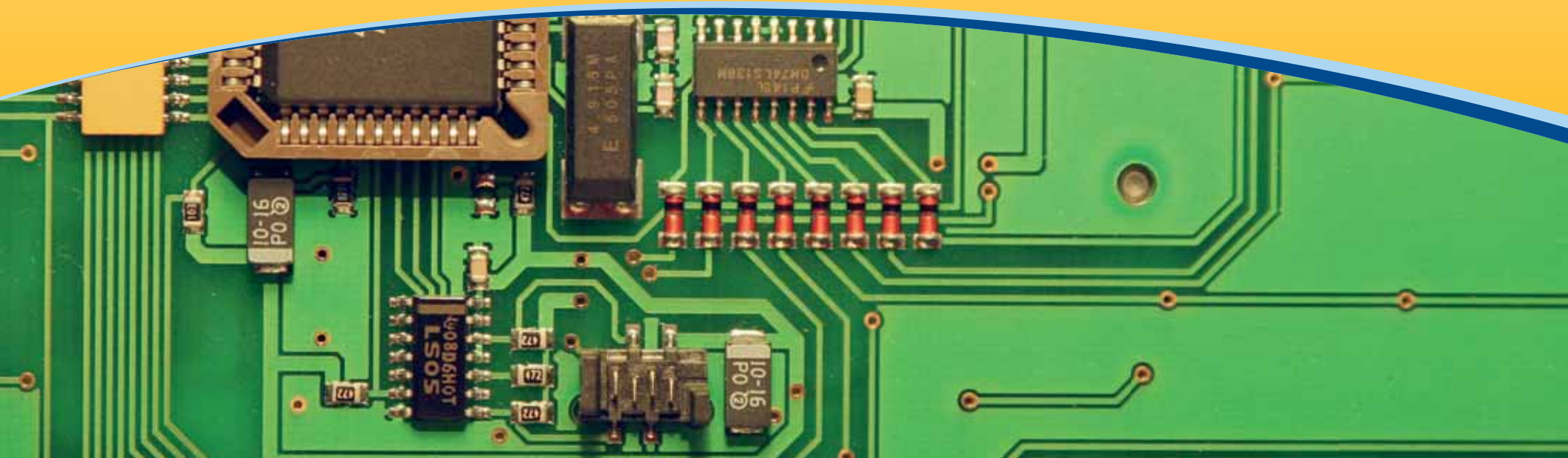


Technical data of the integrated touchpad

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



TKC Series

This category includes not only keyboard and trackball controllers, but also terminal controllers for establishing an own control station. Controllers are the electronic interfaces between the key matrix of the keyboard and the PC. The function of these components is to identify the keys being pressed by using a special software.

Internal code tables contain the corresponding country layouts and the interfaces to be activated.

Freely programmable keyboard controllers and decoders allow for an individual configuration of the single keys (multiple functions are possible as well). For this, a software which is easy-to-handle is available.

DecodersPage 50

- Keyboard decoder
- Decoder for matrix keyboard
- Serial mini terminal decoder
- Trackball decoder

Accessories

- Electronic track switchPage 50
- Mounting set for wall/ table mountingPage 51



Decoder

Cat.No.	Product description	Description	Max. number of keys per level/ number of levels	Plug-in connector key matrix	Plug-in connector interfaces	Operating voltage	Current consumption	Operating temperature	Dimensions	Image
KC08000	TKC-8000-USB-PS/2	Freely programmable decoder	128 (16 x 8)/ 2	2 x 16 pole RM 1.27	MICS/SMD4 or Picoflex	5 V DC	ca. 40 mA (without LED)	0°C to 70°C	45.0 x 25.0 x 11.0 mm	
KC17600	TKC-17600-USB	Freely programmable decoder	128 (16 x 8)/ 3	2 x 16 pole RM 1.27	MICS4, JST 10-pol. RM 2.54, JAE IL-Z 10-pol.	5 V DC ± 5%	35mA (typ), 100mA (max)	0°C to 70°C	78.0 x 33.0 x 33.0 mm	
KC14000	TKC-14000-PS/2-USB	Hard-wired keyboard decoder	142/ 2	2 x 17 pole RM 2.54	MICS/SMD4	5 V DC	10 mA	0°C to 70°C	65.0 x 50.0 x 10.0 mm	
KC18210	TKC-18210-TB-USB-PS/2	Freely programmable decoder	128 (16 x 8 Matrix) 2	2 x 16 pole RM 1.27	USB/PS2: JST 10-pol. RM 2,54 X/Y-Trackball: JST 10-pol. RM 2,54	5 V DC	ca. 40 mA	0°C to 70°C	77.0 x 32.0 x 13.0 mm	
KC18220	TKC-18220-JST-USB-PS/2	Freely programmable decoder	128 (16 x 8 Matrix) 2	2 x 16 pole RM 1.27	USB/PS2: JST 10-pol. RM 2,54 JST: solder pads	5 V DC	ca. 40 mA	0°C to 70°C	77.0 x 32.0 x 13.0 mm	
KC06800	TKC-6800-USB-ADB-PS/2	Hard-wired keyboard decoder	128 (16 x 8 Matrix)	2 x 16 pole RM 1.27	MICS/SMD4 or Picoflex	5 V DC	ca. 25 mA	0°C to 70°C	98.0 x 58.0 x 25.0 mm	



Accessories

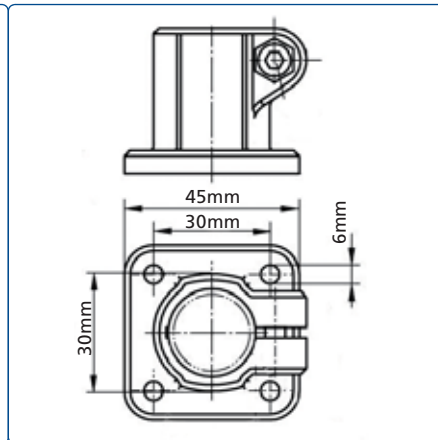
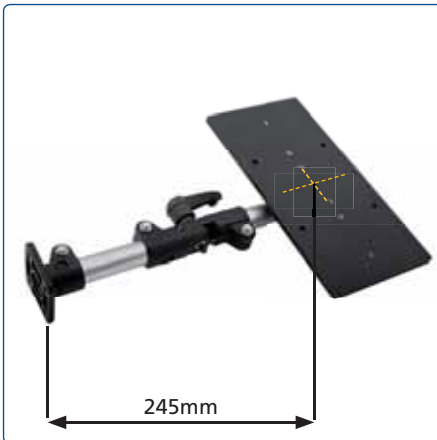
The electronic track switch allows for a simultaneous use of two PS/2 keys on one computer. For this purpose, different plug/ socket combinations are available on request.

Cat.No.	Product description	Description	Inputs	Dimensions (mm)	Cable length
KH14000	TKH-3-ELEKTR	Electronic track switch for keyboard	2 x 6 pole MiniDIN socket	70.0 x 36.0 x 30.0	90.0 cm

Circuits with priority version available on request



Electronic track switch: TKH-3-ELEKTR



Accessories:

This universal solution is suitable for the flexible wall or table mounting of keyboards.

- This mounting set is easily adjustable by means of a clamping lever and locking screws
- Steplessly rotatable and inclinable up to 180° in all directions
- Carrier plate with fastening holes according to VESA standard (75 x 75 mm); Aluminium, black, anodised
- Length: 245 mm (distance between wall and centre of carrier plate)
- Maximum load capacity 5 kg (temporary loading up to 10 kg)
- Weight 0.5 kg
- Wall mounting screws not included

Cat.No.	Product description
KA16201	TKA-MONTAGE-SET
Other tube lengths and hole circles are available on request.	



Technologies

The general trend towards the differentiation of technical systems calls for the differentiation of the necessary components as well. Correspondingly, systems which are manufactured in small and medium quantities according to the exact specifications of the customer require individual data input devices.

Data input systems and components are particularly subject to this dynamics. The starting-points of design and development refer to the following applicational

perspectives: shape, switching technology, functionality and design. By means of a combination of those criteria, which are uncompromisingly oriented on the respective applicational case or case of need, the customer gets the best possible data input solution. This process starts with the idea, continues with the conceptualisation, development and manufacture and finally leads to the commissioning of the device. A technically mature, barely reproducible (because unique) product is the ideal result of a customer-specific system.



The InduKey business division „Customized Data Input Devices“ is sufficiently experienced due to hundreds of successful „Made-to-Measure“-projects in various field of application. The drivers of success of this strategic business division are the technical know-how, a strict orientation on the customer's needs, and a solutions philosophy that is lived.

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Industrial operating systems: Configuration "on demand"

Complete systems are a combination of different elements. Basically, they are subdivided into these four basic components:

- Housing or carrier element
- Data input unit
- Supplemental data input unit
- Data output unit and internal electronics

Variety of variants

From this, variants of any number which are oriented on the requirements of the operational environment can be derived. This is how we realise devices with closed housings as well as complex control panels for the integration into existing systems.

We additionally equip output devices such as monitors or displays with the desired touch screen solution.

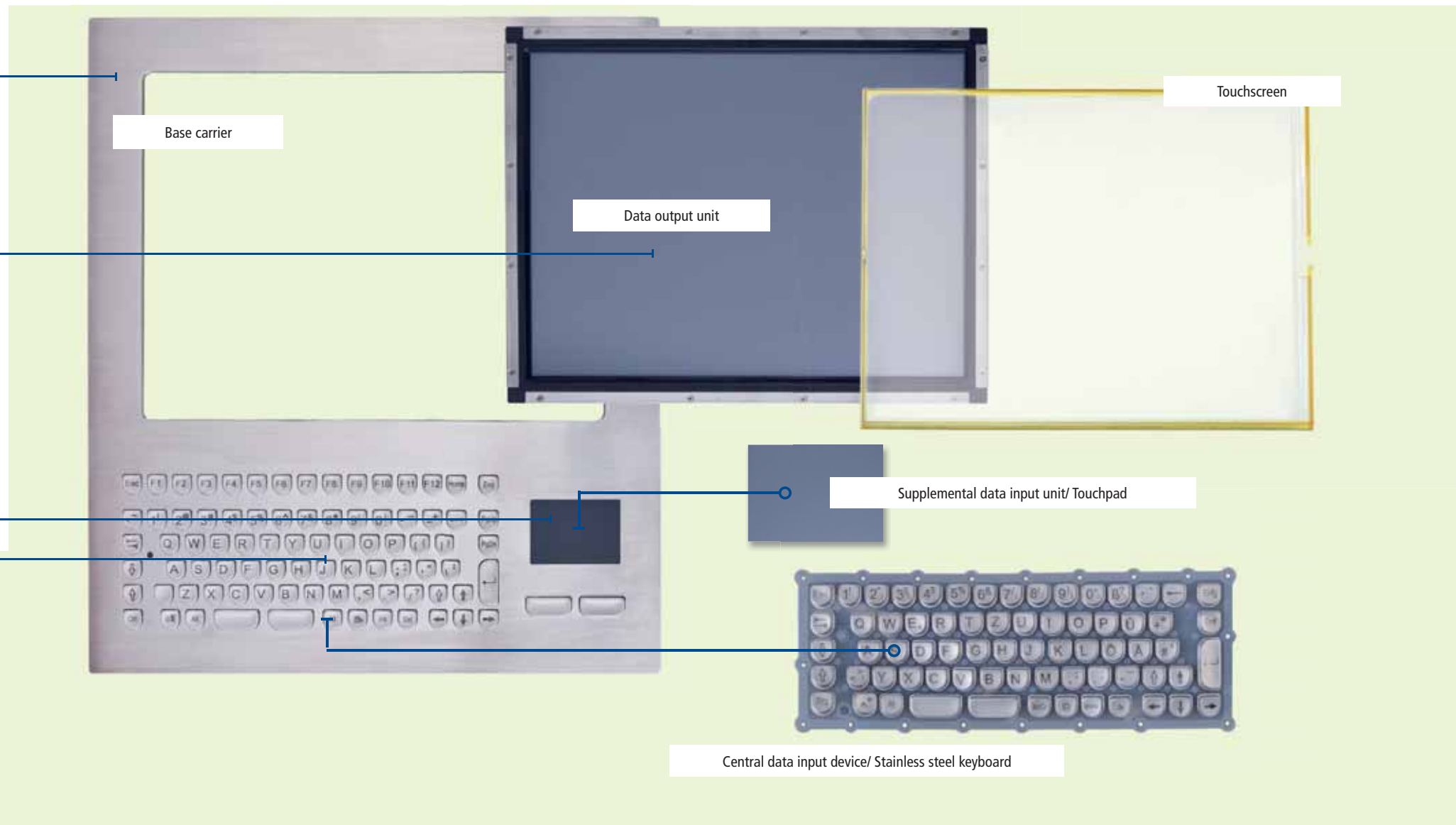
Realisation of small and medium numbers of items as well as prototype construction

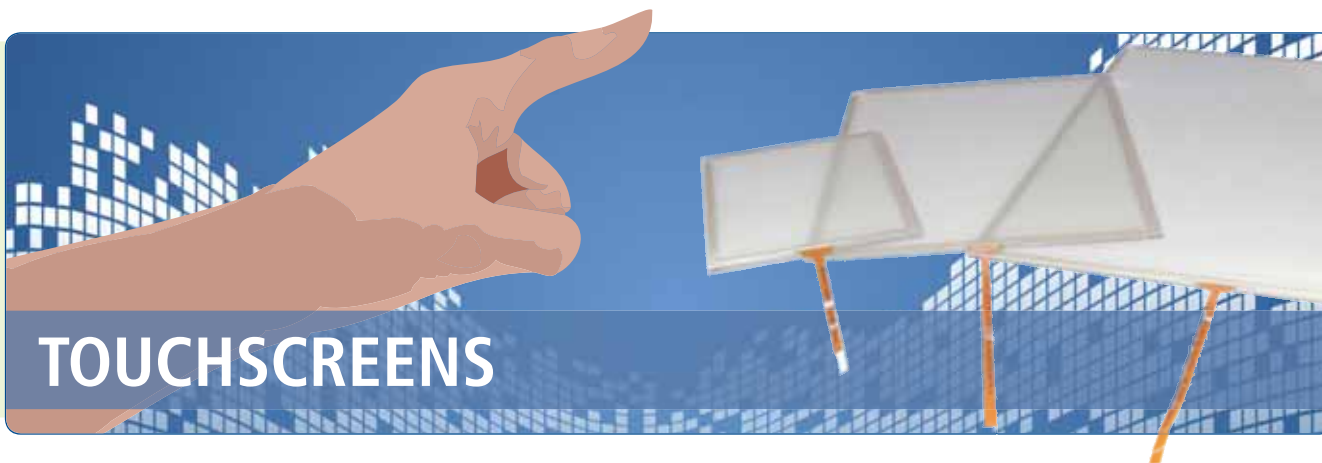
Due to our flexible production structure, we realise also operating units in smaller quantities. In the field of housing technology we mainly work with these variants:

- Plastic injection moulding
- Metal casting
- Tool-free housing production



Individual configuration of control panels:
stainless steel front panel for front mounting, with stainless steel keys, monitor, touch screen and touch pad





Touchscreen Technologies

The basic functional principle of a touchscreen is relatively simple. A rectangular glass surface is equipped with an electronic system which detects the position of a finger or another element which touches this surface. The resulting signal is transmitted to the data-processing system via a controller. From this perspective, a touchscreen can be compared with an oversized touchpad.

The touchscreen technology gets its advantages in combination with a monitor. The transparent touchscreen, which is installed frontally and congruently to the monitor, creates a sensitive surface. Via this you have access to all graphic elements, which are displayed on the monitor. This means that the entire user interface is created in a completely free and variable way on the monitor. In contrast to conventional keyboards, where operating elements are set in the form of keys, here, every interface configuration is possible via the software level.

Due to different application environments and user preferences, various types of touchscreens are available. On the following pages we give you an overview of all current technologies that we use in our systems.



Touch operation for controlling a vacuum pump system

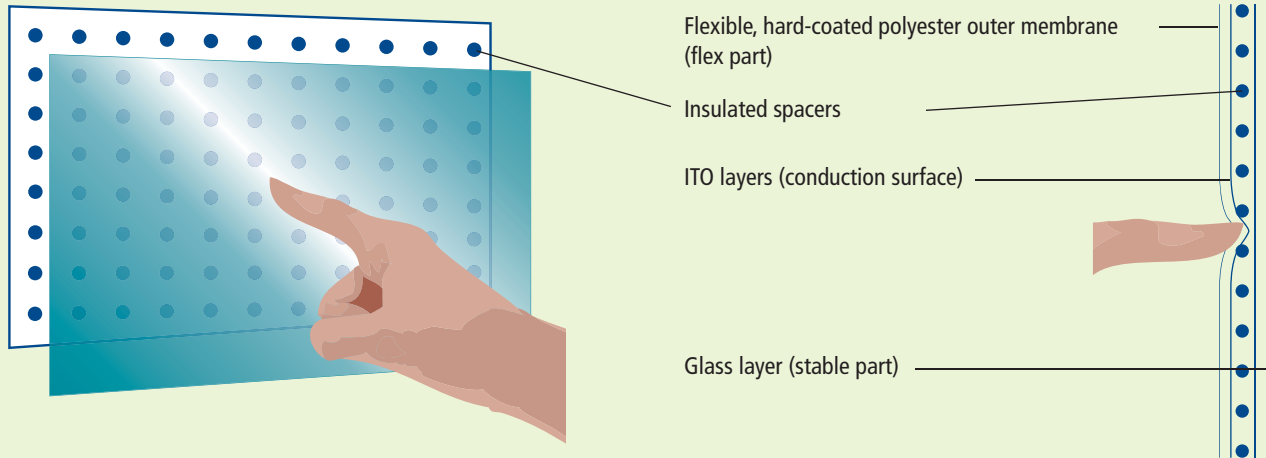
Decisive technology advantages

- Flat design
- Easy to clean
- Operation with any type of soft object, e.g. fingers, pen tips
- High light transmission
- Contamination of the surface has no influence on technical principle of operation
- Different sizes can be selected
- With analogue or digital principle of operation
- Possibility of via on the terminal lug – all connections on one side
- Available as a complete device with housing and other control elements



Stainless steel front with resistive touchscreen

Resistive Touch Technology

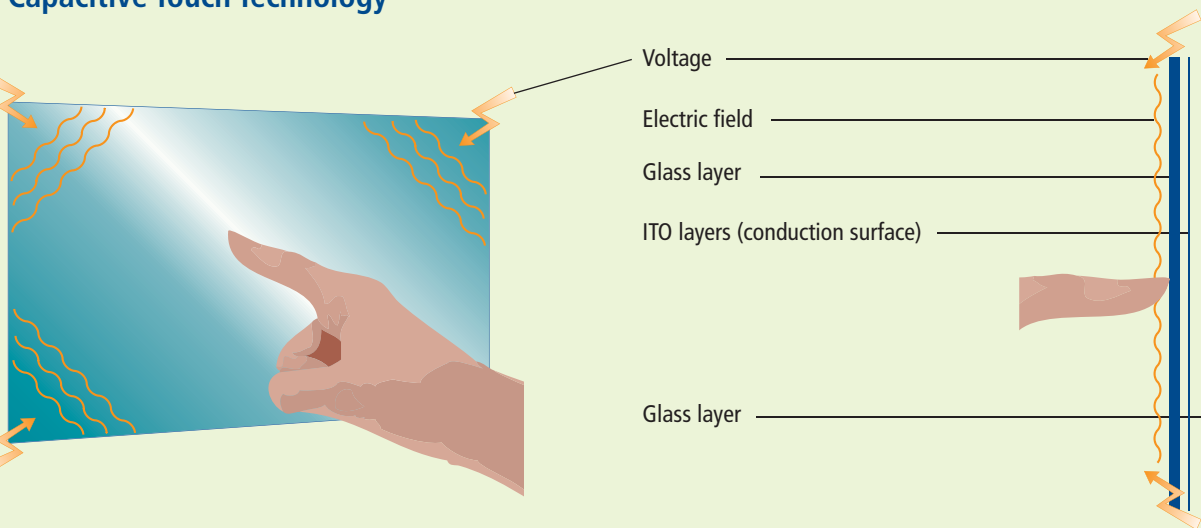


These touchscreens essentially consist of two surface-coated elements: the so-called stable part, usually made of glass, and the flex part, a plastic foil. Both have an ITO (indium tin oxide) layer. The ITO layers are separated by very small printed spacers and mounted opposite to each other. Contact causes a resistance and its position is located by means of the voltage field.

Application

- Medical operating devices
- Electro automation
- Machine and plant control
- Transport and traffic

Capacitive Touch Technology

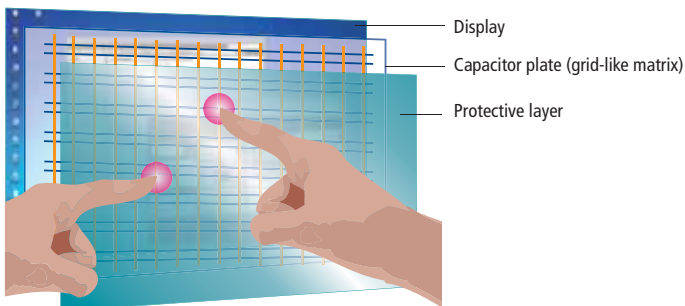


Analogous to the resistive touch technology, here a conductive coating with a transparent surface, usually glass, is used. AC voltage is applied to the corners and generates a weak capacitive field. Placing the finger causes a voltage drop and thus a current flow between the corners of the touchscreen and the point of operation. The controller measures this proportion and determines the position of operation.

Application

- POS / POI terminals
- Register systems
- ATMs
- Home entertainment

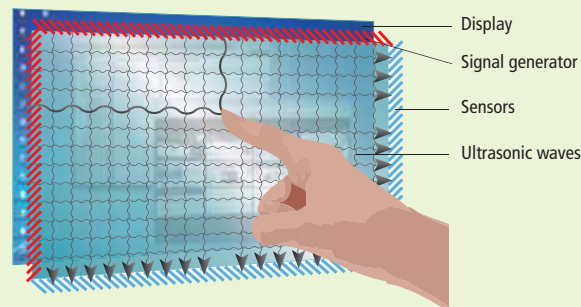
Multi-Touch Technology



Operation with multiple fingers

Multi-touch inputs are based amongst others on the capacitive touch technology. The capacitor plate has an electric field which consists of several intersecting transmitter and receiver electrodes. This grid-like matrix in turn acts at the intersection points like single capacitors, where voltage changes can be measured and analysed independently from each other.

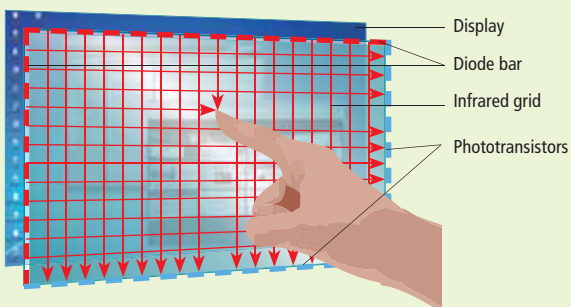
Surface Acoustic Wave Technologie



Sound waves

Surface acoustic wave (SAW) works on the basis of surface waves, i.e. with the help of a signal generator ultrasonic waves are emitted in x / y direction and their amplitude is measured by sensors on the opposite side. Touching the screen changes the tone of the ultrasonic wave. A controller determines correspondingly the change in amplitude of the wave and calculates the exact coordinates of the point of contact.

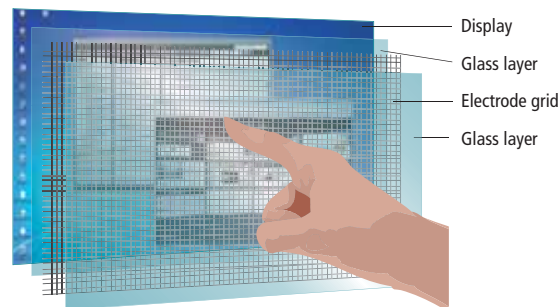
IR Touch Technology



Infrared waves

By means of diodes, which serve as transmitters, an infrared grid is generated. On the respectively opposite side, phototransistors are installed. By touching the surface, the grid is interrupted and the receiver sends a signal for x / y direction to the controller. The controller calculates the position of the interruption and the corresponding operating command can be executed.

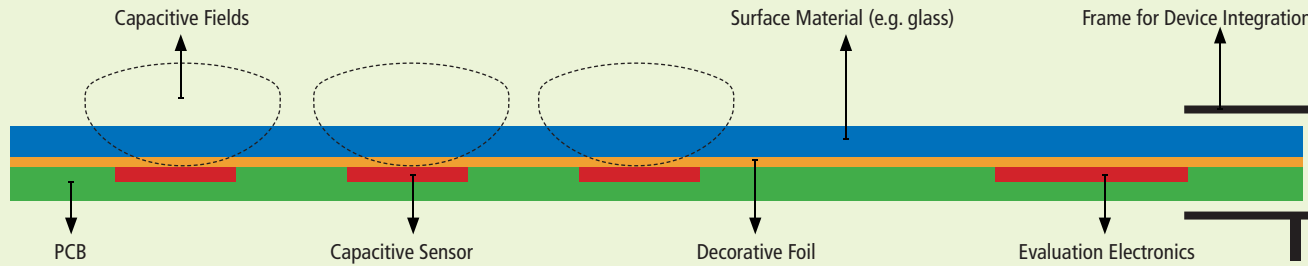
Projected Capacitive Touch



Capacitive field

Projected capacitive touch is an advanced form of the capacitive touch screen technology. A grid is formed in x-y alignment by micro fine electrodes. This grid layer is embedded between two glass surfaces. If the display is touched, an electrical capacitance is created between the finger and the respective electrode of the grid. A controller processes the electrical contact information and calculates the coordinates.

The Technology in Cross-Section



A fully functioning, plug-and-play-capable capacitive keyboard consists of a printed circuit board, which has been equipped with capacitive sensors and the evaluation electronics; the elements are connected via PCB tracks. In the process, the capacitive sensors simulate the single keys. This means that the entire keyboard layout is represented by the quantity and arrangement of the sensors. After the keyboard has been connected to a computer, the sensors generate a capacitive field. When the finger changes this field, the capacity is inevitably changed. This change is the basis in order to generate and trigger a signal, which is then sent to the evaluation electronics.

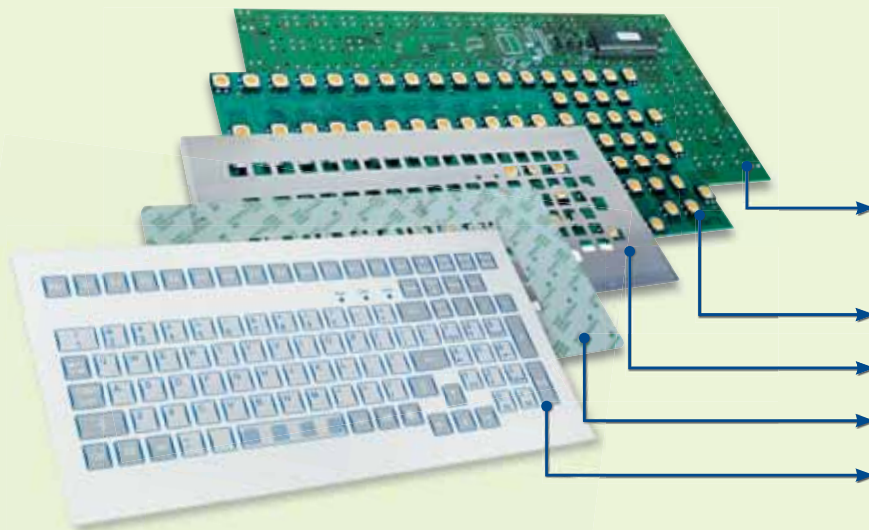
During the further development, the PCB is covered with a decorative foil, which is graphically designed and contains the user elements. As far as possible, the design can be freely determined by the customer. The element on top of the structure is the actual user interface, which can consist of any non-conductive material. In the practice, mostly glass and plexiglass are used. The thickness of the material can reach up to 10 mm.

Possible further operating effects are the partial graving of the surface material or the backlight in various colours via LEDs.

The Difference Between a Touchscreen and a Capacitive Keyboard

Touchscreen	Capacitive Keyboard
Sensitivity of the entire touchscreen surface	Selective sensitivity of specific defined areas
Data input elements are indicated via an output medium (monitor, display)	Data input elements are separated and controlled via PCB configuration
Data input elements are virtually generated via the software	Data input elements are physically present as copper surfaces on the PCB
Touchscreen functionality is directly linked to computer and output unit	Capacitive keyboards have stand-alone functionality; plug-and-play mode
Touchscreen or touchscreen material is always the surface	Possibility of „creative“ surfaces (glass, plexiglass, plastic)
It is not possible to modify the surface	Possibility to modify the surface (graving, haptic varnish, lighting ...)





Layer structure of a short travel keyboard

1. Printed circuit board back
(here with integrated key controller)
2. Printed circuit board (component side keys)
3. Front panel (carrier plate)
4. Adhesive foil
5. Design foil

Decisive technology advantages

- High-quality, long-lasting control elements
- Excellent tactile feel
- Keys with spot or full illumination
- Keys in different sizes and shifting forces
- Front panel has a stabilizing effect
- Insensitive to dirt, water and certain chemicals
- Tactile keys with edge or key embossing or foil relief
- Individual layout and colouring
- Relief coating
- Integration of display windows is possible
- Ex-protection is possible
- Expandable with integrated keyboard controller

With this technology, proven for many years, we realise robust, long-lasting and functionally reliable data input solutions for the industry. Classical application fields are environments where the used devices are exposed to all kinds of imissions. This includes water, dust, dirt, oil, grease or chemical substances.

Due to the closed operating interface on the one hand and the robust carrier materials on the other

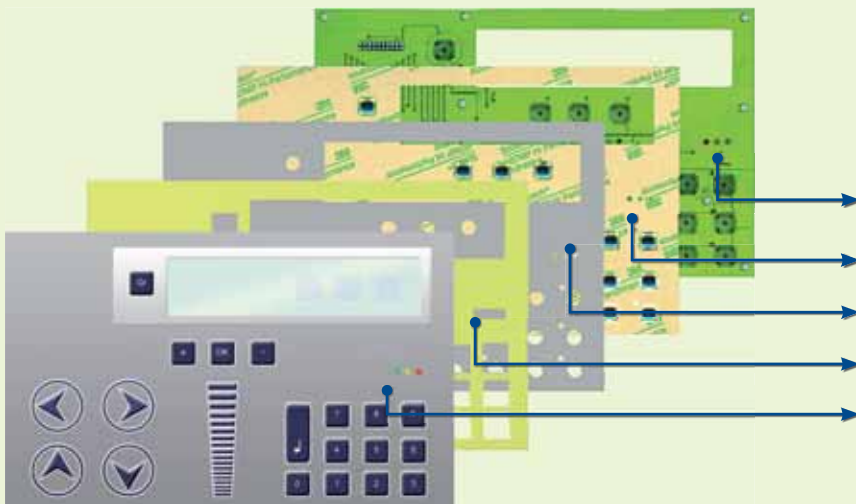
hands, short travel keyboards reliably withstand these harsh operating conditions. In this technology, high-quality short travel keys are used. With a key drop of 0.3 millimeters and an operating force of 2.6 Newton they offer a clearly noticeable key feedback.

The keys are mounted directly on the printed circuit board; above this an aluminum plate with key slots is attached. This reliably protects the elect-

ronics against mechanical influences. A polyester foil with the key labels and an embossed surface forms the upper end. Short travel keyboards can be integrated into systems in different ways.

The most common method is the frontal installation with rearward stay bolts. The installation by means of mounting holes on the side or keyboards integrated in the housing would be possible as well.





Layer structure of a flat input keyboard

1. Printed circuit board with gold plated contacts
2. Spacer foil (spacer)
3. Fixing / screening foil
4. Adhesive foil
5. Design foil

Decisive technology advantages

- Low construction height
- Dirt / splash water protected
- Changeable labels of the keys are possible (exchangeable text)
- Individual layout and colouring
- Compact design due to small key grids
- Key positions very tactile due to embossing
- Precise pressure point by use of metal dome
- Reduced risk of silver migration

These components are similar in appearance to the short-stroke keyboards. However, in contrast to them they do not use short-stroke keys but so-called metal domes. Due to the low height of the keys it is possible to produce very flat designs.

In this technology, a solid printed circuit board is the lower switching element. Gold-plated contact points are situated at the key positions. Above that, the domes are located. Upon operation of the bendable

metal domes they are pushed with the bottom sides on the respective contact point; and as a result a switching signal is triggered.

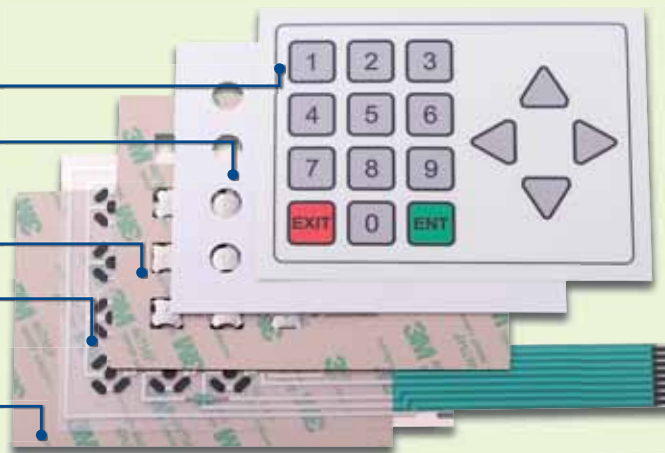
The upper end of the layer structure is also in this case formed by multi-coloured polyester foils which allow an individual, creative design of the user interface. As a customer you have an almost unlimited design freedom. Due to their low construction height and their compact key grid, flat input

keyboards are most suitable also for the integration into devices and systems with low construction heights. The use of these keyboards is also favorable in applications with limited space.



Layer structure

1. Design foil
2. Combination: protection foil/
adhesive foil for design foil
3. Spacer with air ducts
4. Flexible printed circuit with integrated
switching elements (switch membrane)
5. Adhesive layer basis, adhesive back



The membrane foil keyboard is manufactured as a glued foil-layer system. Polyester foils with printed conductive silver lacquer are used as switch membranes. The lower and the upper switch membrane are kept at a distance by means of a spacer foil. The contact closes if pressure is applied on the upper design foil in the area of the key. Membrane keyboards of higher quality are equipped with spring snap-disc

as the switching element. The design foil is located above the upper switch membrane. It is transparent and has a fine-structured or smooth surface. Any desired colour or information can be printed on this foil.

Tactile keys with edge, dome or key embossing create a good tactile feel and lead the fingers to the right position.

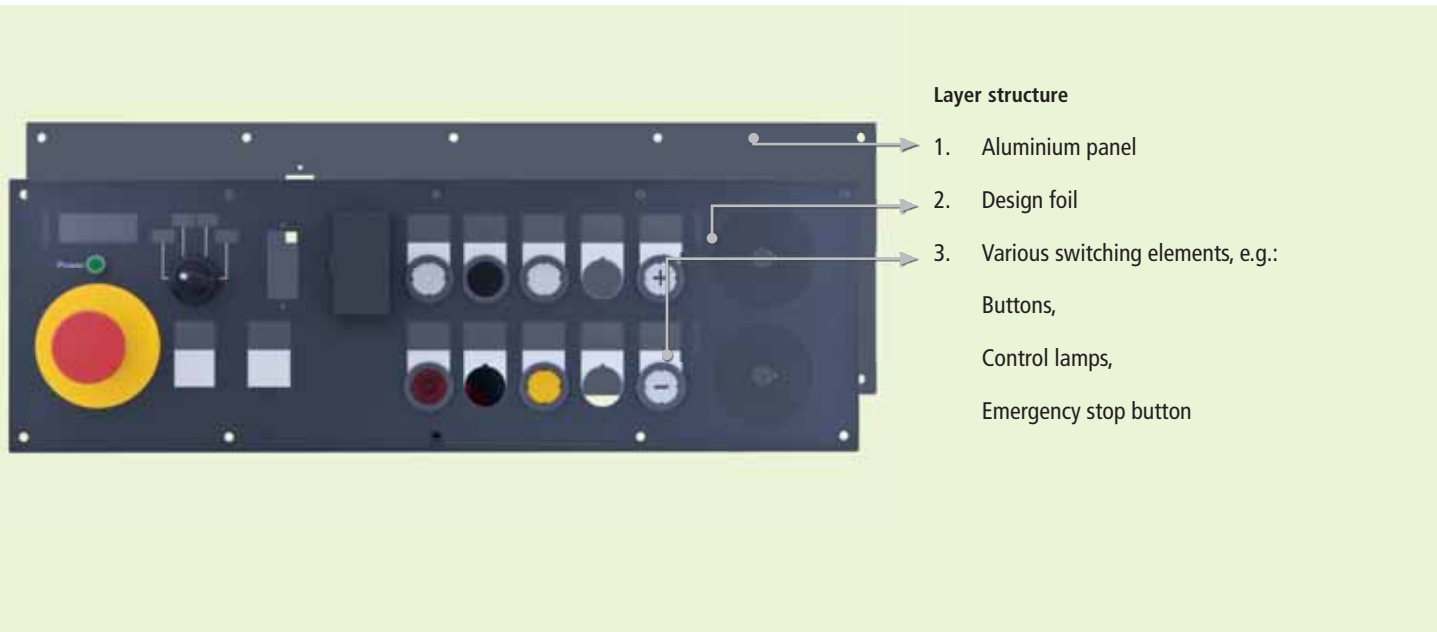
Application examples

- Equipment and apparatus construction
- Consumer products of all kinds
- Mass products
- Computer games and electronic toys
- Mobile data collection terminals
- Medical and analytical technology

Decisive technology advantages

- Easy to clean
- Suitable for industrial applications and flat
- Reliably protected against dust and moisture
- Individually suitable controllers can be supplied
- Convenient installation by gluing
- Polyester foil resistant to many chemicals
- Terminal lugs for ZIF connectors or crimped connectors
- Individual layout and colouring
- Tactile keys with edge, dome or surface embossing





Layer structure

1. Aluminium panel
2. Design foil
3. Various switching elements, e.g.:
Buttons,
Control lamps,
Emergency stop button

Decisive technology advantages

- Individual layout, colouring and text labels of the foils
- Clear and multi-colour prints
- Different embossings improve tactile feel
- Separate front panels without design foils available
- Simple and complex shapes
- Available as a design foil with adhesive foil or laminated on front panel or housing
- Flexible installation design

Design foils

The foils are mostly based on special transparent polyester. These foils are highly transparent and the surface can be fine-structured. In addition, several embossing methods are available. In order to protect the colour against environmental influences and abrasion, the printing is on the back side of the foils. Special glues and spacers create the

connection to the lower foil layers or carrier plates. A spacer between foil and carrier plate makes it possible to insert exchangeable labeling strips.

Design foils with edge or key embossing cause the best possible usability and an improved tactile feel.

Front panels

The front panels made of aluminium, carbon or Plexiglas get all necessary holes and outlines on our modern CNC-3D-drilling-milling and engraving systems. Larger series are produced in an economic way. Completed by threaded bolts or other mechanical elements, robust mechanical components are created.





Layer structure

1. Silicone mat
2. Carbon contacts (carbon pill)
3. Moulded key caps

Decisive technology advantages

- Very good chemical resistance
- Insensitive to dirt and water
- Good feeling of the single key
- Safe contacting on the printed circuit board
- Almost unlimited design possibilities
- Coating on the silicone is possible
- Can be optionally supplied with plastic caps
- Matching houses can be supplied
- Several colours of one silicone mat are possible
- Illuminated versions are possible
- Convenient prices in case of serial production

Compared to other keyboard technologies, silicone mats have a particularly convenient price in mass production. They are resistant and reliable and offer almost unlimited design possibilities. Shapes and colours of the key caps can be freely chosen.

Silicone mats are made of highly flexible, toxin-free silicon caoutchouc. The mats are created

by moulding connectable base materials at a defined temperature and pressure. A special tool is required for every different design.

On the bottom side, there is usually a conductive carbon pill for each key. The lower contact part is normally formed by meander-shaped conductor tracks based on foils or printed circuit boards.

Tools for silicone switching mats

The tool for every silicone switching mat is made of a special alloy. It is produced by means of highly precise CNC-milling and erosion machines. Several silicone mats can be produced with one mould in an optimal way, so attention to later production optimisation is already paid when producing the tool.





Layer structure

1. Printed circuit board
2. Keys
3. Support plate (optional)
4. Key caps

Decisive technology advantages

- Gold-Crosspoint technology
- Safe contacting
- Glare-free surfaces
- Different forms of key caps
- Flexible key prints
- High abrasion resistance of key prints (protective lacquer)
- Operating affinity to conventional PC keyboards
- Low operating force due to long key drop
- Special housings are possible

For data input devices in an office environment, customized keyboards with the long-stroke technology are suitable. Separate key caps are mounted on unobtrusive electromechanical single keys. The switch travel is typically 2.5 to 4 mm. These long-stroke keyboards are available as modular components without housing or integrated in special customised housings. The layout of the key

fields, the colours and the print of the key caps are carried out respectively after consulting according to customer wishes. By using high-quality key modules, a maximum reliability of >10 millions of operation cycles is realised.

Labelling of long travel keys

Depending on the required quantity and desired

colour combinations between the base colour of the key caps and the lettering colour, there are five different labeling technologies to choose from:

- Engraving
- Pad printing
- Sublimation print
- Two-colour injection moulding
- Laser marking





InduPrint method for photorealistic designs

Operating interfaces can be equipped with various additional features to optimise usability, design, or cleaning. For this, three different technologies are available.

InduClean – The Lotos effect for keyboards

The InduClean technology is a dirt and liquid repellent coating system. It is applied with the lacquer method and absolutely transparent, thus obtaining a durable protection of the keyboard against stubborn dirt. This simplifies the cleaning significantly.

This technology can be used for all operating interfaces with foil cover. Typical applications would be for example membrane keyboards in paint shops (easy removal of paint and lacquer residues) or in public areas (anti-graffiti).

InduPrint – Photorealistic design

InduPrint refers to a digital printing method which allows an individual photographic design of membrane keyboards (see large image above).

The user can individually determine whether it is a matter of company colours, photos and (pixel) images or of colour integration into existing terminal and kiosk systems.

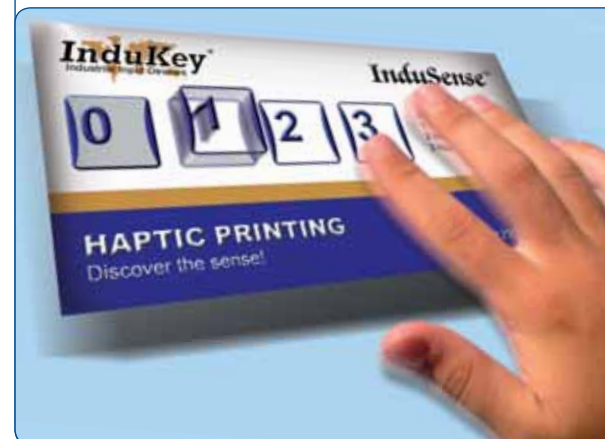
The warranty for maximum abrasion resistance is achieved here as well with the proven method of background printing.

InduSense – Relief elements

The so-called InduSense technology is a haptic printing, i.e. a relief printing method, which creates a “tactile” foil surface. Due to the three-dimensional printing, single function keys, key combinations or framings, e.g. for a touchpad, can be clearly highlighted, so the user gets a sensitive feedback on the surface. There are diverse design possibilities and they can be realised according to the customer’s specification. As it is transparent material, the print adapts to the surrounding/background colours.

Combined surface functions

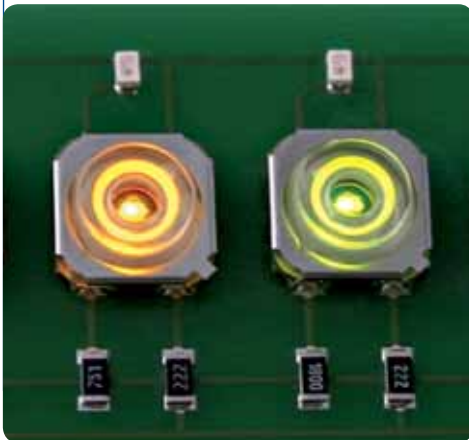
The different surface structures of operating devices can also be applied in a parallel way. A photorealistic print with a liquid repelling effect (the combination InduPrint and InduClean) is just as possible as the combination InduPrint with an individual relief surface (InduSense).



LED keys

With this method, the according lighting element is directly integrated into the key. In most cases, the lighting elements are LED's which have a service life of approx. 50.000 hours. Those LED's are available in various colours. Due to the transparency of the surface material of industrial keyboards, the keys can be illuminated effectively. As surface material, both foil and silicone can be backlitged due to their partial transparency. As illuminated keys, both short travel and long travel keys can be used.

The advantage of this method is that no setup costs are arising, since the keys can be assembled onto the board in the conventional way and without additional efforts.



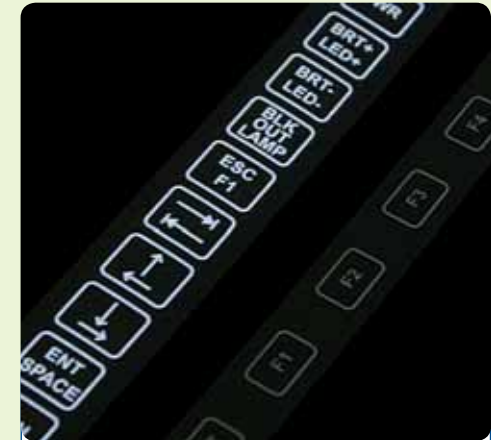
Free LED

In case of this technology, the LED's are not constructionally linked to the key. They are either placed beneath or below the key, or they are position-independently placed as signal indicators (e.g. caps lock key). The latter function is the one which is more frequently used with regard to this technology. For the most part, here, On/Off-modes are visually realized. „Standalone-LED's“ also can be used to indirectly illuminate keys without having to integrate them into the respective key. In case of silicone keyboards without mechanical switching elements, for example, the LED's are positioned directly below the key. By using this method, also plated domes can be illuminated without having to integrate the LED's constructionally. Here, the LED is fixed below the key.



EL foils

This interesting lighting method is based on the effect that energy is transformed into light when AC voltage is applied (electroluminescence). This way, the entire „EL foil“, which is located below the actual operating/decor foil, can be illuminated. All cut-outs on the foil are not illuminated. This allows for the manufacture of almost layout-independent lightings for operating surfaces. Here, compared to the usage of LED's, non-recurring costs are arising due to the individual adjustment. However, the half life of the luminance is not as high as with the other technologies. After 10.000 hours, the luminance amounts to circa 50% of the original value.



Plastic light ducts

At first, in this case as well, an LED is used as light source. In contrast to other technologies, though, the light is emitted into light ducts made from plastic. Those light ducts have been abraded by means of chemical processes, so that the light is emitted there.

This so called fiberlight-method is very versatile; due to the light scattering and the individual length of the light ducts, operating surfaces of all sizes are backlightable. Due to the respective specific modification, setup-costs are arising when this method is applied.

The IP-Rating



The protection class with the two-digit IP codes (1st digit, 2nd digit) indicates the suitability of systems for different environmental conditions. According to DIN the abbreviation IP stands for International Protection.

1st digit	Protection against contact	Protection against foreign objects
0	- no protection	- no protection
1	- with large-area body parts (back of the hand)	- large foreign objects, ø bigger than 50 mm
2	- with the fingers	- mid-size foreign objects, ø bigger than 12 mm
3	- with tools and wires, ø bigger than 2.5 mm	- small foreign objects, ø bigger than 2.5 mm
4	- with tools and wires, ø bigger than 1.0 mm	- granular foreign objects, ø bigger than 1 mm
5	- complete protection	- dust deposit
6	- complete protection	- dust entry

IP 68

2nd digit	Protection against water
0	- no protection
1	- vertically falling dripping water
2	- diagonally falling dripping water
3	- diagonally falling dripping water up to 15° relative to vertical line
4	- spray water up to 60° relative to vertical line
5	- splash water from all sides
6	- jet water
7	- strong jet water
8	- temporary immersion

The InduKey's Underwaterproof-Rating



„Underwaterproof“ is an in-company test standard by InduKey. This standard exceeds the protection level IP68, which until now has been the highest standard for keyboards. Protection level IP68 means that the products are tested for water tightness by temporarily immersing them into water. The devices which are labelled “underwaterproof”, however, have been tested under water for at least 24 hours. In the process, the water column amounts to at least one meter.

Another difference arises during the active testing of the device. In contrast to IP68, where the devices are only passively immersed into water, the testing according to the “underwaterproof” standard involves an active operation of the keys in particular time intervals. In addition, upon completion of this test, a final and comprehensive testing of the keyboards is conducted.

Products which comply with the „underwaterproof“ standard guarantee the user a high resistivity in wet to humid environments and demonstrate durable, robust quality and functionality.

Test parameters

Position of the keyboard:	Common operating position
Water level:	At least 100 cm above the highest point of the keyboard
Water quality:	Tap water
Water temp.:	Room temperature = 295 K +/- 5 K
Test duration:	At least 24 hours
Operating condition:	No operation of the keyboard
Actuation:	During the test: 6-fold actuation of at least 10 keys in intervals of 1 hour in each case
Connection cable:	Non-insulated sockets of the connection cable which are facing away from the keyboard are not immersed into water
Functionality test:	Upon completion of the test, the keyboard has to be fully functional
Visual inspection:	Upon completion of the test, no changes on the keyboard may be detectable



Short travel keys

Mechanical switch elements used in industrial keyboards with a key travel of 0.3 mm and an actuation force of 3.0 N. These rugged keys are rated for up to 3 million operations per key. Short travel keys are used in all models of the TKS series as well as in special models of other series.



Gold plated domes

Mechanical switch elements that – as slightly curved metal domes – make contact with the PCB when being actuated. The advantage of the metal domes is their low height. This allows for a very flat keyboard design. The keyboards can be installed in extremely flat panels.



Flexible membrane keys

Flexible membrane keyboards are equipped with polyester foils printed with conductive silver paste. The upper and lower switch membranes are separated by means of spacer foil. A palpable key separation due to rim or key embossing ensures a good tactile feedback.



Metal key caps

Metal keys which are primarily used for the TKV series are actually silicone keys. The difference is that silicone keys are provided with metal key caps which cannot be levered out. This is ensured by a brim on the bottom side of the cap, which anchors the cap firmly to the front panel.



Silicone keys

Silicone keys have carbon pills on the bottom side that make contact with the PCB after being actuated. The keys provide a pleasant tactile feedback and a very low noise level. Silicone keys are available in different shapes, colours and with different actuation forces and key travels. In large quantities they are very cost-efficient.



Long travel keys

They are used as mechanical switch elements in conventional PC keyboards. Long travel keys have a key travel of more than 3.0 mm. They require an actuation force of only 0.6 N. These keyboards are suited for the input of large amounts of data.

Housing version

Desktop versions can be used as so-called standalone versions. They are suited for places where a stable surface exists. Due to the plastic knobs on the bottom side of the device, they are skid-proof. One of the advantages of desktop versions is their application flexibility. They can be connected to systems with standard interfaces (PS/2, USB) without any problems.



Front mounting version

The most frequently used integration method for keyboards and cursor controls is the so-called MODUL variant. The studs on the rear side allow a comfortable installation into almost every system of any type. Due to the seals (included in delivery) lying underneath, a high IP protection level is guaranteed.



Rack mounted version (front panel)

Front panel versions are mainly used for integrating data input devices into 19-inch racks or 19-inch drawers. The mounting holes on the sides of the front panel allow a comfortable installation of the device. The keyboards are standardized according to the RU (Rack units; 1 RU = 44.45 mm) of the 19" system (1" = 25.40 mm).



Drawer version

In the product line of foil covered industrial keyboards, so-called keyboard/ drawer systems are available. Due to their compact size they are suited for the application in 19-inch mounting systems. The low mounting height of 1 RU (1 RU = 44.45 mm) requires only little space. The extracted drawer has an angle of about 15° degrees allowing for comfortable operation in standing position.



VESA version

The mounting of electronic devices to the wall, the ceiling or to panels is subject to the so-called VESA standard. The rear side of the device is equipped with four insert nuts for installing the bolts. The distance between the mounting holes corresponds to a standardized matrix (usually 75 x 75 mm). This mounting method includes the assembly and system integration of desktop devices.



Manufacturing services

From the idea to the delivery, all manufacturing stages are maintained at our company. The processes are particularly tailored to electrotechnical/electromechanical systems and HMI-components/devices.

On request, however, also products for other areas and applications can be manufactured. Due to a reliable and responsive configuration of all involved factors, we are able to manufacture the most diverse and complex systems even in small and medium sized quantities.

Producing

In the producing area, the subproducts are joined together in order to manufacture the finished product. By means of the in-company milling shop, cutting plotter department, screen printing, and assembly, the delivery routes are very short; this way, a quick and uncomplicated order processing can be ensured.

In the producing department itself, we are working in a highly flexible manner by applying the multiple-shift system. Thanks to an experienced and qualified team, we are able to react to orders on short notice in a quick and reliable manner.

Quality management system

The quality management system used by InduKey meets the DIN EN ISO 9001:2008 standards. Clearly structured and organized inspection processes ensure a continuing high quality of our products. These established processes are also applied at outsourced production locations.

In 2010, the recertification according to DIN EN ISO 9001:2008 was successfully achieved. In addition, further certification processes such as internal audits or system audits by major customers take place.

Made-in-Germany
All InduKey products are manufactured in our plant in Treuen, Germany.

OEM product assembly for all areas in large quantities

Guangzhou InduKey® Assembly Ltd. in Guangzhou, China, offers many years of experience from counselling, OEM manufacture and logistics to transportation.

- Products for the computer periphery
- Electronic gift articles and promotional items
- Sports and leisure time electronics
- Consumer electronics

Technical Know-How

- Support by our experienced development engineers
- Fastest manufacture of approved prototypes
- Many years of experience with regard to OEM manufacture



Developing



Screen printing



CNC milling



Assembling



Producing



Quality controlling



Worldwide partnership

From its German location, InduKey maintains a large network of distribution partners. The company has partners on all continents.

In cooperation with the partners, InduKey ensures that its products and services are globally available. On our homepage (link above) you will find an up-to-date list of our international offices. Please feel free to contact the respective consultants – they will contact you soon and without obligation.

Service and support

We support you in many ways. On the one hand our sales and consulting team will help you to find the adequate data input solution for your application. On the other hand we provide you with comprehensive support during the commissioning of a product.

You also have the possibility of contacting the manufacturer directly. Thus, time-consuming communication via third parties is avoided. This is an efficient solution for both parties.

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Delivery dates

The standard products are available „off-the-shelf“ and regularly available within three weeks.

Complaints

In case of complaints, please call the number of our technical support department or send an e-mail to support@indukey.com.

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