Explosion Protected Industrial Keyboards

EX Series
Keyboards of this category are designed for areas where a potentially explosive atmosphere occurs. This does not only apply to traditionally explosion-prone areas such as tank farms or mines, but increasingly also to a variety of industrial environments. There are two mechanisms to prevent an explosion; either prevent the formation of an explosive atmosphere or prevent the ignition of this atmosphere. In most cases it is not possible to eliminate the causes of explosive atmospheres. Consequently, identifying and eliminating potential sources of ignition is the most prudent course of action. All powered devices represent a potential ignition source when used in explosion-prone areas and must be consequently designed in such a way to take into account this explosive potential. The keyboards in 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 operational activities.

**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 operational activities.

**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 operational activities.
Metal Housing

This explosion protected keyboard is available as a model with a complete stand-alone metal housing. Due to the metal front panel and the stainless steel housing, the keyboard is extremely sturdy.

To prevent the possibility of ignition, a decoupling device for the galvanic isolation between the keyboard and the system is required. If your facility does not have such a device available, this required accessory is available from GETT.

Front Mounting

This front panel model of our explosion protected keyboard can be easily integrated into systems by means of threaded bolts which are located on the rear side.

Entirely Covered Silicone Keyboard

This explosion protected keyboard (pictured above) is completely covered with silicone, which makes it entirely waterproof and dustproof.

TKA Interface Ex:

To prevent the possibility of ignition, a decoupling device for the galvanic isolation between the keyboard and the system is required. This accessory is shown below and available from GETT if your facility does not have such a device available.
## Technical Data

**Switching Technology:** Short Travel Keys  
**Switching Force:** 2.6 N  
**Switch Travel:** 0.3 mm  
**Switching Cycles:** Approx. 3 Mio. (per key)  
**Operating Temperature:** 0 °C to +50 °C  
**Storage Temperature:** 0 °C to +60 °C  
**Interface:** PS/2

**Front Panel Material**  
TKS version: Aluminium  
TKG version: Silicone

**Housing Material**  
MGEH version: Stainless Steel

### Data input devices are electromechanic devices and as such are a potential source of ignition. As a result they are subject to specific technical modifications and often confronted with demanding industrial environments. For the operation of such devices 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 above picture). For barrier is used, which allows for this the galvanic isolation of the two circuits. Without this barrier, the safe use of an explosion protected data input device is not possible. The distance between the operating element and the barrier can often be as large as 10.0 m.

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Product Description</th>
<th>Pointing Device</th>
<th>Protection Level</th>
<th>Dimensions (mm)</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>KS02011</td>
<td>TKS-105-EX-MGEH-PS/2-US</td>
<td>None</td>
<td>IP65</td>
<td>508 x 213 x 52 mm</td>
<td>5700 g</td>
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<tr>
<td>KS02013</td>
<td>TKS-105-EX-TB50-MGEH-PS/2-US</td>
<td>Trackball, 50 mm</td>
<td>IP65</td>
<td>508 x 213 x 52 mm</td>
<td>6000 g</td>
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<tr>
<td>KS02015</td>
<td>TKS-105-EX-TOUCH-MGEH-PS/2-US</td>
<td>Touchpad</td>
<td>IP65</td>
<td>508 x 213 x 52 mm</td>
<td>5800 g</td>
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<td>KS09220</td>
<td>TKS-105-EX-TB50-MODUL-PS/2-US</td>
<td>Trackball, 50 mm</td>
<td>IP65</td>
<td>482.6 x 177.8 x 48</td>
<td>1600 g</td>
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<td>TKS-105-EX-TOUCH-MODUL-PS/2-US</td>
<td>Touchpad</td>
<td>IP65</td>
<td>482.6 x 177.8 x 23</td>
<td>1200 g</td>
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<td>KG14046</td>
<td>TKG-105-EX-IP68 GREY-PS/2-US</td>
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<td>IP68</td>
<td>387 x 150 x 22 mm</td>
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<td>TKA-EX-VERSORUNG-TKS-PS/2</td>
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<td>KA08201</td>
<td>TKA-INTERFACE-EX</td>
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</table>

Other layouts, configurations and interfaces on request

1 IP65 (static), IP54 (dynam.)