

Push, pull, slide, twist and tilt: One joystick for all directions

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SpaceMouse® Module enables brand-new control concepts

The SpaceMouse® Module wins over users thanks to its simple and intuitive method to control complex 3D movements. There are six degrees of freedom available for all directions of movement. This is made possible thanks to the patented opto-electronic sensor unit, which is available now as an industry-compatible installation module.

The SpaceMouse® Module enables brand-new control concepts for industrial applications. Using opto-electronic scanning, the six degrees of freedom are realised via displacements along the main x, y and z axes and tilt and rotary movements around these axes. This way, it is possible to complete complex 3D control tasks with just one hand. The module can essentially replace two otherwise separate control units that would be necessary to operate flying objects (such as drones and quadcopters) or cameras. As a result, the SpaceMouse® Module is ideal for use in the inspection of power poles and wind turbines as well as for use in general disaster relief or mountain rescue, for camera and microscope control, for X/Y/Z precision and special-purpose machining or robotics applications. In other words, it is designed to be used everywhere where 3D movements are controlled manually.

Minimal finger or hand movements are sufficient to operate the module. The controller cap has been ergonomically optimised and the shape, material and colour can be designed according to specific customer requirements. Thanks to its small size, the joystick is also ideal for tight installation spaces. Installation and maintenance are very simple thanks to the bolt flange and plug connections.

The sensors guarantee a resolution of 10 bit and a maximum data rate of 100/s. External interferences such as temperature, dirt particles and magnetic fields have no effect on the service life of the sensors. UART and USB interfaces are available for the SpaceMouse® Module. In the USB version, the operating system detects the device as a USB joystick without other drivers. There is a software development kit (SDK) available for the UART version. It can be used to implement application-specific controls.