



With the HGT 1051, SIGMATEK brings modern multi-touch operating concepts to machine periphery.

VIA MULTI-TOUCH AROUND THE MACHINE

Following the best year in the company's history, SIGMATEK is placing a spotlight on visualization for this year's activities. The star will most certainly be the first mobile operating panel with a capacitive glass multi-touch screen. Additionally, the topic of Safety will also be in focus. Whereby SIGMATEK can send signals by Black Channel via different paths, even wireless.

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Often, we read of the possibility to use smartphones and tablets for machine visualization. When one asks production supervisors or machine operators however, it is something for occasional use, by management or for maintenance.

For harsh daily operation, practitioners continue to prefer the robust units directly on the machine. Here, modern operating comfort is also desired.

SIGMATEK already offers thin multi-touch panels with projective capacitive touch technology (PCT) from the ETT series in display sizes from 8.4 to 19 inches in 4:3 format, for integration into the machine housing, as well as the TT series with 15 and 18.5 inches for the carrier arm mount and a 23.8-inch vertical panel with HMI-Link Technology.

„Today everyone is accustomed to the multi-touch gesture control from smartphones and tablets“, says Mag. Alexander Melkus, Managing Director Sales at SIGMATEK GmbH & Co KG. „For this reason, these capacitive glass touchscreen devices enjoy extremely high user acceptance with machine builders as well as end users. The optional addition of the customer logo with single-color backlighting enhances the modern appearance of the ETT multi-touch panels.“

High Comfort with Mobile Operation

Not all parts of large machine and production cells however, are visible from central operating terminals. In many cases, direct process monitoring, combined with access possibilities up to emergency stop, is indispensable. Especially in setup mode, when processes and movements within the installation are optimized, they must promptly react to situations such as an impending collision for example. With the mobile operating panel HGT 1051, SIGMATEK now meets the demand to provide the high comfort of modern operating concepts close to the operating point of machines and robots – during setup mode for example.

The innovative Salzburg manufacturer has equipped the cable-connected device with a standard, vertically mounted 10.1-inch screen in 16:9 format. The robust panel has a capacitive multi-touch screen with a glass surface for intuitive and comfortable operation and monitoring of machines and robots with excellent clarity. As with all SIGMATEK systems, object-oriented programming is performed in the HMI tool LASAL SCREEN, which has extensive libraries and modern „Add-Ons“.



▲ An example of an optional logo with backlighting on the multi-touch ETT operating panel from SIGMATEK. (Bild: Elmet ©)

These are ready-to-use design templates and intelligent functions such as alarm and recipe handling, management of access rights, online oscilloscope etc. The creation of ergonomic and practical interfaces for operating and monitoring machines and systems is therewith drastically reduced.

Communication Features for the Digital Factory

The panel not only provides machine operators with the option of gesture-control based operating concepts on the machine, it is also equipped with a high-performance EDGE2 processor and Ethernet interface. All SIGMATEK HMIs with a processor comply with OPC UA, making them fit for use in the digital factory.

„In machine concepts 4.0, open communication is a must – whether horizontally in a machine network or vertically with a higher-level system such as MES, ERP or cloud solutions“, says Alexander Melkus.



“The response to the HGT 1051 is very positive. I feel that the market has been waiting for a mobile operating device with multi-touch.

Mag. Alexander Melkus,
Managing Director Sales at
SIGMATEK GmbH & Co. KG



▲ The quadratic mounting plate on the back of the housing, including the ergonomic grip and integrated Safety functions, can also be mounted at 90°. The HGT 1051 can therefore be used vertically, as well as horizontally.

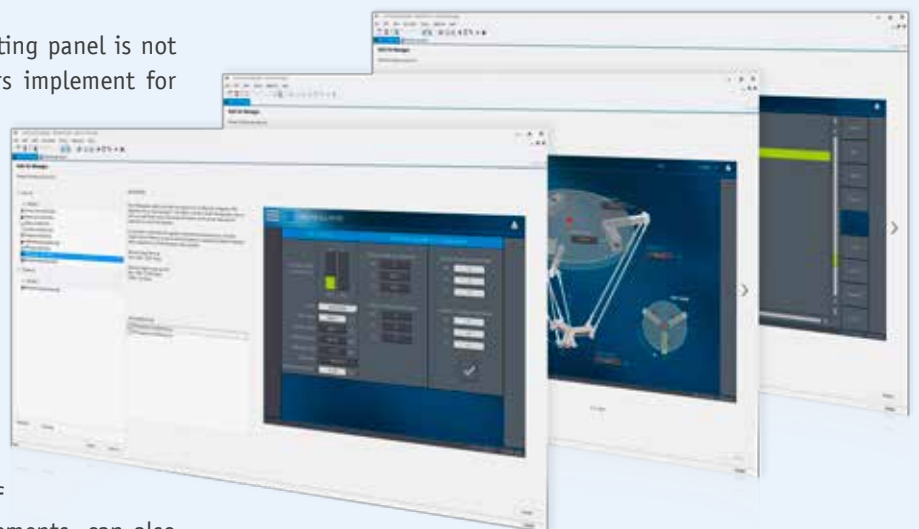
As with all SIGMATEK devices, a USB connection is located directly on the panel, over which from the LASAL design environment, logic, visualization or device firmware can be updated using a bootstick file. This simplifies the device maintenance since no technical knowledge or external programming is required for this process.

As a small help, three magnetic feet are located on the back. With these, operators can place the IP54-protected HGT 1051 on the frame or housing sections of the machine when they need to use both hands or are simply working at the same location for a longer period. This eliminates the mounts that are currently used and their traditionally problematic placement on the machine.

☞ Ergonomics in Form

The ergonomics of the mobile HGT 1051 operating panel is not limited to that which application programmers implement for operating comfort in graphic user interfaces. The user-friendliness already starts with the housing of the under 1 kg device. The symmetrically constructed panel has a grip located in the center of the rear side so that it can be held safely and fatigue-free by right and left hands. This bulge also serves as the cable feed. The connector is placed so that the outgoing cable does not interfere with holding the panel, regardless of in which hand.

The quadratic mounting plate on the back of the housing, including the grip and Safety elements, can also be mounted at 90°. This allows the panel to be ergonomically used with graphic operating concepts, which are designed for a horizontal rather than vertical screen.



▲ To accelerate engineering, ready-to-use Software components are available. These „Add-Ons“ are function-specific and contain program and display elements in various resolutions.



▲ New to the S-DIAS Safety Team is the SNC 021 for analysis of two incremental encoder signals to monitor speed, position, direction and acceleration.

☞ Safety on Board

In addition to the highest possible operating comfort when changing recipes or setting parameters and checking production numbers, as well as maintenance and operating conditions, the HGT 1051 has all the necessary Safety elements. It is equipped with a safe emergency stop button integrated directly in the panel, as well as a confirmation button and key switch. The Safe signals travel over a two-wire connection via the CAN bus directly to the SCP 111 Safety control in the especially thin S-DIAS format. An optional RFID reader is provided, with which employees can log into with their identification media. Authorization schemes can be therewith implemented, which provide users with different access options based on their qualifications. For such cases, in which logging in just once is insufficient, a mount for the RFID card is offered.

„The feedback is extremely positive. I feel that the market has been waiting for a mobile operating device with a capacitive surface and multi-touch capability“, says Alexander Melkus. „We are pleased to give users an opportunity to bring the ergonomics of their machines and production cells up to a level that fits Industry 4.0 and the Internet of Things.“

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AUTOMATION
asked Alexander
Melkus about
the integrated
Safety technology
as a second focal
point of
SIGMATEK´s
activities this year:



☞ Mr. Melkus, which new Safety products will SIGMATEK be presenting?

SIGMATEK has expanded its portfolio of Safety-oriented components and solutions. In addition to the Safety controller, Safe in and output modules are available in the especially thin S-DIAS format. Of particular note are the SRO 021 with two Safe relay outputs, the SSI 021 for the safe analysis of two SSI absolute value encoder signals and – seen for the first time at the SMART – the SNC 021. This module allows the analysis of two incremental encoder signals for monitoring speed, position, direction and acceleration.

The module variety enables an exact layout of the respective application and therewith, an economic Safety solution. Not new, but unique, is that SIGMATEK designed the integrated Safety technology so that the signals can safely travel over any communication path via Black Channel. This makes wireless transmission of Safety signals, via WLAN for example, also possible.

☞ What benefit does the customer have from being able to transmit Safe signals via WLAN?

Developers of machines and production systems are increasingly trying to design components that are location-independent. In many cases, this is easier with wireless communication. An example from our selection is the HGW 1031 handheld operating panel. However, driverless transport systems for example, are also increasingly part of overall systems. With Safe data transfer via WLAN and vibration-proof Safety modules, they can be seamlessly integrated into a comprehensive Safety concept.

Mr. Melkus, thank you for the detailed information.