OPERATING PANELS WITH PCT TECHNOLOGY

In this world of the beautifully designed smartphone and tablet, the importance of appearance is becoming an important factor in the modern machine concept. This is demonstrated by the latest generation of multi-touch operating panels

In industry, safe operation and monitoring are the central tasks of a human-machine interface. If this basic function is met, numerous other factors come into play when selecting the right operating panel. With a user-friendly operating interface that unifies industrial suitability, usability and innovation, manufacturers of machines and systems can inspire their customers.

With the ETT series, Sigmatek launches operating panels that optimally combine multi-touch functionality in hard and software. The modern HMIs enable new, smart operating concepts that provide positive operating experience.

DEMANDING HMI TASKS

Equipped with an ARM-based EDGE2 Technology dual-core processor, the ETT panels provide high performance with low power usage. 512 Mbytes of DDR RAM for internal program and data memory, 512-Mbyte storage (microSD) for recipes, alarm management and data logging, as well as a 2D and 3D graphics accelerator are included in the standard configuration. Even with graphically complex operating surfaces, the ETTs are in their element – especially the high-resolution TFT displays with great colour brilliance provide convincing visualisation.

In the new Sigmatek HMIs, projective capacitive touch technology (PCT) is used, by which the sensors are protected on the back of the robust, solid surface of the glass front (IP65 protection). Multi-finger input, as well as the

use of styluses and thin gloves are possible. Currently, the panels are available in five display sizes: 8.4, 10.4, 12.1, 15 and 19-inch in classic 4:3 format. This enables a simple and fast changeover to multi-touch technology, without immediately requiring a complete reconfiguration of the visualisation.

The streamlined panels – with only a 48mm installation depth – can be mounted directly on the machine, an operating console or integrated into the control cabinet, making them suited to a variety of applications. The interfaces are selected to ensure that the HMIs fit in practically any machine and system configuration: 2x Ethernet, 2x USB 2.0, 1x USB OTG (On-the-Go) and 1x CAN bus. There are also eight digital in- and out-puts on board, which can be used for command and signalling devices such as toggle switches, signal towers and operating mode switches.

Reliability, robustness and electromagnetic compatibility

SURFACE CAPACITIVE & PROJECTED CAPACITIVE TOUCH

Surface capacitive touch screens have a transparent electrode layer placed on top of a glass panel, covered by a protective cover. When an exposed finger touches the screen, it reacts to the static electrical capacity of the human body; some of the electrical charge transfers from the screen to the user. Sensors located at the four corners of the screen detect the decrease in capacitance, allowing the controller to determine the touch point.

Projected capacitive is similar to surface capacitive technology, but in addition to a bare finger, it can also be activated with surgical or thin cotton gloves; and it enables multi-touch activation, ie. simultaneous input from two fingers. This type of screen is more rugged and resistant to surface contaminants.

(EMC) are essential properties of the multi-touch HMIs. The new panel series with IP65 protection has an integrated 4mm glass surface. It is dust-proof and easy to clean.

The ETT operating panels present a modern and minimalistic appearance. With the frameless design, Sigmatek has managed to bring the price of capacitive operating panels closer to that of the resistive panels.

Monochrome logo backlighting can be controlled via the application in any colour (RGB). The elegant look of the ETT can therefore be perfectly integrated into the corporate design of the machine or system. The logo also lights when the touch screen goes into idle mode. An application-specific function can be created to

make the backlit logo blink or display in a different colour when an error occurs.

MULTI-TOUCH SOFTWARE

In addition to the high performance of the panels, the efficiency of the visualisation software is a key factor. Only when hard and software interact perfectly, is multi-touch a fully integrated operating concept. The Sigmatek panels are delivered with a Linux-based real-time operating system and the object-oriented development tool LASAL, which is well equipped for the creation of intuitive multi-touch applications. Object orientation simplifies the modularisation and reusability of the software.

Tel: +43 6274 43210

KEY POINTS

- *ETT panels feature an ARM-based EDGE2 Technology dual-core processor, providing high performance with low power usage*
- *Interfaces are selected to ensure that the HMIs fit in practically any machine and system configuration*
- *Panels come with a Linux-based real-time operating system and the object-oriented development tool LASAL*

HAVE AN OPINION?

Email your comments on this article to:

cda@western-bp.co.uk