

System components - Human Machine Interface (HMI)



Overview



HMI devices

A finely graded range of HMI devices is available for local operator control and monitoring.

Mobile panels

The portable operator panels facilitate operator control and monitoring at the actual scene of the event with direct access and visual contact to the process. They offer simple and secure hot-swapping and can be used flexibly on machines or systems.

Graphics panels 170/270 series

With full graphics display for realistic representation of sequences (for 170B and higher also in color), either as touch panels (TPs) with touch-sensitive display or as operator panels (OPs) with membrane keyboard.

Multi-panels 270/370 series

These can be used for operator control and monitoring in the same way as the panels, with operation by means of touch screens or membrane keyboards. In addition, the multi-panels (MPs) permit installation of additional applications and thus allow integration of several automation tasks on a single platform with the PLC WinAC MP software, for example.

Rugged and compact for use at machine level

With IP65/NEMA 4 degree of protection on the front side, high EMC and extreme vibration resistance, the SIMATIC operator panels are ideally suited for the use at machine level in tough industrial environments. Due to their compact design with a shallow mounting depth, the stationary operator panels can be fitted anywhere, even where only restricted space is available.

The extremely rugged and shock-proof housing with IP65 degree of protection makes the mobile panels especially suitable for industrial applications. Their low weight and ergonomic design means that they are user-friendly and easy to operate.

One configuration software for everything

SIMATIC ProTool or SIMATIC WinCC flexible are tools for consistent configuration of all SIMATIC panels as well as PC-based systems with the visualization software ProTool/Pro Runtime or WinCC flexible Runtime. Graded variants are available for every task. The software permits simple and efficient configuration. Programming experience is not required.

Completed configurations can be reused within the family.

Innovative HMI

The mobile panels, panels and multi-panels of the 170, 270 and 370 series, which are based on the Windows CE operating system, allow innovative operator control and monitoring combined with ruggedness, stability and simplicity. Standard hardware and software interfaces provide more flexibility and openness to the office world, e. g. the MMC/PC/CF card, USB, Ethernet, PROFIBUS DP, Visual Basic scripts or customer-specific ActiveX controls.

HMI software

With the product families SIMATIC ProTool and SIMATIC WinCC flexible, SIMATIC HMI offers visualization and configuration software for the whole spectrum.

SIMATIC ProTool

SIMATIC ProTool covers the applications of the machine-related area with PC-based control and monitoring solutions for single-user systems based on ProTool/Pro through to the SIMATIC HMI operator panels. For the configuration of the ProTool/Pro Runtime for PCs as well as SIMATIC HMI operator panels, the ProTool family has the uniform and scalable configuration tools ProTool/Lite, ProTool and ProTool/Pro CS.

SIMATIC WinCC flexible

SIMATIC WinCC flexible is the consistent further development of the SIMATIC HMI software products. WinCC flexible offers an essential hub for applications close to the machine (until now this has been covered by the ProTool family) with respect to configuration efficiency and new automation concepts. For process-oriented plant and mechanical engineering as well as series production of machines, SIMATIC WinCC flexible 2005 also offers:

- Further productivity improvements (configuration efficiency) when creating HMI projects
- Implementation of innovative TCP/IP and web-based automation and HMI concepts
- Increase of the availability of the machines and systems through new service concepts
- Safe, flexible and world-wide access to process data
- New SIMATIC HMI devices

Changing from the ProTool family to WinCC flexible is possible by simply using the same or converting the old configuration data. The ProTool family, however, will be available alongside WinCC flexible for the foreseeable future.

SIMATIC WinCC will remain the process visualization system for plant monitoring with single or multiple station solutions and the platform for IT & Business integration under Windows 2000 and XP Professional.

The next step will be to use WinCC flexible also as the platform for integrating the SIMATIC WinCC visualization system. As is the case today for ProTool V6 projects, WinCC V6 projects will then also be compatible.