

SIEMENS



Engineered
with
TIA Portal

SIMATIC HMI Panels

Operator Panels for All Requirements – and All Demands

www.usa.siemens.com/hmi



The TIA Portal represents the intuitive, efficient and proven engineering framework for all automation tasks.

Answers for industry.



“I don’t compromise when it comes to operation and monitoring. This is why I rely on the equally proven and innovative solutions by the world market leader – for all applications.”

New productivity benchmarks for sustainable competitive advantages

Against the background of increasing global competition, the consistent utilization of all optimization potentials throughout the entire lifecycle of a machine or plant has never been more important than today. Optimized processes facilitate reduced total cost of ownership, minimized time-to-market and enhanced quality.

Totally Integrated Automation is perfectly attuned to meet these targets while also being open for international standards and third-party systems. With its special system characteristics, Totally Integrated Automation supports the entire lifecycle of a machine or plant.

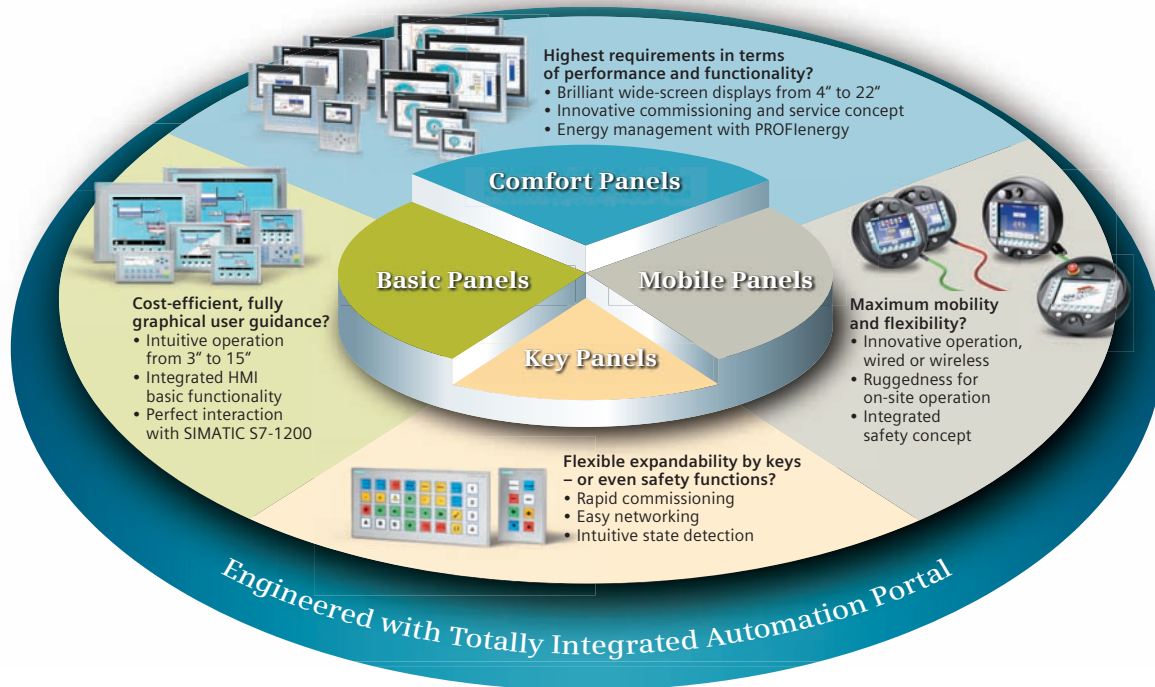
SIMATIC, the world’s leading automation system, represents a core component of Totally Integrated Automation and comprises a multitude of standardized, flexible and scalable products. For example: SIMATIC operator panels, which are presented in this brochure.

The integrated engineering framework for controllers, HMI and drives: TIA Portal

With the Totally Integrated Automation Portal (TIA Portal), Siemens offers an engineering framework which facilitates the implementation of automation solutions in all sectors worldwide. From automation system planning, commissioning, operation and maintenance down to expansion – the TIA Portal offers significant saving potentials in terms of engineering time, costs and expenditures.

Find out more about the TIA Portal
www.siemens.com/tia-portal

TIA Portal



SIMATIC HMI Panels

First choice for efficient operation and monitoring

SIMATIC HMI Panels have been tried and tested in the most various applications throughout all sectors for years. They not only feature an innovative design and high performance – as a unique highlight, they can be configured via SIMATIC WinCC in the TIA Portal. Users can thus benefit from unprecedented engineering efficiency.

Integrated functionality across all display sizes

The hardware's functionality is identical throughout a device range. Simply select the optimum display size for your application and choose between operation via touch screen and/or keys. As the software is scalable, you can start with a small solution and further expand it anytime as required – for example by increasing the number of tags.

Integrated functionality across all display sizes

- **SIMATIC HMI Comfort Panels:**
First choice for demanding applications
- **SIMATIC HMI Basic Panels:**
Basic functions for simple HMI applications
- **SIMATIC HMI Mobile Panels:**
Maximum mobility for operation and monitoring
- **SIMATIC HMI Key Panels:**
Innovative operator panels – for turnkey operation

Unique engineering efficiency

SIMATIC HMI Panels can be intuitively configured in the TIA Portal via the scalable SIMATIC WinCC software. This results in increased engineering efficiency when further components from the Totally Integrated Automation portfolio are used – e.g. SIMATIC controllers. The perfect interaction with STEP 7 does away with multiple entries and ensures maximum data consistency.

Long-term value maintenance

SIMATIC products support long-term investment protection. Existing projects can be easily and directly migrated to the successor product. Whether the panel is integrated or operated autonomously – a long-term phase-out period ensures availability of the suitable spare part in service cases. Moreover, the matching accessories for each product are available throughout the entire product lifecycle.

The TIA Selection Tool helps you to select the suitable device for your application
www.siemens.com/hmi-selection-tool

Convince yourself of our HMI portfolio in practical applications
<https://webservices.siemens.com/referenzen>

Find out more about SIMATIC HMI Panels
www.usa.siemens.com/hmi

HMI Panels

SIMATIC HMI Comfort Panels

First choice for
demanding HMI tasks



Various display sizes – identical functionality

All SIMATIC HMI Comfort Panels consistently offer the same high-end functionality. Featuring high-resolution wide-screen displays from 4" to 22", optionally with touch or key operation, they can be optimally adjusted to any application. Furthermore, they offer numerous innovations. For example, the displays can be centrally disconnected during break times via PROFlenergy in a coordinated manner to reduce energy consumption.

Brilliant displays in wide-screen format

With up to 40 % more visualization space, the wide-screen format offers extended display options for complex operating screens – and a clear differentiation between application monitoring and operation. The following display diagonals are available: 4", 7", 9", 12", 15", 19" and 22". The high resolution with 16 million colors facilitates detailed process visualization and optimum readability. This is also supported by the wide reading angle of 170°. The displays' high brightness is 100 % dimmable to allow for optimum adjustment to individual requirements – this is for example important for applications on ships and ensures reduced energy consumption.

Integrated high-end functionality

SIMATIC HMI Comfort Panels are characterized by their high performance which amongst others ensures rapid image build. Irrespective of the display size, all devices offer archives, VB scripts and various viewers for the display of plant documentation (e.g. as PDF) and Internet websites. The system diagnostics options in interaction with SIMATIC controllers represent an innovation. Diagnostics information which could previously only be obtained via a programming device can now be read out via the Comfort Panel.

Efficient energy management

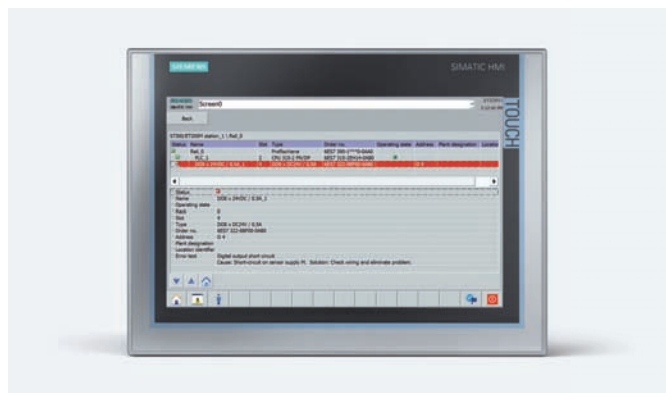
The standardized PROFlenergy protocol supports the coordinated central disconnection of redundant energy loads and the detection of measured energy values. This facilitates disconnection of the Comfort Panels' displays even during short break times for reduced energy consumption. PROFINET as a standard facilitates easy integration in existing plant structures and offers high investment protection.

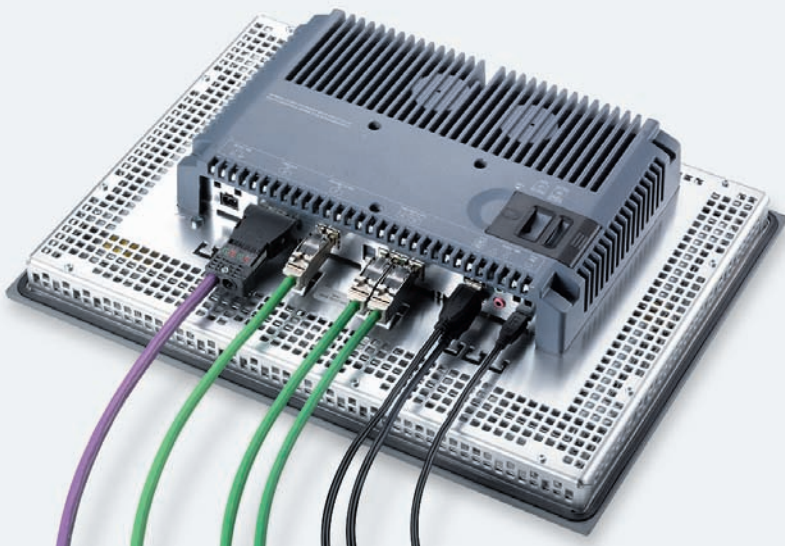
100 percent data security in case of power failure

The Comfort Panels' protection against voltage failure ensures cost-efficient data retention – without an additional uninterruptible power supply. The same applies to recipes and archives in RDB format when these are saved on a SIMATIC HMI memory card.

Suitability for harsh environments

The rugged SIMATIC HMI Comfort Panels come with numerous approvals for international applications and for use in sectors subject to increased requirements. From 7" upwards, they are available with durable aluminum die-cast fronts as a standard. They are certified for Ex Zones 2 and 22 in accordance with ATEX and are thus applicable in hazardous areas. Marine approvals are partially available for all Comfort Panels.





Integrated interfaces

SIMATIC HMI Comfort Panels are suitable for integration in PROFINET and PROFIBUS networks and feature interfaces for the connection of USB I/O. From 7" upwards, the devices come with a 2-port Ethernet switch and from 15" upwards with an additional Gigabit PROFINET interface.

Eased project transfer

Standard cables can be used for loading HMI projects via PROFINET / Ethernet or USB – no special cables are required. Device settings are made during configuration, additional settings on the device itself are done away with. This ensures eased commissioning. The project data and device settings are saved to a system card integrated in the device and automatically updated. The system card can be used for project transfer to a further device.

Now available as download

Plant monitoring via network camera and camera control:

- Monitoring of multiple remote processes on the Comfort Panel
- Monitoring of difficult-to-access areas
- Documentation and saving of machine states

Further information:

<http://support.automation.siemens.com/WW/view/de/65647473>

Printing and documentation

- Paperless printing in PDF / HTML format
- Screenshots for rapid documentation
- Archiving of process values and reports



Highlights

- Versions in sizes of 4", 7", 9", 12" and 15" with touch or keys as well as 19" and 22" with touch; the 4" touch device features additional keys
- All touch devices support vertical installation – for optimum plant space utilization or for special machine designs
- Integrated high-end functionality: Archives, VB scripts and various viewers for plant documentation display – e.g. as PDF or in the form of Internet websites as a standard
- Brilliant displays in wide-screen format
- 100% data security
- Easy commissioning, rapid service
- Integrated system diagnostics
- Cross-sector and cross-regional applicability
- More interfaces
- Less hardware costs

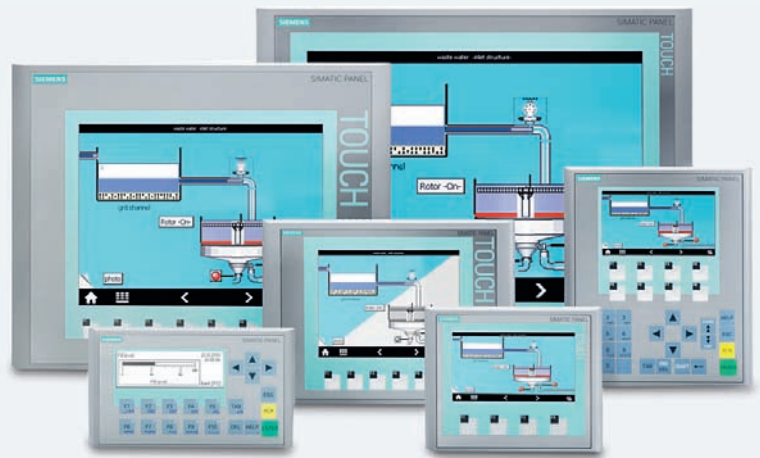
Find out more about SIMATIC HMI Comfort Panels
www.siemens.com/comfort-panels

SIMATIC HMI Comfort Panel Starter Kits
www.siemens.com/comfort-panels-starter-kits

Comfort
Panels

SIMATIC HMI Basic Panels

Efficient solutions for
simple HMI applications



Visualization allows for considerably increased process quality also with compact machines or smaller applications. Up to now, the option of operation and monitoring was frequently abandoned for cost reasons. SIMATIC HMI Basic Panels offer HMI basic functions at an attractive price and open up new possibilities in terms of mechanical engineering.

Brilliant displays in various sizes

SIMATIC HMI Basic Panels are available with displays from 3" to 15". They can thus be optimally adjusted to the actually required visualization space and the spatial conditions on site. The 4" and 6" devices, which can also be configured for vertical application, offer even greater flexibility.

Touch and/or key operation

The 4", 6" and 10" devices feature touch screens – and additional freely configurable control keys. The 4" device is available with high-resolution wide-screen color displays as well as in a more cost-favorable black-and-white version. The 15" device with exclusive application operation via touch screen suggests itself for the visualization of large or particularly detailed process images. Our portfolio of Basic Panels is rounded off towards the bottom by the KP300 Basic mono PN, equipped with a 3" display.

Perfect interaction with SIMATIC S7-1200

Basic Panels support versatile applicability. The visualization of applications of the modular compact controller S7-1200 offers particularly great added value. The new SIMATIC STEP 7 Basic engineering system automatically includes WinCC Basic in its scope of supply. Furthermore, numerous drivers support communication with third-party controllers.

Guaranteed upgradeability

Projects created for a Basic Panel with WinCC in the TIA Portal can be effortlessly transferred to a more powerful Comfort Panel, Mobile Panel or PC. This ensures the continued usability and extendibility of existing projects after an upgrade.

Highlights

- Ideal starter range for the operation and monitoring of compact machines and plants
- Displays from 4" to 15" with touch functionality for intuitive operation
- Cost-efficient key device with 3" LED display and freely configurable backlight color
- Freely configurable keys with tactile feedback
- High-resolution 4" wide-screen color displays as key or touch devices
- Versions for connection to PROFINET / Ethernet or PROFIBUS DP / MPI
- Flexible scalability within the HMI range through configuration with SIMATIC WinCC (TIA Portal)
- Installation compatibility with the existing Panel and Multi Panel touch devices
- Attractive industrial design of SIMATIC HMI

Find out more about SIMATIC HMI Basic Panels
www.siemens.com/basic-panels

SIMATIC HMI Basic Panel Starter Kits
www.siemens.com/basic-panels-starter-kits

Basic
Panels



SIMATIC HMI Mobile Panels

Maximum mobility for
operation and monitoring



Irrespective of sector or application: Mobile operator panels offer decisive advantages when mobility is required for the on-site operation and monitoring of machines and plants.

Innovation by the world market leader

The SIMATIC HMI Mobile Panel 277 IWLAN represents a rugged, wireless operator panel with full HMI and optional safety functionality. It is available in different versions and combines maximum flexibility for mobile operation and monitoring, Industrial Wireless LAN (IWLAN) and integrated safety together with the SIMATIC fail-safe controllers. Safety Category SIL 3 or Performance Level PL e can be attained with the fail-safe Mobile Panels.

High user friendliness and resistance

The Mobile Panels with all-round protection against dust and splash water (IP65) are light and compact and can be effortlessly operated over prolonged periods both by right and left handers. Alternatively, they are also available with a wall mount. They are extremely shock-resistant thanks to their double-walled design and round enclosure form – and for example withstand falls from over one meter without damage. A “protective collar” prevents unintended operation of the STOP button.

Elaborate down to the detail

The Mobile Panels can be configured for alternation of the corresponding user interface according to connection point. Machine-specific HMI authorizations or actions can be realized independently of the selected connection point via the connection box ID. PROFINET connection boxes can be connected in series via integrated switches.

Sophisticated safety concept

The Mobile Panels allow for the provision of safety functions at any point of the machine or plant. STOP and acknowledgement buttons feature a two-circuit design in accordance with the safety regulations (EN 60204-1). Safety Category 3 in accordance with EN ISO 13849-1 can thus be attained.



Variable connection to various stations

When using a Mobile Panel with STOP button in combination with the “Plus” connection box, the operator panel can be configured for application on various connection points. The “Plus” connection box is also available as SIPLUS extreme version for demanding ambient conditions (aggressive atmosphere, condensation, etc.). Further information: www.siemens.com/siplus

Highlights

- Compact, ergonomic and rugged design
- Intuitive operation via membrane keys or touch screen – also with gloves
- High flexibility thanks to easy replugging during ongoing operation
- Connection point detection
- Plugging and unplugging without interruption of the E-STOP circuit (with “Plus” connection box), 1:1 assignment to the machine with “Basic” connection box
- Sophisticated safety concept
- Integrated interfaces (serial, MPI, PROFIBUS or PROFINET / Ethernet)
- Manifold drivers included in scope of supply – also for third-party controllers
- Short device start-up time after docking

Find out more about SIMATIC HMI Mobile Panels
and SIMATIC HMI Mobile Panel Starter Kits
www.siemens.com/mobile-panels

Mobile
Panels

SIMATIC HMI Key Panels

Innovative operator panels
for up to 60 % time savings
in terms of mounting



The compact SIMATIC HMI Key Panels replace conventional operator panels at a way more cost-favorable price. Thanks to the devices' turnkey pre-assembly, they support time savings of up to 60% in terms of mounting.

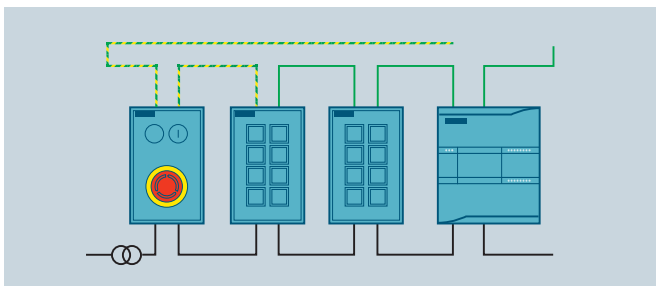
Flexible mounting and service

The devices are dimensioned for direct switchboard installation and can also be mounted to third-party support arm and stand systems as a standard by means of flexible mechanics. This supports their optimum use on machines in any application – for ergonomic operation at various points of plants or production lines.

As power supply and bus cables can be directly looped through on the Key Panel, no separate terminals are required. Furthermore, the F-versions support the direct connection of E-STOP devices or safety-related sensors, which further minimizes the wiring expenditures.

Highlights

- Large mechanical keys and multi-color LEDs (daylight-readable)
- Maximum flexibility through parameterization options
- Wiring time savings of over 60% and material cost reductions of over 30%
- Easy-to-label keys in IP65
- 2 PROFINET ports (incl. switch) for the assembly of line and ring structures
- Integrated digital I/Os on the device's rear for the connection of key switches, indicator lights, etc.
- Direct connection of E-STOP and other fail-safe sensors with F-versions
- Functional compatibility with all standard PROFINET master CPUs (also by third-party manufacturers)



Reduced hardware costs through integrated PROFINET 2-port switch and support of the shared device functionality KP8 or KP8F

Find out more about SIMATIC HMI Key Panels
www.siemens.com/key-panels

Key
Panels

SIMATIC HMI Devices with All-Round Protection

Device versions for
special requirements



Our portfolio of proven SIMATIC HMI operator panels is supplemented by versions with all-round degree of protection IP65 for support arm or stand mounting. The devices are based on standard devices from our portfolio which have been tried-and-tested in countless applications worldwide.

Flexible mounting and service

The devices can be mounted to third-party support arm and stand systems as a standard by means of flexible mechanics. This supports their optimum use on machines in any application – for ergonomic operation at various points of plants or production lines.

The rear panel's easy removability, also with device mounting on the machine, ensures outstanding service friendliness – e.g. for subsequent wiring or replacement of memory cards. Moreover, the operator panels can be easily adjusted to various requirements by means of modular expansion units, e.g. by equipping them with plant-specific mechanical pushbuttons or E-STOP devices.

The range's technology is based on existing installation devices

- SIMATIC HMI IPC477C PRO 15" and 19"
- SIMATIC Flat Panel Monitor PRO 15" and 19"
- SIMATIC Thin Client PRO 15"
- SIMATIC MP 377 PRO 15"



SIMATIC Flat Panel Monitor PRO 19" and HMI IPC477C PRO 15" with expansion units, incl. SIMATIC HMI Key Panels

Highlights

- Easy support arm or stand mounting
- High service friendliness
- High compactness and low weight
- Easy adjustability and modular expandability, e.g. with SIMATIC HMI Key Panels KP8 and KP8F

Find out more about SIMATIC HMI Devices
www.siemens.com/ip65-hmi-devices

All-Round
Protection



Customized Automation

Matched to your requirements

From minor design changes to OEM solutions, down to turnkey products: Customized products from our SIMATIC portfolio offer you the high quality and functionality of our proven SIMATIC products (controllers, HMI and IPC). This both applies to our sector products and our hardware modifications.

Customized design

Our SIMATIC products can be modified in terms of design and appearance to facilitate their seamless adjustment to your individual machine and plant design and your special operating and control philosophy. These design products are fully compatible with the standard products in terms of technology and functionality and are completely integrated in Totally Integrated Automation.

OEM product modifications

We offer special product modifications for our OEM customers. Such modifications support the realization of individual automation solutions which cannot be implemented with standard products or devices with design modifications only. For this purpose, we assemble a SIMATIC OEM device from our standard components, customer-specific components and additionally required software function expansions – analogous to a modular system.

Customized turnkey products

These ready-to-install turnkey products are realized exactly according to your specifications to meet your individual technical requirements. They are also based on our standard products which are combined and assembled specifically for you. Turnkey products comprise all wiring, connections, enclosure solutions and suitable automation components,

including the required software filling with customer-specific images.

Sector products for typical applications

Customized SIMATIC products can be equipped with additional characteristics for application in special industrial sectors.

- Renewable energies
- Automotive industry
- General mechanical engineering
- Food, beverages and tobacco industry / pharmaceutical industry
- Oil and gas / chemical industry and shipbuilding

Highlights

Time savings

- You benefit from our comprehensive customization know-how and our long-standing experience with SIMATIC components.
- You need not acquire any additional know-how and can fully concentrate on your own core competencies.

Increased profitability

- You benefit from the hardware modifications' flexible combinability on the basis of standards, which makes customized solutions attractive in terms of costs even for small quantities.
- You determine the optimum cost-performance ratio for you by specifying the customization type and scope.

Strengthened competitive advantage

- You rely on SIMATIC products which comply with the strictest quality standards, offer optimum performance and thus ensure maximized productivity and minimized downtimes.
- You are provided with customized products which can be excellently integrated in Totally Integrated Automation.

Find out more about Customized Automation
www.siemens.com/customized-automation

Customized
Automation



SIMATIC WinCC in the TIA Portal

One engineering tool for all HMI panels

WinCC in the TIA Portal is the software for all HMI applications – from simple operation solutions with Basic Panels, down to process visualizations on PC-based multi-user systems.

Maximum configuration efficiency

WinCC in the TIA Portal facilitates the use of device-independent configuration data on various target systems without conversion. The interface adjusts itself to the functional properties of the target device. Joint project data (alarm class, project texts, etc.) are centrally managed in the TIA Portal and can be used across different devices. Furthermore, an assistant for HMI configurations is available independently of the device which supports the rapid and easy creation of the visualization's basic structure.

Image editor for efficient and fast image configuration

- Generation of interlinked image objects via drag & drop, e.g. tags for the generation of input/output fields with process connection
- Definition of image templates and functions
- Layer technology with up to 32 layers

Object-oriented data management

- Comfortable search and change options
- Configuration of messages and archives directly on the HMI tags, no alternation between various editors
- Cross-reference list with direct access to all objects, e.g. for changes or selection

Libraries for configuration objects

- Archiving of all configuration objects – whether pre-defined or user-defined – in the library, e.g. of blocks as well as complete images or tags
- Faceplates can be compiled from simple image objects in a customer- or project-specific manner; faceplate changes can be effected centrally via the block definition.

Test and commissioning support

- Simulation of HMI projects on the engineering PC
- Marking of incomplete or faulty configurations directly in the respective editor
- Jump to the fault cause on the basis of the compiler's messages

Migration of existing HMI projects

- Complete data import from projects created in WinCC flexible

Find out more about SIMATIC WinCC
(TIA PORTAL)

www.siemens.com/wincc-tia-portal

SIMATIC
WinCC

Find out more:

www.usa.siemens.com/hmi

Learn everything
about SIMATIC
HMI Panels

SIMATIC
HMI Panels –
take a look!



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