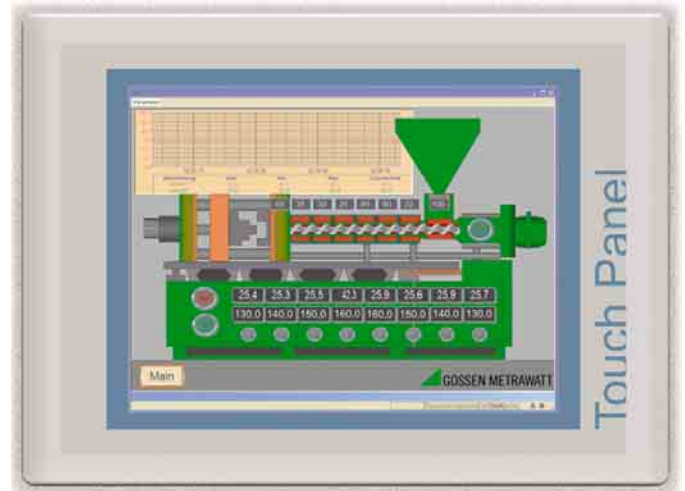


TP6xx Touch Panels

Visualization Platform for Controllers & Control Systems

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1/8.06

- **Display**
5.7" QVGA monochrome through 10.4" VGA TFT color display
- **Protection at front panel:** IP 65
- **Complies with FDA 21 CFR, part 11**
- **Operating system:** Windows CE.Net 5.0 including **Movicon X[®]** real flexible!
- **Upwards compatible with WIN32/64** (Xscale 520 MHz processor, 64 MB)
- **STEP[®]7 – OPC data import function**
- **Open architecture**
XML based, ActiveX, OPC client/server, ADO CE-DB, SMTP e-mail server, TAPI, SAPI, RAS, including networking, web server, VBA script (Visual Basic for application)!
- **Extensive drivers and symbols library**
included as a standard feature
- **4 parallel communication drivers, PLC station addressing and PLC bridge function to other controllers or possible with client-server**
- **Movicon X development platform**



Applications

In combination with the Movicon X visualization platform, our new touch panels (5.7" monochrome display through 10.4" VGA TFT color display), which are based on Windows CE, are suitable for all applications in the fields of factory, process and building management, as well as in machinery and equipment manufacturing.

Their compact design, as well as either horizontal or vertical operation, allow for use of the touch panels in very tight spaces. They are mechanically rugged thanks to the die-cast aluminum housing and are capable of withstanding harsh industrial environments thanks to IP 65 protection at the front.

Communication

In addition to the RS 232, RS 485 and RS 422 serial interfaces, various fieldbus connections are also possible including MPI, CAN, Profibus-DP/S, USB and Ethernet/TCP/IP). The user is provided with greatest possible flexibility and openness thanks to integration of these standard interfaces, which assures that the devices can be used in nearly all applications.

Ethernet (TCP/IP): Data can be exchanged between the touch panel and the higher-level server clients for central data backups and project management.

USB interfaces: Both USB interfaces can be used to connect various peripheral devices such as keyboard, mouse, printer, barcode scanner etc. in the hot plug-in/out mode.

Customer-Specific Applications with Controllers and Control Systems

- Controller or control system can be connected via RS 485 interface
- Graphic representation of applications in the fields of machinery manufacturing (extruders, tool heaters, packaging machines, textile machines etc.), equipment manufacturing (ovens, dryers, climatic chambers etc.), as well as factory automation, process automation and building automation
- Easy access to all control loops / touch-screens
- Separate menus for each control loop for the display and setup of control parameters, controller function and configuration, temperature parameters and status messages
- Online trend display for all control channels
- Overview display with actual value, setpoint, on-time etc.
- Alarm management including alarm history, limit values, probe, heating current etc.
- High security with various password levels
- Network access via Ethernet TCP/IP, MPI

Order Information

Designation	Article Number
STN LCD, monochrome / (B&W) 5.7"	TP605LQ
FSTN LCD, color, 5.7"	TP605CQ
TFT, color, 6.5"	TP606C
TFT, color, 10.4"	TP610C

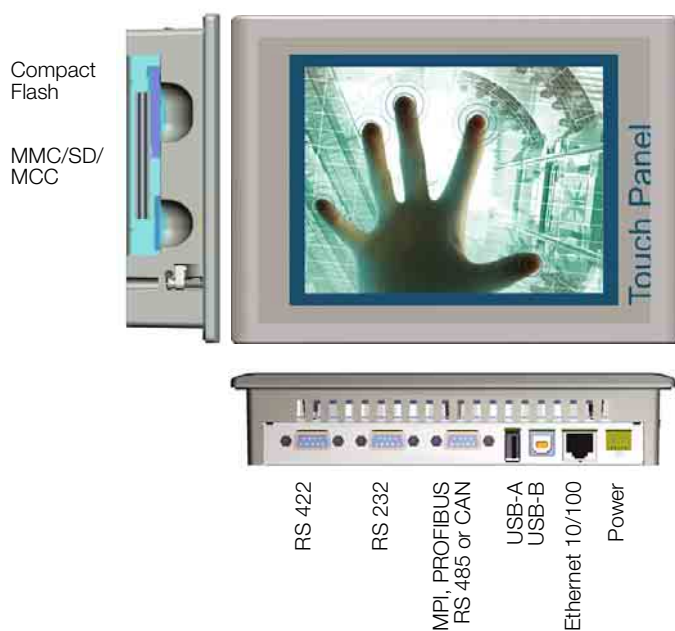
TP6xx Touch Panels

Visualization Platform for Controllers & Control Systems

Technical Data

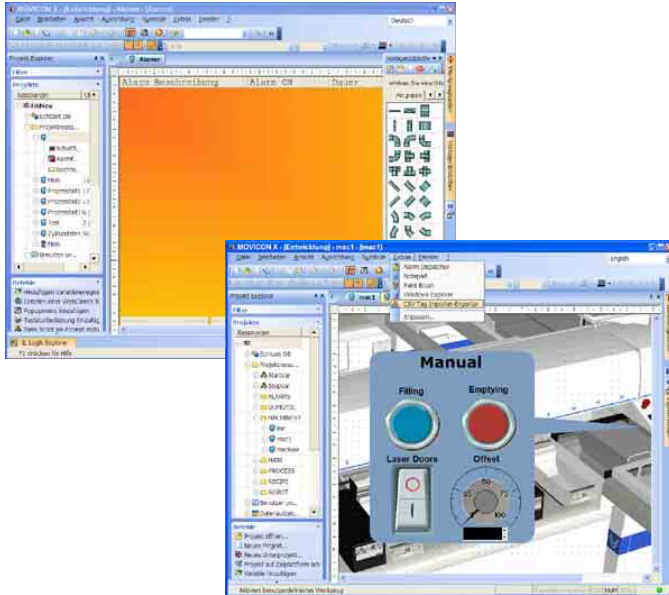
Type		TP 605LQ	TP 605CQ	TP 606C	TP 610C
Display		STN LCD, monochrome / (B&W)	FSTN LCD, color	TFT, color	TFT, color
	Size	5:7"		6.5"	10.4"
	Resolution (in pixels)	240 x 320 / 320 x 240		480 x 640 / 640 x 480	
	Colors	4 levels	256 colors	64K colors	
	MTBF background illumination	Approx. 75,000 hours (at 25° C)		Approx. 50,000 hours (at 25° C)	
Controls		Resistive touch-screen			
		-	USB		
Memory	Type	Flash / RAM			
	Usable memory capacity for user data	Approx. 6 MByte	Approx. 6 MByte	Approx. 6 MB	Approx. 6 MB
	CF card slot, type II	-	yes		
	SD/MMC push-push slot	yes			
Interfaces	Port 1 - MPI, 12 Mbits, Profibus DP, serial	1 ea. RS 485, isolated			
	Port 2 - serial	-	1 ea. RS 232		
	Port 3 - serial	-	1 ea. RS 422/485, isolated		
	Port 4 - serial	-	-	-	1 ea. RS 232
	USB	1 ea. USB.B	1 ea. USB.A, 1 ea. USB.B		2 ea. USB.A, 1 ea. USB.B
	Ethernet	-	10/100. RJ45		2 ea. 10/100. RJ45
Power supply	Voltage	Permissible range: 24 V DC			
	Nominal Current	0.4 a	0.45 A	0.5 A	0.7 A
Clock		Hardware clock, with backup battery			
Housing		Solid aluminum housing			
	Mounting (integrated swivel lever)	4 ea.			9 ea.
	Front / rear	IP 65 / IP 20			
Dimensions / weight	Front panel, W x H (mm)	212 x 156			304 x 233
	Panel cutout / installation depth W x H x D (mm)	200 x 144 x 37 1)			287 x 217 x 45
	Weight (kg)	1.2	1.2	1.3	1.8
Ambient conditions	Mounting position	Horizontal / vertical			
	Operating temperature / relative humidity	0 to +50° C (horizontal/vertical) / max. 85%			
	Transport and storage temperature	-20 to +60 °C	-20 to +60 °C	-20 to +60 °C	-20 to +60 °C

Mechanical Design / Interfaces



TP6xx Touch Panels Visualization Platform for Controllers and Control Systems

Movicon X development environment



Basic concept

Easy operation: With its intuitive user interface and numerous integrated tools, Movicon X is very easy to use. Assistants for automatic configuration of projects, recipes, programmed motion sequences and the automatic import of variables, for example for STEP®7, CSV etc., as well as for OPC, result in a drastic reduction in R&D time and associated project costs.

Consistent scaling: Movicon X is a consistently scalable visualization platform – from Windows CE right on up to XP. HMI and SCADA applications can be implemented without limiting variables with just a single development environment.

Guaranteed future: The project code is generated directly in XML meta language for Movicon X HMI-SCADA software. Data, graphics and elements can be processed as desired with XML. Thus Movicon X allows for web-based, open and flexible automation integration all the way up into company management with MES and ERP.

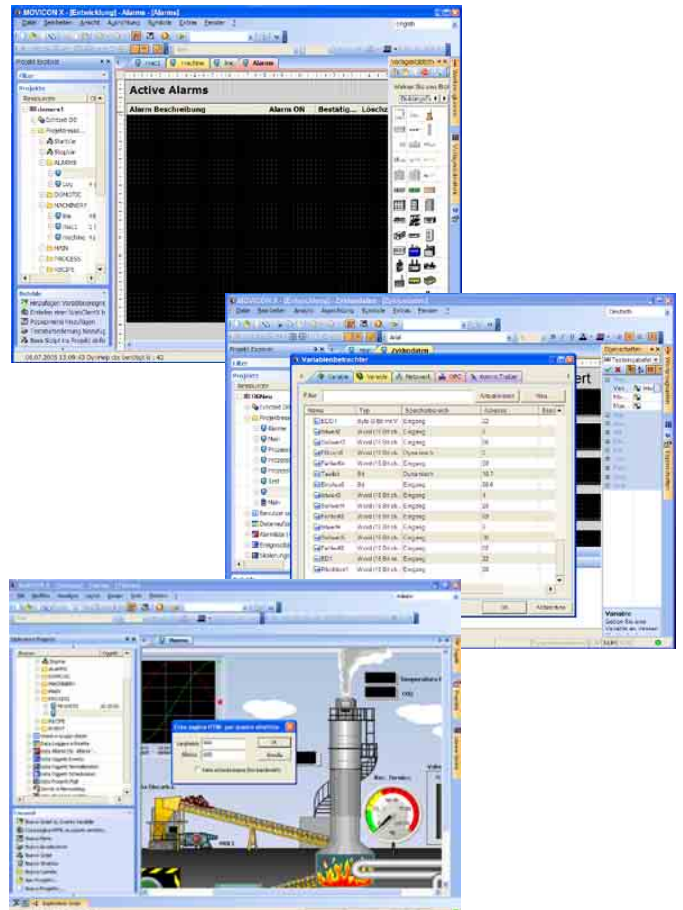
Applications reliability: If required, Movicon X assures maximum data security using XML with the integrated 128 bit encryption algorithm. The guidelines set forth in FDA standard CFR21, part 11, have been fully incorporated into Movicon X, thus greatly simplifying validation of FDA guidelines in projects. The FDA standard has been deeply integrated into the new password and user management function, and assures secure access for system logons via local network access, as well as for remote dial-in via external (public) networks.

Open standards: Open software standards and even future software trends have already been integrated in order to safeguard your investment in the future. Movicon X integrates and supports all technological trends such as XML, ODBC, OPC, VBA, SOAP, web services, TCP/IP, UDP, HTTP, SQL, SMTP and Java, in order to assure reliable access to, and security for your manufacturing and production data at all times.

Connectivity: Movicon X is introducing a new generation of communication drivers. The new drivers include functions like automatic tag import, remote dial-in via modem, multi-partner concept for point-to-point protocols, bridging for remote service at the PLC and immediate testing of interconnected lines. The drivers assure complete configurability, and allow for event-related communication in the user mode via VBA logic. In addition to the included library of free drivers, Movicon X also offers extensive connection options via OPC. Aside from the old OPC specification which makes use of DCOM technology, the new firewall-friendly OPC specification, namely OPC XML-DA, is made available as an OPC client/server.

Effective networking: Movicon X has completely revised the integrated networking management function, in order to be able to take consistent advantage of highly advanced multi-platform technologies such as SOAP (simple object access protocol) and SOA (service oriented application). In addition to TCP, the new version also supports protocols such as UDP and HTTP. Networking allows for automatic remote connections via RAS. Movicon X is also introducing web service technologies which make it possible to disseminate information in public networks as well (Internet and intranet).

Web compatible architecture: Movicon X is updating web client technology with a new open architecture expanded to include Java applets (J2SE) and Java midlets (J2ME). Thanks to Java, which harmonizes perfectly with XML, SVG, and web services, the new architecture allows for server access via Internet browser to any desired platform (Windows, Linux, PalmOS and with J2ME mobile JavaPhones). Multi-users, bi-directionality, high performance and security are guaranteed.



TP6xx Touch Panels

Visualization Platform for Controllers and Control Systems

Development Interface

Integrated variables database management: complete data logging. Scale readings, integrated commands and events for variables management, definition of structure variables, logbook function, access levels, real-time ODBC links, XML links. Direct import of PLC databases. Automatic management of remote connection via modem (RAS and TAPI).

Comprehensive graphics and objects library with attractive appearance. Simple, well thought through commands, as well as functions for graphic animation. Can be changed and expanded as desired with VB script language. Symbols with power templates technology.

The screen views are based upon SVG (scalable vectorial graphics) with comprehensive graphic functions. Fully adaptable screen views with multi-monitor function. Supports WMF, EMF, BMP, GIF and JPG graphics. Graphics are automatically adapted to monitor resolution.

Editing function for vector graphics with powerful design and layout tools. Objects with effective support of the inheritance concept.

Accelerated access options via menu and key editors with objects. Completely integrated touch-screen management function.

Comprehensive alarm management in compliance with ISA standards. Alarms can be configured as desired – accurate down to the millisecond. Management of time stamps and variable limits, alarm and power templates. External help via HTML as well.

Integrated alarm and events notification: supports SMS, e-mail, voice messages and fax. Call management with full accessibility to available personnel.

Historical event management with open archives based on relational databases (ODBC). Statistical analysis of alarms, filters and SQL queries. Print management.

Multi-language management with online language changes. Character management with dynamic switching between programming and run-time mode. Unicode support for each language family (Asian, Arabic etc.).

Historical ODBC management for data loggers with object management. Automatic, high performance, reliable management of ODBC links for archives, which are based upon relational databases.

Dynamic and historical vector trends with comprehensive sampling, display and analysis functions. Historical logbooks based upon ODBC data logger with periodic analysis, zoom, mean values, logarithmic scales, open for all types of adaptation. Sampling with output as CSV file as well (e.g. Excel).

Automatic recipe management via relational databases. The recipes can be configured by the user, and can be automatically forwarded to the database with just a few mouse clicks at the user interface.

Powerful, flexible report management thanks to integrated Crystal Report Engine[®]. Auto-generation of title pages for reports with adjustable printing format. Supports the most common formulas (sums, totals, mean values, deviation etc.).

Integrated events planner with objects.

Comprehensive security management: Users and passwords with access to commands based upon level and range of applications. Automatic control function for access to the operating system. User password can be accepted along with the operating system domain. Full support for FDA standard CFR21, part 11. Easy implementation of FDA compliant applications.

Comprehensive, high performance redundancy management. Hot backup.

High performance networking management: supports TCP/IP, UDP and HTTP protocols. Event controlled status notification with optimized network management. Architecture can be distributed as desired to multi-servers with security levels which are configured directly within the project attributes.

Efficient connection options by means of I/O drivers included in the system. Integrated OPC DA and OPC XMLDA technologies for client and server. Certified OPC DA conformity.

Integrated VB multithreading language. Open to customer adaptations.

Integrated PLC type language in AWL. PLC logic in HMI is made possible via PLC language thanks to Windows CE real-time.

“Synapses visual language” (graphic function blocks).

Powerful online debugger. Analyses, targeted debugging of variables, project statistics, break-point and step-by-step execution of commands and other useful functions for project test runs and documentation.

Integrated, innovative web client technology. The new web client makes use of the most up-to-date web compatible Java technology (J2SE), which offers high performance, security and bi-directionality, and assures multi-platform options. Access to client data is based upon mobile JavaPhones (J2ME).

Support for standard technologies such as XML, ActiveX, ODBC, OPC, VB, SQL, ADO, SOAP, and web services.

Outstanding flexibility for the integration of third party programs like EXE or DLL. SDK allows for the realization of customer-specific drivers.