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HMI-PLC Scalable in Performance with Interface Flexibility

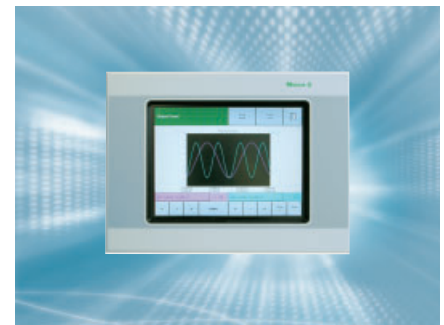


An automation system that offers hardware and software scalability is becoming an increasingly important prerequisite for business success in today's machine and system building markets. Having to “reinvent the wheel” is clearly not the way forward. Only proven standard solutions can lead to success. This is the philosophy on which HMI-PLCs from Moeller are based. Text display PLCs and touch display PLCs enable the use of standard solutions from the small to the large machine worldwide. The high performance, coupled with integrated Ethernet and CANopen interfaces, also allow horizontal and vertical communication with an optimum price/performance ratio.



A modern machine control system must meet the following requirements: high performance, integrated fieldbus interfaces, compact dimensions, integrated configurable I/Os, user-friendly programming tools. However, this is not all: HMI functionality is yet another basic requirement of any machine controls. This includes a graphics-capable text display, bar graphs, a numerical keypad with function keys, alarm and recipe management; and everything in an ergonomically and attractively designed housing to IP65. Can all these requirements be fulfilled in one device? The right answer to this question is text display PLCs from Moeller.

Whether for machine/system building or in individual applications, there is hardly a situation where an HMI would not simplify operation and lighten the work of the operator. State-of-the-art touch displays provide clear and flexible menu guidance in any language required, enabling machine manufacturers to sell their machines worldwide with only one hardware and software solution. The optimum solution for any machine can be implemented with touch displays in sizes from 5.7 to 15 inches. Open-loop control, closed-loop control, positioning and communication functions are programmed easily using XSoft. Visualisation programs can be implemented easily using EPAM (Easy PageMachine) that runs as an EXCEL plug-in.



XVC100 **Text display HMI-PLC**

These devices come with outstandingly small mounting dimensions and are used especially in series machines where space is limited. The compact design, the large number of integrated digital and analog I/Os, counters, interrupt and encoder inputs make the devices a useful allrounder in machine building applications. For communication with peripheral devices you also don't have to spend a penny more thanks to the on-board CANopen interface. The integrated Compact Flash memory card also ensures reliable data retention.

XV **Text display HMI-PLC**

These devices allow you to customise I/O to your individual requirements. Up to three different I/O modules can be plugged in on the rear of the device. The modularity of the system enables CPU performance and I/O configuration to be matched exactly to the application at minimum costs.

HPG/XVC **Touch display HMI-PLC**

The devices of the HPG Series combine a graphics operator panel in sizes from 5.7 to 15 inches with an infra-red touch screen and a powerful compact PLC in the one device. The cutting edge device architecture offers a wide range of automation and networking options. The PLC is programmed in compliance with the IEC 61131 industrial Standard. The graphics screen masks are programmed efficiently and simply using EPAM running in EXCEL. This makes the touch display HMI-PLC into a universal device for automation applications.

Features

HMI-PLC text displays are the user-friendly interface between controller and operating personnel. In conjunction with XC100 and the XI/OC I/O modules, they provide you with a combination PLC, also called an MMI PLC, i.e. an integrated unit comprising controller, I/O and visualization.

Text display controllers have the display window, a keypad (numerical keys, arrow keys, function keys) and the PLC status LEDs on the front. The operator surface can be customized.

Text display controllers have the following features:

- Menu guidance incorporated:
 - Controller configuration, e.g. menu language, password
 - Interrogation regarding error and events list, up-to-date software version, etc.
- Displays: positive STN technology with trans-reflective yellow-green LCD display
- Large key surfaces (13 x 15 mm) for comfortable operation
- Clear layout of the keypad sections
- Backlighting can be switched ON and OFF via the software (e.g. blinking function can be activated as a warning)
- Contrast adjustable, 0 – 100 %
- Controller status indication (3 LEDs) built into the front
- Minimum frame height saves space
- Very high reaction speed due to direct connection to the CPU
- Front surface can be customized

Text display controllers come in modular form or as compact units.

Text Display HMI-PLC XV100 + XC100



The Text Display HMI-PLC XV100 with XC100 is distinguished by its capability of being freely combined with I/O modules in the three dedicated slots on the rear of the devices.

- 4 lines 20 characters (resolution 122 32 pixels), and 9 function keys
- 8 lines 40 characters (resolution 240 pixels), and 15 function keys
- All function keys with freely inscribable insert strips
- Function keys can be directly linked to the display or equipped with LEDs
- Letter height 5 mm (double letter height, 10 mm, also possible)

Text Display HMI-PLC XVC100

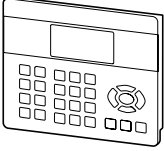
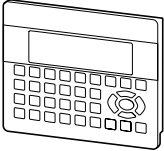


The Text Display HMI-PLC XV100 combines a text display and a high-specification PLC in a single unit. The rugged, compact construction of these controllers allows them to be used where space is very restricted.

- 192 kB program memory
- 56 kB data
- 8 kB retentive data
- 8 × 20 or 4 × 10 characters, as well as 8 function keys
- Built-in interfaces:
 - 1 × CANopen
 - 1 × RS232
 - 10 × digital inputs
 - 2 × counter inputs 50 kHz
 - 2 × interrupt inputs
 - 1 encoder input, max. 50 kHz
 - 8 × digital outputs 24 V/0.5 A
 - 8 digital inputs/outputs, 24 V/0.5 A, individually configurable
 - 2 analog inputs, 0 – 10 V, 10 Bit
 - 2 × analog outputs ±10 V/12-bit



Moeller HPL0213-2004/2005

For use with	Description	Type Article no.	Price See Price List	Std. pack
Text Display HMI-PLC XVC100				
Text Display HMI-PLC with shallow mounting depth, for applications with restricted space.				
	– 8 × 20 or 4 × 10 characters 28 keys, of which 8 function keys – 1 × CANopen interface – 1 × RS232 interface – 10 × digital inputs 24 V – 2 × counter inputs 50 kHz – 2 × interrupt inputs – 1 encoder input, max. 50 kHz – 8 × digital outputs 24 V DC/0.5 A – 8 × digital inputs/outputs 24 V DC/0.5 A, individually configurable – 2 × analog inputs 0 – 10 V/0 – 20 mA, 10-bit – 2 × analog outputs ±10 V/12-bit incl. battery for real-time clock	XVC-101-C192K-K82 264113	1 off	
Text Display HMI-PLC XV100 for XC100				
LCD technology with back-lighting, membrane keypad, 1 slot for XC100, 3 spare slots for XI/OC modules, numerical keypad, arrow keys, contrast setting adjustable via software				
	XC-CPU101-...-XV 4 lines × 20 characters, resolution 122 × 32 dpi, 9 function keys	XV-101-K42 262403		1 off
	XC-CPU101-...-XV 8 lines × 40 characters, resolution 240 × 64 dpi, 15 function keys	XV-101-K84 262404		1 off
Accessories				
Insert labels				
	XV-101-K42 XV-101-K84	Insert labels for free user inscription For 3 devices: XV-101-K42 For 3 devices: XV-101-K84	XT-BS1 265365	1 off
Programming cable				
	XVC-101-C192K-K82	2 × SUB-D, RS232	XT-SUB-D-SUB-D 264114	1 off
Battery				
	XVC-101-C192K-K82	For back-up of real-time clock and retentive data	XT-CPU-BAT2 264115	1 off
Compact flash memory cards				
	XVC-101-C192K-K82	32 MByte	XT-MEM-CF32M-01 279352	1 off



**HPG200**

5.7" embedded HMI-PLC

Display

Active screen area: 5.7"
 Resolution: 320 × 240 pixels
 Display: LCD STN
 Front plate: laminated safety glass
 Touch: IR-Touch (infra-red optical grid)
 Interfaces: Ethernet, RS232, CANopen

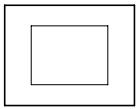
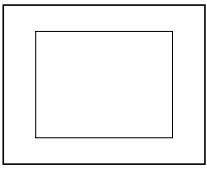
HPG300

10.4" embedded HMI-PLC

Display

Active screen area: 10.4"
 Resolution: 640 × 480 pixels (VGA)
 Display: TFT color
 Front plate: laminated safety glass
 Touch: IR-Touch (infra-red optical grid)
 Interfaces: Ethernet, RS232, CANopen

Moeller HPL0213-2004/2005

Display	Screen diagonal	Display area	Resolution	additional interface	Type Article no.	Price See Price List	Std. pack
	Inches	mm	Pixels				
Touch Display HMI-PLC							
Processor: 486 compatible, 32 MB CF-memory with runtime system, 32 kB battery-buffered RAM Data/program memory: 256 kB/1024 kB, replaceable Compact-Flash™ type 1 Integrated interfaces: RS232, CANopen, Ethernet IR-Touch (infra-red optical grid) Laminated safety glass, IP65 at front incl. 32 MB Compact-Flash incl. battery for real-time clock Programming: PLC = XSoft-Professional; visualization = XSoft-EPAM							
	STN mono 16 grey levels	5.7	118 × 89	320 × 240	–	MC-HPG-210 259695	1 off
	STN color 16 colors	5.7	118 × 89	320 × 240	–	MC-HPG-230 259696	
		5.7	118 × 89	320 × 240	PROFIBUS-DP master	MC-HPG-230-DP 264014	
		5.7	118 × 89	320 × 240	PROFIBUS-DP slave	MC-HPG-230-DPS 267549	
		5.7	118 × 89	320 × 240	Siemens MPI	MC-HPG-230-MPI 267550	
		5.7	118 × 89	320 × 240	Allen Bradley	MC-HPG-230-ABDF1 267551	
		5.7	118 × 89	320 × 240	GE-Fanuc	MC-HPG-230-GEF 267552	
	TFT color 256 colors	10.4	211 × 158	640 × 480 VGA	–	MC-HPG-300 259697	1 off
	TFT color 256 colors	10.4	211 × 158	640 × 480 VGA	PROFIBUS-DP master	MC-HPG-300-DP 264015	
		10.4	211 × 158	640 × 480 VGA	PROFIBUS-DP slave	MC-HPG-300-DPS 274076	
		10.4	211 × 158	640 × 480 VGA	Siemens MPI	MC-HPG-300-MPI 267553	
		10.4	211 × 158	640 × 480 VGA	Allen Bradley	MC-HPG-300-ABDF1 267554	
		10.4	211 × 158	640 × 480 VGA	GE-Fanuc	MC-HPG-300-GEF 267555	

Embedded HMI-PLC





XVC600

10.4" to 15" PC-based HMI-PLC

The PC-based Touch Display HMI-PLC from the XVC600 series, with integrated fieldbus and Ethernet interfaces, offers numerous possibilities for communication and networking in industrial applications. The design of these devices is oriented to expandability and flexibility, thus expanding the range of applications to cover building automation and use as a web-capable touch-panel.

The devices can be operated completely without any fan or moving parts. Bulk memory is provided by a replaceable CompactFlash™. With these features, the device is very much "at home" in tough surroundings!

Thanks to the use of the ETX standard, processing power can be scaled. New technologies and more powerful processors to the ETX standard can be directly applied. This means that the devices are fit for future requirements, and long-term availability is assured.

Display

Display: TFT color

Resolution: 640 × 480, 800 × 600, 1024 × 768 pixels

Front plate: laminated safety glass

Touch: IR-Touch (infra-red optical grid)

Interfaces: CANopen, Ethernet, RS232

XCC600 and DVI-Panel

The DVI-Panel with Touch function fulfills all the requirements that are made these days for demanding digital video data transmission, and meet the DVI standard. Thanks to the IP65 protection level (against sprayed water) at the front, and the robust protective housing for panel mounting, the DVI-Panel with Touch is ideal for building into switchgear cabinets, consoles, kiosks or the like. The TFT screen that is used, with a screen diagonal of 6.4" to 15" and resolution from 680 × 480 to 1024 × 768 pixels, is ideally suited for displaying color pictures.


The completely flat surface and the wide viewing angle of the screen, resulting from TFT technology, provides a clear and faultless picture over the entire visible area of the screen. An infra-red or resistive touch system is used as the input module. This touch-technology permits an absolutely pressure-free operation. The scratch-proof laminated safety glass on the front protects the TFT display and provides a clear picture.



The new PC-based PLC for DIN rail mounting, from the XCC600 series, with its integrated fieldbus and Ethernet interfaces, offers numerous possibilities for communication and networking in industrial applications. In conjunction with DVI-Panels, remote HMI applications can be implemented at distances up to 15 m (referring to a 6.4" DVI-Panel). The devices can be operated completely without any fan or moving parts. The mechanical separation of the PLC and the touch panel especially facilitates use in restricted spaces, such as for a PLC in a switchgear cabinet, with the DVI touch panel on site as a command panel. Bulk memory is provided by a replaceable CompactFlash™.

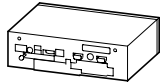
With these features, the device is very much "at home" in tough surroundings! Thanks to the use of the ETX standard, processing power can be scaled. New technologies and more powerful processors to the ETX standard can be directly applied. This means that the devices are fit for future requirements, and long-term availability is assured.

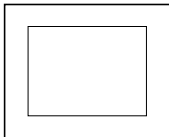
Moeller HPL0213-2004/2005

Display	Screen diagonal	Display area	Resolution	additional interface	Type Article no.	Price See Price List	Std. pack
	Inches	mm	Pixels				
XVC600							
Processor: Pentium 200 MHz, ETX form factor, 64 MByte DRAM, 32 kByte RAM (battery-buffered) Data/program memory: replaceable CompactFlash™ Integrated interfaces: RS232, CANopen, Ethernet IP65 at front incl. 32 MB CompactFlash with PLC and EPAM runtime system incl. battery for real-time clock TFT color display Programming: PLC = XSoft-Professional; visualization = XSoft-EPAM							
							
IR-Touch (infra-red optical grid) tough, scratch-proof front (laminated safety glass)	10.4	211 × 158	640 × 480 VGA	–	XVC-601-GTI-10-V1-000 272547		1 off
	10.4	211 × 158	640 × 480 VGA	PROFIBUS-DP or Siemens MPI	XVC-601-GTI-10-DPM-V1-000 272550		
	10.4	211 × 158	640 × 480 VGA	PROFIBUS-DP slave	XVC-601-GTI-10-DPS-V1-000 272554		
	12	246 × 185	800 × 600 SVGA	–	XVC-601-GTI-12-V1-000 272548		
	12	246 × 185	800 × 600 SVGA	PROFIBUS-DP or Siemens MPI	XVC-601-GTI-12-DPM-V1-000 272552		
	12	246 × 185	800 × 600 SVGA	PROFIBUS-DP slave	XVC-601-GTI-12-DPS-V1-000 272555		
	15	304 × 228	1024 × 768 XGA	–	XVC-601-GTI-15-V1-000 272549		
	15	304 × 228	1024 × 768 XGA	PROFIBUS-DP or Siemens MPI	XVC-601-GTI-15-DPM-V1-000 272553		
	15	304 × 228	1024 × 768 XGA	PROFIBUS-DP slave	XVC-601-GTI-15-DPS-V1-000 272556		
Resistive-Touch absolutely flat (seamless) front	10.4	211 × 158	640 × 480 VGA	–	XVC-601-GTR-10-V1-000 281683		1 off
	10.4	211 × 158	640 × 480 VGA	PROFIBUS-DP or Siemens MPI	XVC-601-GTR-10-DPM-V1-000 281686		
	10.4	211 × 158	640 × 480 VGA	PROFIBUS-DP slave	XVC-601-GTR-10-DPS-V1-000 281689		
	12	246 × 185	800 × 600 SVGA	–	XVC-601-GTR-12-V1-000 281684		
	12	246 × 185	800 × 600 SVGA	PROFIBUS-DP or Siemens MPI	XVC-601-GTR-12-DPM-V1-000 281687		
	12	246 × 185	800 × 600 SVGA	PROFIBUS-DP slave	XVC-601-GTR-12-DPS-V1-000 281700		
	15	304 × 228	1024 × 768 XGA	–	XVC-601-GTR-15-V1-000 281685		
	15	304 × 228	1024 × 768 XGA	PROFIBUS-DP or Siemens MPI	XVC-601-GTR-15-DPM-V1-000 281688		
	15	304 × 228	1024 × 768 XGA	PROFIBUS-DP slave	XVC-601-GTR-15-DPS-V1-000 281701		





additional interface	Type Article no.	Price See Price List	Std. pack
XCC600			
Processor: Pentium 200 MHz, ETX form factor, 64 MB DRAM, 32 kByte RAM (battery-buffered) Data/program memory: replaceable CompactFlash™ Integrated interfaces: CANopen, Ethernet, RS232, DVI incl. 32 MB CompactFlash with PLC and EPAM runtime system incl. battery for real-time clock Programming: PLC = XSoft-Professional; visualization = XSoft-EPAM			
	-	XCC-601-DVI-V1-000 274071	1 off
PROFIBUS-DP master/MPI	XCC-601-DVI-DPM-V1-000 274072		
PROFIBUS-DP slave	XCC-601-DVI-DPS-V1-000 274073		

Display	Screen diagonal Inches	Display area mm	Resolution Pixels	maximum separation m	Type Article no.	Price See Price List	Std. pack
XV-DVI-Panel							
TFT flat screen Integrated interfaces: touch function/power supply 1 × 9-pole SUB-D plug, Video data 1 × DVI (single link DVI-D standard) Driver: mouse-compatible for WINDOWS CE/9x/NT2000 can be used with XCC600 or PC/IPC with DVI interface (PC connection set required when used with IPC) IP65 at front incl. driver and documentation							
							
IR-Touch (infra-red optical grid) tough, scratch-proof front (laminated safety glass)	10.4	211 × 158	640 × 480 VGA	10	XV-DVI-GTI-10-000 274068		1 off
	12	246 × 185	800 × 600 SVGA	10	XV-DVI-GTI-12-000 274069		1 off
	15	304 × 228	1024 × 768 XGA	5	XV-DVI-GTI-15-000 274070		1 off
Resistive-Touch absolutely flat (seamless) front	6.4	131 × 98	640 × 480 VGA	10	XV-DVI-GTR-06-000 272557		1 off
	10.4	211 × 158	640 × 480 VGA	10	XV-DVI-GTR-10-000 274065		1 off
	12	246 × 185	800 × 600 SVGA	10	XV-DVI-GTR-12-000 274066		1 off
	15	304 × 228	1024 × 768 XGA	5	XV-DVI-GTR-15-000 274067		1 off

Moeller HPL0213-2004/2005

Description		For use with	Type Article no.	Price See Price List	Std. pack
Accessories					
Memory cards CompactFlash, bootable with runtime system For saving the applications and data.					
32 MByte	Bootable for MC-HPG-...	–	MC-MEMEX-32M 259703		1 off
32 MByte	Bootable für XVC-601-..., XCC-601-...	–	XT-MEM-CF32M-02 279405		
64 MByte	Bootable für XVC-601-..., XCC-601-...	–	XT-MEM-CF64M-02 279407		
128 MByte	Bootable für XVC-601-..., XCC-601-...	–	XT-MEM-CF128M-02 279408		
Battery for backup of the realtime clock and BIOS data					
–	–	MC-HPG-210 MC-HPG-230 XVC600 XCC600	MC-ACP-BAT01 259699		1 off
–	–	MC-HPG-300	MC-ACP-BAT02 259700		1 off
Cable					
2 m length	Ethernet cross-cable for programming	MC-HPG-... XVC-601-... XCC-601-...	XT-CAT5-X-2 256487		1 off
5 m length	Ethernet cross-cable for programming	MC-HPG-... XVC-601-... XCC-601-...	XT-CAT5-X-5 256488		
5 m length	Power supply and Touch connecting cable for XV-DVI-Panel and XCC600 ot IPC	XV-DVI-Panel: 6.4", 10.4", 12.1", 15", XCC601-...	XT-232-PT-5-01 278501		
10 m length	Power supply and Touch connecting cable for XV-DVI-Panel and XCC600 ot IPC	XV-DVI-Panel: 6.4", 10.4", 12.1", XCC601-...	XT-232-PT-10-01 278502		
5 m length	DVI connecting cable for XV-DVI-Panel and XCC-600 or IPC	XV-DVI-Panel: 6.4", 10.4", 12.1", 15", XCC601-...	XT-DVI-D-5-01 278503		
10 m length	DVI connecting cable for XV-DVI-Panel and XCC-600 or IPC	XV-DVI-Panel: 6.4", 10.4", 12.1", XCC601-...	XT-DVI-D-10-01 278504		
PC connection set Enables connection of the XV-DVI-Panel to a standard PC/IPC. Requirements: • IPC/PC with DVI interface • Free PC slot for PC connection set					
–	PC slot cover with connecting sockets (power supply Touch function for XV-DVI-Panel)	–	XT-PC-232-PT-01 278505		1 off
Connection cable					
–	RS232 link cable (connection of COM interface to PC-slot cover Touch)	–	XT-232-PT-01 283470		1 off

Embedded HMI-PLC
PC-based HMI-PLC



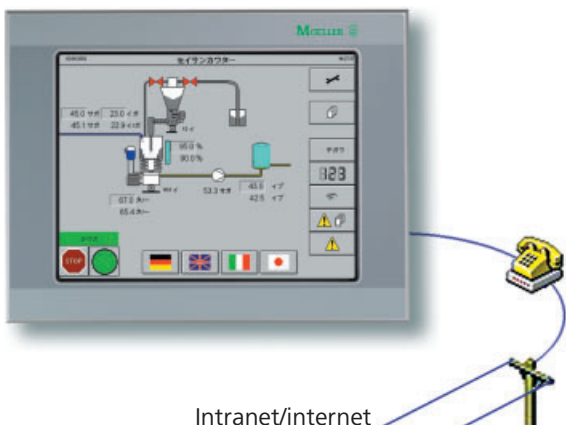
Your Benefits

WEB-EPAM allows new and existing EPAM applications to be run via the Intranet/Internet as remote operating and monitoring units.

WEB-EPAM

Using WEB-EPAM makes every visualisation application created with EPAM automatically WEB-enabled. For this, a Java applet is loaded via the integrated WEB server of PLC line devices, which presents a 1:1 image of the visualisation process in any Java-compatible standard browser, thus enabling the system to be controlled remotely. Remote maintenance and visualisation thus become child's play.

EPAM application



The identification process is implemented using a user/ password so that only authorised persons are allowed access. The terminal client/server technology used transfers only changed screen contents and mouse/button events to the browser in compressed form thus reducing the bandwidth load. The great advantage of this technology is that the project does not have to be compiled. Only one version of the project on the target system is required, which does not have to be converted again into a WEB project when changes are made. This is a tremendous advantage with maintenance work and also saves memory on the target system. It also ensures that a 1:1 image of the process visualisation is available locally at all times, even if this has been enhanced with user-specific functions (e.g. ANSI-C). User entries can be traced and corrected if required.

Java-compatible standard browser

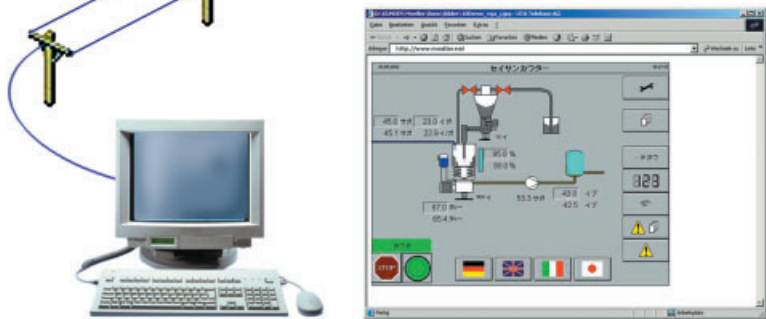
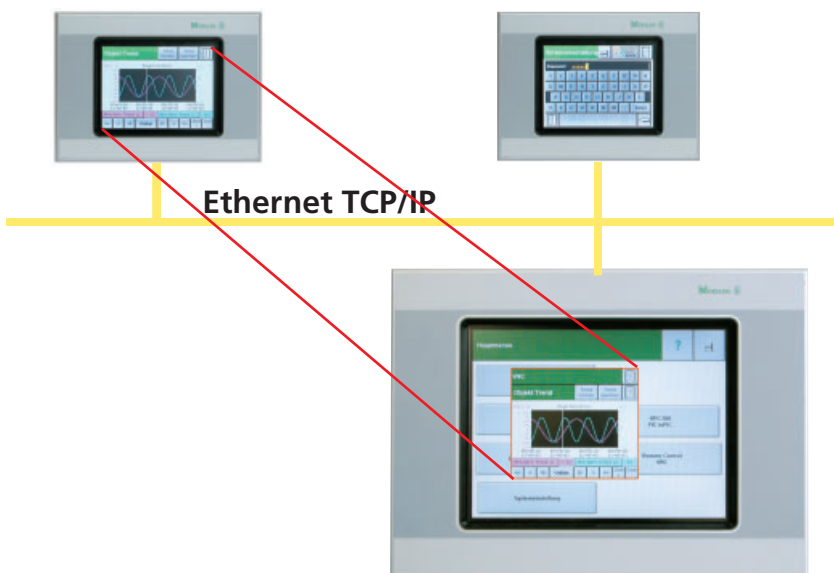


Image within image with EPAM remote control

The EPAM remote control object allows screen contents from other touch displays to be inserted and displayed. This function is designed specially for use in telecontrol service applications and enables system states to be diagnosed and functions to be carried out remotely.

The actual image from an HPG 200 is thus inserted as a 1:1 image copy into the visualisation page of an HPG 300. – And all this involves no extra cost, nor engineering effort, nor do you require additional software packages.

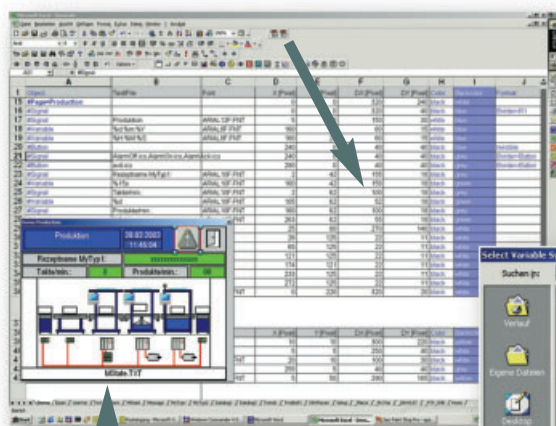


Objects such as buttons, switches, alphanumeric variables, bar graphs, message elements and bitmaps are available for creating the individual screen masks. These objects are simply configured with EXCEL, linked with the PLC variables and combined to form complete screen pages. The PLC variables can be imported simply from IEC61131 without the risk of errors associated with the manual input of variables. The different screen pages are simply linked together and can then be called by clicking a button object.

Easy Page Machine

The Easy PageMachine visualisation-tool (EPAM) is specially designed for supporting graphics operation using touch screen displays and enables the visualisation project to be configured simply without the need for extensive programming.

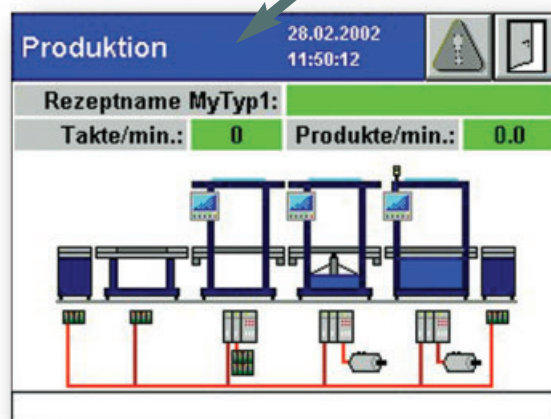
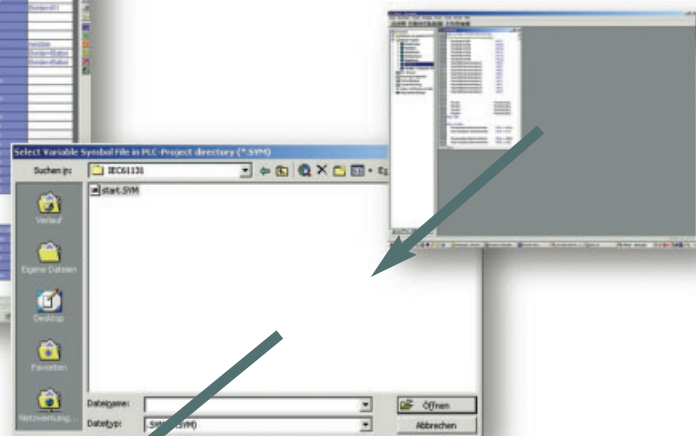
Projects can be designed easily and quickly in Microsoft EXCEL. Powerful EXCEL functions (Copy, Import/Export etc.) are enhanced with additional input aids, such the graphical positioning of objects. The open project concept using EXCEL enables the user even to automate recurring functions by means of EXCEL macros and to adapt the development environment to specific requirements.



Simple positioning

Simple and efficient project design with EXCEL

Import of variables from XSoft

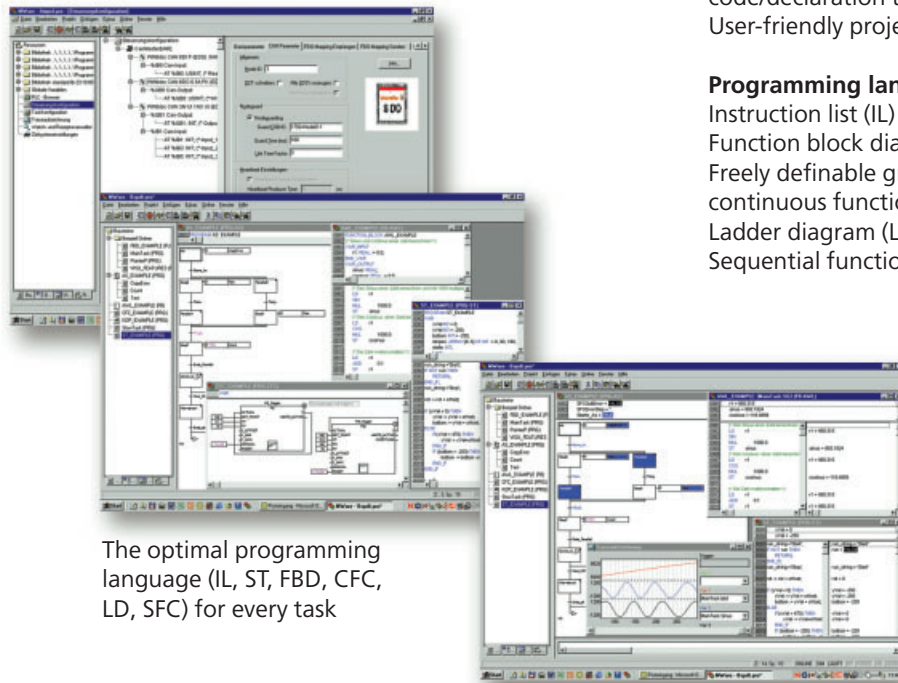


... and running in no time at all

XSoft: Programming to International Standards

XSoft is a programming system for industrial PLCs in PLC line, compliant with the international Standard IEC61131-3. Fully developed technical features, easy handling and the widespread use of this software in the automation components of different manufacturers guarantee successful programming with this software.

User-friendly PLC configuration



The optimal programming language (IL, ST, FBD, CFC, LD, SFC) for every task

Engineering feature

- Auto Declare: automatic variable declaration
- Auto format /syntax colouring
- Automatic formatting and colouring of code/declaration text
- User-friendly project comparison

Programming languages

- Instruction list (IL) and structured text (ST)
- Function block diagram (FBD)
- Freely definable graphical function block chart/continuous function chart (CFC)
- Ladder diagram (LD)
- Sequential function chart (SFC)

Extensive debugging and commissioning tools save time and money

Numerous features facilitate the generation of the application, each with the single aim of saving costs by the reduction of engineering time.

This is just a selection of the available features: global search and replace, generation and utilisation of libraries, context-sensitive help, output of a cross-reference list, checking for unused variables, generation and implementation of macros in XSoft and call-up of macros via batch data.

Debugging and commissioning

XSoft offers you a number of important functions for debugging your PLC application quickly and efficiently, for testing and commissioning. All these features are available, as soon as you have logged onto the PLC (online mode).

Simulation

You can test your application program even without the controller being connected. For this purpose, XSoft provides integrated online simulation. You use this on the same operating surface and with the same handling procedure as though you were online with the controller connected.

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Description	Type Article no.	Price See Price List	Std. pack
XSoft-EPAM			
Software tool for creating vizualisation modules			
– The visualization tool Easy Page Machine (EPAM) is specially designed for graphics user interfaces with touch displays, and permits simple parameterization of the visualization without complex programming.	XSOFT-EPAM 281648		1 off
XSoft Professional			
Programming and configuration software	Programming to IEC 61131-1 with IL, ST, LAD, FBS, AS, CFC Bus configuration: CANopen, PROFIBUS-DP, XI/ON, XI/OC Creation of visualizations for simulation and WEB visualization OPC configurator, extensive online and help functions Documentation as a PDF file	XSOFT-PROFESSIONAL 255930	1 off
Upgrade XSoft	XSoft 2.x must be installed Observe the ordering conditions	XSOFT-PROFESSIONAL-U 283396	1 off
XSoft toolbox			
Closed-loop control toolbox	The control engineering toolbox is a function block library comprising approx. 100 function blocks from the following areas: Regulating Pulse-width modulation Signal processing Simulation Mathematical functions CD - incl. documentation as a PDF file	XSOFT-APPLIB-REG 262547	1 off
Motion-control toolbox			
Motion-control toolbox	The motion-control toolbox is a function block library comprising approx. 30 function blocks from the following areas: Step sequence Simulation of a rotating axis Frequency measurement Synchronization Other modules: Camshaft controller Hydraulics Reference position control Incremental encoder evaluation CD - incl. documentation as a PDF file	XSOFT-APPLIB-MOTIONCONTROL 262548	1 off
Notes	Ordering conditions for upgrades: To use an upgrade, a previous version must be installed. When the upgrade is installed, the system searches for a previous version. The upgrade is the same as the standard version. For information on updates in the Internet, see: Internet address: www.moeller.net/automation		

Embedded HMI-PLC
PC-based HMI-PLC



XVC-101-C192K-K82

General

Ambient temperature			
Operation		°C	-0 – +60
Storage		°C	-25/85
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	10 – 95
Noise immunity			EN 61000-6-2
Emitted interference			EN 50081-2, Class A
Protection			
Front (NEMA 12) IEC/EN 60529			IP65
Rear			IP20
Weight		kg	Approx. 0.9

Power supply

Nominal value		V	24 V DC SELV, safety extra-low voltage
Rated voltage	U_e	V DC	24 V DC to DIN 19240
Admissible range		V	
Voltage dips			Max. 100 ms (at 20.4 V DC to 0 V DC, repetition rate: 1 s)
Protection against polarity reversal			Yes
Protective element			Yes
Fuse		A	2, slow
Breaking capacity		A	30
Electrical isolation			No, 0 V connected to enclosure potential (GND)
Current consumption		mA	Normally 160
Power consumption		W	Normally 4

Real-time clock

Counter			Seconds, minutes, hours, day, month, year, decade
Leap year conversion			Automatically
Summer time conversion			By means of software
Deviation at $T_{amb} = 25^{\circ}\text{C}$			Normally ± 100 ppm

Display

Type			Passive matrix mono LC display (mono STN LCD yellow-green)
Resolution		Pixels	128 × 64
Display area		mm	71 × 39
Back-lighting			LED

Operation

Membrane keypad			28 keys; 3 LED's
Compact flash card			Type 1, ATA flash, 5 V

Interfaces

Programming interface			RS232, not potential-free (D sub-miniature 9-pole male)
Communication interface			CAN, not potential-free (D sub-miniature 9-pole male)

X1 plugs (digital inputs, outputs)

Number of digital I/Os		off	8
Qty. of feeder connections			1
Qty. of 0 V connections			1
Power supply			
Outputs		V DC	Normally 24
Admissible range		V DC	18.5 – 30.2
Max. output current per channel		A	0.5
Inductive loads			Max. 150 mJ
Input voltage			
High level	U_H		-3/4.5 V DC
Low level	U_L		-3/4.5 V DC
Maximum input voltage		V DC	40
Input current			
High level	I_H		2 – 15 mA
Low level	I_L		0 – 1 mA

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				XVC-101-C192K-K82
Protection against polarity reversal				Yes
Electrical isolation				No
Short-circuit protected				Yes
Feed monitor				Yes
Error status				Jointly for all outputs
X2 plug (digital outputs)				
Number of digital I/Os		off		8
Qty. of feeder connections				1
Qty. of 0 V connections				1
Power supply		V DC		Normally 24
Max. output current per channel		A		0.5
Inductive loads				Max. 150 mJ
Protection against polarity reversal				Yes
galvanische Trennung				No
kurzschlussfest				Yes
Feed monitor				Yes
Error status				Jointly for all outputs
X3 plug				
Digital inputs				
Number				10, all of which have a second function
Qty. of 0 V connections				1
Input voltage				
High level		U_H		-3/4.5 V DC
Low level		U_L		-3/4.5 V DC
Maximum input voltage			V DC	40
Input current				
High level		I_H		2 – 15 mA
Low level		I_L		0 – 1 mA
Protection against polarity reversal				Yes
Electrical isolation				No
Counter input				
Number				2
Input voltage				
High level		U_H		-3/4.5 V DC
Low level		U_L		-3/4.5 V DC
Maximum input voltage			V DC	40
Input current				
High level		I_H		2 – 15 mA
Low level		I_L		0 – 1 mA
Protection against polarity reversal				Yes
Electrical isolation				No
Max. counter frequency			kHz	50
Direction reversal facility				Yes
Interrupt input				
Qty.				2
Input voltage				
High level		U_H		-3/4.5 V DC
Low level		U_L		-3/4.5 V DC
Maximum input voltage			V DC	40
Input current				
High level		I_H		2 – 15 mA
Low level		I_L		0 – 1 mA
Protection against polarity reversal				Yes
Electrical isolation				No





				XVC-101-C192K-K82
Incremental encoder				
Qty.				1
Signals				A, B, zero, active zero
Evaluation				2-fold, 4-fold
Input voltage				
High level	U_H			-3/4.5 V DC
Low level	U_L			-3/4.5 V DC
Maximum input voltage		V DC		40
Input current				
High level	I_H			2 – 15 mA
Low level	I_L			0 – 1 mA
Protection against polarity reversal				Yes
Electrical isolation				No
Max. input frequency		kHz		50
Incremental encoder output				Push-pull
X4 plug				
Analog inputs				
Qty.				2
Connections				3 per input (0 V, voltage, current) 1 reference output
Input voltage		V DC		0 – 10
Input resistance		k Ω		1000
Input current		mA		0 – 20
Input resistance		Ω		500
Resolution		Bit		10
Reference output				4.096 V \pm 0.2 %
Protection against short-circuit				Yes
Electrical isolation				No
Analog outputs				
Qty.				2
Connections				2 per output (0 V, voltage)
Output voltage		V DC		-10 – +10
Output current		mA		1 (10 k Ω load)
Resolution		Bit		12
Protection against short-circuit				Yes
Electrical isolation				No

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				XV-101-K42	XV-101-K84
General					
Standards				IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178
Ambient temperature					
Operation					
	When mounted vertically, up to 45° fitting angle		°C	0 – 50	0 – 50
Storage				20/70	20/70
Relative humidity, non-condensing (IEC/EN 60068-2-30)				10 – 95	10 – 95
Degree of protection					
Front				IP65	IP65
Housing				IP20	IP20
Vibration resistance				10 – 57 Hz ±0.075 mm 57 – 150 Hz ±1 g	10 – 57 Hz ±0.075 mm 57 – 150 Hz ±1 g
Mechanical shock resistance				15 g/11 ms	15 g/11 ms
Rated impulse withstand voltage				U_{imp}	850
Overvoltage category				II	II
Pollution degree				2	2
Noise immunity				EN 61000-6-2	EN 61000-6-2
Emitted interference				EN 50081-2, Class A	EN 50081-2, Class A
Weight				kg	Approx. 0.9
Power supply					
Rated voltage				U_e	V DC
Admissible range				V DC	18 – 30
Display					
Back-lighting				LED	LED
Service life of back-lighting				Operational hours	100000
Character height				5 mm/10 mm	5 mm/10 mm
User-definable characters				256	256
Keys					
Total number of keys				29	35
Key pad service life				Operations	> 3000000
Features					
Memory type				SRAM, 32 kB	SRAM, 32 kB
Status				LED (RUN, STOP, SF)	LED (RUN, STOP, SF)
Expansions				3 XI/OC signal modules	3 XI/OC signal modules
Real-time clock				Yes	Yes





			MC-HPG-2x0	MC-HPG-300
General				
Standards			IEC/EN 61131-2	IEC/EN 61131-2
Ambient temperature		°C	0/45	0/45
Ambient temperature for storage		°C	-20/60	-20/60
Relative humidity, no condensation (IEC 60 068-2-30)		%	10 – 90	10 – 90
Shock resistance (IEC 60068-2-27)			15 g/11 ms	15 g/11 ms
Vibration resistance (IEC/EN 60068-2-6)			10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)
Electromagnetic compatibility (EMC)				
Emitted interference			EN 61000-6-4	EN 61000-6-4
Noise immunity			EN 61000-6-2	EN 61000-6-2
Safety ITE (information technology equipment)			EN 60950	EN 60950
Degree of protection				
Front (NEMA 12) IEC/EN 60529			IP65	IP65
Rear			IP20	IP20
Weight		kg	Approx. 1.6	Approx. 5.5
Display				
Screen diagonal		Inches	5.7	10.4
Type			Passive STN LCD	TFT LCD
Resolution		Pixels	320 × 240	640 × 480 VGA
Display area		mm	118 × 89	211 × 158
Colours/grey scales			16 grey levels (MC-HPG210), 16 colors (MC-HPG230)	256 K
Contrast ratio (Normally)			Mono: 10:1, Color 30:1	250:1
Brightness (Normally)		cd/m ²	196	400
Max. viewing angle			MC-HPG210 mono: vertical 78°, horizontal 116° MC-HPG230 color: vertical 48°, horizontal 80 – 120°	Vertical 90° Horizontal 110°
Back-lighting			1 × CCFL, can be dimmed through software	2 × CCFL, can be dimmed through software
Service life of back-lighting		Op. hours	20000	50000
Front plate				
Type			Laminated safety glass, anti-reflective	Laminated safety glass, anti-reflective
Operation				
Technology			Infra-red Touch	Infra-red Touch
Resolution				
Logical		Pixels	45 × 33	81 × 61
Power supply				
Rated voltage		V	24 DC	24 DC
Admissible range		V	20.4 – 28.8 DC rms	20.4 – 28.8 DC rms
Voltage dips (IEC/EN 61131-2)		ms	10	10
Residual ripple		%	≤ 5	≤ 5
Power consumption	<i>P</i> _{max.}	W	8.4	19.2
Current consumption		A	0.35	0.8
Protection against polarity reversal			Yes	Yes
Fuse		A	1.6 slow	4 slow
Power loss		W	8.4	19.2
Electrical isolation			No (0V is at housing potential)	No (0V is at housing potential)
Battery				
Battery (service life)			MC-ACP-BAT01 Normally 5 years	MC-ACP-BAT02 Normally 5 years
PLC (programmable logic controller)				
Processor			486SX, 66 MHz	486SX, 66 MHz
Programming			XSoft Professional	XSoft Professional
Program ode		kByte	512	512
Data		kByte	256	256
Makers and/or retained data		kByte	16	16
Network variables			Ethernet or CAN	Ethernet or CAN
Cycle time for 1 k of instructions (Bit, Byte)		ms	0.8	0.5
RTC (real-time clock)			Yes	Yes

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			MC-HPG-2x0	MC-HPG-300
Visualization				
Software			XSoft EPAM	XSoft EPAM
Graphics memory	MByte		1	1
Memory for visualization pages	MByte		22	22
Messages	Qty.		max. 2000	max. 4000
Alarms	Qty.		max. 1008	max. 1008
Alarm history	Qty.		max. 512	max. 512
Process variables	Qty.		Normally 1000	Normally 2000
Process diagrams	Qty.		Normally 300	Normally 500
Language changeover (online languages)	Qty.		10	10
Character sets			Yes, e.g. Chinese, Japanese,...	Yes, e.g. Chinese, Japanese,...
Recipes			Editable in ASCII text format.	Editable in ASCII text format.
Password protection			10 levels	10 levels
Interfaces/communication				
Programming interface			Ethernet	Ethernet
Ethernet				
Data transfer rate	MBit/s		10	10
Connection types			RJ45	RJ45
Electrical isolation			Yes	Yes
Serial interface RS232				
Data transfer rate	kBit/s		115	115
Connection types			CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation			No	No
CANopen				
Data transfer rate	kBit/s		125, max. 500	125, max. 500
Connection types			CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation			Yes	Yes
Stations	Qty.		64	64
Keyboard (for service purposes only)				
Connection types			PS2	PS2
Replaceable memory (CompactFlash)	MByte		32, 64, 128	32, 64, 128
Software update via CompactFlash			PLC project, visualization, runtime system	PLC project, visualization, runtime system
Optional interfaces				
PROFIBUS-DP (master)				
Data transfer rate master/slave	MBit/s		To12	To12
Connection types			CiA, 9-pole Sub-D socket	CiA, 9-pole Sub-D socket
Electrical isolation			No	No
Stations	Qty.		64	64
PROFIBUS-DP (slave)				
Data transfer rate master/slave	MBit/s		To12	To12
Connection types			CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation			No	No
Stations	Qty.		64	64
Siemens MPI				
Data transfer rate			187.5 (standard)	187.5 (standard)
Connection types			9-pole Sub-D socket	9-pole Sub-D socket
Electrical isolation			No	No
Stations	Qty.		32	32
Allen Bradley				
Data transfer rate	kBit/s		9600 (standard)	9600 (standard)
Connection types			9-pole Sub-D plug	9-pole Sub-D plug
Electrical isolation			No	No
Stations	Qty.		1	1
GE Fanuc				
Data transfer rate	kBit/s		19200 (standard)	19200 (standard)
Connection types			9-pole Sub-D socket	9-pole Sub-D socket
Electrical isolation			Yes	Yes



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		XVC-601-GTI-10-...	XVC-601-GTI-12-...	XVC-601-GTI-15-...
General				
Standards		IEC/EN 61131-2	IEC/EN 61131-2	IEC/EN 61131-2
Ambient temperature	°C	0/+50 with vertical mounting, 0/+40 when tilted, up to max. 35°		
Ambient temperature for storage	°C	-20/60	-20/60	-20/60
Relative humidity, no condensation (IEC 60 068-2-30)	%	10 – 90	10 – 90	10 – 90
Shock resistance (IEC 60068-2-27)		15 g/11 ms	15 g/11 ms	15 g/11 ms
Vibration resistance (IEC/EN 60068-2-6)		10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)
Electromagnetic compatibility (EMC)				
Emitted interference		EN 61000-6-4	EN 61000-6-4	EN 61000-6-4
Noise immunity		EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
Safety ITE (information technology equipment)		EN 60950	EN 60950	EN 60950
Degree of protection				
Front (NEMA 12) IEC/EN 60529		IP65	IP65	IP65
Rear		IP20	IP20	IP20
Weight	kg	Approx. 5.2	Approx. 5.5	Approx. 7
Display				
Screen diagonal	Inches	10.4	12.1	15
Type		TFT LCD	TFT LCD	TFT LCD
Resolution	Pixels	640 × 480 VGA	800 × 600 SVGA	1024 × 768 XGA
Display area	mm	211 × 158	246 × 185	304 × 228
Colors		256 K	256 K	256 K
Contrast ratio (Normally)		250:1	500:1	300:1
Brightness (Normally)	cd/m ²	400	500	250
Max. viewing angle		Vertical 90° Horizontal 110°	Vertical 100° Horizontal 120°	Vertical 115° Horizontal 140°
Back-lighting		2 × CCFL	4 × CCFL	2 × CCFL
Service life of back-lighting	Op. hours	50000	50000	35000
Front				
Type		Laminated safety glass, anti-reflective	Laminated safety glass, anti-reflective	Laminated safety glass, anti-reflective
Operation				
Technology		Infra-red Touch	Infra-red Touch	Infra-red Touch
Resolution				
Logical	Pixels	81 × 61	93 × 71	115 × 87
Power supply				
Rated voltage	V	24 DC	24 DC	24 DC
Admissible range	V	20.4 – 28.8 DC rms	20.4 – 28.8 DC rms	20.4 – 28.8 DC rms
Voltage dips (IEC/EN 61131-2)	ms	10	10	10
Residual ripple	%	≤ 5	≤ 5	≤ 5
Power consumption	<i>P</i> _{max.} W	25	34	38
Current consumption	A	1.1	1.4	1.6
Protection against polarity reversal		Yes	Yes	Yes
Fuse	A	4 slow	4 slow	4 slow
Power loss	W	25	34	38
Electrical isolation		No (0V is at housing potential)	No (0V is at housing potential)	No (0V is at housing potential)
Battery		MC-ACP-BAT01	MC-ACP-BAT01	MC-ACP-BAT01
Battery (service life)		Normally 5 years	Normally 5 years	Normally 5 years

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		XVC-601-GTR-10-...	XVC-601-GTR-12-...	XVC-601-GTR-15-...
General				
Standards		IEC/EN 61131-2	IEC/EN 61131-2	IEC/EN 61131-2
Ambient temperature	°C	0/+50 with vertical mounting, 0/+40 when tilted, up to max. 35°		
Ambient temperature for storage	°C	-20/60	-20/60	-20/60
Relative humidity, no condensation (IEC 60 068-2-30)	%	10 – 90	10 – 90	10 – 90
Shock resistance (IEC 60068-2-27)		15 g/11 ms	15 g/11 ms	15 g/11 ms
Vibration resistance (IEC/EN 60068-2-6)		10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)
Electromagnetic compatibility (EMC)				
Emitted interference		EN 61000-6-4	EN 61000-6-4	EN 61000-6-4
Noise immunity		EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
Safety ITE (information technology equipment)		EN 60950	EN 60950	EN 60950
Degree of protection				
Front (NEMA 12) IEC/EN 60529		IP65	IP65	IP65
Rear		IP20	IP20	IP20
Weight	kg	Approx. 5.2	Approx. 5.5	Approx. 7
Display				
Screen diagonal	Inches	10.4	12.1	15
Type		TFT LCD	TFT LCD	TFT LCD
Resolution	Pixels	640 × 480 VGA	800 × 600 SVGA	1024 × 768 XGA
Display area	mm	211 × 158	246 × 185	304 × 228
Colors		256 K	256 K	256 K
Contrast ratio (Normally)		250:1	500:1	300:1
Brightness (Normally)	cd/m ²	400	500	250
Max. viewing angle		Vertical 90° Horizontal 110°	Vertical 100° Horizontal 120°	Vertical 115° Horizontal 140°
Back-lighting		2 × CCFL	4 × CCFL	2 × CCFL
Service life of back-lighting	Op. hours	50000	50000	35000
Front				
Type		Plane, seamless front surface	Plane, seamless front surface	Plane, seamless front surface
Operation				
Technology		Resistive-Touch	Resistive-Touch	Resistive-Touch
Resolution				
Logical	Pixels	81 × 61	93 × 71	115 × 87
Power supply				
Rated voltage	V	24 DC	24 DC	24 DC
Admissible range	V	20.4 – 28.8 DC rms	20.4 – 28.8 DC rms	20.4 – 28.8 DC rms
Voltage dips (IEC/EN 61131-2)	ms	10	10	10
Residual ripple	%	≤ 5	≤ 5	≤ 5
Power consumption	<i>P</i> _{max.} W	25	34	38
Current consumption	A	1.1	1.4	1.6
Protection against polarity reversal		Yes	Yes	Yes
Fuse	A	4 slow	4 slow	4 slow
Power loss	W	25	34	38
Electrical isolation		No (0V is at housing potential)	No (0V is at housing potential)	No (0V is at housing potential)
Battery		MC-ACP-BAT01	MC-ACP-BAT01	MC-ACP-BAT01
Battery (service life)		Normally 5 years	Normally 5 years	Normally 5 years



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		XVC-601-GTI-10-...	XVC-601-GTI-12-...	XVC-601-GTI-15-...
PLC (programmable logic controller)				
Processor		Pentium 200 MHz, ETX form factor	Pentium 200 MHz, ETX form factor	Pentium 200 MHz, ETX form factor
Programming		Through XSoft-Professional	Through XSoft-Professional	Through XSoft-Professional
Program ode	kByte	1024	1024	1024
Data	kByte	256	256	256
Makers and / or retained data	kByte	16 (max. 32)	16 (max. 32)	16 (max. 32)
Network variables		Ethernet or CAN	Ethernet or CAN	Ethernet or CAN
Cycle time for 1 k of instructions (Bit, Byte)	ms	0.1	0.1	0.1
RTC (real-time clock)		Yes	Yes	Yes
Visualization				
Software		XSoft EPAM	XSoft EPAM	XSoft EPAM
Graphics memory	MByte	4	4	4
Memory for visualization pages	MByte	22	22	22
Messages	Qty.	max. 32767	max. 32767	max. 32767
Alarms	Qty.	max. 1008	max. 1008	max. 1008
Alarm history	Qty.	max. 512	max. 512	max. 512
Process variables	Qty.	Normally 3000	Normally 3000	Normally 3000
Process diagrams	Qty.	Normally 21000	Normally 21000	Normally 21000
Language changeover (online languages)	Qty.	10	10	10
Character sets		Yes, e.g. Chinese, Japanese,...	Yes, e.g. Chinese, Japanese,...	Yes, e.g. Chinese, Japanese,...
Recipes		Editable in ASCII text format.	Editable in ASCII text format.	Editable in ASCII text format.
Password protection		10 levels	10 levels	10 levels
Interfaces/communication				
Programming interface		Ethernet	Ethernet	Ethernet
Ethernet				
Data transfer rate	Mbit/s	10/100	10/100	10/100
Connection types		RJ45	RJ45	RJ45
Electrical isolation		Yes	Yes	Yes
Serial interface RS232				
Data transfer rate	kBit/s	115	115	115
Connection types		CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation		No	No	No
CANopen				
Data transfer rate	kBit/s	125, max. 500	125, max. 500	125, max. 500
Connection types		CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation		Yes	Yes	Yes
Stations	Qty.	64	64	64
Keyboard (for service purposes only)				
Connection types		PS2	PS2	PS2
Optional interfaces				
PROFIBUS-DP (master)				
Data transfer rate master/slave	MBit/s	Up to 12	Up to 12	Up to 12
Connection types		CiA, 9-pole Sub-D socket	CiA, 9-pole Sub-D socket	CiA, 9-pole Sub-D socket
Electrical isolation		No	No	No
Stations	Qty.	64	64	64
PROFIBUS-DP (slave)				
Data transfer rate master/slave	MBit/s	Up to 12	Up to 12	Up to 12
Connection types		CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation		No	No	No
Stations	Qty.	64	64	64
Siemens MPI				
Data transfer rate		187.5 (standard)	187.5 (standard)	187.5 (standard)
Connection types		9-pole Sub-D socket	9-pole Sub-D socket	9-pole Sub-D socket
Electrical isolation		No	No	No
Stations	Qty.	32	32	32

		XVC-601-GTR-10-...	XVC-601-GTR-12-...	XVC-601-GTR-15-...
PLC (programmable logic controller)				
Processor		Pentium 200 MHz, ETX form factor	Pentium 200 MHz, ETX form factor	Pentium 200 MHz, ETX form factor
Programming		Through XSoft-Professional	Through XSoft-Professional	Through XSoft-Professional
Program ode	kByte	1024	1024	1024
Data	kByte	256	256	256
Makers and / or retained data	kByte	16 (max. 32)	16 (max. 32)	16 (max. 32)
Network variables		Ethernet or CAN	Ethernet or CAN	Ethernet or CAN
Cycle time for 1 k of instructions (Bit, Byte)	ms	0.1	0.1	0.1
RTC (real-time clock)		Yes	Yes	Yes
Visualization				
Software		XSoft EPAM	XSoft EPAM	XSoft EPAM
Graphics memory	MByte	4	4	4
Memory for visualization pages	MByte	22	22	22
Messages	Qty.	max. 32767	max. 32767	max. 32767
Alarms	Qty.	max. 1008	max. 1008	max. 1008
Alarm history	Qty.	max. 512	max. 512	max. 512
Process variables	Qty.	Normally 3000	Normally 3000	Normally 3000
Process diagrams	Qty.	Normally 21000	Normally 21000	Normally 21000
Language changeover (online languages)	Qty.	10	10	10
Character sets		Yes, e.g. Chinese, Japanese,...	Yes, e.g. Chinese, Japanese,...	Yes, e.g. Chinese, Japanese,...
Recipes		Editable in ASCII text format.	Editable in ASCII text format.	Editable in ASCII text format.
Password protection		10 levels	10 levels	10 levels
Interfaces/communication				
Programming interface		Ethernet	Ethernet	Ethernet
Ethernet				
Data transfer rate	Mbit/s	10/100	10/100	10/100
Connection types		RJ45	RJ45	RJ45
Electrical isolation		Yes	Yes	Yes
Serial interface RS232				
Data transfer rate	kBit/s	115	115	115
Connection types		CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation		No	No	No
CANopen				
Data transfer rate	kBit/s	125, max. 500	125, max. 500	125, max. 500
Connection types		CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation		Yes	Yes	Yes
Stations	Qty.	64	64	64
Keyboard (for service purposes only)				
Connection types		PS2	PS2	PS2
Optional interfaces				
PROFIBUS-DP (master)				
Data transfer rate master/slave	MBit/s	Up to 12	Up to 12	Up to 12
Connection types		CiA, 9-pole Sub-D socket	CiA, 9-pole Sub-D socket	CiA, 9-pole Sub-D socket
Electrical isolation		No	No	No
Stations	Qty.	64	64	64
PROFIBUS-DP (slave)				
Data transfer rate master/slave	MBit/s	Up to 12	Up to 12	Up to 12
Connection types		CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug	CiA, 9-pole Sub-D plug
Electrical isolation		No	No	No
Stations	Qty.	64	64	64
Siemens MPI				
Data transfer rate		187.5 (standard)	187.5 (standard)	187.5 (standard)
Connection types		9-pole Sub-D socket	9-pole Sub-D socket	9-pole Sub-D socket
Electrical isolation		No	No	No
Stations	Qty.	32	32	32



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		XV-DVI-GTI-10-000	XV-DVI-GTI-12-000	XV-DVI-GTI-15-000
General				
Standards		IEC/EN 61131-2	IEC/EN 61131-2	IEC/EN 61131-2
Ambient temperature	°C	0 – +50 with vertical mounting – +40 when tilted, up to max. 35°		
Ambient temperature for storage	°C	-20/60	-20/60	-20/60
Relative humidity, no condensation (IEC 60 068-2-30)	%	10 – 90	10 – 90	10 – 90
Shock resistance (IEC 60068-2-27)		15 g/11 ms	15 g/11 ms	15 g/11 ms
Vibration resistance (IEC/EN 60068-2-6)		10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)
Electromagnetic compatibility (EMC)				
Emitted interference		EN 61000-6-3	EN 61000-6-3	EN 61000-6-3
Noise immunity		EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
Safety ITE (information technology equipment)		EN 60950	EN 60950	EN 60950
Degree of protection				
Front (NEMA 12) IEC/EN 60529		IP65	IP65	IP65
Rear		IP20	IP20	IP20
Weight	kg	Approx. 4.1	Approx. 4.6	Approx. 6.1
Display				
Screen diagonal	Inches	10.4	12	15
Type		TFT LCD	TFT LCD	TFT LCD
Resolution	Pixels	640 × 480 VGA	800 × 600 SVGA	1024 × 768 XGA
Display area	mm	211 × 158	246 × 185	304 × 228
Colors		256 K	256 K	256 K
Contrast ratio (Normally)		250:1	300:1	300:1
Brightness (Normally)	cd/m ²	400	500	250
Max. viewing angle		Vertical 90° Horizontal 110°	Vertical 100° Horizontal 120°	Vertical 115° Horizontal 140°
Back-lighting		2 × CCFL	4 × CCFL	2 × CCFL
Service life of back-lighting	Op. hours	50000	50000	35000
Max. separation from XCC600	m	10	10	5
Front				
Type		Laminated safety glass, anti-reflective	Laminated safety glass, anti-reflective	Laminated safety glass, anti-reflective
Operation				
Technology		Infra-red Touch	Infra-red Touch	Infra-red Touch
Resolution				
Logical	Pixels	81 × 61	93 × 71	115 × 87
Power supply				
Rated voltage	V	12 DC (connection to XCC600)	12 DC (connection to XCC600)	12 DC (connection to XCC600)
Admissible range	V	10.8 – 13.2 DC	10.8 – 13.2 DC	10.8 – 13.2 DC
Power consumption	<i>P</i> _{max.} W	10	20	23
Current consumption	A	1	2	2.2
Protection against polarity reversal		No	No	No
Fuse	A	Yes, self-resetting	Yes, self-resetting	Yes, self-resetting
Power loss	W	12	24	26.4
Electrical isolation		No (0V is at housing potential)	No (0V is at housing potential)	No (0V is at housing potential)

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		XV-DVI-GTR-06-000	XV-DVI-GTR-10-000	XV-DVI-GTR-12-000	XV-DVI-GTR-15-000
General					
Standards		IEC/EN 61131-2	IEC/EN 61131-2	IEC/EN 61131-2	IEC/EN 61131-2
Ambient temperature	°C	0 – +50 with vertical mounting – +40 when tilted, up to max. 35°			
Ambient temperature for storage	°C	-20/60	-20/60	-20/60	-20/60
Relative humidity, no condensation (IEC 60 068-2-30)	%	10 – 90	10 – 90	10 – 90	10 – 90
Shock resistance (IEC 60068-2-27)		15 g/11 ms	15 g/11 ms	15 g/11 ms	15 g/11 ms
Vibration resistance (IEC/EN 60068-2-6)		10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)	10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)
Electromagnetic compatibility (EMC)					
Emitted interference		EN 61000-6-3	EN 61000-6-3	EN 61000-6-3	EN 61000-6-3
Noise immunity		EN 61000-6-2	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
Safety ITE (information technology equipment)		EN 60950	EN 60950	EN 60950	EN 60950
Degree of protection					
Front (NEMA 12) IEC/EN 60529		IP65	IP65	IP65	IP65
Rear		IP20	IP20	IP20	IP20
Weight	kg	Approx. 1.2	Approx. 4.1	Approx. 4.6	Approx. 6.1
Display					
Screen diagonal	Inches	6.4	10.4	12	15
Type		TFT LCD	TFT LCD	TFT LCD	TFT LCD
Resolution	Pixels	640 × 480 VGA	640 × 480 VGA	800 × 600 SVGA	1024 × 768 XGA
Display area	mm	131 × 98	211 × 158	246 × 185	304 × 228
Colors		256 K	256 K	256 K	256 K
Contrast ratio (Normally)		300:1	250:1	500 :1	300:1
Brightness (Normally)	cd/m ²	250	400	500	250
Max. viewing angle		Vertical 50° Horizontal 90°	Vertical 90° Horizontal 110°	Vertical 100° Horizontal 120°	Vertical 115° Horizontal 140°
Back-lighting		–	2 × CCFL	4 × CCFL	2 × CCFL
Service life of back-lighting	Op. hours	20000	50000	50000	35000
Max. separation from XCC600	m	10	10	10	5
Front					
Type		Plane, seamless front surface	Plane, seamless front surface	Plane, seamless front surface	Plane, seamless front surface
Operation					
Technology		Resistive-Touch	Resistive-Touch	Resistive-Touch	Resistive-Touch
Resolution					
Logical	Pixels	Analog (12-bit)	Analog (12-bit)	Analog (12-bit)	Analog (12-bit)
Power supply					
Rated voltage	V	12 DC (connection to XCC600)	12 DC (connection to XCC600)	12 DC (connection to XCC600)	12 DC (connection to XCC600)
Admissible range	V	8 – 32 DC	10.8 – 13.2 DC	10.8 – 13.2 DC	10.8 – 13.2 DC
Power consumption	<i>P</i> _{max.} W	5	10	20	23
Current consumption	A	0.45	1	2	2.2
Protection against polarity reversal		Yes	No	No	No
Fuse	A	1, fuse, super-fast	Yes, self-resetting	Yes, self-resetting	Yes, self-resetting
Power loss	W	5.4	12	24	26.4
Electrical isolation		No (0V is at housing potential)	No (0V is at housing potential)	No (0V is at housing potential)	No (0V is at housing potential)





			XCC-600
General			
Standards			IEC/EN 61131-2
Ambient temperature		°C	0 – +50 with vertical mounting
Ambient temperature for storage		°C	20/60
Relative humidity, no condensation (IEC 60 068-2-30)		%	10 – 90
Shock resistance (IEC 60068-2-27)			15 g/11 ms
Vibration resistance (IEC/EN 60068-2-6)			10 – 57 Hz(± 0.075 mm), 57 – 150 Hz(± 1 g)
Electromagnetic compatibility (EMC)			
Emitted interference			EN 61000-6-4
Noise immunity			EN 61000-6-2
Safety ITE (information technology equipment)			EN 60950
Degree of protection			
Front (NEMA 12) IEC/EN 60529			IP20
Rear			IP20
Weight		kg	Approx. 2
Power supply			
Rated voltage		V	24 DC
Admissible range		V	18.5 – 30.2 DC
Voltage dips (IEC/EN 61131-2)		ms	10
Residual ripple		%	≤ 5
Power consumption	$P_{max.}$	W	Without monitor: 19.2, with 10.4-inch DVI monitor: 31.2, with 12-inch DVI monitor: 43.2, with 15-inch DVI monitor: 45.6
Current consumption		A	Without monitor: 0.8, with 10.4-inch DVI monitor: 1.3, with 12-inch DVI monitor: 1.8, with 15-inch DVI monitor: 1.9
Protection against polarity reversal			Yes
Fuse		A	4 slow
Power loss		W	Without monitor: 19.2, with 10.4-inch DVI monitor: 31.2, with 12-inch DVI monitor: 43.2, with 15-inch DVI monitor: 45.6
Electrical isolation			No (0V is at housing potential)
Battery			MC-ACP-BAT01
Battery (service life)			Normally 5 years
PLC (programmable logic controller)			
Processor			Pentium 200 MHz, ETX form factor
Programming			XSoft Professional
Program code		kByte	1024
Data		kByte	256
Makers and/or retained data		kByte	32
Network variables			Ethernet or CAN
Cycle time for 1 k of instructions (Bit, Byte)		ms	0.1
RTC (real-time clock)			Yes

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			XCC-600
Visualization			
Software			XSoft EPAM
Graphics memory	MByte		4
Memory for visualization pages	MByte		22
Messages	Qty.		max. 32767
Alarms	Qty.		max. 1008
Alarm history	Qty.		max. 512
Process variables	Qty.		Normally 3000
Process diagrams	Qty.		Normally 21000
Language changeover (online languages)	Qty.		10
Character sets			Yes, e.g. Chinese, Japanese,...
Recipes			Editable in ASCII text format.
Password protection			10 levels
Interfaces/communication			
Programming interface			Ethernet
Ethernet			
Data transfer rate	MBit/s		10/100
Connection types			RJ45
Electrical isolation			Yes
Serial interface RS232			
Data transfer rate	kBit/s		115
Connection types			CI A, 9-pole Sub-D plug
Electrical isolation			No
CANopen			
Data transfer rate	kBit/s		125, max. 500
Connection types			CI A, 9-pole Sub-D plug
Electrical isolation			Yes
Stations	Qty.		64
Keyboard (for service purposes only)			
Connection types			PS2
Optional interfaces			
PROFIBUS-DP (master)			
Data transfer rate master/slave	MBit/s		Up to 12
Connection types			CI A, 9-pole Sub-D socket
Electrical isolation			No
Stations	Qty.		64
PROFIBUS-DP (slave)			
Data transfer rate master/slave	MBit/s		Up to 12
Connection types			CI A, 9-pole Sub-D plug
Electrical isolation			No
Stations	Qty.		64
Siemens MPI			
Data transfer rate			187.5 (standard)
Connection types			9-pole Sub-D socket
Electrical isolation			No
Stations	Qty.		32



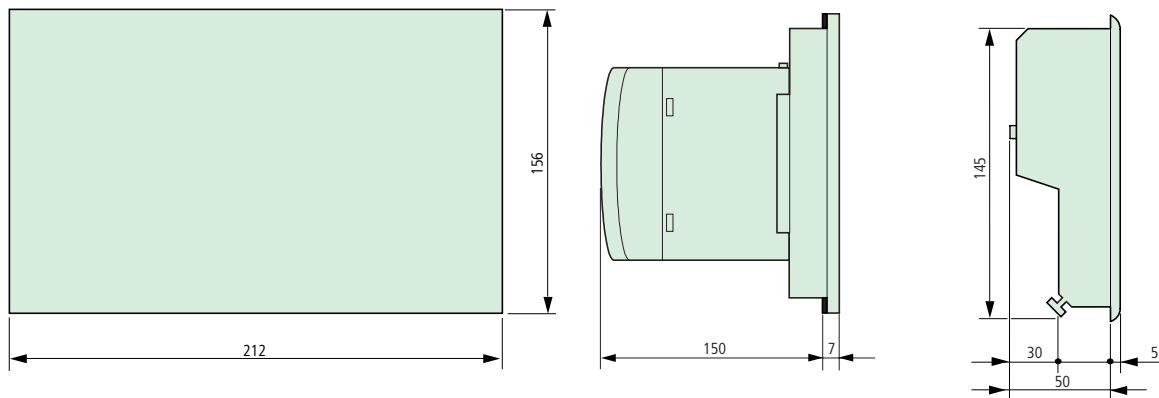
Embedded HMI-PLC
PC-based HMI-PLC



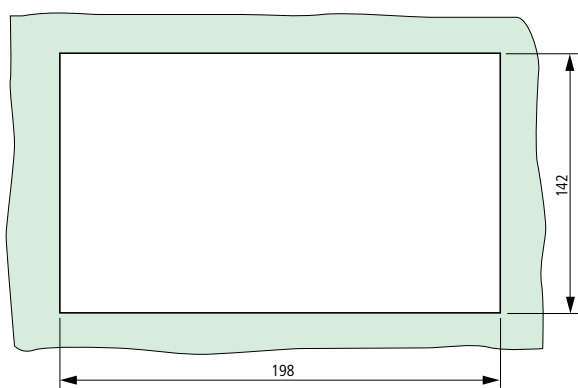
Text Display HMI-PLC

XV-101-K42
XV-101-K84

XVC-101-C192K-K82

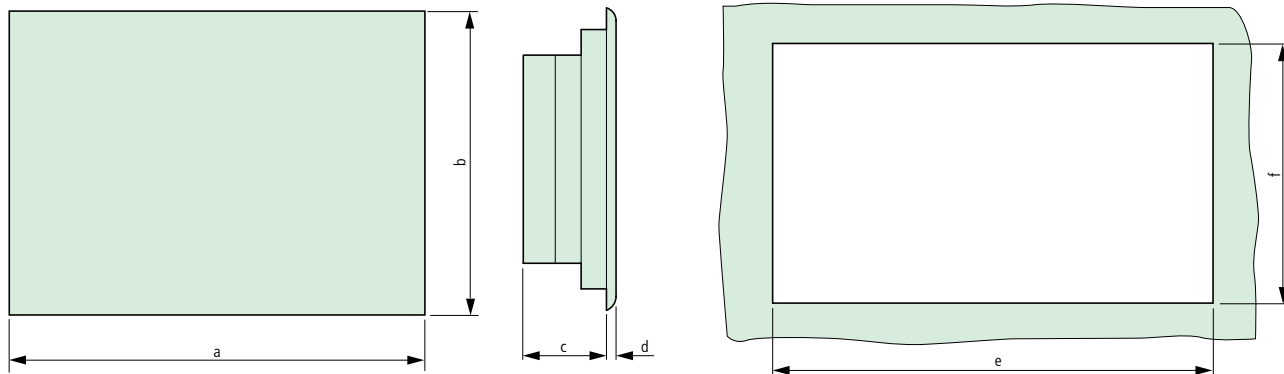


Mounting dimensions



**Embedded HMI-PLC
PC-based HMI-PLC**

Mounting dimensions

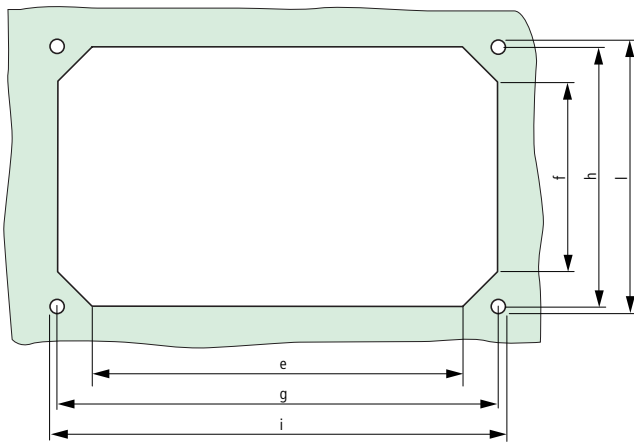


Type	a	b	c	d	e	f
MC-HPG210	212	156	89.2	6	198	142
MC-HPG230	212	156	89.2	6	198	142
MC-HPG300	345	260	100	5	329	238
XVC-601-GTI-10-V1-000	345	260	104	5	329	238
XVC-601-GTI-12-V1-000	361	279	103	5	344	262
XVC-601-GTI-15-V1-000	427	332	104	5	410	315
XVC-601-GTR-10-V1-000	345	260	104	5	329	238
XVC-601-GTR-12-V1-000	361	279	103	5	344	262
XVC-601-GTR-15-V1-000	427	332	104	5	410	315
XV-DVI-GTI-10-000	345	260	58.2	5	329	238
XV-DVI-GTI-12-000	361	279	57.5	5	344	262
XV-DVI-GTI-15-000	361	279	57.5	5	410	315
XV-DVI-GTR-06-000	212	156	42	5	198	142
XV-DVI-GTR-10-000	345	260	58.2	5	329	238
XV-DVI-GTR-12-000	361	279	57.5	5	344	262
XV-DVI-GTR-15-000	361	279	57.5	5	410	315

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Embedded HMI-PLC
PC-based HMI-PLC

Mounting variation for IP65



Type	e	f	g	h	i	l
MC-HPG300	287	196	321	229.8	329	238
XVC-601-GTI-10-V1-000	287	196	321	229.8	329	238
XVC-601-GTI-12-V1-000	302	220	336	254	344	262
XVC-601-GTI-15-V1-000	368	273	402	307	410	315
XVC-601-GTR-10-V1-000	287	196	321	229.8	329	238
XVC-601-GTR-12-V1-000	302	220	336	254	344	262
XVC-601-GTR-15-V1-000	368	273	402	307	410	315
XV-DVI-GTI-10-000	287	196	321	229.8	329	238
XV-DVI-GTI-12-000	302	220	336	254	344	262
XV-DVI-GTI-15-000	368	273	402	307	410	315
XV-DVI-GTR-10-000	287	196	321	229.8	329	238
XV-DVI-GTR-12-000	302	220	336	254	344	262
XV-DVI-GTR-15-000	368	273	402	307	410	315

XCC600

