Product Information

**XSystem:**
Control, Process Display, Input/Output, Communication

- XControl XC 100
- XVision MMI-PLC
- XI/QC
- XSoft
XControl XC100 is the new high-performance compact PLC from the XSystem automation system for small and medium sized automation tasks up to 250 I/Os. The device has eight digital inputs and six digital outputs with electrical isolation as well as an integral CANopen interface. Further I/Os can be connected directly to the CPU via the parallel bus on the rear of the device which assures short reaction times. The respective XSoft programming software unifies program generation conform to IEC 61131, configuration, test/commissioning and process display. The universal data management concept guarantees data consistency and assures reduced cost engineering.

**Features**

**Integrated I/Os:**
- 8 digital inputs
- 6 digital outputs
- Status display via LED – electrically isolated
- Cable connections via connection terminal blocks

**Local I/O extension via XI/OC modules:**
Central extendable I/O:
up to 7 XI/OC modules

**Integrated CANopen Interface:**
- Connection of decentral peripherals
- Control networking

**RS232 interface**
- Programmer access

**Slot for Multimedia Memory modules:**
The MMC memory module enables storage of:
- the program
- the recipe

**SRAM memory:**
- 64/128 kByte for program
- 64/128 kByte for data
- 4/8 kByte non-volatile data

**Processing speed:**
- 0.5 ms/1000 instructions

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**Individual I/O configuration**
Further sensors and actuators can be connected via the new modular I/O system XI/OC directly to the XC100.

**Plug-in or screw-in**
It is not necessary to rewire when a module is exchanged as all the I/O modules are equipped with plug-in connection terminals. Screw or spring-loaded terminals can be selected.

**Simple and cost-effective networking:**
Networking multiple XC100 devices is easy. The integral CANopen interface of the XC100 enables data exchange between the controls. The definition global network variables is sufficient.
XVision Text Display Controls – Information in Plain Text

XVision Text display controls combine text display features and a powerful PLC in a single device. The common XSOFT software for XVision and XControl with central data management reduce the engineering costs to a minimum. Connection to the peripherals is established via the integrated CANopen interface or via the local I/Os.

XVision text display controls are available as modular and compact units.

XVision modular text display controls
These MMI-PLCs consist of a PLC (XC100), the text display (XV-100) and a max. of 3 I/O modules (XI/OC). The respective slots for these modules are available on the rear of the text display. The modular device design enables an optimum application-suitable device configuration and reduces the device hardware costs.

XVision compact text display controls
The XVision compact XVC-100 text display control combines minimum installation dimensions with a high interface integration density, such as CANopen, RS232, I/O and technology modules.

Features

RS232 interface
- Programmer access

Integrated CANopen interface:
- Connection of decentral peripherals
- Control networking

MMI-PLC modular
XC100+XV-100:

Integrated I/Os with LED:
- 8 digital inputs
- 6 digital outputs

SRAM memory:
- 64/128 kByte for program
- 64/128 kByte for data
- 4/8 kByte for non-volatile data

Slot for Multimedia Memory modules:
- Up to 128 MByte MMC memory
- Storage of data and programs

LCD display
- 4 x 20 or 8 x 40 lines x lines
- Text height 5 or 10 mm
- 9 or 15 function keys with inscription labels
- 3 slots for XI/OC I/O module

MMI-PLC compact
XCV100:

Integrated I/Os:
- 10 digital inputs
- 8 digital outputs
- 8 digital inputs/outputs configurable
- 2 analog inputs
- 2 analog outputs
- 2 counter inputs
- 2 interrupt inputs
- 1 encoder input

Memory:
- 192 kByte for program
- 56 kByte for data
- 8 kByte for non-volatile data

Slot for compact flash Memory modules:
- Up to 16 MByte CF memory
- Storage of data, recipies and program

LCD display
- 8 x 20 or 4 x 10 lines x characters
- Text high 4 or 8 mm
- 8 function keys
XI/OC Input/Output Modules – Arranged as Required

XI/OC I/O-modules can be combined as desired in any sequence with XControl controls and XVision displays. The modules stand out through their space-saving design. The modularity ensures an application specific and cost-effective device configuration.

The I/O module is connected directly to the XVision text display or on the rear of the modules. The modules which can be arranged in a row are simply snapped onto a top-hat rail.

Simple to expand
Up to 7 XI/OC modules can be connected directly to the XControl XC100. Further XI/OC modules can be connected via CANopen Gateways.

Faster module exchange
Plug-in terminations with screw terminals or spring-loaded terminals enable exchange of the module without having to touch the wiring.

### Digital Input
- **XIOC-8DI**: 8 digital inputs DC 0-24V
- **XIOC-16DI**: 16 digital inputs DC 0-24V
- **XIOC-16DI-AC**: 16 digital inputs AC 0-240V

### Digital Output
- **XIOC-8DO**: 8 digital outputs DC 24V/0,5A
- **XIOC-16DO-S**: 16 digital outputs DC 24V/0,8A short-circuit protected
- **XIOC-16DO**: 16 digital outputs DC 24V/0,5A
- **XIOC-12DO-R**: 12 digital relay outputs DC 24V
- **XIOC-4DO-P**: 4 digital outputs Pulse-width modulation

### Parameter definition
- **XIOC-16DX**: 16 digital inputs/outputs, can be freely defined as an input or output

### Analog Input
- **XIOC-8AI-I2**: 8 analog inputs 4-20mA
- **XIOC-8AI-U1**: 8 analog inputs 0-10V
- **XIOC-8AI-U2**: 8 analog inputs +/-10V
- **XIOC-4T-PT**: 4 analog inputs for PT100
- **XIOC-4AI-2AO-U1**: 4 analog inputs (0-10V) + 2 analog outputs (0-10V)
- **XIOC-2AI-1AO-U1**: 2 analog inputs (0-10V) + 1 analog output (0-10V)

### Analog Output
- **XIOC-2AO-U1-2AO-I2**: 2 analog outputs 0-10V, 2 outputs 4-20mA
- **XIOC-4AO-U1**: 4 analog outputs 0-10V
- **XIOC-4AO-U2**: 4 analog outputs +/-10V

### Counters
- **XIOC-1CNT-100KHZ**: 1 counter up to 100kHZ + 2DO
- **XIOC-2CNT-100KHZ**: 2 counters up to 100kHZ + 4DO
- **XIOC-2CNT-2AO-INC**: 2 inputs (400KHZ) for 5V incremental encoder + 2 analog outputs 0-10V
- **XIOC-TERM30-CNT4**: connector for counter module

### Communication
- **XIOC-NET-DP-M**: Profibus-Master for connection to XC
- **XIOC-NET-CAN**: CANopen-Interface for connection to XC
- **XIOC-SER-232**: serial RS232 interface

### Gateways
- **XIOC-GW-CAN-8DI-6DO**: CAN fieldbus coupler with integral I/Os (8DI, 6DO)
- **XIOC-GW-CAN-8DI-6DO-EXP**: CAN fieldbus coupler with integral I/Os (8DI, 6DO), I/Os can be extended

### Backplane
- **XIOC-BP-XC**: backplane for XC100/200
- **XIOC-BP-XC1**: backplane for XC100/200 + 1 XI/OC-module
- **XIOC-BP-2**: backplane for 2 XI/OC-module
- **XIOC-BP-3**: backplane for 3 XI/OC-module

### Connection terminations
- **XIOC-TERM-18T**: spring-loaded terminals
- **XIOC-TERM-18S**: screw terminals
New Flexibility with XSystem: Control, Process Display, Input/Output, Communication

XSystem offers you numerous options of combining innovative products to provide tailor-made solutions. XVision consists of a series of text and touch panel displays that can be combined with XControl units and XI/OC input/output modules to form efficient MMI-PLC systems. New possibilities for building individually tailored control systems arise due to the flexibility of matching display size to PLC rating.

In addition, the XSystem offers a compact MMI-PLC with integrated I/Os where installation space is critical. XSoft combines the programming, configuration, test/commissioning functions including process display in a single tool for the entire XSystem product range.
XSoft: Software for everything

XSoft combines the programming, configuration, test and commissioning and visualization software into a single tool for the entire XSystem product range.

The flexible programming environment to IEC61131-3 offers the following standard programming languages: IL, LD, FBD (previously CSF), ST Structured Text, SFC Sequential Function Chart. Complex graphical sequences can also be represented in a graphical CFC (Continuous Flow Chart) function plan editor.

Program generation is simplified by the high performance test and commissioning functions provided by XSoft. The following functions are available:

- Offline simulation: Testing even without the hardware
- Power flow: Colour representation of the signal flow
- Forcing: Setting variables to defined values
- Tracer: Recording values over time
- Break points: Program analysis at every point
- Online modifications: Inserting new variables and function blocks

XSoft process display offers special possibilities for test and commissioning. Numerous standard objects such as buttons, rectangles, ellipses, etc. simplify the representation of process display pages. These objects are linked directly to the variables. The objects can also be animated and bitmaps can be embedded. Program sequences can be simply tested and engineering costs reduced.

The integrated XSoft hardware configurator provides clarity during configuration of local I/O and the decentral peripherals (Profibus or CAN) by providing them in a common user interface. They can be configured, the parameters can be defined, assigned with control variables and also tested online.

XSoft control engineering toolbox (XSOFT-APPLIB-REG): The XSoft control engineering toolbox is a function module library from the area of PID control, pulse width modulation, signal processing, circuit simulation and mathematical functions. The self-explanatory function module names makes usage with control engineering simple to learn and master: parameter definition instead of programming. Engineering times are reduced considerably.

XSoft positioning toolbox (XSOFT-APPLIB-MOTION-CONTROL) The XSoft positioning toolbox contains more than 30 function modules from the areas of position control, sequencing, simulation of rotating axes, frequency measurement, synchronisation....