Human/Machine interfaces

Catalogue

2009

Schneider Electric

A full range of catalogues for . . . .

Detection

Global Detection Electronic and electromechanical sensors
n° 960262
MKTED208052EN

Photo-electric sensors
Proximity sensors
Capacitive proximity sensors
Ultrasonic sensors
Limit switches
Pressure switches
Rotary encoders
Radio frequency identification
Machine cabling accessories

Automation

Modicon Momentum distributed I/O and control
n° 807861
MKTED205061EN

Modicon Quantum automation platform, Unity, Concept & ProWORX 32
n° 960237
MKTED208011EN

Modicon Premium and Unity - PL7 software
n° 960268
MKTED208054EN

Modicon M340 and Unity software
n° 960303
DIAED2081007EN

PLCs
Discrete, analogue I/O and application-specific solutions
Communication

Automation

Twido programmable controller and TwidoSuite software
n° 960211
DIA3ED2070902EN

Controller base
Discrete, analogue I/O
Communication

Automation functions, relays, interfaces and power supplies
n° 960162
MKTED207031EN

Smart relays
Timing relays
Measurement & control relays
Analogue interfaces
Counters
Plug-in relays
Interfaces for discrete signals
Power supplies & transformers

Software
PLCs and safety controllers programming software

Operator dialog

Control and signalling components
n° 960239
MKTED208031EN

Control and signalling units
Control stations & enclosures
Cam switches
Beacons and indicator banks
Pendant control stations
Controllers
Emergency stops
Foot switches

Human-Machine interfaces
n° 821230
MKTED206071EN

Operator interface terminals
Industrial PCs
HMI and SCADA PC-based software

Software
Vijeo Designer
Operator terminal software

Motion and Drives

Motion control Lexium 05
n° 808610
DIA7ED2050910EN

Motion control Lexium 15
n° 816811
DIA2ED2060506EN

Lexium Controller motion controllers
n° 960165
DIA7ED2070410EN

Servo drives and Servo motors
Motion controllers
Motion control modules
Modicon Premium and Modicon Quantum

Soft starters and variable speed drives
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MKTED206111EN

Soft starters and variable speed drives

Software
Software for drives and motors
Motor control programming software

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See on: ***www.schneider-electric.com***

. . . . all Automation & Control functions

Motor control

Motor starter solutions Control and protection components
n° 814711
MKTED205103EN

Contactors
Circuit-breakers, fuse carriers
Thermal relays
Combinations, motor controllers
Mounting solutions
Motor starter mounting kits

Machine safety

*This catalogue contains Automation and Control function products relating to **machines Safety***

Safety functions and solutions using Preventa
n° 960260
MKTED208051EN

Safety PLCs
Safety controllers
Safety monitors
Safety solutions on AS-Interface cabling system
Safety switches
Safety light curtains
Safety mats
Emergency stops
Control stations
Enabling switches
Foot switches
Beacons & indicator banks
Switch disconnectors
Thermal-magnetic motor circuit breakers
Enclosed D.O.L. starters

Software
XPSMFWIN configuration software
XPSMCWIN configuration software

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Interfaces, I/O splitter boxes and power supplies
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MKTED203113EN

Discrete interfaces
Pre-wired interfaces
IP 67 Splitter boxes

Terminal blocks
n° 960151
MKTED207011EN

Terminal blocks
Cable ends

IP 20 distributed inputs/outputs Advantys STB
n° 960266
MKTED208053EN

Modules for automation island
Network interfaces
Power distribution
Digital I/O, analogs and application-specific

Software
STB configuration software

Power supplies

Power supplies and transformers Phaseo
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DIA3ED2061209EN

Switch mode power supplies
Filtered rectified power supplies
Transformers

Systems & architectures

This catalogue contains Automation and Control function products relating to Communication

Machine & Installations with industrial communication
n° 960153
MKTED207012EN

Preferred implementations
Ethernet TCP/IP, the universal communication standard
CANopen for machines and installations
AS-interface, simple and safe

Products
Human-Machine interface
Controllers and PLCs
Field devices
Infrastructure and wiring
Gateways

Software and tools
Collaborative Automation Partner Program & Partners

Human/Machine Interfaces

Contents

1 - Operator dialogue terminals

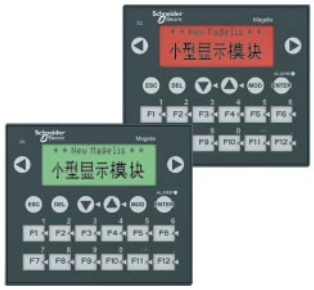
Magelis Small Panels

Magelis Advanced Panels

Operator dialogue terminals
Magelis Small Panels

Applications		**Display of text messages**
Terminal type		**Small Panels with keypad**
		
Display	Type	Green backlit LCD, height 5.5 mm or Green, orange or red backlit LCD, height 4.34…17.36 mm
	Capacity	2 lines of 20 characters or 1 to 4 lines of 5 to 20 characters
Data entry		Via keypad with 8 keys (4 customizable)
Memory capacity	Application	512 KB Flash
	Expansion by PCMCIA type II	–
Functions	Maximum number of pages	128/200 application pages 256 alarm pages
	Variables per page	40…50
	Representation of variables	Alphanumeric
	Recipes	–
	Curves	–
	Alarm logs	Depending on model
	Real-time clock	Access to the PLC real-time clock
	Alarm relay	–
	Buzzer	–
Communication	Asynchronous serial link	RS 232C/RS 485
	Downloadable protocols	Uni-TE, Modbus, and for PLC brands: Allen-Bradley, Omron, Mitsubishi, Siemens
	Printer link	RS 232C serial link *(2)*
Programming software		Vijeo Designer Lite (on Windows 2000, XP and Vista)
Operating system		Magelis
Terminal type		**XBT N**
Pages		1/13

(1) XBT RT511 only.
(2) Depending on model

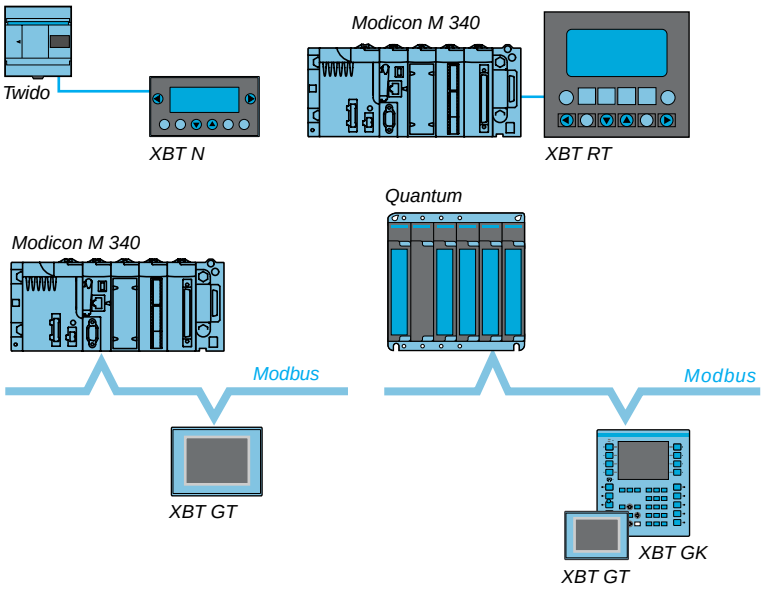
Display of text messages Control and configuration of data	Display of text messages and/or semi-graphics Control and configuration of data
Small Panels with keypad	**Small Panels with touch screen and keypad**
	
Green, orange or red backlit LCD, height 4.34…17.36 mm	Green, orange or red backlit matrix LCD (198 x 80 pixels) height 4…16 mm
1 to 4 lines of 5 to 20 characters	2 to 10 lines of 5 to 33 characters
Via keypad with 12 function keys or numeric entry (depending on context) + 8 service keys	Via keypad with 4 function keys 8 service keys
	Via touch screen and keypad with 10 function keys 2 service keys
512 KB Flash	512 KB Flash EPROM
–	–
128/200 application pages 256 alarm pages	200 application pages 256 alarm pages
40…50	50
Alphanumeric	Alphanumeric, bargraph, buttons, lamps
–	–
–	Yes
Yes	Yes
Access to the PLC real-time clock	
–	
–	Yes *(1)*
RS 232C/RS 485	
Uni-TE, Modbus, and for PLC brands: Allen-Bradley, Omron, Mitsubishi, Siemens	
RS 232C serial link *(2)*	
Vijeo Designer Lite (on Windows 2000, XP and Vista)	
Magelis	
XBT R	**XBT RT**
1/15	1/19

Operator dialogue terminals
Architectures, connection to automation systems

Architectures, connection to automation systems

Magelis operator dialogue terminals communicate with automation system equipment:
- Via serial link
- Via fieldbus
- In network architectures
- By integration in an architecture with Ethernet TCP/IP network

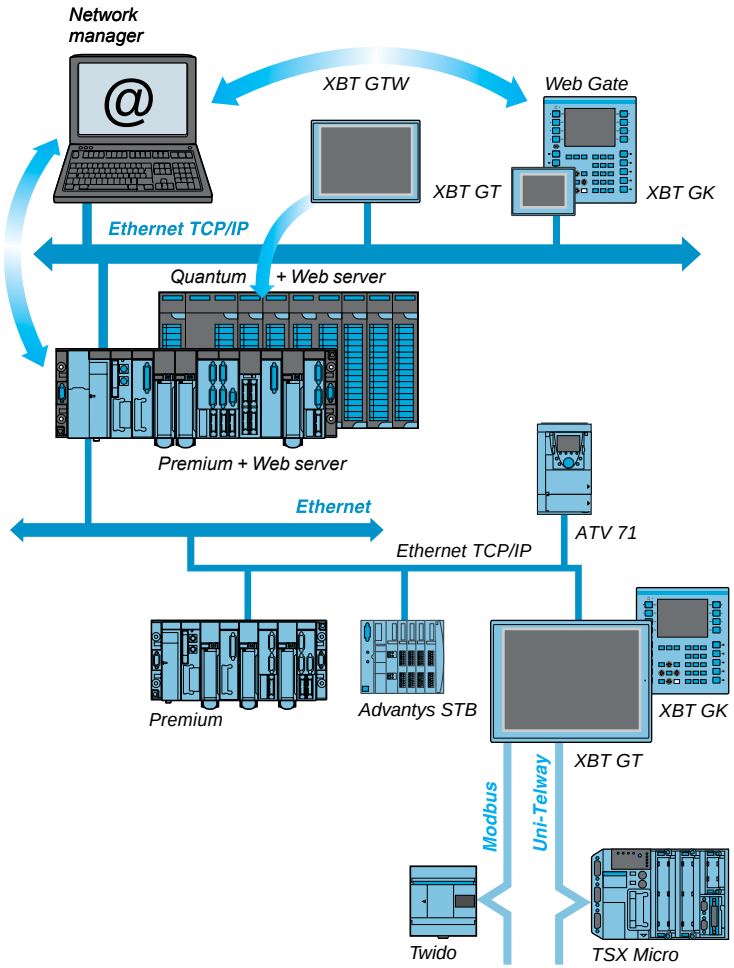
Point-to-point or multidrop connection with PLC via serial link



All the terminals incorporate an RS 232 C or RS 422/485 asynchronous serial link as standard.
Use of the Uni-TE or Modbus protocol makes it easy to set up communication with Schneider Electric PLCs: Modicon.
Third party protocols can be used for connection to PLCs from the main suppliers on the market :
- DF1, DH485 for Allen Bradley PLCs
- SysmacWay for Omron PLCs
- MPI/PPI for Siemens Simatic S7 PLCs
- Mitsubishi Melsec FX PLC

Operator dialogue terminals
Architectures, connection to automation systems

Integration in an architecture with Ethernet TCP/IP network



Automation platforms provide transparent routing of Uni-TE or Modbus messages from a TCP/IP network to a Uni-TE or Modbus network and vice versa.

The following services are offered for the terminals:
- Modbus TCP/IP messaging (for XBT GT, XBT GK and XBT GTW, access with Ethernet TCP/IP Modbus protocol)
- Browse function with XBT GTW or standard PC.
- Web Gate function:
Diagnostics for remote control of the application
- FTP server:
Transfer of data files with the terminal
- Data Sharing function:
Data exchanges on Ethernet between 8 terminals (maximum)

Operator dialogue terminals
Magelis XBT N, XBT R and XBT RT Small Panels

Presentation

XBT R411 *XBT N400*

XBT RT511

Magelis XBT N and Magelis XBT R/RT terminals are used to display messages and variables.
In addition, Magelis XBT RT terminals can display small graphic elements.

The various keys can be used to:
- Modify variables
- Control a device
- Navigate within the operator dialogue application

On XBT RT terminals, the touch screen can also be used to modify variables, control devices and navigate within the dialogue application.

Alarm messages can be printed out from models that have a printer port.

Operation

"Entry" customization

"Control" customization

All Magelis terminals have the same user interface:

- A configurable touch screen, on XBT RT only ("touch-sensitive" mode)

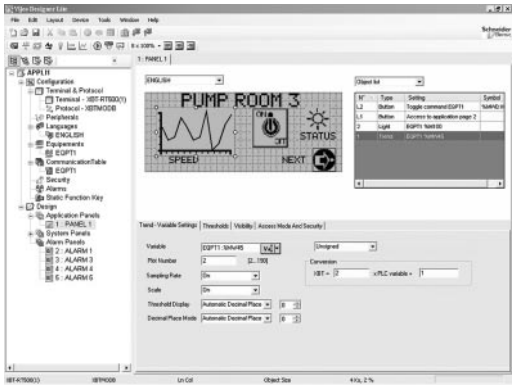
- 2 service keys (◀, ▶) configurable for contextual link or control, on XBT N/R and XBT RT ("entry"/"control" modes)

- 2 non-configurable service keys (ESC, ENTER)

- In addition to these keys:
  - On XBT N terminals: 4 customizable service keys which can be configured as function keys ("control" mode) or service keys ("entry" mode)
  - On XBT R terminals: 4 non-configurable service keys and 12 function or numeric entry keys (depending on context)
  - On XBT RT terminals in "control" or "entry" mode: 4 customizable, configurable function keys. 4 non-configurable service keys.

Operator dialogue terminals
Magelis XBT N, XBT R and XBT RT Small Panels

Configuration



Vijeo Designer Lite

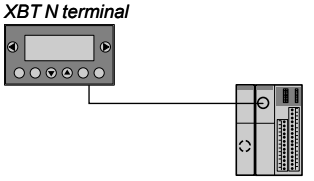
Magelis terminals can be configured using Vijeo Designer Lite software, in a Windows environment.

The Vijeo Designer Lite software uses the concept of pages: each page can be viewed in its entirety.
A 2, 4, or 10-line window, depending on the terminal model to be configured, is used to view the screen of this virtual terminal.

The symbol databases of TwidoSoft, PL7 and Concept applications can be imported into the Vijeo Designer Lite operator dialogue application.

Communication

XBT N terminal



Twido controller

XBT N and XBT R/RT terminals communicate with PLCs via an integrated serial link in either point-to-point or multidrop mode, depending on the model.

The communication protocols used are those of Schneider Electric PLCs (Uni-TE, Modbus) and those of the main manufacturers on the market.

Operator dialogue terminals
Magelis XBT N, XBT R and XBT RT Small Panels

Functions

XBT N/R/RT terminals have function and service keys on the front panel (according to “control” or “entry” configuration).
XBT RT terminals have a touch screen which can be configured in “touch-sensitive” operating mode.

“F” function keys

The function keys are defined for the whole application.
The number of function keys depends on the model:
- F1, F2, F3, F4 on XBT N
- F1…F12 on XBT R
- F1…F10 or F1...F4 according to configuration on XBT RT

They can take the following functions:
- Access to a page
- Pulsed control
- Toggle command
- Etc.

In addition, with the XBT R terminal, if the **MOD** key is pressed, the 12 function keys become numeric entry keys **1…0**, **+/-** and **.**.

“R” function keys for XBT RT (“entry” mode)

The R1, R2, R3 and R4 function keys on the XBT RT are defined for the pages displayed. They can be used to:
- Access a page
- Latch memory bits
- Toggle memory bits (ON/OFF)
- Set memory bits to one/zero

An icon can be displayed on the screen, above the **Ri** keys. This icon is defined using the Vijeo Designer Lite software.

Matrix touch screen (5 x 11 cells) for XBT RT

The touch screen can be configured to be active on XBT RT (“touch-sensitive” mode).
This is used to:
- Access a page
- Latch/toggle memory bits
- Modify a numeric field via a virtual numeric keypad

Service keys

- Service keys ◀, **ESC**, **DEL**, ▼, ▲, **MOD**, **ENTER**, ▶, are used to modify the parameters of the automation system.

They perform the following actions:

ESC Cancel an entry, suspend or stop a current action, go up one level in a menu

DEL Delete the character selected in entry mode

MOD Select the variable field to enter. Authorize the entry of the next field, on each press, from left to right and top to bottom.

ENTER Confirm a selection or an entry, acknowledge an alarm

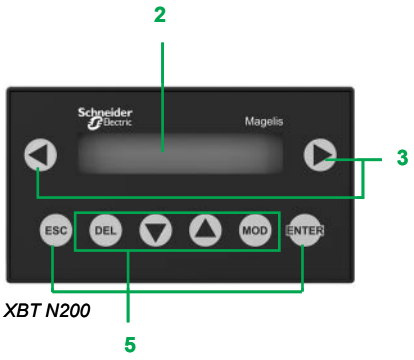
- The “arrow” keys are used to:

◀ ▶
- Change page in a menu
- Display current alarms
- Change digit in a variable field during input
- Activate the function associated with a functional link

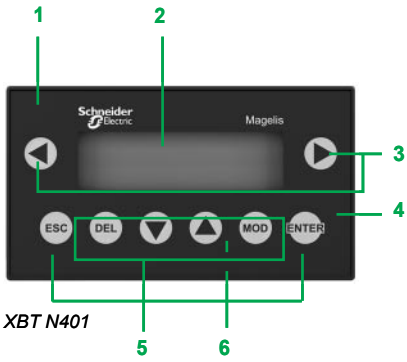
▼ ▲
- Move up and down within a page (XBT N40●)
- Select the value of a digit
- Select a value in a selection list
- Increment or decrement the value of a variable field

Operator dialogue terminals
Magelis XBT N, XBT R and XBT RT Small Panels

Description of XBT N terminals



XBT N200



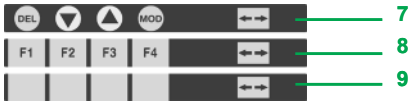
XBT N401

XBT N terminals comprise:

On the front panel

1 A communication monitoring lamp (model XBT N401)
2 A backlit ultra bright LCD display: 122 x 32 pixels (matrix) or 2 lines of 20 characters (alphanumeric)
3 2 non-customizable control or contextual link keys
4 An “alarm” lamp (model XBT N401)
5 Six service keys, 4 of which (shown in frame) can be configured as function keys and customized with labels
6 2 system lamps in entry mode or 4 lamps that can be controlled by PLC in control mode (model XBT N401)

Supplied separately



■ A sheet of labels comprising:
7 An “entry” label
8 A “control” label, F1, F2, F3 and F4
9 4 blank customizable labels
■ 2 spring clips for fixing the terminal on a panel

On the rear panel

XBT N200/N400 terminals

1 An RJ 45 connector for point-to-point serial link and connection of the 5 V ⎓ power supply (provided by the PLC)

XBT N200

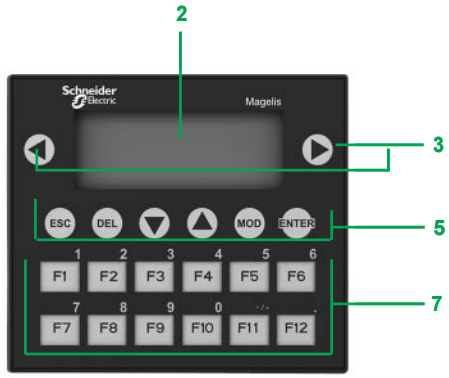
XBT N401/N410/NU400 terminals

2 A removable screw terminal block for the 24 V ⎓ external power supply
3 A 25-way female SUB-D connector for multidrop serial link
4 An 8-way female mini-DIN connector for serial printer link (model XBT N401)

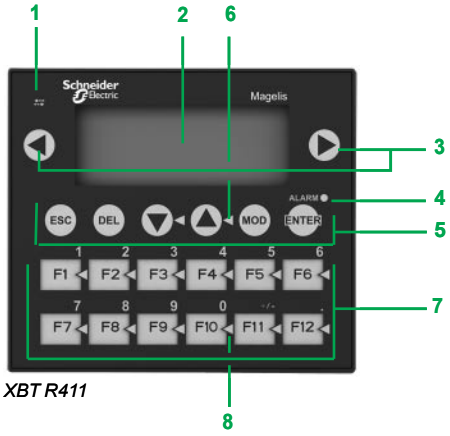
XBT N401

1

Description of XBT R terminals with keypad



XBT R400



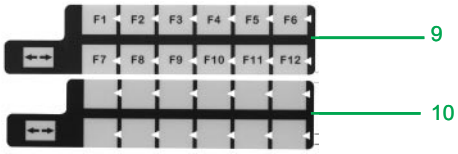
XBT R411

XBT R terminals comprise:

On the front panel:

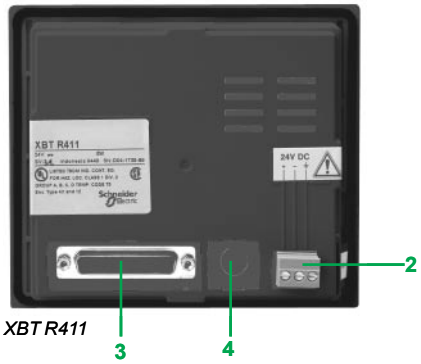
1 A communication monitoring lamp (model XBT R411)
2 A backlit ultra bright LCD display: 122 x 32 pixels (matrix)
3 Two non-customizable control or contextual link keys
4 An “alarm” lamp (model XBT R411)
5 Six service keys
6 2 system lamps (model XBT R411)
7 12 function or numeric entry keys (depending on context) that can be customized with labels
8 12 lamps (for model XBT R411), that can be controlled by the PLC

Supplied separately:



■ A sheet of labels comprising:
9 A “control” label, F1, F2, ...F12
10 2 blank customizable labels
■ 4 spring clips for fixing the terminal on a panel

XBT R400



XBT R411

On the rear panel

XBT R400 terminals

1 An RJ 45 connector for point-to-point serial link and connection of the 5 V ⎓ power supply (provided by the PLC)

XBT R410/R411 terminals

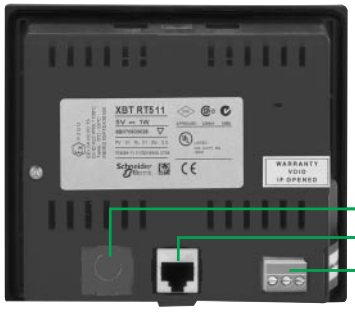
2 A removable screw terminal block for the 24 V ⎓ external power supply
3 A 25-way female SUB-D connector for multidrop serial link
4 An 8-way female mini-DIN connector for serial printer link (model XBT R411)

Description of XBT RT terminals with touch screen and keypad

XBT RT 500

XBT RT511

XBT RT500



XBT RT511

XBT RT terminals comprise:

On the front panel:

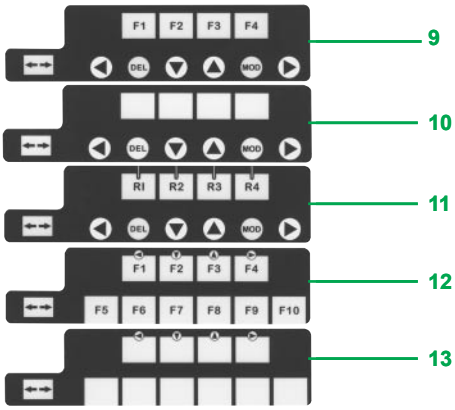
XBT RT terminals

1 A backlit ultra bright LCD display: 198 x 80 pixels (matrix)
2 2 service keys
3 Configurable function or service keys that can be customized using labels
4 Matrix touch screen, 11 x 5 cells

XBT RT511 terminal

5 A communication monitoring lamp
6 A “touch panel or keys being pressed” lamp
7 An “alarm” lamp
8 6 or 10 lamps, depending on the configuration, that can be controlled by the PLC

Supplied separately:



■ 2 sheets of labels comprising:
9 A configurable “control” label, F1… F4
10 A blank customizable “control” label
11 An “entry” label, R1…R4
12 A “touch sensitive” label, F1…F10
13 2 blank customizable “touch-sensitive” labels

On the rear panel

XBT RT500 terminal

1 An RJ 45 connector for point-to-point serial link and connection of the 5 V ⎓ power supply (provided by the PLC).

XBT RT511 terminal

2 A removable screw terminal block for the 24 V ⎓ external power supply
3 An RJ45 connector for multidrop serial link
4 An 8-way female mini-DIN connector for serial printer link

Operator dialogue terminals
Magelis XBT N Small Panels

Terminal type			XBT N200	XBT N400	XBT N410	XBT N401	XBT NU400
Environment							
Conformity to standards			IEC 61131-2, IEC 60068-2-6, IEC 60068-2-27, UL 508, CSA C22-2 no. 14				
Product certifications			CE, UL, CSA, class 1 Div 2 (UL and CSA), ATEX zone 2/22				
Ambient air temperature	Operation	°C	0…+ 55				
	Storage	°C	- 20…+ 60				
Maximum relative humidity		%	0…85 (non-condensing)				
Degree of protection	Front panel		IP 65, conforming to IEC 60529, Nema 4X ("**outdoor use**")				
	Rear panel		IP 20, conforming to IEC 60529				
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes				
Vibration resistance			Conforming to IEC 60068-2-6 and marine certification; ± 3.5 mm; 2…8.45 Hz; 1 gn 8.45…150 Hz				
E.S.D.			Conforming to IEC 61000-4-2, level 3				
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m				
Electrical interference			Conforming to IEC 61000-4-4, level 3				
Mechanical characteristics							
Mounting and fixing			Flush-mounted, fixed by 2 spring clips (included) pressure-mounted for panels 1.5 to 6 mm thick				
Material	Screen protection		Polyester				
	Front frame		Polycarbonate/polybutylene terephthalate alloy				
	Keypad		Polyester				
Keys			8 keys (6 configurable and 4 customizable)				
Electrical characteristics							
Power supply	Voltage	V	5 ⎓ via PLC terminal port		24 ⎓		
	Voltage limits	V	–		18…30 ⎓		
	Ripple factor	%	–		5 maximum		
Consumption		W	–		5 maximum		
Functional characteristics							
Display unit	Type		Green backlit LCD	Green backlit LCD (122 x 32 pixels)		Green, orange and red backlit LCD (122 x 32 pixels)	Green backlit LCD (122 x 32 pixels)
	Capacity (height x width)		2 lines of 20 characters (5.55 x 3.2 mm)	From 1 line of 5 characters (17.36 x 11.8 mm) to 4 lines of 20 characters (4.34 x 2.95 mm)			
	Character fonts		Latin and Katakana	Latin, Cyrillic, Greek, Katakana and simplified Chinese			
Signalling			–			6 LEDs	–
Dialogue application	Number of pages		128 application pages (2 lines/page max.)	200 application pages (25 lines/page max.) 256 alarm pages (25 lines/page max.)			
Memory			512 KB Flash				
Transmission medium	Asynchronous serial link		RS 232C/RS 485				
Downloadable protocols			Uni-TE, Modbus *(1)*		Uni-TE, Modbus and third party *(2)*		Modbus
Real-time clock			Access to the PLC real-time clock				
Connection	Power supply		Via the PLC terminal port connecting cable		Removable terminal block with 3 screw terminals (pitch 5.08 mm) Max. clamping capacity: 1.5 mm²		
	Serial link – Connector		Female RJ45 (RS 232C/RS 485)		25-way female SUB-D (RS 232C/RS 485)		
	Serial link – Connection		Point-to-point		Multidrop		
	Printer link		No			8-way female mini-DIN	No

(1) Modbus master for all XBT N terminals.
Modbus slave for XBT N410 terminals (entry mode) and XBT N401 (entry and control mode).
(2) Third party protocols:
- Allen Bradley DF1/DH485
- Siemens PPI
- Omron SysmacWay
- Mitsubishi Melsec FX

Presentation: pages 1/6 to 1/11
Dimensions: page 1/62

Operator dialogue terminals
Magelis XBT N Small Panels


XBT N200


XBT N400/N410/NU400


XBT N401

Magelis Small Panels

Downloadable exchange protocol	Compatible PLCs	Supply voltage	Type of screen	Reference	Weight kg
Terminal with 2 lines of 20 characters (with alphanumeric screen)					
Uni-TE, Modbus	Twido, Nano, TSX Micro, Premium, Modicon M340	5 ⎓ via PLC terminal port	Green backlit LCD	**XBT N200**	0.360
Terminals with 4 lines of 20 characters (with matrix screen)					
Uni-TE, Modbus	Twido, Nano, TSX Micro, Premium, Modicon M340	5 V ⎓ via PLC terminal port	Green backlit LCD (122 x 32 pixels)	**XBT N400**	0.360
	Twido *(1)*, Nano, TSX Micro, Premium, TSX series 7, Momentum, Quantum Other Modbus slave devices, Modicon M340	24 V ⎓ external supply	Green backlit LCD (122 x 32 pixels)	**XBT N410**	0.380
			Green, orange and red backlit LCD *(2)* (122 x 32 pixels)	**XBT N401**	0.380
Modbus	TeSys model U motor starters *(3)* Altivar drives	24 V ⎓ external supply	Green backlit LCD (122 x 32 pixels)	**XBT NU400**	0.380

Software

Description	Operating system	Reference	
Configuration software	Windows 2000, XP, and Vista	See pages 3/7 and 3/17	–

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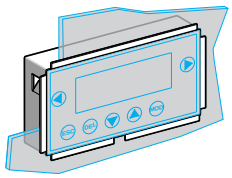
XBT ZN01

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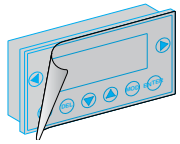

XBT ZN02

Accessories *(4)*

Description	Details	For use with	Reference	Weight kg
Flush mounting accessory	Kit for applications requiring a higher degree of dust and damp protection or customization of the panel, using a flat metal strip (not included)	All XBT N	**XBT ZN01**	–
Protective sheets	10 peel-off sheets	All XBT N	**XBT ZN02**	–
Sheets of re-usable labels	10 sheets of 6 labels	XBT N200/400	**XBL YN00**	–
		XBT N401 XBT NU400	**XBL YN01**	–
Mechanical adaptors for substitution of XBT H	From XBT H0●2●1/H0●1010 to XBT N410 From XBT H811050 to XBT N410	–	**XBT ZNCO**	–

Connection cables and accessories *(5)*

Description	Compatibility	Types of connector	Physical link	Protocol	Length	Reference	Weight kg
Adaptor cable	XBT N200 XBT N400 *(6)*	RJ45-RJ45	RS 232C RS 485	Modbus, Uni-TE	0.1 m	**XBT ZN999**	–

(1) Connection via integrated port or optional serial port on the Twido programmable controller.
(2) Also has 4 indicator LEDs.
(3) Factory preloaded application for monitoring, diagnostics and adjustment of 1 to 8 TeSys model U motor starters.
(4) Other accessories (see page 1/20).
(5) Other connection cables and accessories (see pages 1/20 to 1/23).
(6) Adaptor cable included with new version **XBT N200/N400** *terminals. The* **XBT ZN999** *adaptor is for use with new version* **XBT N200/N400** *terminals and the* **XBT Z978** *cable (replaced by* **XBT Z9780***), or with the old version* **XBT N200/N400** *terminals and the new* **XBT Z9780** *cable.*

Note: *The new version XBT N terminal can be distinguished externally from the old version as it has the* **Schneider Electric** *logo on the front panel (on the left above the screen).*

Presentation: pages 1/6 to 1/11
Dimensions: page 1/62

Operator dialogue terminals
Magelis XBT R Small Panels

Type of terminal			XBT R400	XBT R410	XBT R411
Environment					
Conformity to standards			IEC 61131-2, IEC 60068-2-6, IEC 60068-2-27, UL 508, CSA C22-2 no. 14		
Product certifications			CE, UL, CSA, class 1 Div 2 (UL and CSA), ATEX zone 2/22		
Ambient air temperature	Operation	°C	0…+ 55		
	Storage	°C	- 20…+ 60		
Maximum relative humidity		%	0…85 (non-condensing)		
Degree of protection	Front panel		IP 65, conforming to IEC 60529, Nema 4X ("**outdoor use**")		
	Rear panel		IP 20, conforming to IEC 60529		
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes		
Vibration resistance			Conforming to IEC 60068-2-6 and marine certification; ± 3.5 mm; 2…8.45 Hz; 1 gn 8.45…150 Hz		
E.S.D.			Conforming to IEC 61000-4-2, level 3		
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m		
Electrical interference			Conforming to IEC 61000-4-4, level 3		
Mechanical characteristics					
Mounting and fixing			Flush-mounted, fixed by 4 spring clips (included) pressure-mounted for panels 1.5 to 6 mm thick		
Material	Screen protection		Polyester		
	Front frame		Polycarbonate/polybutylene terephthalate alloy		
	Keypad		Polyester		
Keys			20 keys (12 configurable and customizable)		
Electrical characteristics					
Power supply	Voltage	V	5 ⎓ via PLC terminal port	24 ⎓	
	Voltage limits	V	–	18…30 ⎓	
	Ripple factor	%	–	5 maximum	
Consumption		W	–	5 maximum	
Functional characteristics					
Display	Type		Green backlit LCD (122 x 32 pixels)		Green, orange and red backlit LCD (122 x 32 pixels)
	Capacity (height x width)		From 1 line of 5 characters (17.36 x 11.8 mm) to 4 lines of 20 characters (4.34 x 2.95 mm)		
	Character fonts		Latin, Cyrillic, Greek, Katakana and simplified Chinese		
Signalling			–		16 LEDs
Dialogue application	Number of pages		200 application pages (25 lines/page max.) 256 alarm pages (25 lines/page max.)		
Memory			512 KB Flash		
Transmission medium	Asynchronous serial link		RS 232 C/RS 485		
Downloadable protocols			Uni-TE, Modbus *(1)*	Uni-TE, Modbus and third party *(2)*	
Real-time clock			Access to the PLC real-time clock		
Connection	Power supply		Via the PLC terminal port connecting cable	Removable terminal block with 3 screw terminals (pitch 5.08 mm) Max. clamping capacity: 1.5 mm²	
	Serial link – Connector		Female RJ45 (RS 232C/RS 485)	25-way female SUB-D (RS 232C/RS 485)	
	Serial link – Connection		Point-to-point	Multidrop	
	Printer link		No		8-way female mini-DIN

(1) Modbus master for all XBT R terminals. Modbus slave for the **XBT R411** *terminal. Modbus slave for the XBT R411 terminal.*
(2) Third party protocols:
-Allen Bradley DF1/DH485
-Siemens PPI
-Omron SysmacWay
-Mitsubishi Melsec FX

Presentation: pages 1/6 to 1/11
Dimensions: page 1/62

Operator dialogue terminals
Magelis XBT R Small Panels


XBT R400/R410

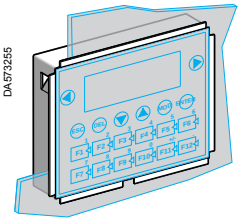

XBT R411

Magelis Small Panels

Downloadable exchange protocol	Compatible PLCs	Supply voltage	Type of screen	Reference	Weight kg
Terminals with 4 lines of 20 characters (with matrix screen)					
Uni-TE, Modbus	Twido, Nano, TSX Micro, Premium, Modicon M340	5 V ⎓ via PLC terminal port	Green backlit LCD (122 x 32 pixels)	**XBT R400**	0.550
	Twido *(1)*, Nano, TSX Micro, Premium, TSX series 7, Momentum, Quantum Other Modbus slave devices, Modicon M340	24 V ⎓ external supply	Green backlit LCD (122 x 32 pixels)	**XBT R410**	0.550
			Green, orange and red backlit LCD *(2)* (122 x 32 pixels)	**XBT R411**	0.550

Software

Description	Operating system	Reference	
Configuration software	Windows 2000 and XP	See pages 3/7 and 3/17	–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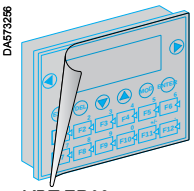
XBT ZR01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XBT ZR02

Accessories *(3)*

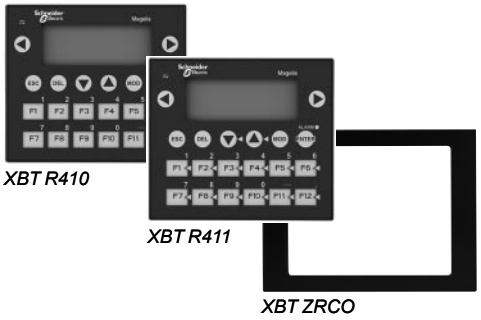
Description	Details	For use with	Reference	Weight kg
Flush mounting accessory	Kit for applications requiring a higher degree of dust and damp protection or customization of the panel, using a flat metal strip (not included)	All XBT R	**XBT ZR01**	–
Protective sheets	10 peel-off sheets	All XBT R	**XBT ZR02**	–
Sheets of re-usable labels	10 sheets of 6 labels	XBT R400/R410	**XBL YR00**	–
		XBT R411	**XBL YR01**	–
Mechanical adaptor for substitution of XBT P	From XBT P01●010/P02●010 to XBT R410	–	**XBT ZRCO**	–
	From XBT P02●110 to XBT R411			

(1) Connection via integrated port or optional serial port on the Twido PLC.
(2) Also has 16 indicator LEDs.
(3) Other accessories (see pages 1/20 to 1/23).

Presentation: pages 1/6 to 1/11
Dimensions: page 1/62

Operator dialogue terminals
Equivalent product tables for Magelis XBT P/XBT R

Equivalent product tables - XBT P terminals to XBT R terminals



XBT R410

XBT R411

XBT ZRCO

Old range XBT P	XBT R range	Mechanical adaptor *(1)*
XBT P011010	XBT R410	XBT ZRCO
XBT P012010	XBT R410	XBT ZRCO
XBT P021010	XBT R410	XBT ZRCO
XBT P021110	XBT R411	XBT ZRCO
XBT P022010	XBT R410	XBT ZRCO
XBT P022110	XBT R411	XBT ZRCO

(1) Mechanical adaptor for mounting XBT R terminal in place of the substituted XBT P terminal.

Equivalent product table - cables for connection to Schneider Electric PLCs

Summary

Old range XBT P	XBT R range	
Type of link	**Type of link**	**Cable**
Serial port, 25-way SUB-D RS 232C/RS 485/RS 422	Serial port, 25-way SUB-D RS 232C/RS 485	*Existing cable, see below*
Printer port, 9-way SUB-D (model XBT P02●110)	Printer port, 8-way mini-DIN (model XBT R411)	**XBT Z926** *(new cable)*

Equivalent product table - cables

Old range XBT P				XBT R range			
Type of terminal	**Type of link**	**Length**	**Reference**	**Type of terminal**	**Type of link**	**Length**	**Reference**
Twido, Modicon TSX Micro, Modicon Premium, 8-way mini-DIN terminal port, Uni-TE (V1/V2), Modbus protocol							
XBT P	RS 485 serial port, 25-way SUB-D	2.5 m	**XBT Z968**	XBT R	RS 485 serial port, 25-way SUB-D	2.5 m	**XBT Z968**
		5 m	**XBT Z9681**			5 m	**XBT Z9681**
		2.5 m angled	**XBT-Z9680**			2.5 m angled	**XBT-Z9680**
Modicon Premium with TSX SCY 2160●, 25-way female SUB-D connector, Uni-TE (V1/V2) protocol							
XBT P	RS 485 serial port, 25-way SUB-D	2.5 m	**XBT Z918**	XBT R	RS 485 serial port, 25-way SUB-D	2.5 m	**XBT Z918**
Modicon Quantum, 9-way male SUB-D connector, Modbus protocol							
XBT P	RS 232C serial port, 25-way SUB-D	2.5 m	**XBT Z9710**	XBT R	RS 232C serial port, 25-way SUB-D	2.5 m	**XBT Z9710**
Advantys STB, HE13 connector (network interface module, NIM), Modbus protocol							
XBT P	RS 232C serial port, 25-way SUB-D	2.5 m	**XBT Z988**	XBT R	RS 232C serial port, 25-way SUB-D	2.5 m	**XBT Z988**
Modicon Momentum M1, RJ45 connector (port 1), Modbus protocol							
XBT P	RS 232C serial port, 25-way SUB-D	2.5 m	**XBT Z9711**	XBT R	RS 232C serial port, 25-way SUB-D	2.5 m	**XBT Z9711**
TeSys U starters, ATV 31/61/71 drives, ATS 48 starters, RJ45 connector, Modbus protocol							
XBT P	RS 485 serial port, 25-way SUB-D	2.5 m	**XBT Z938**	XBT R	RS 485 serial port, 25-way SUB-D	2.5 m	**XBT Z938**
LT6 P multifunction protection relay, 9-way female SUB-D connector, Modbus protocol							
XBT P	RS 232C serial port, 25-way SUB-D	2.5 m	**XBT Z938**	XBT R	RS 232C serial port, 25-way SUB-D	2.5 m	**XBT Z938**

Equivalent product table - cables for application transfer to PC and printer cable

Old range XBT P				XBT R range			
Type of terminal	**Type of link**	**Length**	**Reference**	**Type of terminal**	**Type of link**	**Length**	**Reference**
Cables for application transfer to PC							
XBT P	25-way SUB-D/ 9-way SUB-D	2.5 m	**XBT Z915**	XBT R	25-way SUB-D/ 9-way SUB-D	2.5 m	**XBT Z915**
	25-way SUB-D/USB	2.5 m	**XBT Z915 + SR2 CBL 06 adaptor**		25-way SUB-D/ USB	2.5 m	**XBT Z915 + SR2 CBL 06 adaptor**
Serial printer cable							
XBT P	Printer port, 9-way SUB-D	2.5 m	**XBT Z936**	XBT R	Printer port, 8-way mini-DIN	2.5 m	**XBT Z926**

Operator dialogue terminals
Equivalent product tables for Magelis XBT P/XBT R

Compatibility table - Downloadable third party protocols

PLC brand	Compatibility		Protocol name
	XBT P	XBT R	
Allen Bradley	■	■	DF1/DH485
GE Fanuc	■	–	SNPX
Omron	■	■ (on RS 232)	Sysmacway
Siemens	■	■	PPI
	■	–	AS511, 3964R, MPI

Equivalent product table - Cables for connection to third party PLCs

Omron CQM1 & CVM1, Sysmac PLCs

Old range XBT P					XBT R range				
Type of terminal	**Type of connectors**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connectors**	**Serial port**	**Length**	**Reference**
Sysmacway protocol									
XBT P	25-way SUB-D/ 9-way SUB-D	RS 232	2.5 m	**XBT Z9740**	XBT R	25-way SUB-D/ 9-way SUB-D	RS 232C	2.5 m	**XBT Z9740**

Rockwell, Allen-Bradley PLCs

Old range XBT P					XBT R range				
Type of terminal	**Type of connectors**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connectors**	**Serial port**	**Length**	**Reference**
DF1 protocol									
XBT P *AP SLC5*	25-way SUB-D/ 9-way SUB-D	RS 232C	2.5 m	**XBT Z9730**	XBT R *AP SLC5*	25-way SUB-D/ 9-way SUB-D	RS 232C	2.5 m	**XBT Z9730**
XBT P *AP PLC5*	25-way SUB-D/ 25-way SUB-D	RS 232C	2.5 m	**XBT Z9720**	XBT R *AP PLC5*	25-way SUB-D/ 25-way SUB-D	RS 232C	2.5 m	**XBT Z9720**
XBT P *AP Micro-logix*	25-way SUB-D/ Micro-logix 1000	RS 232C	2.5 m	**XBT Z9731**	XBT R *AP Micro-logix*	25-way SUB-D/ Micro-logix 1000	RS 232C	2.5 m	**XBT Z9731**
DH 485 point-to-point protocol									
XBT P *AP Micro-logix*	25-way SUB-D/ Micro-logix 1000	RS 232C	2.5 m	**XBT Z9732**	XBT R *AP Micro-logix*	25-way SUB-D/ Micro-logix 1000	RS 232C	2.5 m	**XBT Z9732**
DH 485 multidrop protocol									
XBT P *SLC500 with AIC gateway*	25-way SUB-D/ 9-way SUB-D	RS 232C	2.5 m	**XBT Z9730**	XBT R *AP SLC5 with AIC gateway*	25-way SUB-D/ Micro-logix 1000	RS 232C	2.5 m	**XBT Z9732**

Siemens Simatic PLCs

Old range XBT P					XBT R range				
Type of terminal	**Type of connectors**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connectors**	**Serial port**	**Length**	**Reference**
PPI (S7) protocol									
XBT P	25-way SUB-D/ 9-way SUB-D	RS 485	2.5 m	**XBT Z9721**	XBT R	25-way SUB-D/ 9-way SUB-D	RS 485	2.5 m	**XBT Z9721**

Equivalent product table - Connection to Uni-Telway serial link

Old range XBT P					XBT R range				
Type of terminal	**Type of connectors**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connectors**	**Serial port**	**Length**	**Reference**
On subscriber socket TSX SCA 62									
XBT P	25-way SUB-D/ 15-way SUB-D	RS 485	1.8 m	**XBT Z908**	XBT R	25-way SUB-D/ 15-way SUB-D	RS 485	1.8 m	**XBT Z908**
On cable connector TSX P ACC 01									
XBT P	25-way SUB-D/ 8-way mini-DIN	RS 485	2.5 m 5 m	**XBT Z968** **XBT Z9681**	XBT R	25-way SUB-D/ 8-way mini-DIN	RS 485	2.5 m 5 m	**XBT Z968** **XBT Z9681**

Equivalent product table - Connection to Modbus serial link

Old range XBT P					XBT R range				
Type of terminal	**Type of connectors**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connectors**	**Serial port**	**Length**	**Reference**
On subscriber socket TSX SCA 64									
XBT P	25-way SUB-D/ 15-way SUB-D	RS 485/ RS422	1.8 m	**XBT Z908**	XBT R	25-way SUB-D/ 15-way SUB-D	RS 485/ RS422	1.8 m	**XBT Z908**
On 8 port splitter box LU9 GC3									
XBT P	25-way SUB-D/RJ45	RS 485	2.5 m	**XBT Z938**	XBT R	25-way SUB-D/RJ45	RS 485	2.5 m	**XBT Z938**

Operator dialogue terminals
Magelis XBT RT Small Panels

Type of terminal				XBT RT500	XBT RT511
Environment					
Conformity to standards				IEC 61131-2, IEC 60068-2-6, IEC 60068-2-27, UL 508, CSA C22-2 no. 14	
Product certifications				CE, UL, CSA, class 1 Div 2 (UL and CSA), ATEX zone 2/22	
Ambient air temperature	Operation		°C	0…+ 55	
	Storage		°C	- 20…+ 60	
Maximum relative humidity			%	0…85 (non-condensing)	
Degree of protection	Front panel			IP 65, conforming to IEC 60529, Nema 4X ("**indoor use**")	
	Rear panel			IP 20, conforming to IEC 60529	
Shock resistance				Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes	
Vibration resistance				Conforming to IEC 60068-2-6; ± 3.5 mm; 2…8.45 Hz; 1 gn 8.45…150 Hz	
E.S.D.				Conforming to IEC 61000-4-2, level 3	
Electromagnetic interference				Conforming to IEC 61000-4-3, 10 V/m	
Electrical interference				Conforming to IEC 61000-4-4, level 3	
Mechanical characteristics					
Mounting and fixing				Flush-mounted, fixed by 4 spring clips (included) pressure-mounted for panels 1.5 to 6 mm thick	
Material	Screen protection			Polyester	
	Front frame			Polycarbonate/polybutylene terephthalate alloy	
	Keypad			Polyester	
Keys				12 keys (10 configurable and customizable)	
Electrical characteristics					
Power supply	Voltage		V	5 via PLC terminal port ⎓	24 ⎓
	Voltage limits		V	–	18...30 ⎓
	Ripple factor		%	–	5 maximum
Consumption			W	–	5 maximum
Functional characteristics					
Display	Type			Green backlit ultra bright LCD (198 x 80 pixels)	Green, orange and red backlit ultra bright LCD (198 x 80 pixels)
	Capacity (height x width)			From 2 lines of 5 characters (16 x 16 mm) to 10 lines of 33 characters (4 x 2.7 mm)	
	Touch-sensitive area			Matrix, 11 x 5 cells	
	Character fonts			Latin, Cyrillic, Greek, Katakana and simplified Chinese	
Signalling				–	13 LEDs + buzzer
Dialogue application	Number of pages			200 application pages (10 lines/page max.) 256 alarm pages (10 lines/page max.)	
Memory				512 KB Flash	
Transmission medium	Asynchronous serial link			RS 232 C/RS 485	
Downloadable protocols				Uni-TE, Modbus *(1)*	
Third-party protocols	Mitsubishi	Melsec		Melsec FX	
	Omron	Sysmac		Sysmacway	
	Rockwell Automation	Allen Bradley		DF1/DH485	
	Siemens	Simatic		PPI	
Real-time clock				Access to the PLC real-time clock	
Connection	Power supply			Via the PLC terminal port connecting cable	Removable screw terminal block, 3 terminals
	Serial link	Connector		Female RJ45 (RS 232C/RS 485)	
		Connection		Point-to-point	Multidrop
	Printer link			No	8-way female mini-DIN

(1) Modbus master for XBT RT500 terminal only.

Presentation:
pages 1/6 to 1/11

Dimensions:
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Operator dialogue terminals
Magelis XBT RT Small Panels

XBT RT500

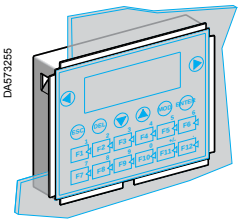
XBT RT511

Magelis Small Panels

Downloadable exchange protocol	Compatible PLCs	Supply voltage	Type of screen	Reference	Weight kg
Terminal with 10 lines of 30 characters (with matrix screen)					
Uni-TE, Modbus	Twido, Nano, TSX Micro, Premium, Modicon M340	5 V ⎓ via PLC terminal port	Green backlit LCD (198 x 80 pixels)	**XBT RT500**	0.550
	Twido, Nano, TSX Micro, Premium, TSX Series 7, Momentum, Quantum, other Modbus slave devices, Modicon M340	24 V ⎓ external supply	Green, orange and red backlit LCD (198 x 80 pixels) + 13 indicator LEDs + buzzer	**XBT RT511**	–

Software

Description	Operating system	Reference	
Configuration software	Windows 2000, XP and Vista	See pages 3/7 and 3/17	–



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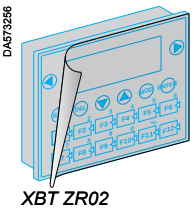
XBT ZR01



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XBT ZR02

Accessories *(1)*

Description	Details	For use with	Reference	Weight kg
Flush mounting accessory	Kit for applications requiring a higher degree of dust and damp protection or customization of the panel, using a flat metal strip (not included)	All XBT RT	**XBT ZR01**	–
Protective sheets	10 peel-off sheets	All XBT RT	**XBT ZR02**	–
Sheets of re-usable labels	10 sheets of 6 labels	XBT RT500	**XBL YRT00**	–
		XBT RT511	**XBL YRT01**	–
Mechanical adaptor for substitution XBT P/PM		–	**XBT ZRCO**	–

Description	Compatibility	Type of connector	Physical link	Protocol	Length m	Reference	Weight kg
Downloading adaptor *(2)*	XBT RT500	RJ45-RJ45	RS 485	Modbus	0.2	**XBT ZRT 999**	–

(1) Other accessories, see page 1/20.
Other connection cables and accessories, see pages 1/20 to 1/23.
(2) Also included in kit XBT Z 945.

Presentation: pages 1/6 to 1/11
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Operator dialogue terminals
Separate parts for Magelis XBT N/R/RT Small Panels

Accessories

Type	Compatibility	Order in multiples of	Unit reference	Weight kg
External 5 V adaptor *(1)*	XBT N200/N400 XBT R400 XBT RT500	1	**XBT ZRT PW**	–
Downloading adaptor XBT RT *(2)*	XBT RT500/511	1	**XBT ZRT999**	–
Spring clips (replacement parts)	XBT N/R/RT/GT	12	**XBT Z3002**	0.200
Power supply connector	XBT N/R/RT	10	**XBT Z3004**	0.200

Connection to PCs and printers

Use	Compatibility	Length	Connector, peripheral end	Reference	Weight kg
Cables for PC connection, RS 232C serial port	XBT N401/N410/NU400 XBT R410/R411	2.5 m	9-way male SUB-D	**XBT Z915**	0.200
	XBT N200/N400/R400 XBT RT500/RT511	2.5 m	9-way male SUB D and mini-DIN (PS/2)	**XBT Z945**	0.200
USB cable for PC connection *(3)*	XBT N/R/RT	–	USB type A male	**TSX CUSB 485**	–
XBT adaptor for USB cable	XBT N/R/RT	2 m	Set of 2 cables RJ45/RJ45 RJ45/25-way SUB-D	**XBT Z925**	–
Serial printer cables	XBT N/R/RT	2.5 m	25-way female SUB-D	**XBT Z926**	0.220

(1) Use a 5 V ⎓ power supply: **ABL 8MEM 05040**
(2) Cable **XBT Z945** *included.*
(3) Adaptor **XBT Z925** *to be used with the cable.*

Operator dialogue terminals
Separate parts for Magelis XBT N/R/RT Small Panels

Cables for connecting Magelis terminals

Type of PLC to be connected	Type of connector	Physical link	Protocol	Length	Reference	Weight kg
Direct connection of XBT N/R/RT (XBT N200/N400/R400/RT500/RT511) terminals to Schneider Electric PLCs						
Twido, Modicon Nano, Modicon TSX Micro, Modicon Premium	Mini-DIN	RS 485	Modbus/Uni-TE	2.5 m	**XBT Z9780**	–
				10 m	**XBT Z9782** *(1)*	–
Modicon M340	RJ45	RS485	Modbus	2.5 m	**XBT Z9980**	–
				10 m	**XBT Z9982** *(1)*	–
Direct connection of XBT N/R (XBT N410/N401/R410/R411) terminals to Schneider Electric PLCs						
Twido, Modicon Nano, Modicon TSX Micro, Modicon Premium	Terminal port, 8-way female mini-DIN	RS 485	Uni-TE (V1/V2) and Modbus	2.5 m	**XBT Z968**	0.180
				5 m	**XBT Z9681**	0.340
				2.5 m *(2)*	**XBT Z9680**	0.170
Modicon Premium with TSX SCY 2160●	25-way female SUB-D	RS 485	Uni-TE (V1/V2)	2.5 m	**XBT Z918**	0.230
Modicon Quantum	9-way male SUB-D	RS 232	Modbus	2.5 m	**XBT Z9710**	0.210
Advantys STB	HE13 (NIM module)	RS 232	Modbus	2.5 m	**XBT Z988**	0.170
Modicon Momentum M1 (Port 1)	RJ45	RS 232	Modbus	2.5 m	**XBT Z9711**	0.210
Modicon M340	RJ45	RS 485	Modbus	2.5 m	**XBT Z938**	0.210

(1) For XBT N200/N400/R400/RT500, use a cable with **XBT ZRT PW** adaptor and a 5 V ⎓ power supply.
(2) Angled SUB-D connector.

Operator dialogue terminals
Separate parts for Magelis XBT N/R/RT Small Panels

Cables for connecting Magelis terminals (continued)

Direct connection of XBT RT500/RT511 terminals to Advantys STB I/O *(1)*

Advantys STB		HE13 (NIM module)	RS 232	Modbus	2.5 m	**XBT Z9715**	–

Direct connection of XBT (XBT NU400/N410/N401/R410/R411) terminals to Schneider Electric motor starters and drives

TeSys U, T ATV 31/38/58/71 drives ATS 48 starter Lexium 05, Preventa XPSMC		RJ45	RS 485	Modbus	2.5 m	**XBT Z938**	0.210

Direct connection of XBT (XBT N200/N400/R400/RT500/RT511) terminals to Schneider Electric motor starters and drives *(2)*

TeSys U, T ATV 31/38/58/71 drives ATS 48 starter Lexium 05, Preventa XPSMC		RJ45	RS 485	Modbus	2.5 m	**XBT Z9980**	–

Direct connection of XBT (XBT N410/N401/R410/R411) terminals to third party PLCs

Allen Bradley	SLC5	9-way male SUB-D	RS 232	DF1	2.5 m	**XBT Z9730**	0.210
	PLC5	25-way female SUB-D	RS 232	DF1	2.5 m	**XBT Z9720**	0.210
	Micro-logix	Micro-logix 1000	RS 232	DF1	2.5 m	**XBT Z9731**	0.210
				DH485	2.5 m	**XBT Z9732**	–
Mitsubishi	FX	8-way female mini-DIN	RS 232/ RS 422 converter	Melsec FX	2.5 m	**XBT Z980**	–
Omron	CPM1, CPM2, CJ1, CS1	9-way male SUB-D	RS 232	Sysmacway	2.5 m	**XBT Z9740**	0.210
Siemens	S7 (PG)	9-way male SUB-D	RS 485	PPI	2.5 m	**XBT Z9721**	0.210

Direct connection of the XBT RT500/RT511 terminal to third party PLCs *(1)*

Allen Bradley	SLC5	9-way male SUB-D	RS 232	DF1	2.5 m	**XBT Z9734**	–
	Micro-logix	Micro-logix 1000	RS 232	DF1	2.5 m	**XBT Z9733**	–
Mitsubishi	FX	8-way female mini-DIN	RS 232/ RS 422 converter	Melsec FX	2.5 m	**XBT Z980** + *(3)*	–
Omron	CPM1, CPM2, CJ1, CS1	9-way male SUB-D	RS 232	Sysmacway	2.5 m	**XBT Z9743**	–
Siemens	S7 (PG)	9-way male SUB-D	RS 485	PPI	2.5 m	**XBT ZG9721**	0.210

(1) For **XBT RT500** *use a cable with* **XBT ZRT PW** adaptor and a 5 V ⎓ power supply.
(2) For Magelis **XBT N200/N400/R400/RT500**, *use a cable with* **XBT ZRT PW** adaptor and a 5 V ⎓ power supply.
(3) Adaptor **XBT ZG939** *to be used with cables with " + (3) " after the reference.*

Operator dialogue terminals
Separate parts for Magelis XBT N/R/RT Small Panels

Cables for connecting Magelis terminals (continued)

Bus and network connections for XBT N410/N401/R410/R411 terminals

Type of bus/network	Tap-off units	Type of connector	Length	Reference	Weight kg
Uni-Telway serial link	Subscriber socket TSX SCA 62	15-way female SUB-D	1.8 m	**XBT Z908**	0.240
	Cable connector TSX P ACC 01	8-way female mini-DIN	2.5 m	**XBT Z968**	0.180
			5 m	**XBT Z9681**	0.340
Modbus serial link	Subscriber socket TSX SCA 64	15-way female SUB-D	1.8 m	**XBT Z908**	0.240
	8 port Modbus splitter box LU9 GC3, Modbus tap-off, TWD XCA ISO, TWD XCA T3RJ	RJ45	2.5 m	**XBT Z938**	0.210

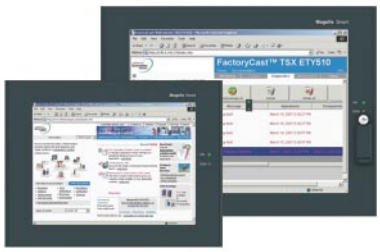
Bus and network connections for XBT RT511 terminals

Type of bus/network	Tap-off units	Type of connector	Length	Reference	Weight kg
Uni-Telway serial link	Cable connector TSX P ACC 01	8-way female mini-DIN	2.5 m	**XBT Z9780**	0.180
Modbus serial link	8 port Modbus splitter box LU9 GC3, Modbus tap-off, TWD XCA ISO, TWD XCA T3RJ	RJ45	2.5 m	**XBT Z9980**	–

Operator dialogue terminals
Magelis XBT GT, XBT GK and XBT GTW Advanced Panels

Applications		**Display of text messages, graphic objects and synoptic views Control and configuration of data**		
Type of terminal		**Touch screen Advanced Panels**		
				
Display	Type	Backlit monochrome (amber or red mode) STN LCD (320 x 240 pixels) or TFT LCD	Backlit monochrome or colour STN LCD or backlit colour TFT LCD (320 x 240 pixels)	Backlit colour STN LCD or colour TFT LCD (640 x 480 pixels)
	Capacity	3.8” (monochrome or colour)	5.7” (monochrome or colour)	7.5” (colour)
Data entry		Via touch screen		
	Static function keys	–		
	Dynamic function keys	–		
	Service keys	–		
	Alphanumeric keys	–		
Memory capacity	Application	32 MB Flash EPROM	16 MB Flash EPROM	32 MB Flash EPROM
	Expansion	–	By 128, 256, 512 MB or 1 GB CF card (except XBT GT2110)	
Functions	Maximum number of pages	Limited by internal Flash EPROM memory capacity	Limited by the internal Flash EPROM memory capacity or CF card memory capacity	
	Variables per page	Unlimited (8000 variables max.)		
	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, light		
	Recipes	32 groups of 64 recipes comprising 1024 ingredients max.		
	Curves	Yes, with log		
	Alarm logs	Yes		
	Real-time clock	Built-in		
	Discrete I/O	–		1 input (reset) and 3 outputs (alarm, buzzer, run)
	Multimedia I/O	–		1 audio input (microphone), 1 composite video input (digital or analog video camera), 1 audio output (loudspeaker) *(1)*
Communication	Downloadable protocols	Uni-TE *(2)*, Modbus, Modbus TCP/IP *(1)* and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens		
	Asynchronous serial link	RS 232C/485 (COM1)	RS 232C/RS 422/485 (COM1) and RS 485 (COM2)	
	USB ports	1	1	2
	Bus and networks	–	Modbus Plus and Fipway with USB gateway, Profibus DP and Device Net with optional card	
		Ethernet TCP/IP (10BASE-T/100BASE-TX) *(1)*		
	Printer link	USB port for parallel printer	RS 232C (COM1) serial link, USB port for parallel printer	
Design software		Vijeo Designer (3/17) (on Windows 2000, Windows XP and Vista)		
Operating system		Magelis (100 MHz RISC CPU) or (200 MHz RISC CPU)	Magelis (133 MHz RISC CPU)	Magelis (266 MHz RISC CPU)
Type of terminal		**XBT GT11/13**	**XBT GT21/22/23**	**XBT GT42/43**
Pages		1/46		

(1) Depending on model
(2) Uni-TE version V2 for Twido controller and TSX Micro/Premium platform.

Touch screen Advanced Panels			Advanced Panels with keypad/ touch screen		Touch screen/open Advanced Panels	
						
Backlit colour STN LCD or colour TFT LCD (640 x 480 pixels)	Backlit colour TFT LCD (800 x 600 pixels)	Backlit colour TFT LCD (1024 x 768 pixels)	Colour TFT LCD (320 x 240 pixels) or monochrome STN	Colour TFT LCD (640 x 480 pixels)	Colour TFT LCD (800 x 600 pixels)	Colour TFT LCD (1024 x 768 pixels)
10.4” (colour)	12.1” (colour)	15” (colour)	5.7” (monochrome or colour)	10.4” (colour)	8.4” (colour)	15” (colour)
Via touch screen			Via keypad and/or touch screen (configurable) and/or by industrial pointer		Via touch screen	
–			10	12	–	
–			14	18	–	
–			8		–	
–			12		–	
32 MB Flash EPROM			16 MB Flash EPROM	32 MB Flash EPROM	Limited by 1 GB CF system	
By 128, 256, 512 MB or 1 GB CF card						
Limited by the internal Flash EPROM memory capacity or CF card memory capacity						
Unlimited (8000 variables max.)						
Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, light						
32 groups of 64 recipes comprising 1024 ingredients max.						
Yes, with log						
Yes						
Built-in						
1 input (reset) and 3 outputs (alarm, buzzer, run)			–	1 input - 3 outputs	–	
1 audio input (microphone),1 composite video input (digital or analog video camera), 1 audio output (loudspeaker) *(1)*			–		1 audio output	
Uni-TE *(2)*, Modbus, Modbus TCP/IP *(1)* and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens						
RS 232C/RS 422/485 (COM1) and RS 485 (COM2)			RS 232C/RS 422/485 (COM1) RS 485 (COM2)		RS 232C (COM1) RS 232C (COM2)	
2			1	2	4	4 + 1 on front
Modbus Plus and Fipway with USB gateway, Profibus DP and Device Net with optional card					Modbus Plus with USB gateway	
Ethernet TCP/IP (10BASE-T/100BASE-TX)					1 Ethernet TCP/IP port (10BASE-T/100BASE-TX) and 1 Ethernet port (10BASE-T/100BASE-TX/1 GB)	
RS 232C (COM1) serial link, USB port for parallel printer						
Vijeo Designer (3/17) (on Windows 2000 and Windows XP)			Vijeo Designer (3/17) (Windows 2000, Windows XP and Vista)			
Magelis (266 MHz RISC CPU)					Windows XP embedded	
XBT GT52/53	**XBT GT63**	**XBT GT73**	**XBT GK 21/23**	**XBT GK 53**	**XBT GTW 450**	**XBT GTW 750**
1/46			1/47		1/47	

Operator dialogue terminals
Magelis XBT GT, XBT GK and XBT GTW Advanced Panels

Presentation

Touch screen terminals with monochrome or colour screen in 6 sizes from 3.8" to 15"

Magelis terminals comprise:
■ A range of 16 touch screen products (XBT GT) available with a wide range of screen sizes (3.8", 5.7", 7.5", 10.4" 12.1" and 15") in various versions (monochrome, colour, STN or TFT).
■ A range of 3 keypad/touch screen terminals (XBT GK), sizes: 5.7" and 10.4" (monochrome, colour).
A range of 2 touch screen/open terminals (XBT GTW), sizes: 8.4" and 15", with embedded Windows XP operating system for open access to new automation functions.

Operation

Magelis XBT terminals feature new information and communication technologies which, depending on the model, include:
■ High level of communication (on-board Ethernet, multilink, Web server and FTP)
■ External data storage medium (Compact Flash memory card and USB memory stick) for storing production data and backing up applications.
■ Multimedia data with integrated image and sound management (digital or analog camera).
Management of peripherals: printers, bar code readers, loudspeakers, etc.

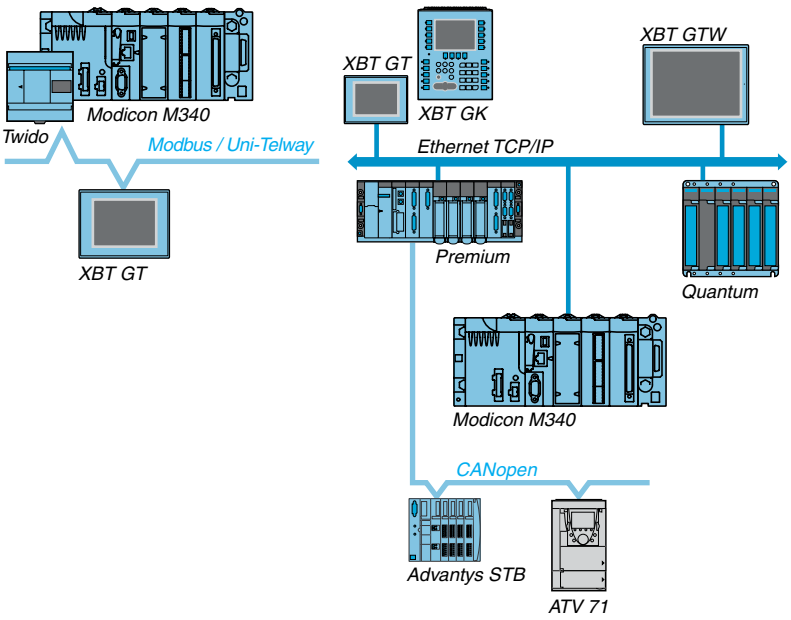
Operator dialogue terminals
Magelis XBT GT, XBT GK and XBT GTW Advanced Panels

Display of a video sequence

Configuration

XBT terminals can be configured using Vijeo Designer VJD ●●D TGS V●●M software, in a Windows XP or Windows Vista environment.
The advanced user interface of the Vijeo Designer VJD ●●D TGS V●●M software is based around a number of configurable windows, enabling quick and simple development of projects. This version can process composite video signals from a camera or camcorder.
See pages 3/8 to 3/10.

Communication



Magelis XBT terminals communicate with PLCs via one or two integrated serial links, using communication protocols:
- Schneider Electric (Uni-TE, Modbus)
- Third party: Mitsubishi Electric, Omron, Allen-Bradley and Siemens

Magelis multifunction terminals can be connected, depending on the model, to Ethernet TCP/IP networks using Modbus TCP or third party protocols, and to fieldbuses (FIPWAY, Modbus Plus, Device Net, Profibus DP).

1

Functions

XBT terminals offer the following functions:
- Display of animated synoptic views with 8 types of animation (press on touch panel, change of colour, filling, movement, rotation, size, visibility or value display)
- Control and modification of numeric or alphanumeric variables
- Display of current date and time
- Real-time and trending curves with log
- Alarm display, alarm log and management of alarm groups
- Multiwindow management
- Operator-initiated page calls
- Multilingual application management (10 languages simultaneously)
- Recipe management
- Data processing via Java script
- Storage of the application and logs on external Compact Flash application memory card (multifunction range) or USB key
- Serial printer and bar code reader management (multifunction range)
- Management of sound messages (multifunction range)
- Management of composite video signals from camera or camcorder on XBT GT and digital video signals (Webcam) on XBT GTW

XBT terminals have been designed for Transparent Ready architectures and equipment (combination of Web and Ethernet TCP/IP technologies).

All terminals with an Ethernet port therefore integrate an FTP server for transferring data files and a Web Gate function for remote access to the application on the XBT terminal from a PC with an Internet browser.

The latest version of Vijeo Designer therefore enables the XBT terminal to browse HTML pages.

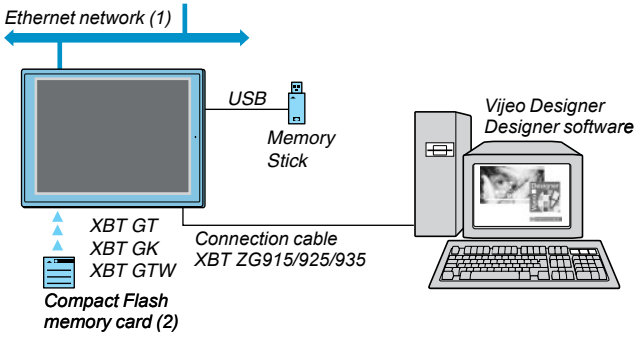
The flexibility of embedded Windows XP enables Internet Explorer or Office Readers (.pdf, .doc, .xls, .ppt documents) to be used on XBT GTW touch screen/open terminals while a Vijeo Designer application is running.

1

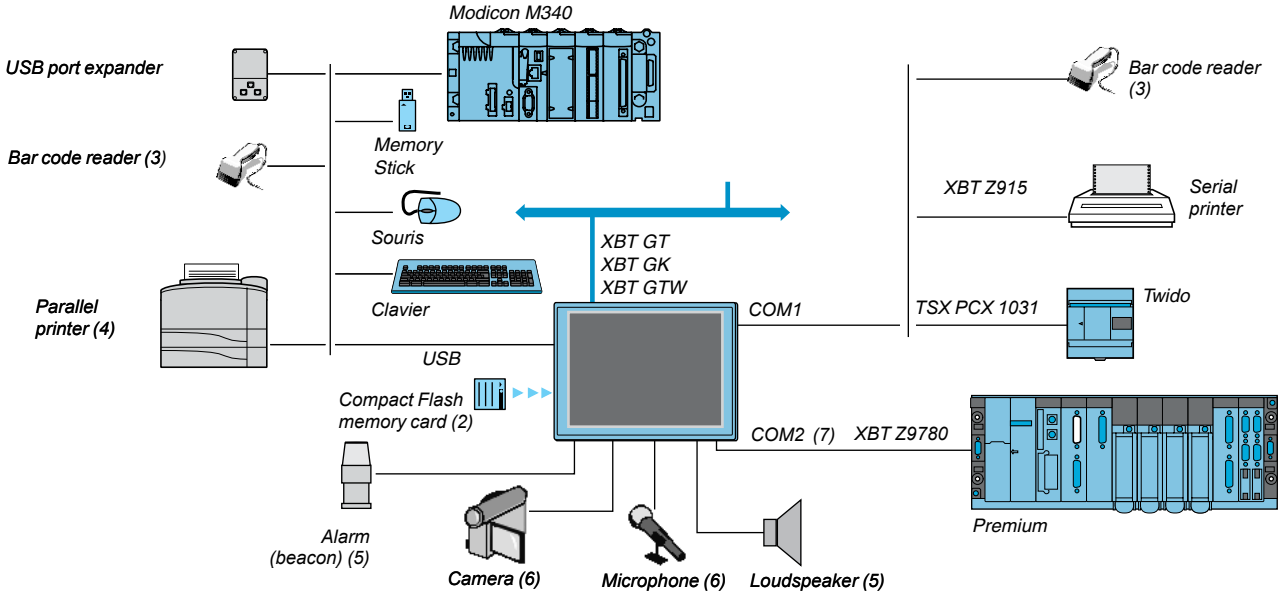
Operating modes of the terminals

The following illustrations show the equipment that can be connected to XBT terminals according to their two operating modes.

Edit mode



Operating mode



(1) With **XBT GT●●30/XBT GT●●40, XBT GK●●30/XBT GTW●●●0**.
(2) 128, 256, 512 MB or 1 GB memory card, with XBT GT, XBT GK and XBT GTW multifunction.
(3) Validated with DataLogic Gryphon bar code reader.
(4) Validated with Hewlett Packard printer via USB/PIO converter.
(5) With all XBT GT, XBT GK and XBT GTW multifunction 7.5" to 15".
(6) With multimedia XBT GT 7.5" to 15" **XBT GT●340**.
(7) With XBT GT and XBT GK 5.7" screen min.

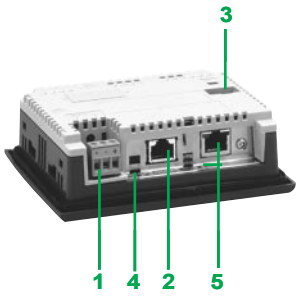
Operator dialogue terminals
Magelis XBT GT Advanced Panels with 3.8” screen

Description
Magelis XBT GT1105/1135/1335 Advanced Panels

Front panel

The front panels of Magelis XBT GT1105/1135/1335 Advanced Panels comprise:

1 A touch screen for displaying synoptic views (3.8” amber or red mode monochrome, colour TFT)
2 A control lamp indicating the operating mode of the terminal



Rear panel

The rear panels of Magelis XBT GT1105/1135/1335 Advanced Panels comprise:

1 A removable screw terminal block for the 24 V ⎓ power supply
2 An RJ45 connector for RS 232C or RS 485 serial link connection to PLCs (COM1)
3 A USB type A host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
4 A switch for polarization of the serial link, used on RS 485 Modbus

On XBT GT1135/1335 only
5 An RJ45 connector for Ethernet TCP/IP link, 10/100BASE-T

Characteristics: page 1/31
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels with 3.8" screen

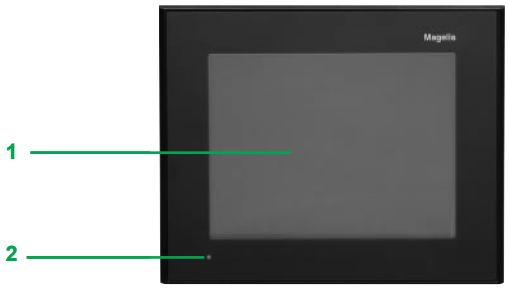
Type of terminal			XBT GT1105	XBT GT1135	XBT GT1335
Environment					
Conformity to standards			EN 61131-2, IEC 61000-6-2, FCC (Class A), UL 508, UL 1604, CSA C22-2 no. 14		
Product certification			CE, cULus, CSA, Class 1 Div 2 T4A or T5 (UL and CSA), C-Tick, ATEX Zone 2/22		
Temperature	Operation		0…50°C		
	Storage		- 20…+ 60°C		
Relative humidity			0…85% (non-condensing)	0…90% (non-condensing)	
Altitude			< 2000 m		
Degree of protection	Front panel		IP 65 conforming to IEC 60529, Nema 4X (with fixing by 4 screw clamps)		
	Rear panel		IP 20 conforming to IEC 60529		
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes		
Vibration			Conforming to IEC 60068-2-6; 5…9 Hz at 3.5 mm; 9…150 Hz at 1 gn		
E.S.D.			Conforming to IEC 61000-4-2, level 3		
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m		
Electrical interference			Conforming to IEC 61000-4-4, level 3		
Mechanical characteristics					
Mounting and fixing	Mounting on 1.6…5 mm thick panel		Flush mounted, fixed by 4 screw clamps (included) or 2 spring clips (to be ordered separately)		
Material	Housing		Polycarbonate/polyethylene terephthalate alloy		
Keys			–		
Electrical characteristics					
Power supply	Voltage		24 V ⎓		
	Limits		19.2…28.8 V ⎓		
	Voltage break		≤ 2 ms		
Inrush current			≤ 60 A		
Consumption			13 W		
Functional characteristics					
LCD screen	Type		Backlit monochrome STN		Colour TFT
	Colour		Amber or red, 8 levels of grey		256 colours
	Definition		320 x 240 pixels (QVGA)		
	Size (W x H)		3.8" (76.7 x 57.5 mm)		
	Touch-sensitive area		Analog		
	Backlighting (service life)		50,000 hours used in amber mode 10,000 hours used in red mode		40,000 hours
	Adjustments	Brightness	16 levels		
		Contrast	8 levels via touch panel		–
	Character fonts		ASCII, Japanese (ANK, Kanji), Chinese (simplified Chinese), Taiwanese (traditional Chinese), Korean		
Dialogue application	Max. number of pages		Limited by internal Flash EPROM memory capacity		
Signalling			1 LED: green for normal operation		
Operating system/Processor		Magelis RISC CPU	200 MHz		
Memory	Application	Flash EPROM	32 MB		
	Data backup		512 KB SRAM (lithium batteries)		
Schneider Electric protocols		Modicon	Modbus, Uni-TE	Modbus, Uni-TE and Modbus TCP/IP	
Third-party protocols	Mitsubishi	Melsec	A Link (SIO)		
			–	A/Q Ethernet (TCP), Q Ethernet (UDP)	
	Omron	Sysmac	FINS (SIO), LINK (SIO)		
			–	FINS (Ethernet)	
	Rockwell Automation	Allen Bradley	DF1-Full Duplex, DH 485		
			–	Ethernet IP (PLC5, SLC500, MicroLogix, ControlLogix), Ethernet IP (native)	
	Siemens	Simatic	MPI (S7-300/400), RK512/3964R (S7-300/400), PPI (S7-200)		
			–	Ethernet	
Real-time clock			Integrated real-time clock		
Connection	Power supply		Removable screw terminal block: 3 terminals (pitch 5.08 mm), tightening torque 0.5 Nm		
	COM1 serial port (115.2 Kbps max.)		RJ45 connector (RS 232C/RS 485 serial link), compatible with Siemens MPI (187.5 kbps)		
	Ethernet TCP/IP network 10/100Base-TX		–	RJ45 connector	
Mini-DIN port	Downloading applications		–		
	USB port (V1.1) for downloading applications, connecting peripherals and Modicon M340 terminal port communication		Type A host		

Characteristics: page 1/31
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels with 5.7” screen

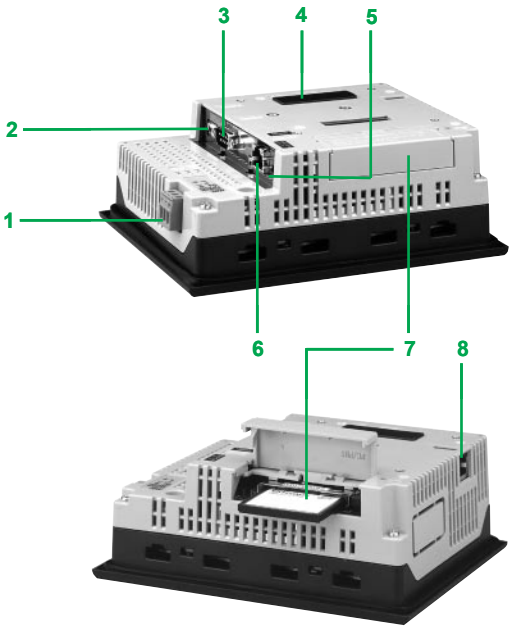
Description

Magelis XBT GT2110 and multifunction XBT GT2●20 & XBT GT2●30 Advanced Panels



The front panel comprises:

1 A touch screen for displaying synoptic views (5.7” monochrome or colour)
2 A multicolour lamp (green, orange and red) indicating the operating mode of the terminal



The rear panel comprises:

1 A removable screw terminal block for the 24 V ⎓ power supply
2 A USB type A host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
3 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)
4 An expansion unit interface for fieldbus communication card (Device Net, Profibus DP) *(1)*
5 A switch for polarization of the COM2 serial link, used on Modbus
6 An RJ45 connector for RS 485 serial link (COM2)
7 A Compact Flash memory card slot, with cover (except XBT GT2110 optimum model).

On XBT GT2130 and GT2330 only:

8 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX

(1) Connection accessories required (see page 1/53).

Characteristics: page 1/33
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels with 5.7" screen

Terminal type			XBT GT2110	XBT GT2120	XBT GT2130	XBT GT2220	XBT GT2330
Environment							
Conformity to standards			EN 61131-2, IEC 61000-6-2, FCC (Class A), UL 508, UL 1604, CSA C22-2 no. 14				
Product certification			CE, cULus, CSA, Class 1 Div 2 T4A or T5 (UL and CSA), C-Tick, ATEX Zone 2/22				
Temperature	Operation		0…50°C				
	Storage		- 20…+ 60°C				
Relative humidity			0…85% (non-condensing)	0…90% (non-condensing)			
Altitude			< 2000 m				
Degree of protection	Front panel		IP 65 conforming to IEC 60529, Nema 4X				
	Rear panel		IP 20 conforming to IEC 60529				
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes				
Vibration			Conforming to IEC 60068-2-6; 5…9 Hz at 3.5 mm; 9…150 Hz at 1 g				
E.S.D.			Conforming to IEC 61000-4-2, level 3				
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m				
Electrical interference			Conforming to IEC 61000-4-4, level 3				
Mechanical characteristics							
Mounting and fixing	Mounting on 1.6…5 mm thick panel		Flush mounted, fixed by 4 screw clamps (included) or 2 spring clips (to be ordered separately)				
Material	Housing		Polycarbonate/polyethylene terephthalate alloy				
			–	Aluminium (front)			
Electrical characteristics							
Power supply	Voltage		24 V ⎓				
	Limits		19.2…28.8 V ⎓				
	Voltage break		≤ 10 ms	≤ 5 ms			
Inrush current			≤ 30 A				
Consumption			18 W	26 W			
Functional characteristics							
LCD screen	Type		Backlit monochrome STN			Colour STN	Colour TFT
	Colour		Blue and white, 16 levels of grey	Black and white, 16 levels of grey		4096 colours	65,536 colours, 16,384 if flashing
	Definition		320 x 240 pixels (QVGA)				
	Size (width x height in mm)		5.7" (115.2 x 86.4)				
	Touch-sensitive area		Analog, resolution 1024 x 1024				
	Backlighting (service life at 25°C for continuous use)		58,000 hours			75,000 hours	50,000 hours
	Adjustments	Brightness	8 levels via touch panel				
		Contrast	8 levels via touch panel				–
	Character fonts		ASCII (including all European characters), Japanese (ANK, Kanji), Chinese (simplified Chinese), Taiwanese (traditional Chinese), Korean				
Dialogue application	Max. number of pages		–	Limited by the capacity of the internal flash memory or the Compact Flash card			
Signalling			1 LED: green for normal operation, orange if backlighting faulty				
Operating system/Processor			Magelis/133 MHz RISC CPU				
Memory	Application		16 MB Flash EPROM				
	Data backup		128 KB SRAM (lithium batteries)	512 KB SRAM (lithium batteries)			
Schneider Electric protocols		Modicon	Modbus, Modbus Plus, Modbus TCP/IP, Uni-TE, FIPWAY, FIPIO				
Third-party protocols	Mitsubishi	Melsec	A/Q CPU (SIO), A/Q Ethernet (TCP) *(1)*, A Link (SIO), QnA CPU (SIO), Q Ethernet (UDP) *(1)*, FX (CPU)				
	Omron	Sysmac	FINS (Ethernet) (1), FINS (SIO), LINK (SIO)				
	Rockwell Automation	Allen Bradley	DF1-Full Duplex, DH 485, Ethernet IP (PLC5, SLC500, MicroLogix, ControlLogix) *(1)*, Ethernet IP (native) *(1)*, Device Net *(2)*				
	Siemens	Simatic	MPI (S7-300/400), RK512/3964R (S7-300/400), PPI (S7-200), Ethernet *(1)*, Profibus DP *(2)*				
Real-time clock			Integrated real-time clock				
Expansion	Compact Flash memory card		–	1 slot for 128, 256, 512 MB or 1 GB Compact Flash card			
	Expansion unit		For fieldbus communication card (Device Net, Profibus DP) *(2)*				
Connections	Power supply		Removable screw terminal block: 3 terminals (pitch 5.06 mm), tightening torque 0.5 Nm				
	COM1 serial port (115.2 Kbps max.)		9-way male SUB-D connector (RS 232C/RS 422/485 serial link)				
	COM2 serial port (115.2 Kbps max.)		RJ45 connector (RS 485 link), compatible with Siemens MPI (187.5 kbps)				
	USB port (V1.1)		USB type A host connector for downloading applications, connecting peripherals and Modicon M340 terminal port communication				
	Ethernet TCP/IP network (10BASE-T/100BASE-TX)		–		RJ45 connector	–	RJ45 connector
	Inputs/outputs		–				

(1) With models **XBT GT2130** and **XBT GT2330**.
(2) Connection accessories required (see page 1/53).

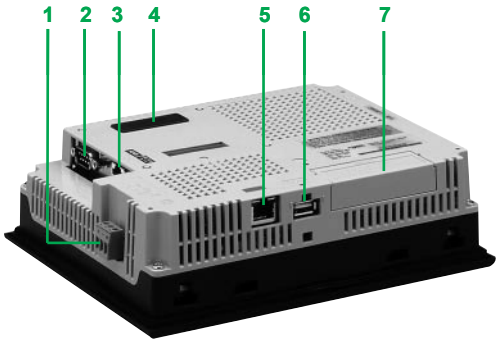
Description: page 1/32 References: pages 1/46 to 1/53 Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels with 7.5" screen

Description
Magelis XBT GT4230 & 43●0 Advanced Panels

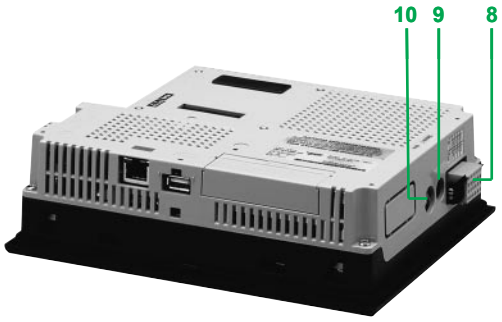
The front panel comprises:

1 A touch screen for displaying synoptic views (7.5" colour STN or 7.5" colour TFT, depending on the model)
2 A multicolour lamp (green, orange and red) indicating the operating mode of the terminal



The rear panel comprises:

1 A removable screw terminal block for the 24 V ⎓ power supply
2 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)
3 An RJ45 connector for RS 485 serial link (COM2) with switch for polarization of the link used on Modbus
4 An expansion unit interface for fieldbus communication card (Device Net, Profibus DP) *(1)*
5 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX, with an activity LED
6 A USB type A host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
7 A slot for Compact Flash memory card, with pivoting cover
8 A removable I/O connector, 12 spring terminals for loudspeaker connection, one input (reset) and 3 outputs (alarm, buzzer, run).



On XBT GT4340 only:

9 A mini-jack connector for connecting a microphone
10 An RCA connector for connecting a digital or analog video camera (NTSC/PAL)

(1) Connection accessories required (see page 1/53).

Characteristics: page 1/35
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels with 7.5" screen

Terminal type			XBT GT4230	XBT GT4330	XBT GT4340
Environment					
Conformity to standards			EN 61131-2, IEC 61000-6-2, FCC (Class A), UL 508, UL 1604, CSA C22-2 no. 14		
Product certification			CE, cULus, CSA, Class 1 Div 2 T4A or T5 (UL and CSA), C-Tick, ATEX Zone 2/22		
Temperature	Operation		0…50°C		
	Storage		- 20…+ 60°C		
Relative humidity	Operation/storage		10…90% (non-condensing)		
Altitude			< 2000 m		
Degree of protection	Front panel		IP 65 conforming to IEC 60529, Nema 4X (with fixing by 4 screw clamps)		
	Rear panel		IP 20 conforming to IEC 60529		
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes		
Vibration			Conforming to IEC 60068-2-6; 5…9 Hz at 3.5 mm; 9…150 Hz at 1 g		
E.S.D.			Conforming to IEC 61000-4-2, level 3 (contact 6 kV, air 8 kV)		
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m		
Electrical interference			Conforming to IEC 61000-4-4, level 3 (power supply and I/O 2 kV, other ports 1 kV)		
Mechanical characteristics					
Mounting and fixing	Mounting on 1.6…10 mm thick panel		Flush mounted, fixed by 4 screw clamps (included) or 4 spring clips (to be ordered separately)		
Material	Housing		Aluminium (front) Polycarbonate/polyethylene terephthalate alloy (rear)		
Electrical characteristics					
Power supply	Voltage		24 V ⎓		
	Limits		19.2…28.8 V ⎓		
	Voltage break		≤ 10 ms		
Inrush current			≤ 30 A		
Consumption			28 W		
Functional characteristics					
LCD screen	Type		Colour STN	Colour TFT	
	Colour		4096 colours	65,536 colours, 16,384 if flashing	
	Definition		640 x 480 pixels (VGA)		
	Size (width x height in mm)		7.5" (153.7 x 115.8)		
	Touch-sensitive area		Analog, resolution 1024 x 1024		
	Backlighting (service life at 25°C for continuous use)		54,000 hours		
	Adjustments	Brightness	8 levels via touch panel		
		Contrast	8 levels via touch panel		
	Character fonts		ASCII (including all European characters), Japanese (ANK, Kanji), Chinese (simplified Chinese), Taiwanese (traditional Chinese), Korean		
Dialogue application	Max. number of pages		Limited by the capacity of the internal flash memory or the Compact Flash card		
Signalling			1 LED: green for normal operation, orange if backlighting faulty		
Operating system/Processor			Magelis/266 MHz RISC CPU		
Memory	Application		32 MB Flash EPROM		
	Data backup		512 KB SRAM (lithium batteries)		
Schneider Electric protocols		Modicon	Modbus, Modbus Plus, Modbus TCP/IP, Uni-TE, FIPWAY, FIPIO		
Third-party protocols	Mitsubishi	Melsec	A/Q CPU (SIO), A/Q Ethernet (TCP), A Link (SIO), QnA CPU (SIO), Q Ethernet (UDP), FX (CPU)		
	Omron	Sysmac	FINS (Ethernet), FINS (SIO), LINK (SIO)		
	Rockwell Automation	Allen Bradley	DF1-Full Duplex, DH 485, Ethernet IP (PLC5, SLC500, MicroLogix, ControlLogix), Ethernet IP (native), Device Net *(1)*		
	Siemens	Simatic	MPI (S7-300/400), RK512/3964R (S7-300/400), PPI (S7-200), Ethernet, Profibus DP *(1)*		
Real-time clock			Integrated real-time clock		
Expansion	Compact Flash card		1 slot for 128, 256, 512 MB or 1 GB Compact Flash memory card		
	Expansion unit		For fieldbus communication card (Device Net, Profibus DP) *(1)*		
Connections	Power supply		Removable screw terminal block: 3 terminals (pitch 5.06 mm), tightening torque 0.5 Nm		
	COM1 serial port (115.2 Kbps max.)		9-way male SUB-D connector (RS 232C/RS 422/485 serial link)		
	COM2 serial port (115.2 Kbps max.)		RJ45 connector (RS 485 link), compatible with Siemens MPI (187.5 kbps)		
	USB port (V1.1)		A USB type A host connector for downloading applications, connecting peripherals and Modicon M340 terminal port communication		
	Ethernet TCP/IP network (10BASE-T/100BASE-TX)		RJ45 connector (10BASE-T/100BASE-TX)		
	Audio input (microphone)		–		Mini-jack connector
	NTSC/PAL video input (59.9/50 Hz)		–		RCA connector (75 Ω)
	Inputs/outputs		Screw connector for 1 audio output (8 Ω,70 mW, frequency 1 kHz), 1 discrete input and 3 discrete outputs		

(1) Connection accessories required (see page 1/53).

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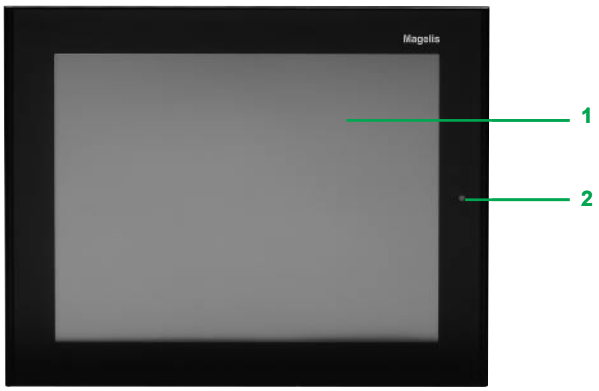
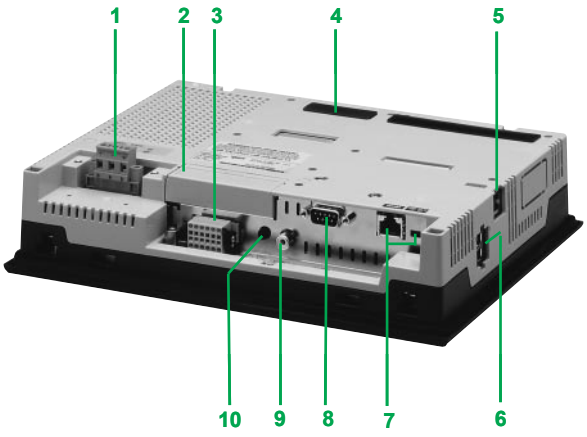
Operator dialogue terminals
Magelis XBT GT Advanced Panels with 10.4” screen

Description
Magelis XBT GT5230 & XBT GT53●0 Advanced Panels



The front panel comprises:

1 A touch screen for displaying synoptic views (10.4” colour STN or 10.4” colour TFT, depending on model)
2 A multicolour lamp (green, orange and red) indicating the operating mode of the terminal



The rear panel comprises:

1 A removable screw terminal block for the 24 V ⎓ power supply
2 A slot for Compact Flash memory card, with pivoting cover
3 A removable I/O connector *(1)*, 12 spring terminals for loudspeaker connection, one input (reset) and 3 outputs (alarm, buzzer, run).
4 An expansion unit interface for fieldbus communication card (Device Net, Profibus DP) *(2)*
5 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX with an activity LED
6 Two USB type A host connectors for connecting peripherals, transferring applications and Modicon M340 terminal port communication
7 An RJ45 connector for RS 485 serial link (COM2) with switch for polarization of the link used on Modbus
8 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)

On XBT GT5340 only:

9 A mini-jack connector for connecting a microphone
10 An RCA connector for connecting a digital or analog video camera (NTSC/PAL)

(1) On the XBT GT5230 model, this removable connector is located on the rear panel of the terminal.
(2) Connection accessories required (see page 1/53).

Characteristics: page 1/35
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels with 10.4” screen

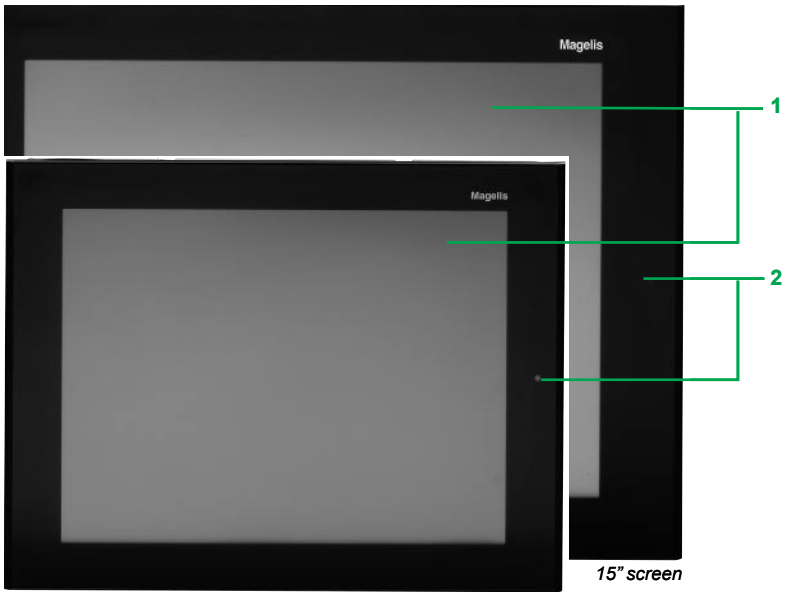
Terminal type			XBT GT5230	XBT GT5330	XBT GT5340
Environment					
Conformity to standards			EN 61131-2, IEC 61000-6-2, FCC (Class A), UL 508, UL 1604, CSA C22-2 no. 14		
Product certification			CE, cULus, CSA, Class 1 Div 2 T4A or T5 (UL and CSA), C-Tick, ATEX Zone 2/22		
Temperature	Operation		0…50°C		
	Storage		- 20…+ 60°C		
Relative humidity	Operation/storage		10…90% (non-condensing)		
Altitude			< 2000 m		
Degree of protection	Front panel		IP 65 conforming to IEC 60529, Nema 4X (with fixing by 4 screw clamps)		
	Rear panel		IP 20 conforming to IEC 60529		
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes		
Vibration			Conforming to IEC 60068-2-6; 5…9 Hz at 3.5 mm; 9…150 Hz at 1 g		
E.S.D.			Conforming to IEC 61000-4-2, level 3 (contact 6 kV, air 8 kV)		
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m		
Electrical interference			Conforming to IEC 61000-4-4, level 3 (power supply and I/O 2 kV, other ports 1 kV)		
Mechanical characteristics					
Mounting and fixing	Mounting on 1.6…10 mm thick panel		Flush mounted, fixed by 4 screw clamps (included) or 4 spring clips (to be ordered separately)		
Material	Housing		Aluminium (front) Polycarbonate/polyethylene terephthalate alloy (rear)		
Electrical characteristics					
Power supply	Voltage		24 V ⎓		
	Limits		19.2…28.8 V ⎓		
	Voltage break		≤ 10 ms		
Inrush current			≤ 30 A		
Consumption			26 W	30 W	
Functional characteristics					
LCD screen	Type		Colour STN	Colour TFT	
	Colour		4096 colours	65,536 colours, 16,384 if flashing	
	Definition		640 x 480 pixels (VGA)		
	Size (width x height in mm)		10.4” (215.2 x 162.3)	10.4” (211.2 x 158.4)	
	Touch-sensitive area		Analog, resolution 1024 x 1024		
	Backlighting (service life at 25°C for continuous use)		54,000 hours	50,000 hours	
	Adjustments	Brightness	8 levels via touch panel		
		Contrast	8 levels via touch panel		
	Character fonts		ASCII (including all European characters), Japanese (ANK, Kanji), Chinese (simplified Chinese), Taiwanese (traditional Chinese), Korean		
Dialogue application	Max. number of pages		Limited by the capacity of the internal flash memory or the Compact Flash card		
Signalling			1 LED: green for normal operation, orange if backlighting faulty		
Operating system/Processor			Magelis/266 MHz RISC CPU		
Memory	Application		32 MB Flash EPROM		
	Data backup		512 KB SRAM (lithium batteries)		
Schneider Electric protocols		Modicon	Modbus, Modbus Plus, Modbus TCP/IP, Uni-TE, FIPWAY, FIPIO		
Third-party protocols	Mitsubishi	Melsec	A/Q CPU (SIO), A/Q Ethernet (TCP), A Link (SIO), QnA CPU (SIO), Q Ethernet (UDP), FX (CPU)		
	Omron	Sysmac	FINS (Ethernet), FINS (SIO), LINK (SIO)		
	Rockwell Automation	Allen Bradley	DF1-Full Duplex, DH 485, Ethernet IP (PLC5, SLC500, MicroLogix, ControlLogix), Ethernet IP (native), Device Net *(1)*		
	Siemens	Simatic	MPI (S7-300/400), RK512/3964R (S7-300/400), PPI (S7-200), Ethernet, Profibus DP *(1)*		
Real-time clock			Integrated real-time clock		
Expansion	Compact Flash card		1 slot for 128, 256, 512 MB or 1 GB Compact Flash memory card		
	Expansion unit		For fieldbus communication card (Device Net, Profibus DP) *(1)*		
Connections	Power supply		Removable screw terminal block: 3 terminals (pitch 5.06 mm), tightening torque 0.5 Nm		
	COM1 serial port (115.2 Kbps max.)		9-way male SUB-D connector (RS 232C/RS 422/485 serial link)		
	COM2 serial port (115.2 Kbps max.)		RJ45 connector (RS 485 link), compatible with Siemens MPI (187.5 kbps)		
	USB port (V1.1)		2 USB type A host connectors for downloading applications, connecting peripherals and Modicon M340 terminal port communication		
	Ethernet TCP/IP network (10BASE-T/100BASE-TX)		RJ45 connector		
	Audio input (microphone)		–		Mini-jack connector
	NTSC/PAL video input (59.9/50 Hz)		–		RCA connector (75 Ω)
	Inputs/outputs		Screw connector for 1 audio output (8 Ω,70 mW, frequency 1 kHz), 1 discrete input and 3 discrete outputs		

(1) Connection accessories required (see page 1/53).

Characteristics: page 1/35
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels with 12.1” and 15” screen

Description
Magelis XBT GT63●0 & XBT GT7340 Advanced Panels

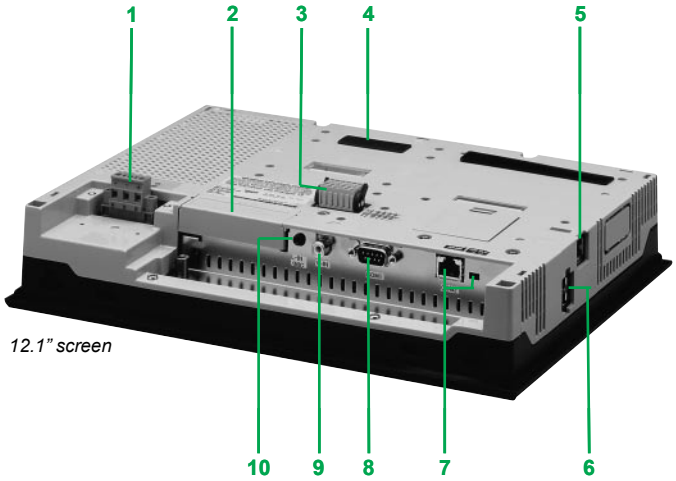


15” screen

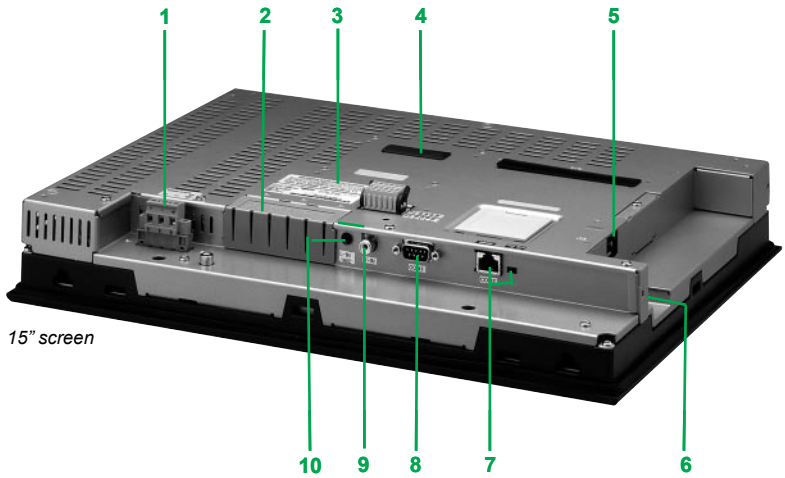
12.1” screen

The front panel comprises:

1 A touch screen for displaying synoptic views (12.1” or 15” colour TFT, depending on model)
2 A multicolour lamp (green, orange and red) indicating the operating mode of the terminal



12.1” screen



15” screen

The rear panel comprises:

1 A removable screw terminal block for the 24 V ⎓ power supply
2 A slot for Compact Flash memory card, with pivoting cover
3 A removable I/O connector, 12 spring terminals for loudspeaker connection, one input (reset) and 3 outputs (alarm, buzzer, run).
4 An expansion unit interface for fieldbus communication card (Device Net, Profibus DP) *(1)*
5 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX, with an activity LED
6 Two USB type A host connectors for connecting peripherals, transferring applications and Modicon M340 terminal port communication
7 An RJ45 connector for RS 485 serial link (COM2) with switch for polarization of the link used on Modbus
8 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)

On XBT GT6340 and XBT GT7340 only:

9 A mini-jack connector for connecting a microphone
10 An RCA connector for connecting a digital or analog video camera (NTSC/PAL)

(1) Connection accessories required (see page 1/53).

Characteristics: page 1/35
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels with 12.1” and 15” screen

Terminal type			XBT GT6330	XBT GT6340	XBT GT7340
Environment					
Conforming to standards			EN 61131-2, IEC 61000-6-2, FCC (Class A), UL 508, UL 1604, CSA C22-2 no. 14		
Product certification			CE, cULus, CSA, Class 1 Div 2 T4A or T5 (UL and CSA), C-Tick, ATEX Zone 2/22		
Temperature	Operation		0…50°C		
	Storage		- 20…+ 60°C		
Relative humidity	Operation/storage		10…90% (non-condensing)		
Altitude			< 2000 m		
Degree of protection	Front panel		IP 65 conforming to IEC 60529, Nema 4X (with fixing by 4 screw clamps)		
	Rear panel		IP 20 conforming to IEC 60529		
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes		
Vibration			Conforming to IEC 60068-2-6; 5…9 Hz at 3.5 mm; 9…150 Hz at 1 g		
E.S.D.			Conforming to IEC 61000-4-2, level 3 (contact 6 kV, air 8 kV)		
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m		
Electrical interference			Conforming to IEC 61000-4-4, level 3 (power supply and I/O 2 kV, other ports 1 kV)		
Mechanical characteristics					
Mounting and fixing	Mounting on 1.6…10 mm thick panel		Flush mounted, fixed by 4 screw clamps (included) or 4 spring clips (to be ordered separately)		Flush mounted, fixed by 8 screw clamps (included) or 4 spring clips (to be ordered separately)
Material	Housing		Aluminium (front) Polycarbonate/polyethylene terephthalate alloy (rear)		Aluminium (front and rear)
Electrical characteristics					
Power supply	Voltage		24 V ⎓		
	Limits		19.2…28.8 V ⎓		
	Voltage break		≤ 10 ms		
Inrush current			≤ 30 A		
Consumption			30 W		42 W
Functional characteristics					
LCD screen	Type		Colour TFT		
	Colour		65,536 colours, 16,384 if flashing		
	Definition		800 x 600 pixels (SVGA)		1024 x 768 pixels (XGA)
	Size (width x height in mm)		12.1” (248 x 186.5)		15” (306 x 230.1)
	Touch-sensitive area		Analog, resolution 1024 x 1024		
	Backlighting (service life at 25°C for continuous use)		50,000 hours		
	Adjustments	Brightness	8 levels via touch panel		
		Contrast	–		
	Character fonts		ASCII (including all European characters), Japanese (ANK, Kanji), Chinese (simplified Chinese), Taiwanese (traditional Chinese), Korean		
Dialogue application	Max. number of pages		Limited by the capacity of the internal flash memory or the Compact Flash card		
Signalling			1 LED: green for normal operation, orange if backlighting faulty		
Operating system/Processor			Magelis/266 MHz RISC CPU		
Memory	Application		32 MB Flash EPROM		
	Data backup		512 KB SRAM (lithium batteries)		
Schneider Electric protocols		Modicon	Modbus, Modbus Plus, Modbus TCP/IP, Uni-TE, FIPWAY, FIPIO		
Third-party protocols	Mitsubishi	Melsec	A/Q CPU (SIO), A/Q Ethernet (TCP), A Link (SIO), QnA CPU (SIO), Q Ethernet (UDP), FX (CPU)		
	Omron	Sysmac	FINS (Ethernet), FINS (SIO), LINK (SIO)		
	Rockwell Automation	Allen Bradley	DF1-Full Duplex, DH 485, Ethernet IP (PLC5, SLC500, MicroLogix, ControlLogix), Ethernet IP (native), Device Net *(1)*		
	Siemens	Simatic	MPI (S7-300/400), RK512/3964R (S7-300/400), PPI (S7-200), Ethernet, Profibus DP *(1)*		
Real-time clock			Integrated real-time clock		
Expansion	Compact Flash card		1 slot for 128, 256, 512 MB or 1 GB Compact Flash memory card		
	Expansion unit		For fieldbus communication card (Device Net, Profibus DP) *(1)*		
Connections	Power supply		Removable screw terminal block: 3 terminals (pitch 5.06 mm), tightening torque 0.5 Nm		
	COM1 serial port (115.2 Kbps max.)		9-way male SUB-D connector (RS 232C/RS 422/485 serial link)		
	COM2 serial port (115.2 Kbps max.)		RJ45 connector (RS 485 link), compatible with Siemens MPI (187.5 kbps)		
	USB ports (V1.1)		2 USB type A host connectors for downloading applications, connecting peripherals and Modicon M340 terminal port communication		
	Ethernet TCP/IP network (10BASE-T/100BASE-TX)		One RJ45 connector		
	Audio input (microphone)		–		Mini-jack connector
	NTSC/PAL video input (59.9/50 Hz)		–		RCA connector (75 Ω)
	Inputs/outputs		Screw connector for 1 audio output (8 Ω,70 mW, frequency 1 kHz), 1 discrete input and 3 discrete outputs		

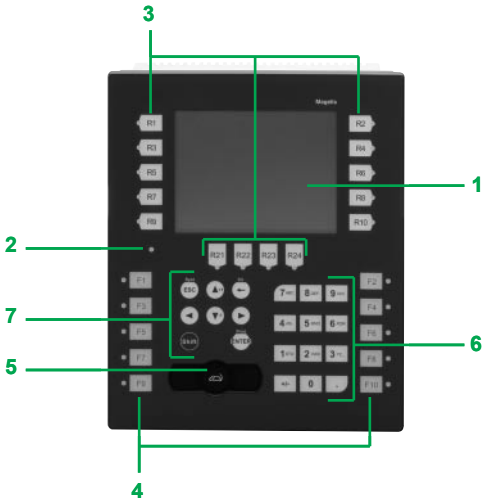
(1) Connection accessories required (see page 1/53).

Characteristics: page 1/35 References: pages 1/46 to 1/53 Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GK Advanced Panels with 5.7” screen

Details

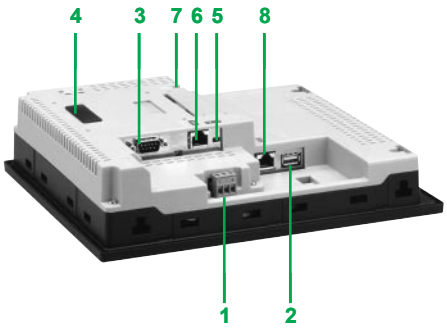
XBT GK2120 & XBT GK2330 Advanced Panels



The front panel comprises:

1 A touch screen for displaying synoptic views (5.7” monochrome or colour) configurable using Vijeo Designer
2 A multicolour lamp (green, orange and red) indicating the operating mode of the terminal
3 14 dynamic keys (Ri) with 3-colour LED (green, orange, red)
4 10 static keys (Ri) with 3-colour LED (green, orange, red) and customizable labels
5 An industrial pointer “ ”, configurable using Vijeo Designer
6 12 alphanumeric keys (0...9, +/-, .) with successive pressing to access characters (A...Z)
7 8 service keys:

←	Delete the character to the left of the cursor
◀ ▶	Move the cursor to the right or left in an input field
ENTER	Confirm a selection or an entry
Shift	Access the second of the functions marked on the key
▼-1 ▲+1	Increment or decrement a numeric field value or activate the next or previous object
ESC	Exit Entry Mode
Shift + ESC	Display the terminal configuration menu
Shift + ENTER	Copy the current screen
Shift + ←	Delete the whole field



The rear panel comprises:

1 A removable screw terminal block for 24 V ⎓ power supply
2 A USB type A host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
3 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)
4 An expansion unit interface for fieldbus communication card (Profibus DP, Device Net) *(1)*
5 A switch for polarization of the COM2 serial link, used on Modbus
6 An RJ45 connector for RS 485 serial link (COM2)
7 A slot for Compact Flash memory card, with cover

On GK2330 only:

8 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX

(1) Connection accessories required (see page 1/53).

Operator dialogue terminals
Magelis XBT GK Advanced Panels with 5.7" screen

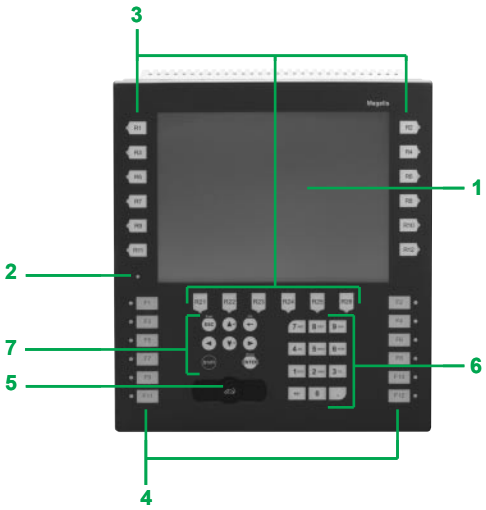
Type of terminal			XBT GK2120	XBT GK2330
Environment				
Conformity to standards			EN 61131-2, IEC 61000-6-2, FCC (Class A), UL 508, UL 1604, CSA C22-2 no. 14	
Product certification			CE, cULus, CSA, Class 1 Div 2 T4A or T5 (UL and CSA), C-Tick	
Temperature	Operation		0…50°C	
	Storage		- 20…+ 60°C	
Relative humidity			0…90% (non-condensing)	
Altitude			< 2000 m	
Degree of protection	Front panel		IP 65 according to IEC 60529, Nema 4X	
	Rear panel		IP 20 conforming to IEC 60529	
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes	
Vibration			Conforming to IEC 60068-2-6; 5…9 Hz at 3.5 mm; 9…150 Hz at 1 g	
E.S.D.			Conforming to IEC 61000-4-2, level 3	
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m	
Electrical interference			Conforming to IEC 61000-4-4, level 3	
Mechanical characteristics				
Mounting and fixing	Mounting on 1.6…10 mm thick panel		Flush mounted, fixed by 10 spring clips (included) or 4 screw clamps (to be ordered separately)	
Material	Housing		Polycarbonate/polyethylene terephthalate alloy	
			Aluminium (front)	
Keys	Dynamic		14 with LED	
	Static		10 (with LED and customizable labels)	
	Service		8	
	Alphanumeric		12	
Electrical characteristics				
Power supply	Voltage		24 V ⎓	
	Limits		19.2…28.8 V ⎓	
	Voltage break		≤ 5 ms	
Inrush current			≤ 30 A	
Consumption			26 W	
Functional characteristics				
LCD screen	Type		Back-lit monochrome STN	Colour TFT
	Colour		Black and white, 16 levels of grey	65,536 colours, 16,384 if flashing
	Definition		320 x 240 pixels (QVGA)	
	Size (width x height in mm)		5.7" (115.2 x 86.4)	
	Touch-sensitive area		Analog, resolution 1024 x 1024	
	Back-lighting (service life at 25°C for continuous use)		58,000 hours	50,000 hours
	Adjustments	Brightness	8 levels via touch panel	
		Contrast	8 levels via touch panel	–
	Character fonts		ASCII (including all European characters), Japanese (ANK, Kanji), Chinese (simplified Chinese), Taiwanese (traditional Chinese), Korean	
Dialogue application	Max. number of pages		Limited by the capacity of the internal flash memory or the Compact Flash card	
Signalling			1 LED: green for normal operation, orange if back-lighting faulty	
Operating system/Processor			Magelis/133 MHz RISC CPU	
Memory	Application		16 MB Flash EPROM	
	Data backup		512 KB SRAM (lithium batteries)	
Schneider Electric protocols		Modicon	Modbus, Uni-TE, Modbus TCP/IP, FIPWAY, FIPIO, Modbus Plus	
Third-party protocols	Mitsubishi	Melsec	A/Q CPU (SIO), A/Q Ethernet (TCP) *(1)*, A Link (SIO), QnA CPU (SIO), Q Ethernet (UDP) *(1)*, FX (CPU)	
	Omron	Sysmac	FINS (Ethernet) *(1)*, FINS (SIO), LINK (SIO)	
	Rockwell Automation	Allen Bradley	DF1-Full Duplex, DH 485, Ethernet IP (PLC5, SLC500, MicroLogix, ControlLogix) *(1)*, Ethernet IP (native) *(1)*, Device Net *(2)*	
	Siemens	Simatic	MPI (S7-300/400), RK512/3964R (S7-300/400), PPI (S7-200), Ethernet *(1)*, Profibus DP *(2)*	
Real-time clock			Integrated real-time clock	
Expansion	Compact Flash memory card		1 slot for 128, 256, 512 MB or 1 GB Compact Flash card	
	Expansion unit		For fieldbus communication card (Device Net, Profibus DP) *(2)*	
Connections	Power supply		Removable screw terminal block: 3 terminals (pitch 5.06 mm), tightening torque 0.5 Nm	
	COM1 serial port (115.2 Kbps max.)		9-way male SUB-D connector (RS 232C/RS 422/485 serial link)	
	COM2 serial port (115.2 Kbps max.)		RJ45 connector (RS 485 link), compatible with Siemens MPI (187.5 kbps)	
	USB port (V1.1)		USB type A host connector for downloading applications, connecting peripherals and Modicon M340 terminal port communication	
	Ethernet TCP/IP network (10BASE-T/100BASE-TX)		–	RJ45 connector
	Inputs/outputs		–	

(1) With model **XBT GK2330**.
(2) Connection accessories required (see page 1/53).

Characteristics: page 1/41 References: pages 1/46 to 1/53 Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GK Advanced Panels with 10.4" screen

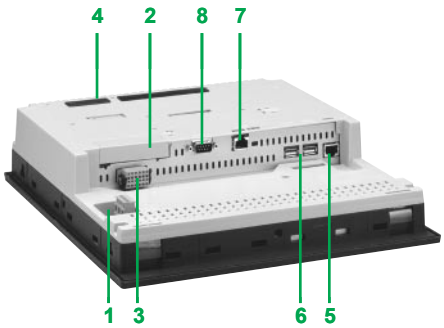
Description
XBT GK5330 Advanced Panels



The front panel comprises:

1 A touch screen for displaying synoptic views (10.4" colour TFT) configurable using Vijeo Designer
2 A multicolour lamp (green, orange and red) indicating the operating mode of the terminal
3 18 dynamic keys (Ri) with 3-colour LED (green, orange, red)
4 12 static keys (Fi) with 3-colour LED (green, orange, red) and customizable labels
5 An industrial pointer " " , configurable using Vijeo Designer
6 12 alphanumeric keys (0...9, +/-, .) with successive pressing to access characters (A...Z)
7 8 service keys:

←	Delete the character to the left of the cursor
◀ ▶	Move the cursor to the right or left in an input field
ENTER	Confirm a selection or an entry
Shift	Access the second of the functions marked on the key
▼-1 ▲+1	Increment or decrement a numeric field value or activate the next or previous object
ESC	Exit Entry Mode
Shift + ESC	Display the terminal configuration menu
Shift + ENTER	Copy the current screen
Shift + ←	Delete the whole field



The rear panel comprises:

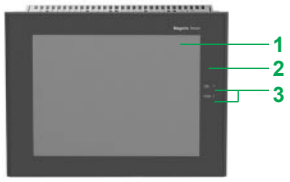
1 A removable screw terminal block for 24 V ⎓ power supply
2 A slot for Compact Flash memory card, with pivoting cover
3 A removable I/O connector, 12 spring terminals for loudspeaker connection, one input (reset) and 3 outputs (alarm, buzzer, run)
4 An expansion unit interface for fieldbus communication card (Device Net, Profibus DP)
5 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX with an activity LED
6 Two USB type A host connectors for connecting peripherals, transferring applications and Modicon M340 terminal port communication
7 An RJ45 connector for RS 485 serial link (COM2) with switch for polarization of the link used on Modbus
8 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)

Characteristics: page 1/41
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GK Advanced Panels with 10.4" screen

Type of terminal			XBT GK5330
Environment			
Conformity to standards			EN 61131-2, IEC 61000-6-2, FCC (Class A), UL 508, UL 1604, CSA C22-2 no. 14
Product certification			CE, cULus, CSA, Class 1 Div 2 T4A or T5 (UL and CSA), C-Tick
Temperature	Operation		0…50°C
	Storage		- 20…+ 60°C
Relative humidity	Operation/storage		10…90% (non-condensing)
Altitude			< 2000 m
Degree of protection	Front panel		IP 65 conforming to IEC 60529, Nema 4X (with fixing by 4 screw clamps)
	Rear panel		IP 20 conforming to IEC 60529
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes
Vibration			Conforming to IEC 60068-2-6; 5…9 Hz at 3.5 mm; 9…150 Hz at 1 g
E.S.D.			Conforming to IEC 61000-4-2, level 3 (contact 6 kV, air 8 kV)
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m
Electrical interference			Conforming to IEC 61000-4-4, level 3 (power supply and I/O 2 kV, other ports 1 kV)
Mechanical characteristics			
Mounting and fixing	Mounting on 1.5…10 mm thick panel		Flush mounted, fixed by 12 spring clips (included) or 4 screw clamps (to be ordered separately)
Material	Housing		Aluminium (front)
			Polycarbonate/polyethylene terephthalate alloy
Keys	Dynamic		18 with LED
	Static		12 (with LED and customizable labels)
	Service		8
	Alphanumeric		12
Electrical characteristics			
Power supply	Voltage		24 V ⎓
	Limits		19.2…28.8 V ⎓
	Voltage break		≤ 10 ms
Inrush current			≤ 30 A
Consumption			30 W
Functional characteristics			
LCD screen	Type		Colour TFT
	Colour		65,536 colours, 16,384 if flashing
	Definition		640 x 480 pixels (VGA)
	Size (width x height in mm)		10.4" (211.2 x 158.4)
	Touch-sensitive area		Analog, resolution 1024 x 1024
	Back-lighting (service life at 25°C for continuous use)		50,000 hours
	Adjustments	Brightness	8 levels via touch panel
		Contrast	8 levels via touch panel
	Character fonts		ASCII (including all European characters), Japanese (ANK, Kanji), Chinese (simplified Chinese), Taiwanese (traditional Chinese), Korean
Dialogue application	Max. number of pages		Limited by the capacity of the internal flash memory or the Compact Flash card
Signalling			1 LED: green for normal operation, orange if back-lighting faulty
Operating system/Processor			Magelis/266 MHz RISC CPU
Memory	Application		32 MB Flash EPROM
	Data backup		512 KB SRAM (lithium batteries)
Schneider Electric protocols		Modicon	Modbus, Uni-TE, Modbus TCP/IP, FIPWAY, FIPIO, Modbus Plus
Third-party protocols	Mitsubishi	Melsec	A/Q CPU (SIO), A/Q Ethernet (TCP), A Link (SIO), QnA CPU (SIO), Q Ethernet (UDP), FX (CPU)
	Omron	Sysmac	FINS (Ethernet), FINS (SIO), LINK (SIO)
	Rockwell Automation	Allen Bradley	DF1-Full Duplex, DH 485, Ethernet IP (PLC5, SLC500, MicroLogix, ControlLogix), Ethernet IP (native), Device Net
	Siemens	Simatic	MPI (S7-300/400), RK512/3964R (S7-300/400), PPI (S7-200), Ethernet, Profibus DP
Real-time clock			Integrated real-time clock
Expansion	Compact Flash memory card		1 slot for 128, 256, 512 MB or 1 GB Compact Flash memory card
	Expansion unit		For fieldbus communication card (Device Net, Profibus DP)
Connections	Power supply		Removable screw terminal block: 3 terminals (pitch 5.06 mm), tightening torque 0.5 Nm
	COM1 serial port (115.2 Kbps max.)		9-way male SUB-D connector (RS 232C/RS 422/485 serial link)
	COM2 serial port (115.2 Kbps max.)		RJ45 connector (RS 485 link), compatible with Siemens MPI (187.5 kbps)
	USB port (V1.1)		USB type A host connector for downloading applications, connecting peripherals and Modicon M340 terminal port communication
	Ethernet TCP/IP network (10BASE-T/100BASE-TX)		RJ45 connector
	Audio input (microphone)		–
	NTSC/PAL video input (59.9/50 Hz)		–
	Inputs/outputs		Screw connector for 1 audio output (8 Ω, 70 mW, frequency 1 kHz), 1 discrete input and 3 discrete outputs

Operator dialogue terminals
Magelis XBT GTW Advanced Panels with 8.4” and 15” screen

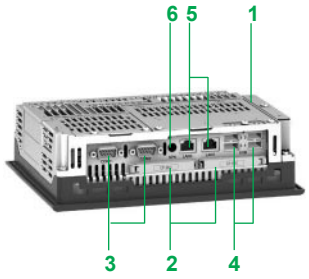


Description of XBT GTW terminals

8.4” touch screen front panel, XBT GTW 450

The touch screen front panel of the **XBT GTW 450** terminal comprises:

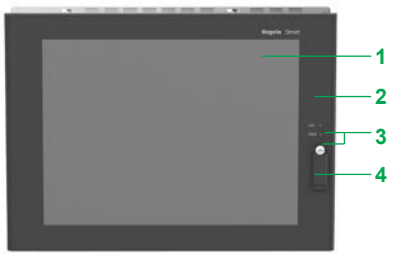
1 An 8.4" SVGA active matrix colour TFT LCD screen (maximum display area 800 x 600 points) with high-definition analog touch panel
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two lamps marked:
- ON (green), terminal on
- DISK (green), accessing IDE bus (accessing Compact Flash memory, etc.)



Lower faces, 8.4”

All expansion slots and connection elements can be accessed from the rear of the terminal, with the following elements located on the lower face:

1 A removable screw terminal block for connecting 24 V ⎓ power supply
2 Two Compact Flash memory card slots, one for the card containing the operating system and integrated software, and the other free
3 Two 9-way male SUB-D connectors marked COM1 and COM2 for the RS232 serial link
4 4 USB 2.0 ports
5 Two RJ45 connectors for Ethernet 10/100 Mbps and Ethernet 10/100 Base-TX/1 GB link
6 A mini-jack connector for loudspeaker

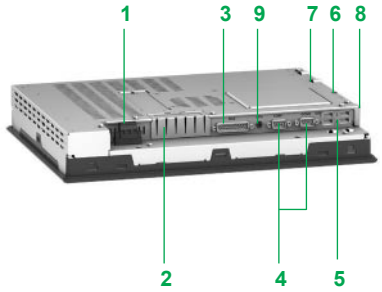


15” touch screen front panel, XBT GTW 750

The touch screen front panel of the **XBT GTW 750** terminal comprises:

1 A 15” XGA active matrix colour TFT LCD screen (maximum display area 1024 x 768 points) with high-definition analog touch panel
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two lamps marked:
- ON (green), terminal on
- DISK (green), accessing IDE bus (accessing Compact Flash memory, etc.)

4 A dust and damp proof USB port



Lower faces, 15”

All expansion slots and connection elements can be accessed from the rear of the terminal, with the following elements located on the lower face:

1 A removable screw terminal block for connecting 24 V ⎓ power supply
2 A slot for the Compact Flash memory card containing the operating system and integrated software
3 A 25-way female SUB-D connector marked RAS for product monitoring and diagnostics
4 Two 9-way male SUB-D connectors marked COM1 and COM2 for the RS232 serial link
5 4 USB 2.0 ports
6 A mini-DIN PS/2 connector for connecting the external keyboard
7 Two RJ45 connectors for Ethernet 10/100 Mbps and Ethernet 10/100 Base-TX/1 GB link
8 A slot for 2 additional type II PCMCIA cards
9 A mini-jack connector for loudspeaker

Pre-installed software

In addition to embedded Windows XP, XBT GTW terminals also have the following software on the Compact Flash System card:

- Vijeo Designer Run Time
- Internet Explorer
- Acrobat Reader
- Word/Excel/PowerPoint viewer

Characteristics: page 1/45
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GTW Advanced Panels with 8.4" and 15" screen

Type of terminal			XBT GTW 450	XBT GTW 750
Environment				
Conformity to standards			EN 61131-2, IEC 61000-6-2, FCC (Class A), UL 508, CSA C22-2 no. 14	
Product certification			CE, cULus, CSA	
Temperature	Operation		0…50°C	
	Storage		- 20…+ 60°C	
Relative humidity	Operation/storage		10…85% (non-condensing)	
Altitude			< 3000 m	
Degree of protection	Front panel		IP 65 conforming to IEC 60529, Nema 4X (with fixing by 4 screw clamps)	
	Rear panel		IP 20 conforming to IEC 60529	
Shock resistance			Conforming to IEC 60068-2-27; semi-sinusoidal pulse 11 ms, 15 gn on the 3 axes	
Vibration			Conforming to IEC 60068-2-6; 5…9 Hz at 3.5 mm; 9…150 Hz at 1 g	
E.S.D.			Conforming to IEC 61000-4-2, level 3 (contact 6 kV, air 8 kV)	
Electromagnetic interference			Conforming to IEC 61000-4-3, 10 V/m	
Electrical interference			Conforming to IEC 61000-4-4, level 3 (power supply and I/O 2 kV, other ports 1 kV)	
Mechanical characteristics				
Mounting and fixing	Mounting on 1.6…10 mm thick panel		Flush-mounted, fixed by 8 screw clamps (included)	
Material	Housing		Aluminium (front and rear)	
Electrical characteristics				
Power supply	Voltage		24 V ⎓	
	Limits		21.6…26.4 V ⎓	
	Voltage break		≤ 5 ms	
Inrush current			≤ 30 A	
Consumption			40 W	90 W
Functional characteristics				
LCD screen	Type		Colour TFT	
	Colour		262,144	
	Definition		800 x 600 pixels (SVGA)	1024 x 768 pixels (XGA)
	Size (width x height in mm)		8.4" (171 x 128)	15" (306 x 230.1)
	Touch-sensitive area		Analog, resolution 1024 x 1024	
	Back-lighting (service life at 25°C for continuous use)		50,000 hours	
	Adjustments	Brightness	4 levels via touch panel	
		Contrast	–	
	Character fonts		ASCII (including all European characters), Japanese (ANK, Kanji), Chinese (simplified Chinese), Taiwanese (traditional Chinese), Korean	
Dialogue application	Max. number of pages		Limited by the capacity of the internal flash memory or the Compact Flash card	
Signalling			ON lamp: switched on DISK lamp: accessing CF system card	
Operating system/Processor			Windows XPe, SP2 (1), Intel Celeron M600 MHz	
Memory	Application		1 GB CF system card supplied with the terminal	
	Data backup		512 KB SRAM (lithium batteries)	
Schneider Electric protocols		Modicon	Modbus, Modbus TCP/IP, Modbus Plus, Uni-TE	
Third-party protocols	Mitsubishi	Melsec	A/Q CPU (SIO), A/Q Ethernet (TCP), A Link (SIO), QnA CPU (SIO), Q Ethernet (UDP), FX (CPU)	
	Omron	Sysmac	FINS (Ethernet), FINS (SIO), LINK (SIO)	
	Rockwell Automation	Allen Bradley	DF1-Full Duplex, DH 485, Ethernet IP (PLC5, SLC500, MicroLogix, ControlLogix), Ethernet IP (native)	
	Siemens	Simatic	RK512/3964R (S7-300/400), PPI (S7-200), Ethernet	
Real-time clock			Integrated real-time clock	
Expansion	Compact Flash card		2 slots for 128, 256, 512 MB or 1 GB Compact Flash memory card	1 slot for 128, 256, 512 MB or 1 GB Compact Flash memory card
	PCMCIA Card		–	2 type II card slots
Connections	Power supply		Removable screw terminal block: 3 terminals (pitch 5.06 mm), tightening torque 0.5 Nm	
	COM1 and COM2 serial links		Two 9-way male SUB-D connectors (RS 232C serial link)	
	USB ports (V2.0)	Lower face	4 USB type A host connectors for downloading applications, connecting peripherals and Modicon M340 terminal port communication	
		Front panel	–	1 dust and damp protected connector (15")
	Ethernet TCP/IP network		1 RJ45 10BASE-T/100BASE-TX connector	
			1 RJ45 10BASE-T/100BASE-TX/1 GB connector	
	Audio output (loudspeaker)		Mini-jack connector	
	PS/2 keyboard port		–	1 mini-DIN connector
	RAS port		–	1 x 25-way female SUB-D

(1) Installed in Compact Flash memory

Characteristics: page 1/45
References: pages 1/46 to 1/53
Dimensions: page 1/63

Operator dialogue terminals
Magelis XBT GT Advanced Panels


XBT GT1105/1135


XBT GT21●0 / 2220 / 2330


XBT GT4230 / 43●0


XBT GT53●0


XBT GT63●0


XBT GT7340

Monochrome touch screen terminals (1)

Type of screen	No. of ports	Application memory capacity	Compact Flash memory	Composite video input	No. of Ethernet ports	Reference	Weight kg
Optimum, 3.8" screen							
STN amber or red	1 COM1 1 USB	32 MB	No	No	-	**XBT GT1105**	
					1	**XBT GT1135**	
Optimum, 5.7" screen							
STN blue mode	1 COM 1 1 COM 2 1 USB	16 MB	No	No	-	**XBT GT2110**	1.000
Multifunction, 5.7" screen							
STN Black and white	1 COM 1 1 COM 2 1 USB	16 MB	Yes	No	-	**XBT GT2120**	1.000
					1	**XBT GT2130**	1.000

Colour touch screen terminals (1)

Type of screen	No. of ports	Application memory capacity	Compact Flash memory	Composite video input	Onboard Ethernet	Reference	Weight kg
Optimum, 3.8" screen							
TFT	1 COM 1 1 USB	32 MB	No	No	1	**XBT GT1335**	1.000
Multifunction, 5.7" screen							
STN	1 COM 1 1 COM 2 1 USB	16 MB	Yes	No	-	**XBT GT2220**	1.000
TFT	1 COM 1 1 COM 2 1 USB	16 MB	Yes	No	1	**XBT GT2330**	1.000
Multifunction, 7.5" screen							
STN	1 COM 1 1 COM 2 1 USB	32 MB	Yes	No	1	**XBT GT4230**	1.800
TFT	1 COM 1 1 COM 2 1 USB	32 MB	Yes	No	1	**XBT GT4330**	1.800
				Yes	1	**XBT GT4340**	1.800
Multifunction, 10.4"							
STN	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	**XBT GT5230**	3.000
TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	**XBT GT5330**	2.500
				Yes	1	**XBT GT5340**	2.500
Multifunction, 12.1"							
TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	**XBT GT6330**	3.000
				Yes	1	**XBT GT6340**	3.000
Multifunction, 15"							
TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	Yes	1	**XBT GT7340**	5.600

(1) Terminals supplied with fixing kit (screw clamps), locking device for USB connectors (except **XBT GT 11●0***) and Quick Reference Guide. The setup documentation for XBT GT terminals is provided in electronic format with the Vijeo Designer configuration software (see page 3/17).*

Description: pages 1/30 to 1/38
Characteristics: pages 1/31 to 1/39
Dimensions : page 1/63

Operator dialogue terminals
Magelis XBT GK/XBT GTW Advanced Panels

XBT GK2120 / 2330

XBT GK5330

Keypad/touch screen terminals *(1)*

Type of screen	No. of ports	Application memory capacity	Compact Flash memory	Video input	No. of Ethernet ports	Reference	Weight kg
Multifunction, 5.7" screen							
STN Black and white	1 COM1 1 COM2 1 USB	32 MB	Yes	No	-	**XBT GK2120**	–
Multifunction, 5.7" screen							
TFT Colour mode	1 COM 1 1 COM 2 1 USB	32 MB	Yes	No	1	**XBT GK2330**	–
Multifunction, 10.4" screen							
TFT Colour mode	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	**XBT GK5330**	–

XBT GTW450

XBT GTW750

Open touch screen terminals *(2)*

Type of screen	No. of ports	Application memory capacity	Compact Flash memory	Video input	No. of Ethernet ports	Reference	Weight kg
Multifunction, 8.4" screen							
TFT	1 COM 1 1 COM 2 4 USB	1 GB for system and application	Yes	No	2	**XBT GTW450**	–
Multifunction, 15" screen							
TFT	1 COM 1 1 COM 2 5 USB	1 GB for system and application	Yes	No	2	**XBT GTW750**	–

(1) Terminals supplied with fixing kit (spring clips), locking device for USB connectors, sheets of user-customizable labels and Quick Reference Guide.
(2) Terminals supplied with fixing kit (screw clamps), locking device for USB connectors and Quick Reference Guide. The setup documentation for XBT GT terminals is provided in electronic format with the Vijeo Designer configuration software (see page 3/17).

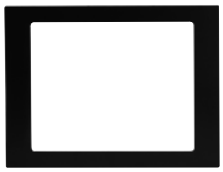
Description: pages 1/40 to 1/44
Characteristics : pages 1/41 to 1/45
Dimensions : page 1/63

Operator dialogue terminals
Separate parts for Magelis XBT GT/GK/GTW Advanced Panels

XBT ZGM●●●

Separate parts

Description	Compatibility	Size	Reference	Weight kg
Compact Flash memory cards	All XBT terminals except XBT GT1●●●/GT2110	128 MB	**XBT ZGM128**	0.050
		256 MB	**XBT ZGM256**	0.050
		512 MB	**MPC YN0 0CFE 00N**	0.050
		1 GB	**MPC YN0 0CF1 00N**	–
		2 GB	**MPC YN0 0CF2 00N**	–
		4 GB	**MPC YN0 0CF4 00N**	–
Protective sheets (5 peel-off sheets)	XBT GT1105/GT1135/GT1335	–	**XBT ZG60**	
	XBT GT1100/GT1130	–	**XBT ZG61**	
	XBT GT21●0/GT2220/GT2330	–	**XBT ZG62**	0.200
	XBT GT4230/GT43●0	–	**XBT ZG64**	0.200
	XBT GT53●0	–	**XBT ZG65**	0.200
	XBT GT5230/GT63●0	–	**XBT ZG66**	0.200
	XBT GK 2●●0	–	**XBT ZG68**	
	XBT GK 5330		**XBT ZG69**	
	XBT GT7340/XBT GTW750	–	**MPC YK5 0SPS KIT**	0.200
	XBT GTW450	–	**MPC YK1 0SPS KIT**	
Spring clips	All XBT GT terminals (no. of spring clips depending on terminal)	**Sold in lots of 12**	**XBT Z3002**	–



XBT ZGCO●

Description	Details	Length	Reference	Weight kg
Mechanical adaptors for substitution of previous Magelis range	From XBT F032●10 to XBT GT2●●0	–	**XBT ZGCO1**	–
	From XBT G2110 to XBT GT2●●0	–	**XBT ZGCO2**	–
	From XBT F034●●● to XBT GT53●0	–	**XBT ZGCO3**	–
	From XBT G5330 to XBT GT5330	–	**XBT ZGCO4**	–
Remote USB port for terminals: XBT GT2●●0...GT7340 GT1●●5, GK●●●, GTW●●●	For remote location of the USB port on the rear of the XBT terminal, on a panel or the enclosure door (Ø 21 mm fixing device)	1 m	**XBT ZGUSB**	–
Compact Flash Card adaptor	Enables a PC with a PCMCIA card slot to take a Compact Flash card	–	**XBT ZGADT**	0.050

XBT ZGUSB

Replacement parts

Description	For use with	Reference	Weight kg
Seals	XBT GT1100/GT1130/GT1105/GT1135/GT1335	**XBT ZG51**	0.030
	XBT GT21●0/GT2220/GT2330	**XBT ZG52**	0.030
	XBT GT4230/GT43●0	**XBT ZG54**	0.030
	XBT GT53●0	**XBT ZG55**	0.030
	XBT GT5230/GT63●0	**XBT ZG56**	0.030
	XBT GT7340	**XBT ZG57**	0.030
	XBT GK2●●0	**XBT ZG58**	–
	XBT GK5330	**XBT ZG59**	–
Backlighting bulbs	XBT GT5230	**XBT ZG43**	0.100
	XBT GT53●0	**XBT ZG45**	0.200
	XBT GT53●0 PV ≥ 3	**XBT ZG45B**	0.200
	XBT GT63●0	**XBT ZG46**	0.200
	XBT GT7340	**XBT ZG47**	0.200
USB fastening	XBT GT1●●0/GT2●●0/GT4●●0	**XBT ZGCLP1**	–
	XBT GT1●●5/GT5●●0/GT6●●0/GT7●●0	**XBT ZGCLP2**	–
	XBT GK	**XBT ZGCLP3**	–
Mounting kit	4 clamps and screws (max. tightening torque: 0.5 Nm), included with all XBT GT terminals	**XBT ZG FIX**	0.100
Protector for extension connector	All XBT GT/GK terminals except XBT GT1●●●	**XBT ZGCNC**	0.030
Power supply connector	XBT GT1●●●/GT2●●● XBT GT4●●● XBT GK2●●●	**XBT ZGPWS1**	0.030
	XBT GT5●●●/6●●●/7●●● XBT GK5●●● XBT GTW●●●	**XBT ZGPWS2**	–
Auxiliary connector	Terminals: XBT GT4●●●/5●●●/6●●●/7●●●, XBT GK5●●●	**XBT ZGAUX**	–
Sheets of user-customizable labels	XBT GK2●●0	**XBL YGK2**	0.030
	XBT GK5●●●	**XBL YGK5**	–

Cables for application transfer to PC

Type of terminal (connector terminal end)	Connector (PC end)	Type	Length	Reference *(1)*	Weight kg
XBT GT2●●0...GT7340, XBT GT1●●5, XBT GK, XBT GTW	USB	TTL	2 m	**XBT ZG935**	0.290

Printer connection cables

Type of printer	Connector (printer end)	Type	Length	Reference	Weight kg
Serial printer *(2)* **for XBT GT/GK/GTW terminal** (except XBT GT1●●●)	25-way female SUB-D	RS 232C (COM1)	2.5 m	**XBT Z915**	0.200

Adaptors and isolation units for XBT terminals

These 3 adaptors are for use with the connection cables, as appropriate. For example, the XBT Z968 cable is used with "+ *(2)* ", i.e. the XBT ZG909 adaptor, to connect a Twido controller (via its terminal port) to an XBT GT2●●0 terminal (via its COM1 port).

Description	Type of connector (automation product end)	Physical link (XBT GT terminal end)	Length	Reference	Weight kg
Adaptor for XBT GT1●●● (COM1 port) **XBT GT2●●0...7340/ XBT GK** (COM2 port)	25-way SUB-D connector	RJ45 connector	0.2 m	**XBT ZG939**	–
Adaptors for XBT GT2●●0...7340/ XBT GK (COM1 port) **XBT GTW** (COM1 and COM2 port)	25-way SUB-D connector	9-way SUB-D connector, RS 485	0.2 m	**XBT ZG909**	–
		9-way SUB-D connector, RS 232C	0.2 m	**XBT ZG919**	–

XBT ZGI485

Description	Use	Link to be isolated	Reference	Weight kg
Serial link isolation units for XBT GT2●●0...7340/ XBT GK	- Connection to serial port on XBT terminal - Isolated link on 9-way SUB-D connector - Unit power supply via the USB port on the terminal. Incorporates a USB port expander	RS 232C/RS 485 (COM1)	**XBT ZGI232**	–
		RS 485 (COM2)	**XBT ZGI485**	–

(1) Cable included, depending on model, in Vijeo Designer software packages (see page 3/17).
(2) Parallel printer (see page 1/29).
(3) Male connector with **XBT ZGI232**, *female connector with* **XBT ZGI485**

Operator dialogue terminals
Separate parts for Magelis XBT GT/GK/GTW Advanced Panels

TSX PCX 1031

Cables for connecting XBT GT to Schneider Electric products

Type of automation product	Type of connector (automation product end)	Protocol	Type of XBT terminal, physical link	On XBT port	Length	Reference	Weight kg
Twido, Nano, Modicon TSX Micro, Modicon Premium	Terminal port, 8-way female mini-DIN	Uni-TE (V1/V2), Modbus	XBT GT1●●●, RS 485	COM1	2.5 m	**XBT Z9780**	0.180
			XBT GT2●●0...7340, XBT GK, RS 485	COM2	10 m	**XBT Z9782**	–
			XBT GT2●●0...7340, XBT GK, RS 485	COM1	2.5 m	**XBT Z968 +** *(2)*	0.180
					5 m	**XBT Z9681 +** *(2)*	0.340
			XBT GT2●●0...7340, XBT GK, RS 485	COM1	2.5 m	**XBT Z9018**	0.170
			XBT GTW●● , RS 232	COM1	2.5 m	**TSX PCX 1031**	–
Modicon M340	RJ45	Modbus	XBT GT1●●●, RS 485	COM1	2.5 m	**XBT Z9980**	0.230
			XBT GT2●●0...7340, XBT GK, RS 485	COM2	10 m	**XBT Z9982**	–
			XBT GT2●●0...7340, XBT GK, RS 485	COM1	1.8 m	**XBT Z938 +** *(2)*	0.230
					2.5 m	**XBT Z9008**	–
	USB	Terminal port	XBT GT *(4)* XBT GK/GTW	USB	1.8 m	**BMX XCA USB H018**	0.230
Modicon Premium with TSX SCY 2160●	25-way female SUB-D	Uni-TE (V1/V2)	XBT GT1●●●, RS 485	COM1	2.5 m	**XBT Z918 +** *(1)*	0.230
			XBT GT2●●0...7340, XBT GK, RS 485	COM1	2.5 m	**XBT Z918 +** *(2)*	0.230
Modicon Quantum	9-way male SUB-D	Modbus	XBT GT1●●●, RS 232C	COM1	2.5 m	**XBT Z9710 +** *(1)*	0.210
			XBT GT2●●0...7340, XBT GK/GTW, RS 232C	COM1	2.5 m	**XBT Z9710 +** *(3)*	0.210
					3.7 m	**990 NAA 263 20**	0.290
Advantys STB	HE13 (network interface module, NIM)	Modbus	XBT GT1●●●, RS 232C	COM1	2.5 m	**XBT Z988 +** *(1)*	0.220
						XBT Z9715	–
			XBT GT2●●0...7340, XBT GK/GTW, RS 232C	COM1	2 m	**STB XCA 4002**	0.210
					2.5 m	**XBT Z988 +** *(3)*	0.220
Modicon Momentum M1	RJ45 (port 1 on Momentum M1)	Modbus	XBT GT1●●●, RS 232C	COM1	2.5 m	**XBT Z9711 +** *(1)*	0.210
			XBT GT2●●0...7340, XBT GK, XBT GTW RS 232C	COM1	2.5 m	**XBT Z9711 +** *(3)*	0.210
TeSys U, T starters ATV 31/61/71 speed drives ATS 48 starters LEXIUM O5 Preventa XPSMC	RJ45	Modbus	XBT GT1●●●, RS 485	COM1	3 m	**VW3 A8 306 R30**	0.060
					2.5 m	**XBT Z9980**	–
			XBT GT2●●0...7340, XBT GK, RS 485	COM2	10 m	**XBT Z9982**	–
			XBT GT2●●0...7340, XBT GK, RS 485	COM1	2.5 m	**XBT Z9008**	–

(1) Adaptor **XBT ZG939** *to be used with cables with " + (1) " after the reference.*
(2) Adaptor **XBT ZG909** *to be used with cables with " + (2) " after the reference.*
(3) Adaptor **XBT ZG919** *to be used with cables with " + (3) " after the reference.*
(4) Except XBT GT1●●0.

Operator dialogue terminals
Separate parts for Magelis XBT GT/GK/GTW Advanced Panels

XBT ZG9772

XBT ZG9731

Cables and adaptors for connecting XBT GT terminals to third party PLCs

Mitsubishi, Melsec PLCs

Description *Driver used*	Type of XBT terminal	Type of connectors (fitted to cable, excluding adaptor)	Physical link (COM1)	Length	Reference	Weight kg
Connection cable, ***A CPU (SIO)***	GT2●●0...7340/ GK	9-way SUB-D/25-way SUB-D	RS 422	5 m	**XBT ZG9773**	–
Connection cable, ***Q Link (SIO)***	GT2●●0...7340 /GK/GTW	9-way SUB-D/9-way SUB-D	RS 232C	5 m	**XBT ZG9772**	–
Connection cable, ***Q CPU (SIO)***	GT2●●0...7340 /GK/GTW	9-way SUB-D/mini-DIN	RS 232C	5 m	**XBT ZG9774**	–
Connection cable, ***A Link (SIO)***	GT2●●0...7340 /GK/GTW	9-way SUB-D/25-way SUB-D	RS 232C	5 m	**XBT ZG9731**	–
Connection cable, ***FX (CPU)***	GT2●●0...7340 /GK	9-way SUB-D/mini-DIN	RS 422	5 m	**XBT ZG9775**	–
	GT1●●●	25-way SUB-D/mini-DIN	RS 422	5 m	**XBT Z980 +** *(1)*	
Cable for 2 port adaptor, ***FX (CPU),*** ***A CPU (SIO)*** ***QnA CPU (SIO)***	GT2●●0...7340 /GK	9-way SUB-D/flying leads	RS 422	5 m	**XBT ZG9778 +** *(4)*	–
Adaptor unit ***FX (CPU),*** ***A CPU (SIO)*** ***QnA CPU (SIO)***	GT2●●0...7340 /GK	2 port unit Screw terminal block/2 x 9-way SUB-D	RS 422	–	**XBT ZG979**	–

Omron, Sysmac PLCs

Description *Driver used*	Type of XBT terminal	Type of connectors (fitted to cable, excluding adaptor)	Physical link (COM1)	Length	Reference	Weight kg
Connection cables, ***Link (SIO)***	GT1●●●	25-way SUB-D/9-way SUB-D	RS 232C	2.5 m	**XBT Z9740 +** *(1)*	0.210
					XBT Z9743	–
	GT2●●0...7340 /GK/GTW	9-way SUB-D/9-way SUB-D	RS 232C	5 m	**XBT ZG9740**	–
		9-way SUB-D/25-way SUB-D	RS 232C	5 m	**XBT ZG 9731**	–
Connection cables ***FINS (SIO)***	GT1●●●	25-way SUB-D/9-way SUB-D	RS 232C	2.5 m	**XBT Z9740 +** *(1)*	0.210
					XBT Z9743	–
	GT2●●0...7340 /GK/GTW	9-way SUB-D/9-way SUB-D	RS 232C	5 m	**XBT ZG9740**	–

(1) Adaptor **XBT ZG939** *to be used with cables with " + (1) " after the reference, (see page 1/50.*

(4) Cable **XBT ZG9778** *to be used in conjunction with 9-way female/female SUB-D adaptor* **XBT ZGCOM1**.

Operator dialogue terminals
Separate parts for Magelis XBT GT/GK/GTW Advanced Panels

XBT ZG9731

Cables and adaptors for connecting XBT GT terminals to third party PLCs (continued)

Rockwell, Allen-Bradley PLCs

Description *Driver used*	Type of XBT terminal	Type of connectors (fitted to cable, excluding adaptor)	Physical link (COM1)	Length	Reference	Weight kg
Connection cables, ***DF1 Full Duplex***	GT1●●●	25-way SUB-D/9-way SUB-D	RS 232C	2.5 m	**XBT Z9730 +** *(1)*	0.210
					XBT Z9733	–
		25-way SUB-D/8-way mini-DIN	RS 232C	2.5 m	**XBT Z9731 +** *(1)*	0.210
	GT2●●0...7340 /GK/GTW	9-way SUB-D/25-way SUB-D	RS 232C	5 m	**XBT ZG 9731**	–
Connection cables, ***DH485***	GT1●●●	25-way SUB-D/9-way SUB-D	RS 232C	2.5 m	**XBT Z9734**	–
		25-way SUB-D/8-way mini-DIN	RS 485	5 m	**XBT Z9732 +** *(1)*	–
	GT2●●0...7340 /GK	25-way SUB-D/8-way mini-DIN	RS 485	5 m	**XBT Z9732 +** *(2)*	–

Siemens, Simatic PLCs

Description *Driver used*	Type of XBT terminal	Type of connectors (fitted to cable, excluding adaptor)	Physical link	Length	Reference	Weight kg
Connection cable, ***PPI, S7 200***	GT1●●●	RJ45/9-way SUB-D	RS 485 (COM1)	2.5 m	**XBT ZG9721**	–
	GT2●●0...7340 /GK	RJ45/9-way SUB-D	RS 485 (COM2)			
Connection cables, ***MPI port, S7 300/400***	GT2●●0...7340 /GK/GTW	9-way SUB-D/9-way SUB-D	RS 232C (COM1)	3 m	**XBT ZG9292**	–
	GT2●●0...7340 /GK	RJ45/flying leads	RS 485 *(4)* (COM2)	3 m	**VW3 A8 306 D30**	0.150
		RJ45/9-way SUB-D	RS 485 *(4)* (COM2)	2.5 m	**XBT ZG9721**	–

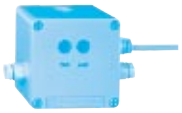
Customizable cables

Description *Driver used*	Type of XBT terminal	Type of connectors (fitted to cable, excluding adaptor)	Physical link	Length	Reference	Weight kg
Universal cable, RS 422	GT2●●0...7340 /GK	9-way SUB-D/flying leads	RS 422 (COM1)	2.5 m	**XBT ZG9722**	0.210
Universal adaptor, RS 422/485	GT2●●0...7340 /GK	9-way SUB-D/Screw terminal block	RS 422 (COM1)	–	**XBT ZG949 +** *(5)*	–
		9-way SUB-D/Screw terminal block	RS 485 (COM2)	–	**XBT ZG949 +** *(6)*	–

(1) Adaptor **XBT ZG939** *to be used with cables with " + (1) " after the reference, see page 1/50.*
(2) Adaptor **XBT ZG909** *to be used with cables with " + (2) " after the reference, see page 1/50.*
(4) Non-isolated RS 485 serial link, 12 Mbps (187.5 kbps with **XBT GT11●0/2110***).*
(5) Cable to be created by user and used in conjunction with 9-way female/female SUB-D adaptor **XBT ZGCOM1***.*
(6) Cable to be created by user and used in conjunction with isolation unit **XBT ZGI485** *and 9-way male/female SUB-D adaptor* **XBT ZGCOM2***.*

Operator dialogue terminals
Separate parts for Magelis XBT GT/GK/GTW Advanced Panels


TSX SCA 62


TSX P ACC 01


TSX SCA 64


LU9 GC3


VW3 A8 306 TF10


TWDXCAISO


ABL 7RM240●


ABL 7RM240●

Connecting XBT terminals via serial links and Ethernet network

Type of bus/ network	Tap-off unit	Connector (tap-off unit end)	Type of XBT terminal	Length	Reference	Weight kg
Uni-Telway serial link	Subscriber socket **TSX SCA 62**	15-way female SUB-D	GT1●●● (COM1)	3 m	**VW3 A8 306**	0.150
			GT2●●0...7340/GK (COM2)			
			GT2●●0...7340/GK (COM1)	1.8 m	**XBT Z908 +** *(2)*	0.240
	Connection box **TSX P ACC01**	8-way female mini-DIN	GT1●●● (COM1)	2.5 m	**XBT Z9780**	0.180
			GT2●●0...7340/GK (COM2)			
			GT2●●0...7340/GK (COM1)	2.5 m	**XBT Z9018**	–
Modbus serial link	Subscriber socket **TSX SCA 64**	15-way female SUB-D	GT1●●● (COM1)	3 m	**VW3 A8 306**	0.150
			GT2●●0...7340/GK (COM2)			
			GT2●●0...7340/GK (COM1)	1.8 m	**XBT Z908 +** *(2)*	0.240
	8 port Modbus splitter box **LU9 GC3** 2 port tap **TWDXCAISO** **TWDXCAT3RJ**	RJ45	GT1●●● (COM1)	3 m	**VW3 A8 306R30**	0.060
				2.5 m	**XBT Z9980**	–
			GT2●●0...7340/GK (COM1)	2.5 m	**XBT Z9008**	–
	T-connector	With integrated cable, with RJ45	GT1●●● (COM1)	1 m	**VW3 A8 306 TF10**	–
			GT2●●0...7340/GK (COM2)			
Ethernet TCP/IP network	Hubs 499 NEH/NOH Switches 499 NES, 499 NMS, 499 NSS and 499 NOS	RJ45	GT●●30/●●40 GK●●30 GTW●●●	2 m	**490 NTW 000 02**	–
				5 m	**490 NTW 000 05**	–
				12 m	**490 NTW 000 12**	–
				40 m	**490 NTW 000 40**	–
				80 m	**490 NTW 000 80**	–

Connecting XBT terminals to fieldbuses

Type of bus/ network	Connection components	Type of XBT terminal	Reference	Weight kg
FIPWAY, FIPIO	USB gateway	XBT GT/GK *(3)*	**TSXCUSBFIP**	–
Modbus Plus	USB gateway	XBT GT/GK *(3)* XBT GTW	**XBTZGUMP** **TSXCUSBMBP**	–
Profibus DP	Card on bus expansion	XBT GT/GK *(3)*	**XBTZGPDP**	–
Device Net	Card on bus expansion	XBT GT/GK *(3)*	**XBTZGDVN**	–

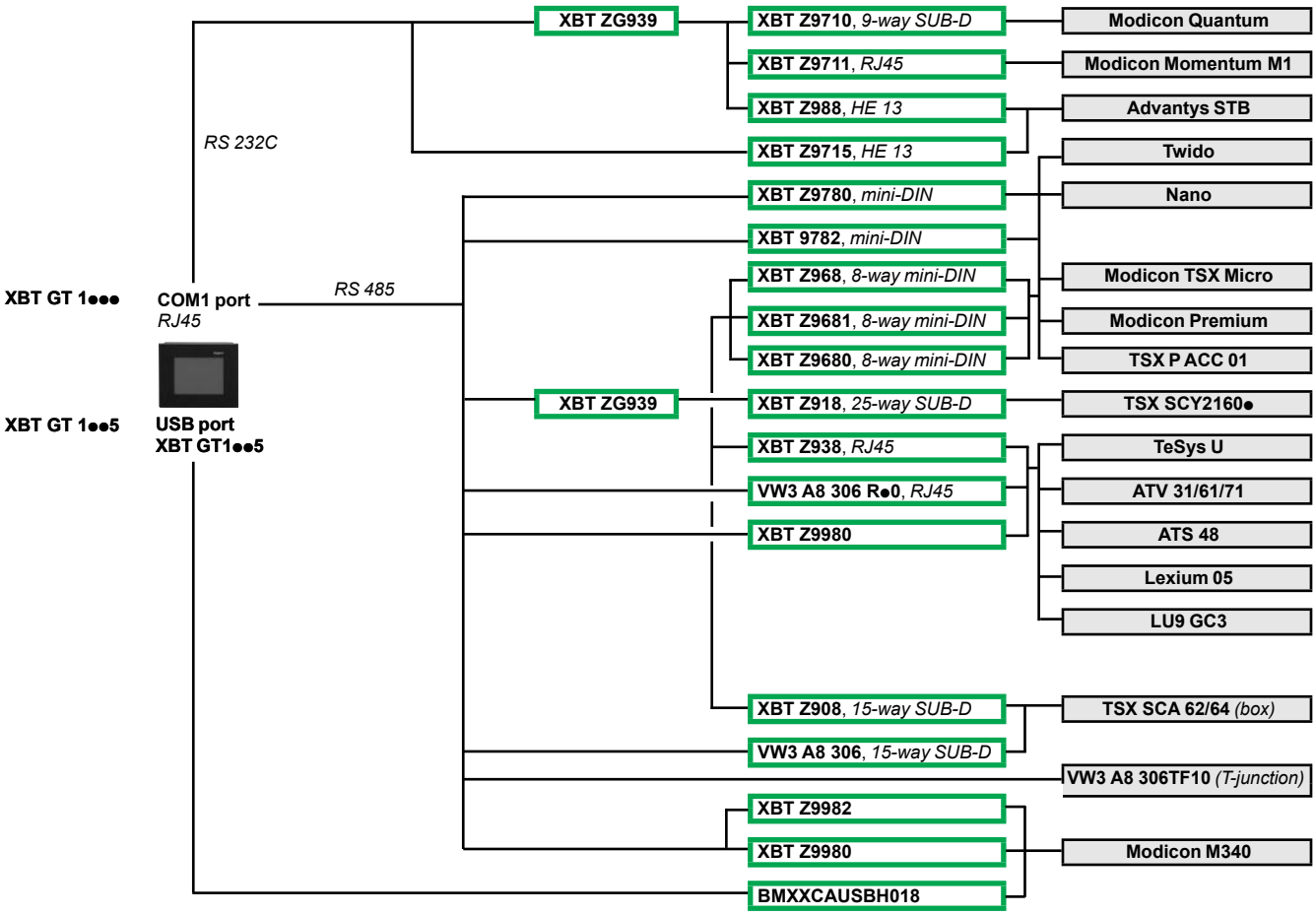
Modular regulated switch mode power supplies ABL 7RM *(4)*

Input voltage/ output voltage	Use with XBT	Nominal power	Nominal current	Reference	Weight kg
100...240/24 V single phase wide range mains supply 47...63 Hz	GT1100...6340 /GK	30 W	1.3 A	**ABL 7RM2401**	0.182
	GT7340/GTW	60 W	2.5 A	**ABL 7RM24025**	0.255

(2) Adaptor **XBT ZG909** *to be used with cables with " + (2) " after the reference, see page 1/50.*
(3) Except XBT GT1●●●.
(4) Dimensions: H x W x D = 90 x 72 x 59 mm. For further information, please consult our "Power supplies, splitter boxes and interfaces" catalogue.

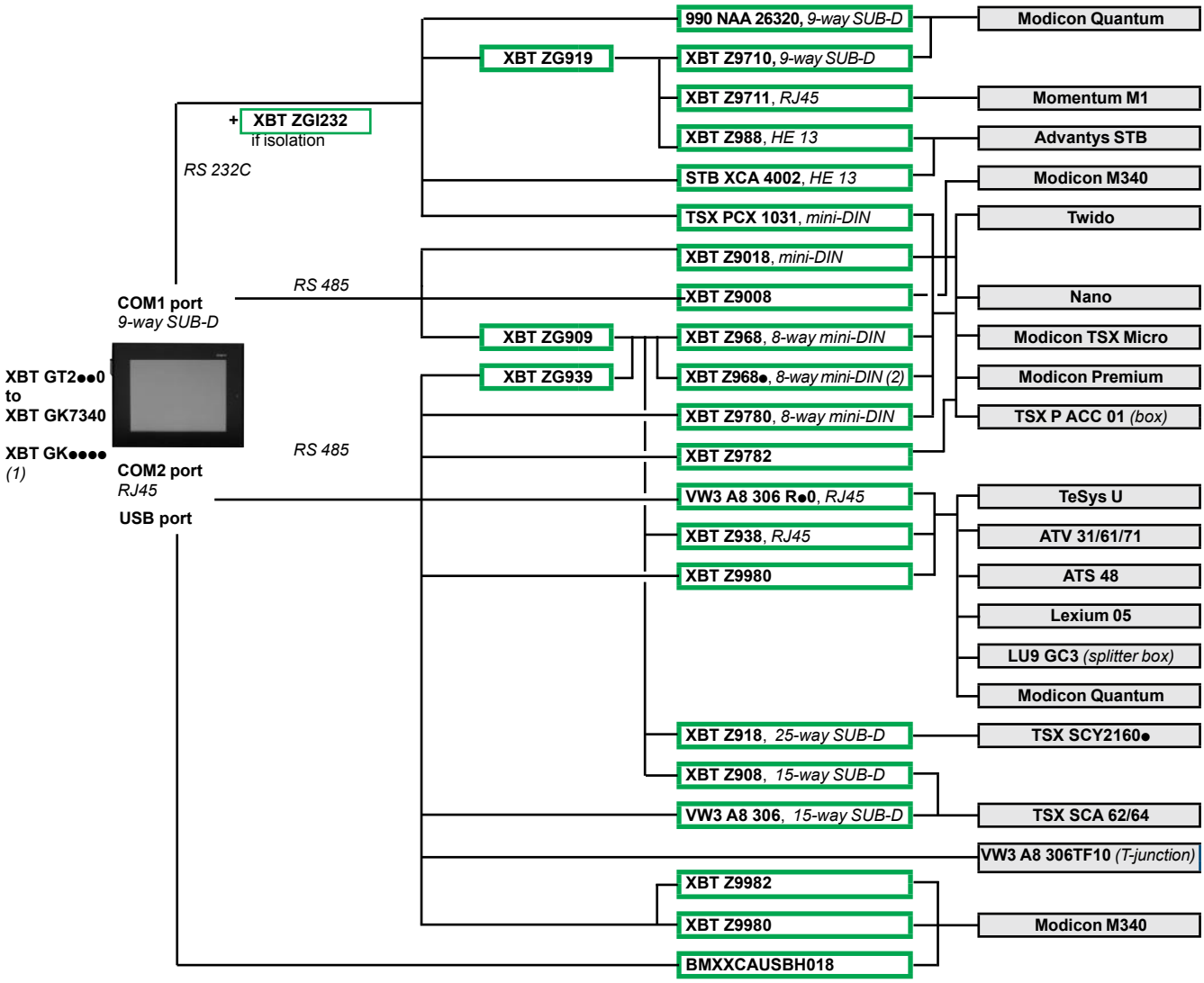
Operator dialogue terminals
Advanced Panels
Wiring system

XBT GT11●5 terminals and Schneider Electric products



Operator dialogue terminals
Advanced Panels
Wiring system

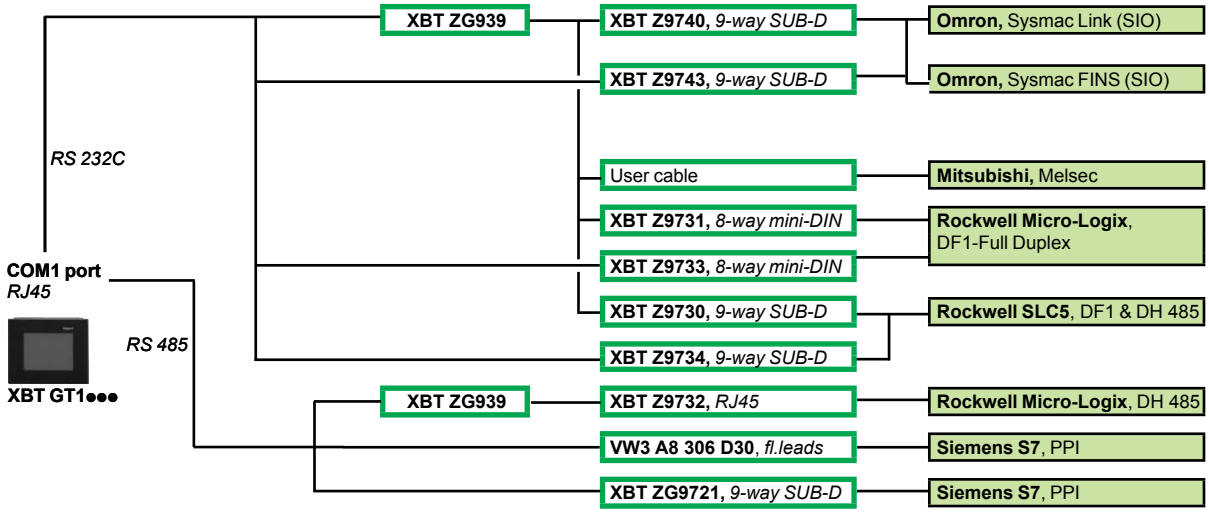
XBT GT2●●0/GT7340/GK●●●● terminals and Schneider Electric products



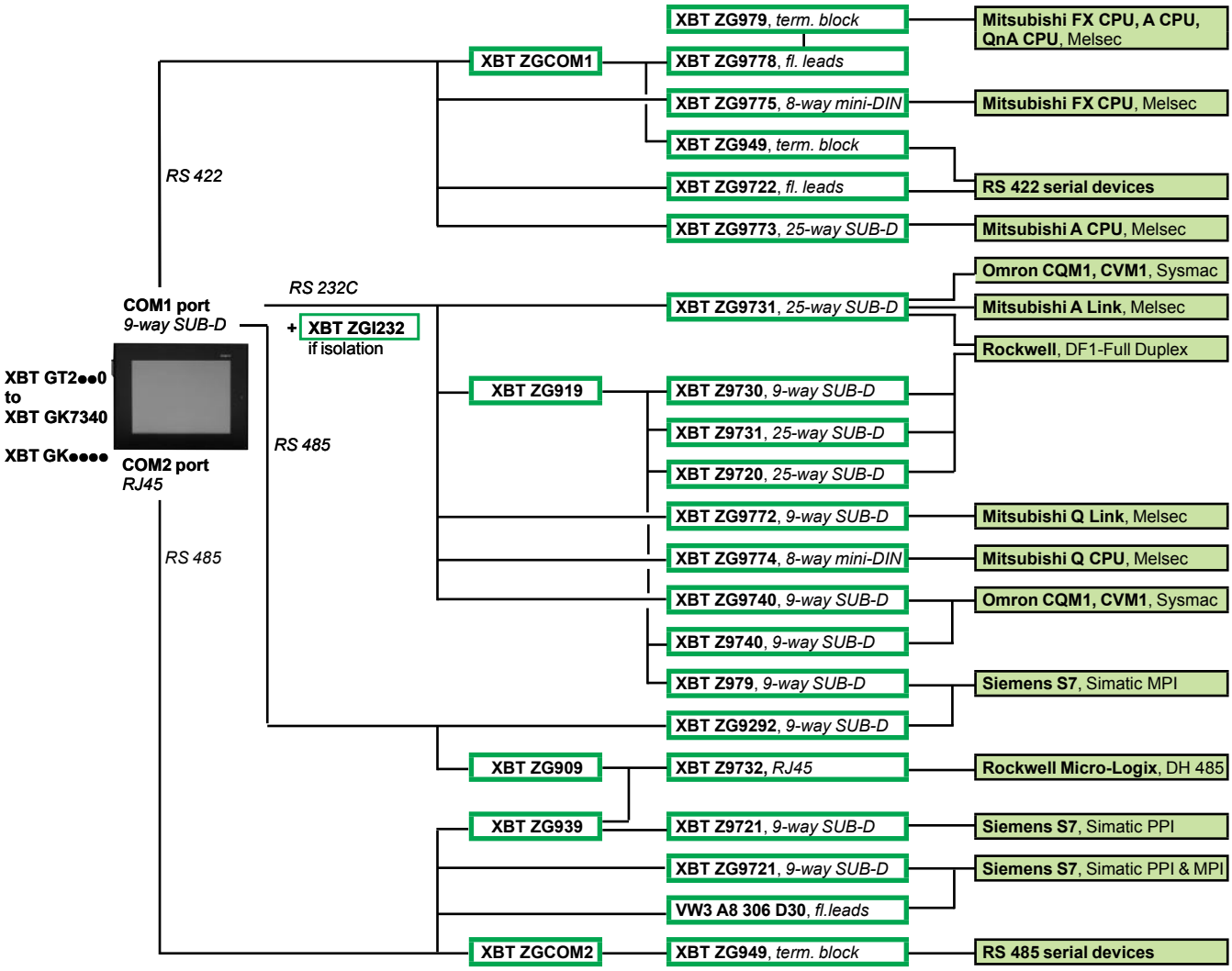
(1) XBT GK USB port only
(2) ● defines the length:
- **0**, *length 2.5 m (angled version)*
- **1**, *length 5 m*
- **6**, *length 16 m*
- **7**, *length 20 m*
- **8**, *length 25 m*

Operator dialogue terminals
Advanced Panels
Wiring system

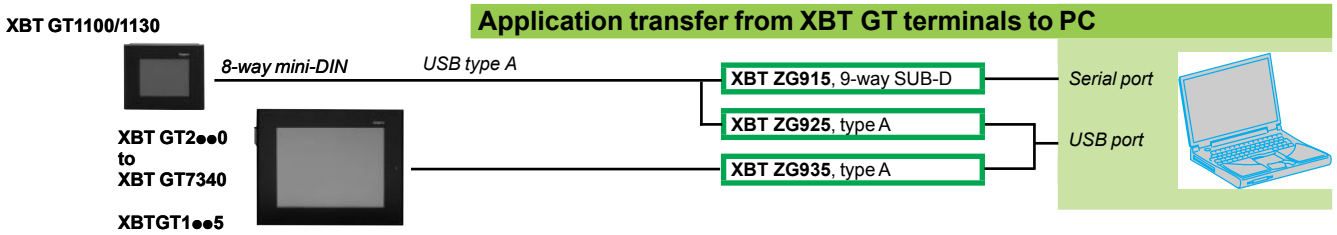
XBT GT11●5 terminals and third party PLCs



XBT GT2●●0/GT7340/GK●●●● terminals and third party PLCs



Application transfer from XBT GT terminals to PC



Operator dialogue terminals
Magelis Advanced Panels
Equivalent product tables for XBT F, XBT FC/GT and XBT F/GK

Equivalent product table - XBT F 5” colour touch screen terminals to XBT GT terminals

Old range XBT F	New range XBT GT	Mechanical adaptor
XBT F032110	XBT GT2220	XBT ZGC01
XBT F032310	XBT GT2220	XBT ZGC01

Equivalent product table - XBT F 10” colour touch screen terminals to XBT GT terminals

Old range XBT F	New range XBT GT	Mechanical adaptor
XBT F034310	XBT GT5330	XBT ZGC02
XBT F034110	XBT GT5330	XBT ZGC03
XBT F034510	XBT GT5330	XBT ZGC03
XBT F034610	XBT GT5330	XBT ZGC03

Equivalent product table - XBT FC 5” terminals to XBT GT terminals

Old range XBT FC	New range XBT GT	Mechanical adaptor
XBT FC022310	XBT GT2220	XBT ZGC01

Equivalent product table - XBT FC 10” terminals to XBT GT terminals

Old range XBT FC	New range XBT GT	Mechanical adaptor
XBT FC044310	XBT GT5330	XBT ZGC03
XBT FC044510	XBT GT5330	XBT ZGC03
XBT FC044610	XBT GT5330	XBT ZGC03
XBT FC064310	XBT GT5330	XBT ZGC03
XBT FC064510	XBT GT5330	XBT ZGC03
XBT FC064610	XBT GT5330	XBT ZGC03
XBT FC084310	XBT GT5330	XBT ZGC03
XBT FC084510	XBT GT5330	XBT ZGC03
XBT FC084610	XBT GT5330	XBT ZGC03

Equivalent product table for Magelis XBT F/XBT GK

Equivalent product table - XBT F 5” and 10” colour keypad terminals to XBT GK terminals

Old range XBT FC	New range XBT GT	Mechanical adaptor
XBT F011110	XBT GK2330/GK2120	–
XBT F011310	XBT GK2330/GK2120	–
XBT F023110	XBT GK2120	–
XBT F023310	XBT GK2120	–
XBT F024110	XBT GK5330	–
XBT F024510	XBT GK5330	–
XBT F024610	XBT GK5330	–

The dimensions of the products are identical.

Operator dialogue terminals
Magelis Advanced Panels
Equivalent product tables for Magelis XBT G/XBT GT

XBT GT5330

XBT ZGCO4

Equivalent product table - XBT G terminals to XBT GT terminals

Old range XBT G	New range XBT GT *Requires* *Vijeo Designer ≥ V4.3*	Mechanical adaptor *(1)*
XBT G2110	**XBT GT2110**	**XBT ZGCO2**
XBT G2120	**XBT GT2120**	**–**
XBT G2130	**XBT GT2130**	**–**
XBT G2220	**XBT GT2220**	**–**
XBT G2330	**XBT GT2330**	**–**
XBT G4320	**XBT GT4330**	**–**
XBT G4330	**XBT GT4330**	**–**
XBT G5230	**XBT GT5230**	**–**
XBT G5330	**XBT GT5330**	**XBT ZGCO4**
XBT G6330	**XBT GT6330**	**–**
XBT ZG MBP	**XBT ZG UMP**	Modbus Plus network connection

Equivalent product table - cables for connection to Schneider Electric PLCs

Summary

Old range XBT G	New range XBT GT2●●0...GT6330	
Type of link	**Type of link**	**Cable + adaptor reference**
COM1, RS 232C, 25-way SUB-D	COM1, RS232C, 9-way SUB-D	**Existing cable + XBT ZG919**
	COM2, RS485, RJ45	**Existing cable + RS 485/RS 232C converter + XBT ZG939**
COM1, RS 485, 25-way SUB-D	COM1, RS485, 9-way SUB-D	**Existing cable + XBT ZG909**
	COM2, RS485, RJ45	**Existing cable + XBT ZG939**
COM2, RS 232C, 9-way SUB-D	COM1, RS232C, 9-way SUB-D	**Existing cable**
	COM2, RS485, RJ45	**Existing cable + RS 485/RS 232C converter + XBT ZG939**

Equivalent product table - cables

Old range XBT G2●●0...G6330				New range XBT GT2●●0...GT6330			
Type of terminal	**Type of link**	**Length**	**Reference**	**Type of terminal**	**Type of link**	**Length**	**New reference Cable + adaptor**
Twido, Modicon TSX Micro, Modicon Premium, 8-way female mini-DIN terminal port, Uni-TE (V1/V2), Modbus protocol							
XBT G	COM1, RS 485 25-way SUB-D	2.5 m	**XBT Z968**	XBT GT	COM1, RS 485 9-way SUB-D	2.5 m	**XBT Z968 + XBT ZG909**
		5 m	**XBT Z9681**			5 m	**XBT Z9681 + XBT ZG909**
XBT G	COM2, RS 232C 9-way SUB-D	2.5 m	**TSX PCX 1031**	XBT GT	COM1, RS 232C 9-way SUB-D	2.5 m	**TSX PCX 1031**
				XBT GT	COM2, RS 485 RJ45	2.5 m	**XBT Z9780**
Modicon Premium with TSX SCY 2160●, 25-way female SUB-D connector, Uni-TE (V1/V2) protocol							
XBT G	COM1, RS 485 25-way SUB-D	2.5 m	**XBT Z918**	XBT GT	COM1, RS 485 9-way SUB-D	2.5 m	**XBT Z918 + XBT ZG909**
Modicon Quantum, 9-way male SUB-D connector, Modbus protocol							
XBT G	COM1, RS 232C 25-way SUB-D	2.5 m	**XBT Z9710**	XBT GT	COM1, RS 232C 9-way SUB-D	2.5 m	**XBT Z9710 + XBT ZG919**
						3.7 m	**990 NAA 26320**
Advantys STB, HE13 connector (network interface module, NIM), Modbus protocol							
XBT G	COM2, RS 232C 9-way SUB-D	2 m	**STB XCA 4002**	XBT GT	COM1, RS 232C 9-way SUB-D	2 m	**STB XCA 4002**
Modicon Momentum M1, RJ45 connector (port 1), Modbus protocol							
XBT G	COM1, RS 232C 25-way SUB-D	2.5 m	**XBT Z9711**	XBT GT	COM1, RS 232C 9-way SUB-D	2.5 m	**XBT Z9711 + XBT ZG919**
TeSys U starters, ATV 31/61/71 drives, ATS 48 starters, RJ45 connector, Modbus protocol							
XBT G	COM1, RS 485 25-way SUB-D	2.5 m	**XBT Z938**	XBT GT	COM1, RS 485 9-way SUB-D	2.5 m	**XBT Z938 + XBT Z909**
				XBT GT	COM2, RS 485 RJ45	3 m	**VW3 A8 306 R30**

(1) Mechanical adaptor for mounting XBT GT terminal in place of the substituted XBT G terminal.

Operator dialogue terminals
Magelis Advanced Panels
Equivalent product tables for Magelis XBT G/XBT GT

Equivalent product table - cables for application transfer to PC and printer cables

Old range XBT G2●●0...G6330				New range XBT GT2●●0...GT6330			
Type of terminal	**Type of link**	**Length**	**Reference**	**Type of terminal**	**Type of link**	**Length**	**New reference**
Cables for application transfer to PC							
XBT G	Mini-DIN/9-way SUB-D	2 m	**XBT ZG915**	XBT GT	USB/USB	2 m	**XBT ZG935**
	Mini-DIN/USB	2 m	**XBT ZG925**				
Serial printer cable							
XBT G	COM2, RS 232C	2.5 m	**XBT Z915**	XBT GT	COM1, RS232C	2.5 m	**XBT Z915**
Parallel printer cable							
XBT G	Centronics, Epson ESC/P		**XBT ZG946**	XBT GT	USB, Hewlett Packard model		Connection via USB/PIO converter *(not supplied by Schneider Electric)*
					Centronics, Epson ESC/P	2 m	**XBT Z925**
							XBT Z935

Equivalent product table - cables for connection to third party PLCs

Mitsubishi Melsec PLCs

Old range XBT G2●●0...G6330					New range XBT GT2●●0...GT6330				
Type of terminal	**Type of connectors**	**Physical link**	**Length**	**Substituted reference**	**Type of terminal**	**Type of connectors**	**Physical link**	**Length**	**New reference + adaptor**
Q Link (SIO) protocol									
XBT G	25-way SUB-D/ 9-way SUB-D	COM1, RS 232C	3 m	**XBT ZG9771**	XBT GT	9-way SUB-D/ 9-way SUB-D	COM1, RS 232C	5 m	**XBT ZG9772**
A Link (SIO) protocol									
XBT G	25-way SUB-D/ 25-way SUB-D	COM1, RS 232C	5 m	**XBT ZG973**	XBT GT	9-way SUB-D/ 25-way SUB-D	COM,1 RS 232C	5 m	**XBT ZG9731**
	25-way SUB-D/ 9-way SUB-D	COM1, RS 232C	3 m	**XBT ZG9771**					
Q FX (CPU) protocol									
XBT G	25-way SUB-D/ 25-way SUB-D	COM1, RS 422	5 m	**XBT ZG9770**	XBT GT	9-way SUB-D/ mini-DIN	COM1, RS 422	5 m	**XBT ZG9775**
2 port adaptor, FX (CPU), A CPU (SIO) and QnA CPU (SIO) protocols									
XBT G	25-way SUB-D/ flying leads	COM1, RS 422	5 m	**XBT ZG9777**	XBT GT	9-way SUB-D/flying leads	COM1, RS 422	5 m	**XBT ZG9778 + XBT ZGCOM1**
Adaptor unit, FX (CPU), A CPU (SIO) and QnA CPU (SIO) protocols									
XBT G	2 port unit Screw terminal block/ 2 x 9-way SUB-D	COM1, RS 422	–	**XBT ZG979**	XBT GT	2 port unit Screw terminal block/ 2 x 9-way SUB-D	COM1, RS 422	–	**XBT ZG979**
Adaptor unit, A Link (SIO) and Q Link (SIO) protocols									
XBT G	1 port unit Screw terminal block/ 1 x 25-way SUB-D	COM1, RS 422	–	**XBT ZG989**	XBT GT	–	–	–	**–**

References:
pages 1/46 to 1/50

Equivalent product table - cables for connection to third party PLCs (continued)

Omron, Sysmac PLCs

Old range XBT G2●●0...G6330					New range XBT GT2●●0...GT6330				
Type of terminal	**Type of connectors**	**Physical link**	**Length**	**Substituted reference**	**Type of terminal**	**Type of connectors**	**Physical link**	**Length**	**New reference**
Link (SIO) protocol									
XBT G	9-way SUB-D/ 9-way SUB-D	COM2, RS 232C	5 m	**XBT ZG9740**	XBT GT	9-way SUB-D/9-way SUB-D	COM1, RS 232C	5 m	**XBT ZG9740**
	25-way SUB-D/ 25-way SUB-D	COM1, RS 232C	5 m	**XBT ZG973**		9-way SUB-D/25-way SUB-D	COM1, RS 232C	5 m	**XBT ZG 9731**
FINS (SIO) protocol									
XBT G	25-way SUB-D/ 9-way SUB-D	COM1, RS 232C	2.5 m	**XBT Z9740**	XBT GT	9-way SUB-D/9-way SUB-D	COM1, RS 232C	5 m	**XBT ZG9740**

Rockwell, Allen-Bradley PLCs

Old range XBT G2●●0...G6330					New range XBT GT2●●0...GT6330				
Type of terminal	**Type of connectors**	**Physical link**	**Length**	**Substituted reference**	**Type of terminal**	**Type of connectors**	**Physical link**	**Length**	**New reference**
DF1 Full Duplex protocol									
XBT G	25-way SUB-D/ 25-way SUB-D	COM1, RS 232C	5 m	**XBT ZG973**	XBT GT	9-way SUB-D/25-way SUB-D	COM1, RS 232C	5 m	**XBT ZG 9731**

Siemens, Simatic PLCs

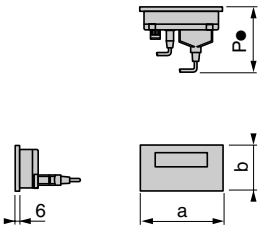
Old range XBT G2●●0...G6330					New range XBT GT2●●0...GT6330				
Type of terminal	**Type of connectors**	**Physical link**	**Length**	**Substituted reference**	**Type of terminal**	**Type of connectors**	**Physical link**	**Length**	**New reference**
MPI (S7-300/400) protocol									
XBT G	25-way SUB-D/ 9-way SUB-D	COM1, RS 232C	3 m	**XBT ZG929**	XBT GT	9-way SUB-D/9-way SUB-D	COM1, RS 232C	3 m	**XBT ZG9292**
						RJ45/9-way SUB-D	COM2, RS485	2.5 m	**XBT ZG9721**
Adaptor unit, RK512/3964F (S7-300/400) protocol									
XBT G	1 port unit Screw terminal block/1 x 25-way SUB-D	COM1, RS 422	3 m	**XBT ZG989**	XBT GT	–	–	–	**–**

References:
pages 1/46 to 1/53

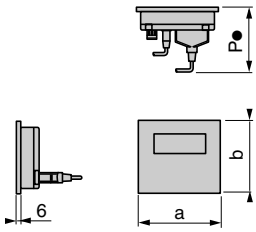
Operator dialogue terminals
XBT N/R/RT Small Panels

Dimensions

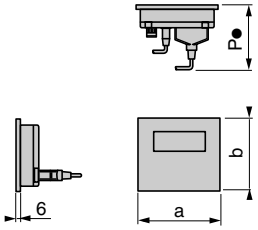
XBT N



XBT R



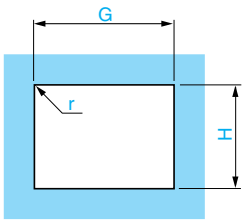
XBT RT



	a	a1 *(1)*	b	b1 *(1)*	P1 *(2)*	P2 *(3)*	P3 *(4)*	P4 *(5)*
XBT N200/N400	132	–	74	104	78	–	–	–
XBT N401/N410	132	–	74	104	–	–	58	104
XBT NU400	132	–	74	104	–	104	–	–
XBT R400	137	160	118	146	78	–	–	–
XBT R410/R411	137	160	118	146	–	–	58	104
XBT RT	137	160	118	146	79	104	58	104

(1) With fixing clips (supplied with the product).
(2) P1: depth with RJ45 cable **XBT Z9780** *(for Twido, TSX Micro and Premium).*
(3) P2: depth with 25-way SUB-D cable **XBT Z938** *(for TeSys model U and ATV 61/71 drives).*
(4) P3: depth with 25-way SUB-D angled cable **XBT Z9680** *(for Twido, TSX Micro and Premium) or XBT Z998 (for Advantys STB).*
(5) P4: depth with 25-way SUB-D cable **XBT Z68/Z9681** *(for Twido, TSX Micro and Premium).*

Mounting



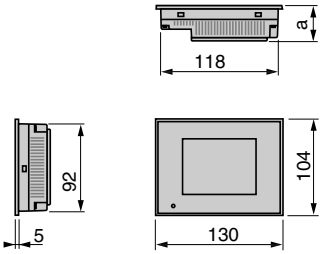
Panel thickness: 1.5…6 mm

Display units and terminals	Cut-out for flush mounting H (± 0.4 mm)	G (± 0.5 mm)	r
XBT N	63	119.4	1.5 max.
XBT R	105.2	119.6	1.5 max.
XBT RT	105.2	119.6	1.5 max.

XBT N/R/RT references:
page 1/46

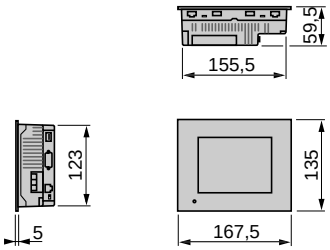
Dimensions

XBT GT1100/GT1130/GT1335

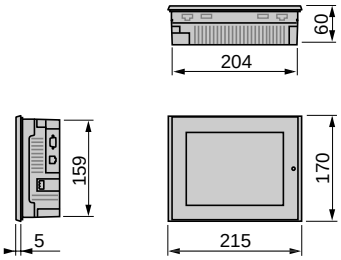


XBT GT1100/1130: a = 41
XBT GT1335: a = 40

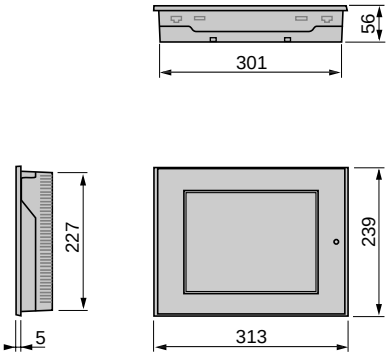
XBT GT2110
XBT GT2120/GT2130/GT2220/GT2330



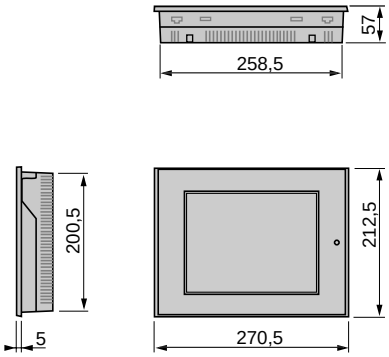
XBT GT4230/GT4330/GT4340



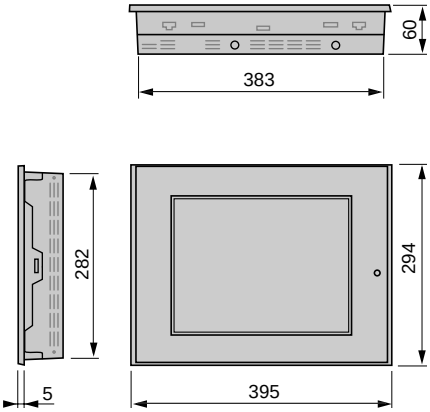
XBT GT5230 and XBT GT6330/GT6340



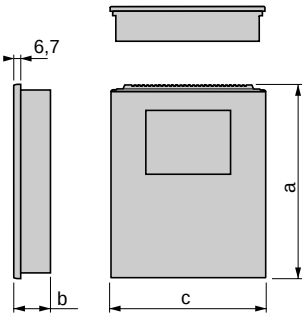
XBT GT5330/GT5340



XBT GT7340

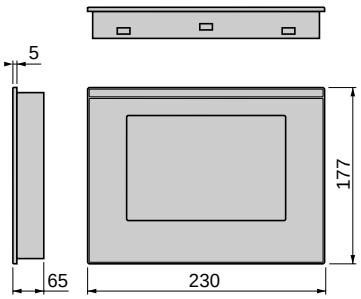


XBT GK2120/GK2330/GK5330

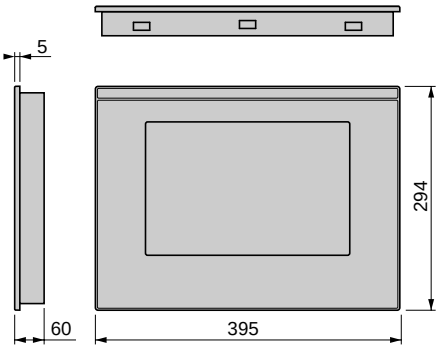


XBT GK2120/2330: a = 265, b = 60.3, c = 220.3
XBT GK5330: a = 332, b = 72.7, c = 296

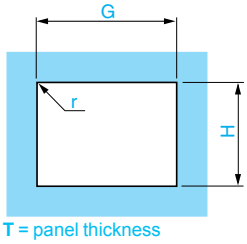
XBT GTW 450



XBT GTW 750



Mounting



T = panel thickness

Graphic terminals	Cut-out for flush mounting			
	H	G	r	T
XBT GT1100/GT1130/GT1335	92.5 (+ 1/- 0)	118 (+ 1/- 0)	3 max.	1.6...5
XBT GT2110/GT2120/GT2130/GT2220/GT2330	123.5 (+ 1/- 0)	156 (+ 1/- 0)	3 max.	1.6...5
XBT GT4230/GT4330/GT4340	159.5 (+ 1/- 0)	204.5 (+ 1/- 0)	3 max.	1.6...10
XBT GT5230/GT6330/GT6340	227.5 (+ 1/- 0)	301.5 (+ 1/- 0)	3 max.	1.6...10
XBT GT5330/GT5340	201 (+ 1/- 0)	259 (+ 1/- 0)	3 max.	1.6...10
XBT GT7340	282.5 (+ 1/- 0)	383.5 (+ 1/- 0)	3 max.	1.6...10
XBT GK2120/GK2330	243 (+/- 0.4)	209 (+/- 0.4)	3 max.	1.6...10
XBT GK5330	309 (+/- 0.4)	285 (+/- 0.4)	3 max.	1.6...10
XBT GTW 450	165.5 (+ 1/- 0)	218.5 (+ 1/- 0)	3 < r < 4	1.6...10
XBT GTW 750	282.5 (+ 1/- 0)	383.5 (+ 1/- 0)	3 < r < 4	1.6...10

XBT GT/GK/GTW references:
page 1/46 and 1/47

2 - Industrial PCs

Industrial PCs
Magelis Smart Embedded Panels
Magelis Compact *i*PC PC Panels

Applications		Embedded Panels		
				
Model		**Magelis Smart**		
8.4" screen SVGA (800 x 600)	Data entry via touch screen	●		
12" screen XGA (1024 x 768)	Data entry via touch screen			
12" screen SVGA (800 x 600)			●	
15" screen XGA (1024 x 768)	Data entry via touch screen			●

Model			Magelis Smart		
CPU	Processor		Intel Celeron M 600 MHz		
	Storage		Compact Flash 1 GB expandable up to 4 GB		
	RAM		256 MB expandable up to 1024 MB		
	DVD-ROM drive		–		
	Floppy disk drive		–		
	Slots available for expansion		–	1 x PCMCIA slot 1 x type III/type I	1 x PCMCIA slot 1 x type III or 2 x type I
	Ethernet TCP/IP network		2 RJ45 ports: 1 x 10/100/1000BASE-T 1 x 10/100BASE-T		
	I/O ports	On front panel	–	1 x USB 2.0	
		Other	4 x USB 2.0, 1 x COM1, 1 x COM2 1 x audio	4 x USB 2.0, 1 x COM1, 1 x audio, 1 x RAS	4 x USB 2.0, 1 x COM1, 1 x COM2, 1 x audio, 1 x RAS
	Operating system		Windows Embedded XPe SP2		
General purpose (hard disk)	Client edition	100 to 240 V ~			
		24 V ⎓			
	HMI edition, Vijeo Designer Run Time	100 to 240 V ~			
Heavy duty (Flash disk)	Client edition	100 to 240 V ~			
	HMI edition, Vijeo Designer Run Time	100 to 240 V ~			
Heavy duty (Compact Flash)	Client edition	100 to 240 V ~	**MPC ST1 1NAJ 00T**	**MPC ST2 1NAJ 10T**	**MPC ST5 2NAJ 20T**
		24 V ⎓	**MPC ST1 1NDJ 00T**		**MPC ST5 2NDJ 20T**
	HMI edition, Vijeo Designer Run Time	100 to 240 V ~	**MPC ST1 1NAJ 00H**	**MPC ST2 1NAJ 10R**	**MPC ST5 2NAJ 20H**
Pages			2/9		

Magelis Compact *i*PC		
●		
	●	
		●

Magelis Compact *i*PC		
Intel Celeron M 1 GHz	Intel Celeron M 1.3 GHz	Pentium M 1.6 GHz
Hard disk ≥ 80 GB or Flash disk 8 GB		80 GB min. hard disk or Flash disk 16 GB
512 MB expandable up to 1024 MB		512 MB expandable up to 2 GB
–	–	Yes
–	–	Yes
1 PCI bus slot	1 x PCI bus slot 1 x PCMCIA slot 1 x type III/type I	1 x PCI bus slot 1 x PCMCIA slot 1 x type III or 2 x type II
2 RJ45 ports: 1 x 10/100/1000BASE-T 1 x 10/100BASE-T		
–	1 x USB 2.0	
4 x USB 2.0, 1 x COM1, 1 x COM2, 1 x audio	4 x USB 2.0, 1 x COM1, 1 x audio, 1 x RAS	4 x USB 2.0, 1 x COM1, 1 x COM2, 1 x COM3, 1 x COM4, 3 x audio, 1 x RAS
Windows XP Pro		
MPC KT1 2NAX 00N	**MPC KT2 2NAX 00N**	**MPC KT5 5NAX 20N**
		MPC KT5 5NDX 20N
MPC KT1 2NAX 00H	**MPC KT2 2NAX 00R**	**MPC KT5 5NAX 20H**
MPC KT1 2SAX 00N	**MPC KT2 2SAX 00N**	**MPC KT5 5MAX 20N**
MPC KT1 2SAX 00H	**MPC KT2 2SAX 00H**	**MPC KT5 5MAX 20H**
2/19 and 2/20		

Industrial PCs
Magelis Smart Embedded Panels

Presentation

The Magelis Smart combines all the benefits of an industrial PC with those of an operator terminal for client applications developed under Windows.
Simple and user-friendly, it offers the flexibility of Windows XP embedded for standard client applications such as Internet Explorer, Outlook Express, Office readers, etc. As an operator terminal, the Magelis Smart is, of course, open to HMI Vijeo Designer applications as well as to SCADA client applications.

Complementing the Magelis Compact *i*PC and PC BOX ranges, this updated range of "all in one" products has been designed with the needs of machine manufacturers, systems integrators and users in mind: the products are compact, easy to install and set up, and open to Web technologies.

Given that Magelis Smart (and Compact *i*PC) industrial PCs have the same dimensions and screen size as Magelis XBT GT terminals and are also compatible with Vijeo Designer software, they should be regarded as the natural extension of these earlier terminals. They optimize flexibility for all user-interface applications, from the simplest to the most advanced.

Magelis Smart

Magelis Smart industrial PCs are built around an IP 65 front panel with an 8.4", 12" or 15" colour TFT LCD screen and a high-definition analog touch panel.
They have two built-in Ethernet TCP/IP ports:
- 1 x 10/100/1000BASE-T
- 1 x 10/100BASE-T

These two ports make the terminal perfectly suited for use with Transparent Ready architectures and equipment (combination of web and Ethernet TCP/IP technologies).

The Magelis Smart is available in two pre-installed software configurations, supplied on a 1-GB Compact Flash memory card.

■ **The Magelis Smart Client edition** makes it easy to display web pages, either locally or remotely. A ready-to-use Thin Client station, the Magelis Smart integrates the following software components:
- Internet Explorer browser and Outlook Express message client
- JVM (Java Virtual Machine)
- Windows Terminal Services Client for client/server architectures
- Office reader for access to device documentation (.pdf, .doc, .xls and .ppt documents)

These components can be used for the system diagnostics, visualization and control of Schneider Electric Transparent Ready products, as well as for access to FactoryCast services (see "Transparent Ready, embedded Web servers").

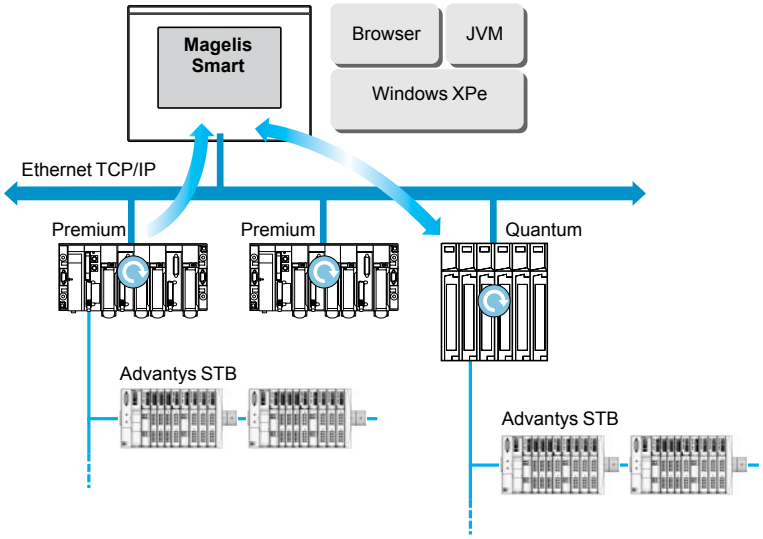
■ **Magelis Smart Edition HMI -** Vijeo Designer Run Time, as well as offering the same functions as the Client edition and the same readiness for use after initial startup, also features Vijeo Designer Run Time control software.

Built around Intel Celeron M 600 MHz processors and with an expandable 256 MB RAM, the Magelis Smart is based on standard Windows XPe SP2 technologies.
As well as built-in Ethernet TCP/IP ports, the Magelis Smart also has a PCMCIA card slot that can be used for network access (Modbus, Modus Plus, Fipway, etc.).
The Magelis Smart has particularly generous USB connectivity capabilities, featuring 4 or 5 *(1)* USB ports, depending on the model.
Ultra-slim (60 or 65 mm thick), the Magelis Smart benefits from increased durability thanks to the omission of vulnerable components (hard disk, fan, CD-ROM drive, etc.). Windows XPe and its component software tools are pre-loaded onto a ready-to-use Compact Flash memory.

(1) 4 + 1 on front panel

Typical architectures

Connections to Transparent Ready architectures



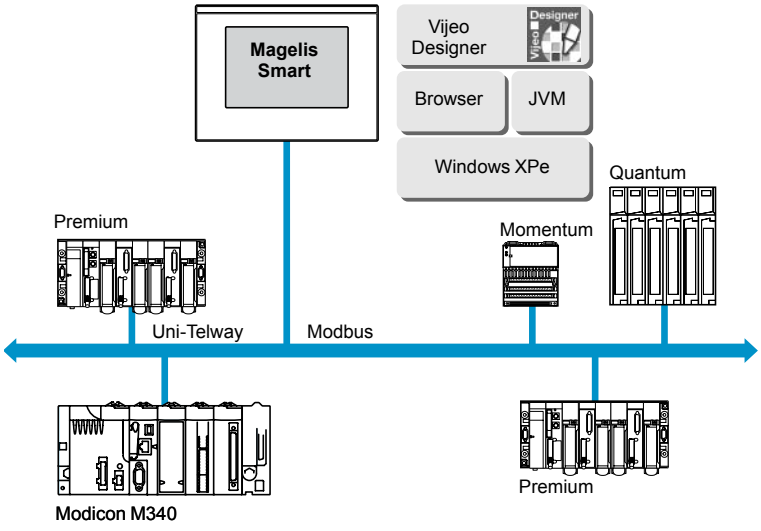
With its double integrated Ethernet port, the Magelis Smart can be integrated into "full Ethernet" architectures, such as Transparent Ready. Transparent Ready devices with this type of architecture open the way for transparent communication on the Ethernet TCP/IP network. Communication services and Web services enable data to be shared and distributed between levels 1, 2 and 3 of the Transparent Ready architecture.

Used as a client station, the Magelis Smart makes it easier to implement client solutions in relation to:
- Base servers embedded in field devices (Advantys STB/Momentum distributed I/O, ATV 71/38/58 starters, Ositrack identification systems, etc.)
- FactoryCast Web servers embedded in Modicon PLCs (TSX Micro, Premium and Quantum) or the FactoryCast gateway.

The following services are available as standard (without the need for additional programming): alarm management, mimic management and Web welcome pages created by users.
- FactoryCast HMI Web servers embedded in Modicon Premium and Quantum PLCs also provide basic data management services, automatic e-mail transmission triggered by specific process events, and arithmetic and logic calculations for data preprocessing.

The ready-to-use Magelis Smart PCs with references **MPC ST1 1N●J 00T**, **MPC ST2 1NAJ 10T** and **MPC ST5 2N●J 20T** (see page 2/9 can be operated as client stations without the addition of separate parts.

HMI applications in traditional architectures (Fipway, Modbus Plus)



The bundled offer comprising the Smart industrial PC and pre-installed Vijeo Designer control software allows them to be used in mono-network architectures such as Uni-Telway/Modbus or Fipway/Modbus Plus.
For Uni-Telway, an RS 485 TSX SCP 114 card *(1)* should be inserted into one of the PCMCIA slots.
For a Modbus link, one of the built-in COM RS 232C ports is used.
Fipway or Modbus Plus links require a network interface:
- Fipway network with a PCMCIA TSX FPP 20 *(1)* or TSX CUSB FIP *(1)* card.
- Modbus Plus network with a PCMCIA TSX MBP 100 card or a PCI 416 NHM 300 30 bus card

The built-in Ethernet TCP/IP port allows Modicon PLC stations to be connected to levels 2 and 3 of communication architectures, if required.
The ready-to-use Magelis Smart PCs with references **MPC ST1 1NAJ 00H**, **MPC ST2 1NAJ 10R** and **MPC ST5 2NAJ 20H** (see page 2/9) can be used with these HMI applications without the addition of separate parts.

(1) Requires the "X-Way drivers" CD-ROM, TLX CD DRV20M.

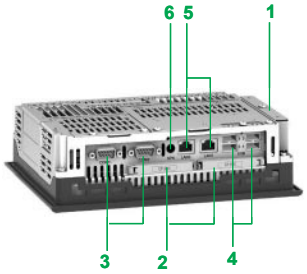
Industrial PCs
Magelis Smart Embedded Panels

Smart description

8.4" front panel with touch screen MPC ST1 1N●J 00●

The front panel with touch screen on the **MPC ST1 1N●J 00●** industrial PC comprises:

1 An 8.4" SVGA active-matrix colour TFT LCD screen (maximum display area 800 x 600 points) with high-definition analog touch panel
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two indicators labelled:
- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing Compact Flash memory, etc.)



Lower and left-hand sides, 8.4"

All expansion slots and connection elements are accessible from the rear of the PC, with the following elements located on the lower and left-hand sides:

1 A removable screw terminal block for connecting the 24 V ⎓ power supply
2 Access to the Compact Flash memory card containing the operating system and installed software
3 Two 9-way male SUB-D connectors marked COM1 and COM2 for the RS 232 serial link
4 4 USB 2.0 ports
5 2 RJ45 connectors for the Ethernet link:
- 1 x 10/100/1000 Mbps
- 1 x 10/100 Mbps

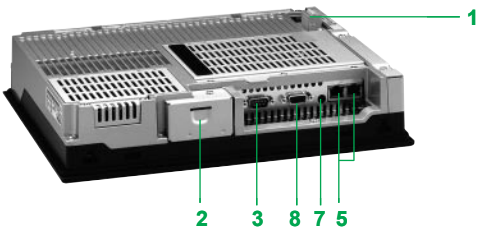
6 A mini-jack connector for a loudspeaker

12" front panel with touch screen MPC ST2 1NAJ 10●

The front panel with touch screen on the **MPC ST2 1NAJ 10●** industrial PC comprises:

1 A 12" SVGA active-matrix colour TFT LCD screen (maximum display area 800 x 600 points) with high-definition analog touch panel
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two indicators labelled:
- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing Compact Flash memory, etc.)

4 A dust and damp proof USB 2.0 port

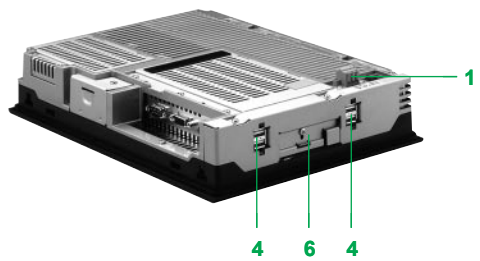


Lower and left-hand sides, 12"

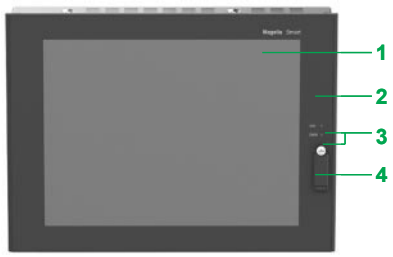
All expansion slots and connection elements are accessible from the rear of the PC, with the following elements located on the lower and left-hand sides:

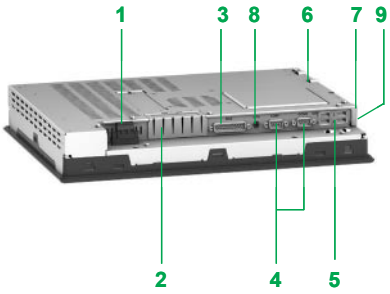
1 A removable screw terminal block for connecting the AC power supply
2 Access to the Compact Flash memory card containing the operating system and installed software
3 One 9-way male SUB-D connector marked COM1 for the RS 232 serial link
4 4 USB 2.0 ports
5 2 RJ45 connectors for the Ethernet link:
- 1 x 10/100/1000 Mbps
- 1 x 10/100 Mbps

6 A slot for 1 additional PCMCIA card
7 A mini-jack connector for a loudspeaker
8 An RAS connector



Presentation: page 2/4 | Architecture: page 2/5 | Characteristics: page 2/8 | References: pages 2/9 and 2/10 | Dimensions: page 2/11





15" front panel with touch screen MPC ST5 2N●J 20●

The front panel with touch screen on the **MPC ST5 2N●J 20●** industrial PC comprises:

1 A 15" XGA active-matrix colour TFT LCD screen (maximum display area 1024 x 768 points) with high-definition analog touch panel
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two indicators labelled:
- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing Compact Flash memory, etc.)

4 A dust and damp proof USB 2.0 port

Lower and left-hand sides, 15"

All expansion slots and connection elements are accessible from the rear of the PC, with the following elements located on the lower and left-hand sides:

1 A removable screw terminal block for connecting the 24 V ⎓ power supply
2 Access to the Compact Flash memory card containing the operating system and installed software
3 One 25-way female SUB-D connector marked RAS for diagnostics
4 Two 9-way male SUB-D connectors marked COM1 and COM2 for the RS 232 serial link
5 4 USB 2.0 ports
6 2 RJ45 connectors for the Ethernet link:
- 1 x 10/100/1000 Mbps
- 1 x 10/100 Mbps

7 A slot for 2 additional PCMCIA cards
8 A mini-jack connector for a loudspeaker
9 A VGA SUB-D port

2

Characteristics

Front panel characteristics

Type			Smart 8.4" MPC ST1 1N●J 00●	Smart 12" MPC ST2 1NAJ 10●	Smart 15" MPC ST5 2N●J 20●
Touch screen	Type		8.4" SVGA active-matrix colour TFT LCD	12" SVGA active-matrix colour TFT LCD	15" XGA active-matrix colour TFT LCD
	Definition		800 x 600		1024 x 768
	No. of colours		262144		16 777 216
	Brightness		≥ 200 cd/m² adjustable	≥ 250 cd/m² adjustable	
	Optimum viewing angle		Horizontal 160°, vertical 160°		
Touch panel			Analog resistive, 1 million cycles		
Front	Signalling		ON indicator: PC switched on - DISK indicator: accessing Compact Flash system card		
	I/O ports		–	1 USB port, protected by IP 65 cover	
	Material		Aluminum alloy with IP 65 membrane on hardened steel frame		
	Screen protection		Polyethylene sheet		
Degree of protection			IP 65	IP 65 (when front USB port not in use)	IP 65, Nema 4 (when front USB port not in use)

CPU characteristics

Type			Smart 8.4" MPC ST1 1N●J 00●	Smart 12" MPC ST2 1NAJ 10●	Smart 15" MPC ST5 2N●J 20●
Processor			Intel Celeron M 600 MHz		
Storage	Internal hard disk		–	–	–
	Compact Flash card		1-GB card, expandable to 4 GB, containing OS and software		
RAM (1 memory slot)		**MB**	SDRAM 256, expandable up to 1024		
CD-ROM drive			–	–	–
Floppy disk drive			–	–	–
Expansion slots	PCMCIA cards		–	1 slot (taking a maximum of 1 x type III card or 1 x type I card)	1 slot (taking a maximum of 1 x type III card or 2 x type I cards)
	PCI port		–	–	–
Built-in I/O ports	Ethernet TCP/IP port		2 RJ45 ports, links: 1 x 10/100/1000BASE-T 1 x 10/100BASE-T		
	USB ports		4 USB 2.0 ports		
	Serial port COM 1		1 RS 232C link (9-way male SUB-D connector)		
	Serial port COM 2		1 RS 232C link (9-way male SUB-D connector)	–	1 RS 232C link (9-way male SUB-D connector)
	Audio		1 mini-jack LINE output		
	PS/2 keyboard port		–		
	PS/2 pointing device port		–		
Operating system			Windows XPe SP2 installed *(1)*		
Pre-installed software			Internet Explorer *(1)*		
			Acrobat Reader, Word/Excel/PowerPoint reader *(1)*		
			Vijeo Designer Run Time *(1) (2)*		
Power supply	Voltage		24 V ⎓ 100 to 240 V ∿ with external AC power supply	100 to 240 V ∿, (threshold values 85 to 265 V), EN 61131-2-compliant	24 V ⎓ 100 to 240 V ∿
	Frequencies	**Hz**	–	50/60 (threshold values 47/63), EN 61131-2-compliant	–
	Micro-breaks	**ms**	5	10	5
Consumption			40 W max.	120 VA max.	90 W max.
Material			Hardened steel		
Mounting			On panel or enclosure door (8 fixing bolts supplied)		
Environment	Certifications		UL 508, CSA 142, IEC 61131-2		
	Interference immunity		High-frequency interference, compliant with IEC 61131-2, EN 61000-6-2, FCC (class A)		
			Electromagnetic emissions, EN 55011 (Group 1, Class A), EN 61000-3-2, EN 61000-3-3		
	Temperature In operation	**°C**	0 to +50		
	In storage	**°C**	-20 to +60	-10 to +60	-20 to +60
	Relative humidity	**%**	10 to 85		
	Operating altitude	**m**	0 to 3000, max.		
	Storage altitude	**m**	0 to 12,000, max.		
	Vibration resistance	**m/s²**	9.8 at 10 to 25 Hz/3 axes for 30 minutes		

(1) Installed in Compact Flash memory.
(2) HMI edition - Vijeo Designer Run Time (see references on page 2/9).

Industrial PCs
Magelis Smart Embedded Panels

References
Magelis Smart

Magelis Smart industrial PCs are "hardened" PCs, which do not feature vulnerable components such as a hard disk or CD-ROM drive. They are equipped with an 8.4", 12" or 15" active-matrix backlit colour TFT LCD touch screen.
■ The **MPC ST1 1NDJ 00T** 8.4" model has a 24 V ⎓ power supply. It requires an external AC power supply if used with alternating current.
The **MPC ST1 1NAJ 00●** models have an external AC power supply which should be installed in the back of the cabinet.
■ The **MPC ST2 1NAJ 10●** 12" models are only available in an alternating current version.
■ The **MPC ST5 2N●J 20●** 15" models are available in 24 V ⎓ and 100 to 240 V ∿ versions.

The Magelis Smart features the Windows XPe SP2 operating system and is supplied ready-to-use in two configurations:
■ **Client edition**: **MPC ST● ●N●J ●0T**, with application software pre-installed on a 1-GB Compact Flash memory card:
□ Internet Explorer for browsing the Web (Internet/Intranet)
□ Windows Terminal Services Client for client/server architectures
□ Software (readers) for reading Word (.doc), Excel (.xls), PowerPoint (.ppt) and Acrobat (.pdf) files
■ **HMI edition - Vijeo Designer RT**: **MPC ST● ●NAJ ●0●**, with the above software pre-installed on a 1-GB Compact Flash card, plus:
□ Vijeo Designer Run Time software

MPC ST1 1N●J 00●

Smart - 8.4" heavy-duty screen
With 1-GB Compact Flash

Supply voltage	RAM processor	Slots available for expansion	Edition	Reference	Weight kg
24 V ⎓	Celeron M 600 MHz 256 MB expandable up to 1024 MB	–	Client edition	**MPC ST1 1NDJ 00T**	–
100 to 240 V ∿	Celeron M 600 MHz 256 MB expandable up to 1024 MB		Client edition	**MPC ST1 1NAJ 00T**	3.500
			HMI edition -Vijeo Designer RT	**MPC ST1 1NAJ 00H**	–

MPC ST2 1NAJ 10●

Smart - 12" heavy-duty screen
With 1-GB Compact Flash

Supply voltage	RAM processor	Slots available for expansion	Edition	Reference	Weight kg
100 to 240 V ∿	Celeron M 600 MHz 256 MB expandable up to 1024 MB	1 PCMCIA	Client edition	**MPC ST2 1NAJ 10T**	–
			HMI edition -Vijeo Designer RT	**MPC ST2 1NAJ 10R**	–

MPC ST5 2N●J 20●

Smart - 15" heavy-duty screen
With 1-GB Compact Flash

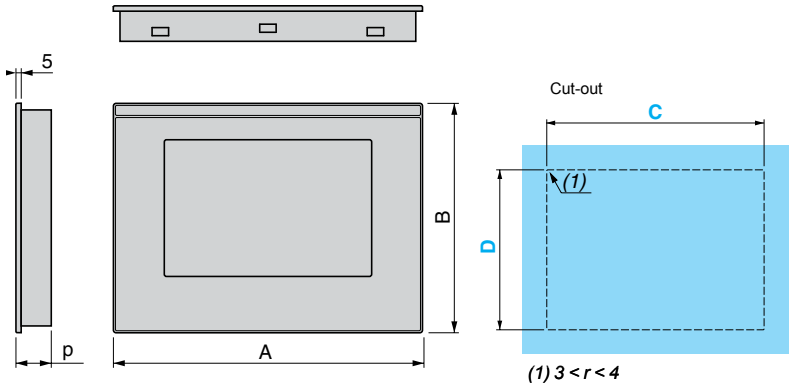
Supply voltage	RAM processor	Slots available for expansion	Edition	Reference	Weight kg
24 V ⎓	Celeron M 600 MHz 256 MB expandable up to 1024 MB	2 PCMCIA	Client edition	**MPC ST5 2NDJ 20T**	6.000
100 to 240 V ∿	Celeron M 600 MHz 256 MB expandable up to 1024 MB	2 PCMCIA	Client edition	**MPC ST5 2NAJ 20T**	6.000
			HMI edition -Vijeo Designer RT	**MPC ST5 2NAJ 20H**	–

2

Separate parts for Smart				
Designation	**Characteristics**	**Compatible with**	**Reference**	**Weight kg**
RAM expansion kit	512 MB	8.4" models MPC ST1 1N●J 00●	**MPC YK0 5RAM 512**	–
		12" models MPC ST2 1NAJ 10●	**MPC YK0 5RAM 512**	–
		15" models MPC ST5 2N●J 20●	**MPC YK0 5RAM 512**	–
	1024 MB	8.4" models MPC ST1 1N●J 00●	**MPC YK2 2RA1 024**	–
		12" models MPC ST2 1NAJ 10●	**MPC YK2 2RA1 024**	–
		15" models MPC ST5 2N●J 20●	**MPC YK2 2RA1 024**	–
Compact Flash memory cards	128 MB, blank	All Smart models	**XBT ZGM128**	0.050
	256 MB, blank		**XBT ZGM256**	0.050
	512 MB, blank		**MPC YN0 0CFE 00N**	0.050
	1 GB, blank		**MPC YN0 0CF1 00N**	–
	2 GB, blank		**MPC YN0 0CF2 00N**	–
	4 GB, blank		**MPC YN0 0CF4 00N**	–
	1 GB, Client edition software pre-installed	8.4" models MPC ST1 1N●J 00●	**MPC YN1 1CF1 10T**	–
		12" models MPC ST2 1NAJ 10●	**MPC YN2 1CF1 00T**	–
		15" models MPC ST5 2N●J 20●	**MPC YN5 2CF1 20T**	–
	1 GB, HMI edition Vijeo Designer RT software pre-installed	8.4" models MPC ST1 1N●J 00●	**MPC YN1 1CF1 10H**	–
		12" models MPC ST2 1NAJ 10●	**MPC YN2 1CF1 00R**	–
		15" models MPC ST5 2N●J 20●	**MPC YN5 2CF1 20H**	–
	2 GB, Windows Xpe SP2 software in 6 languages (English, French, German, Italian, Spanish, Swedish) and .NET Framework pre-installed	8.4" models MPC ST1 1N●J 00●	**MPC YN1 1CF2 10M**	–
		15" models MPC ST5 2N●J 20●	**MPC YN5 2CF2 20M**	–
PCMCIA adaptor for Compact Flash card	Enables a Smart to receive the second Compact Flash card needed for Vijeo Designer at the PCMCIA slot	All Smart models All Compact Flash memory cards	**XBT ZGADT**	0.050
Maintenance kits	Include panel mounting brackets and seals	8.4" models MPC ST1 1N●J 00T	**MPC YK1 0MNT KIT**	–
		12" models MPC ST2 1NAJ 10●	**MPC YK2 0MNT KIT**	–
		15" models MPC ST5 2NDJ 10T	**MPC YK5 0MNT KIT**	–
Screen protection	Protective film for Smart	8.4" models MPC ST1 1N●J 00T	**MPC YK1 0SPS KIT**	–
		12" models MPC ST2 1NAJ 10●	**MPC YK2 0SPS KIT**	–
		15" models MPC ST5 2NDJ 10T	**MPC YK5 0SPS KIT**	–
Replacement power supply connector	AC connector	All Smart models with power supply type ∿ MPC ST● ●NAJ ●0●	**MPC YN0 0PWA CTE**	–

Dimensions

MPC ST1 1N●J00●/MPC ST2 1NAJ 10●/MPC ST5 2N●J 20●



	A	B	C	D	p
MPC ST1 1N●J 00●	230	177	218.5^{+1}_{0}	165.5^{+1}_{0}	65.0
MPC ST2 1NAJ 10●	313	239	301.5^{+1}_{0}	227.5^{+1}_{0}	60.0
MPC ST5 2N●J 20●	395	294	383.5^{+1}_{0}	282.5^{+1}_{0}	60.0

Industrial PCs
Magelis Compact *i*PC PC Panels

Presentation

Magelis Compact *i*PC provides an easy means of optimizing machine solutions, from the simplest to the most advanced.

With identical dimensions to Magelis XBT GT *(1)* terminals, the Magelis Compact *i*PC (and the Magelis Smart) should be regarded as the natural extension of these earlier terminals.

Compatible with Vijeo Designer software, Magelis XBT GT, Smart and Compact *i*PC terminals ensure optimum flexibility in terms of selecting equipment and the OS. They also feature a unique software tool, which can be used to control all user-interface applications, from the simplest to the most advanced.

Complementing the Magelis PC BOX range, the Magelis Compact *i*PC range of industrial PCs offers compact "all in one" products designed with the needs of machine manufacturers, systems integrators and users in mind: reduced dimensions, incredible ease of installation and setup, and openness to Web technologies.

Magelis Compact *i*PC

Like the Magelis Smart, the Magelis Compact *i*PC is built around an IP 65 front panel with an 8.4", 12" or 15" colour TFT LCD screen and a high-definition analog touch panel.

Although compact in size, the Magelis Compact *i*PC is an open PC designed for open-ended solutions. It supports:
- A choice of 3 processor speeds: 1 GHz (Intel Celeron M), 1.3 GHz (Intel Celeron M) or 1.6 GHz (Intel Pentium M)
- Expansions:
  - By PCMCIA card (1 slot), except on the 8.4" Compact *i*PC
  - On PCI bus (1 slot)

The Magelis Compact *i*PC features:
- An 80 GB min. hard disk, a 512 MB to 1024 MB RAM (for 8.4" and 12" screens) or a 512 MB to 2 GB RAM (for 15" screen), and an operating system (see page 43634-EN/6)
- 2 TCP/IP Ethernet ports:
  - 1 x 10/100/1000BASE-T
  - 1 x 10/100BASE-T
- USB 2.0 ports
- A 110 to 240 V ∼ 50/60 Hz power supply
- Various standard serial/parallel ports

The Windows XP Pro operating system is installed on Magelis Compact iPCs.

Software bundle offer

This offer includes Vijeo Designer Run Time control software as well as the hardware.

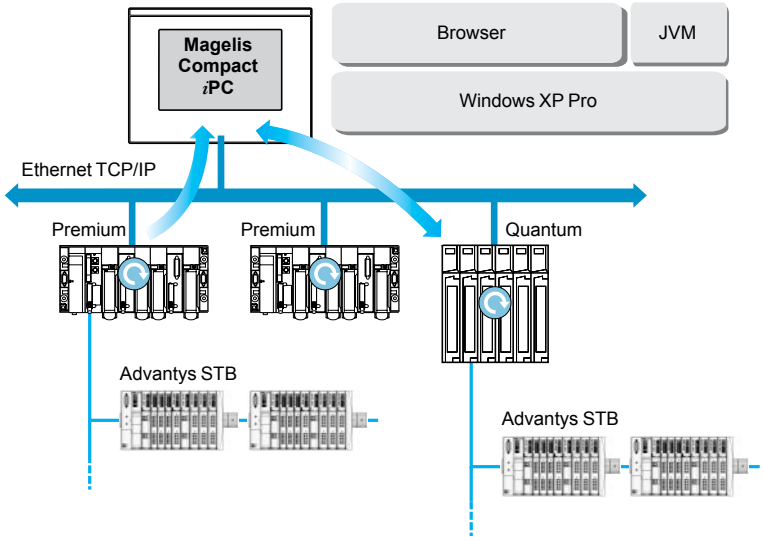
This type of offer provides an industrial system, adapted to application needs, at a preferential cost.

(1) Identical screen size

Industrial PCs
Magelis Compact iPC PC Panels

Typical architectures

Connections to Transparent Ready architectures



The built-in Ethernet ports on the Magelis Compact iPC allow it to be integrated into "full Ethernet" architectures, such as Transparent Ready. Transparent Ready devices with this type of architecture open the way for transparent communication over the Ethernet TCP/IP network. Communication services and Web services enable data to be shared and distributed between levels 1, 2 and 3 of the Transparent Ready architecture.

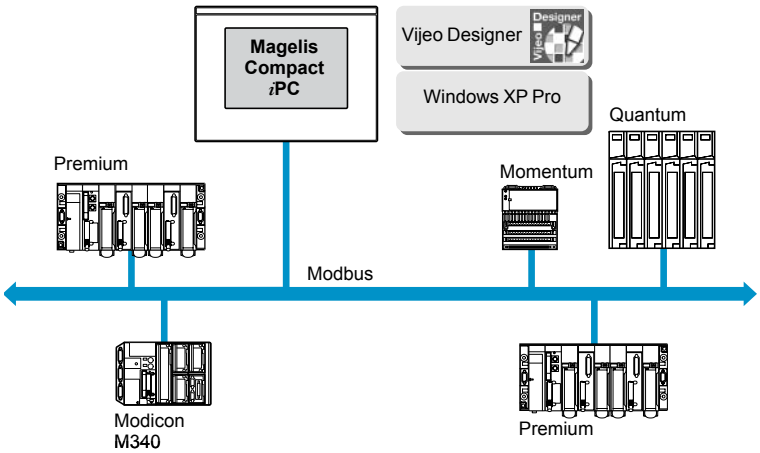
Used as a client station, the Magelis Compact iPC makes it easier to implement Web client solutions in relation to:

- Base servers embedded in field devices (Advantys STB/Momentum distributed I/O, ATV 71/38/58 starters, Ositrack identification systems, etc.)
- FactoryCast Web servers embedded in Modicon PLCs (TSX Micro, Premium and Quantum) or the FactoryCast gateway.

The following services are available as standard (without the need for additional programming): alarm management, mimic management and hosting of user-created Web pages.

- FactoryCast HMI Web servers embedded in Modicon Premium and Quantum PLCs also provide basic data management services, automatic e-mail transmission triggered by specific process events, and arithmetic and logic calculations for data preprocessing.

HMI applications in traditional architectures (Fipway, Modbus Plus)



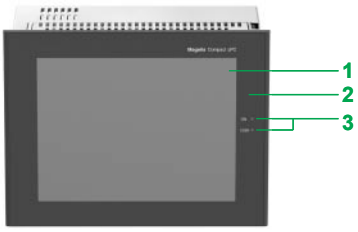
The bundled offer comprising the Compact iPC industrial PC and pre-installed Vijeo Designer control software allows them to be used in single-network architectures such as Modbus or Fipway/Modbus Plus. For a Modbus link, one of the built-in RS 232C COM ports is used.

Fipway or Modbus Plus links require adaptors:

- The Fipway network needs adaptor TSX CUSB FIP.
- The Modbus Plus network needs adaptor TSX CUSB MBP.

The built-in Ethernet TCP/IP port allows Modicon PLC stations to be connected to levels 2 and 3 of communication architectures, if required.

Industrial PCs
Magelis Compact *i*PC PC Panels

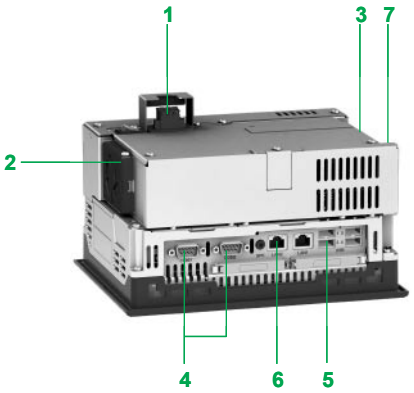


Description of the Compact*i*PC

8.4" front panel with touch screen MPC KT1 2NAX 00●

The front panel with 8.4" touch screen **MPC KT1 2NAX 00●** on industrial PCs comprises:

1 An 8.4" SVGA active-matrix colour TFT LCD screen (maximum display area 800 x 600 points) with high-definition analog touch panel
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs labelled:
- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing hard disk memory, etc.)

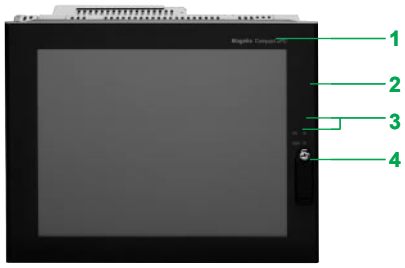


Lower side, 8.4"

All expansion slots and connection elements are accessible from the rear of the PC, with the following elements located on the lower side:

1 Connector for plugging in the 100 to 240 V ∿ power cable
2 One vent equipped with an anti-dust filter and fan
3 A slot for an additional Compact Flash memory card
4 2 x 9-way male SUB-D ports labelled COM1 and COM2 for serial links (see details on page 2/16)
5 4 USB 2.0 ports
6 2 RJ45 connectors for the Ethernet link:
- 1 x 10/100/1000 Mbps
- 1 x 10/100 Mbps

7 A slot for a PCI bus expansion card

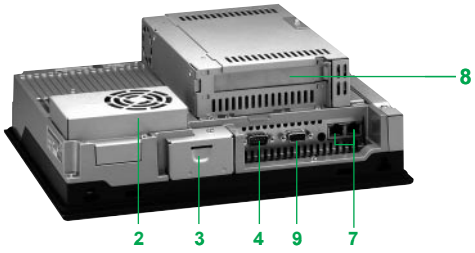


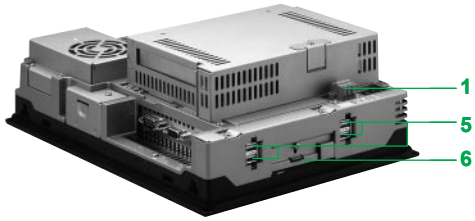
12" front panel with touch screen MPC KT2 2NAX 00●

The front panel with 12" touch screen **MPC KT2 2NAX 00●** on industrial PCs comprises:

1 A 12" XGA active-matrix colour TFT LCD screen (maximum display area 1024 x 768 points) with high-definition analog touch panel
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs labelled:
- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing hard disk memory, etc.)

4 A cover plate which provides IP 65 protection when in position and gives access when removed to:
- A USB 2.0 port
- A "pencil point" RESET button for restarting the processor





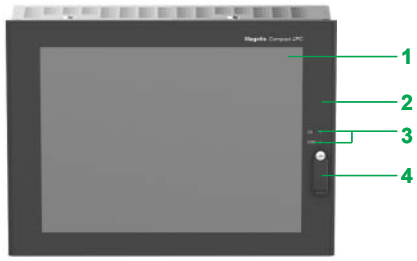
Lower and left-hand sides, 12"

All expansion slots and connection elements are accessible from the rear of the PC, with the following elements located on the lower and left and right-hand sides:

1 Connector for plugging in the 100 to 240 V ∿ power cable
2 One vent equipped with an anti-dust filter and fan
3 A slot for an additional Compact Flash memory card
4 One 9-way male SUB-D port labelled COM1 for serial links (see details on page 2/16)
5 4 USB 2.0 ports
6 A slot for 1 additional PCMCIA card
7 2 RJ45 connectors for the Ethernet link:
- 1 x 10/100/1000 Mbps
- 1 x 10/100 Mbps

8 A slot for a PCI bus expansion card
9 An RAS port

Presentation: page 2/12 | Architecture : page 2/13 | Characteristics: pages 2/16 to 2/18 | References: pages 2/19 to 2/21 | Dimensions: page 2/21



15" front panel with touch screen MPC KT5 5NAX 20●

The front panel with 15" touch screen **MPC KT5 5NAX 20●** on industrial PCs comprises:

1 A 15" XGA active-matrix colour TFT LCD screen (maximum display area 1024 x 768 points) with high-definition analog touch panel

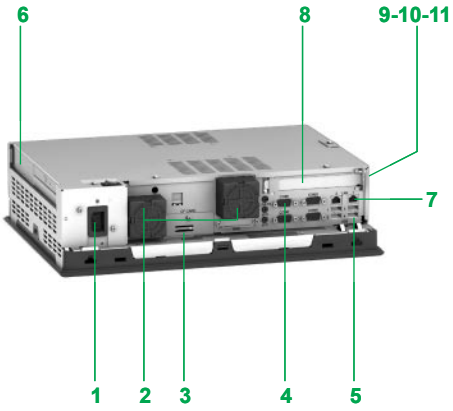
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)

3 Two LEDs labelled:

- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing hard disk memory, etc.)

4 A cover plate which provides IP 65 protection when in position and gives access when removed to:

- A USB 2.0 port
- A "pencil point" RESET button for restarting the processor



Lower side, 15"

All expansion slots and connection elements are accessible from the rear of the PC, with the following elements located on the lower side:

1 Connector for plugging in the 100 to 240 V ∿ power cable

2 2 vents, each with an anti-dust filter and fan

3 A slot for an additional Compact Flash memory card

4 4 x 9-way male SUB-D connectors labelled COM1, COM2, COM3 and COM4 for serial links (see details on page 2/16)

5 4 USB 2.0 ports

6 A slot for 2 additional PCMCIA cards

7 2 RJ45 connectors for the Ethernet link:

- 1 x 10/100/1000 Mbps
- 1 x 10/100 Mbps

8 A slot for a PCI bus expansion card

9 A DVD-ROM drive

10 A 3.5" floppy disk drive

11 A VGA port

Industrial PCs
Magelis Compact *i*PC 8.4" PC Panels

Characteristics

Front panel characteristics

Type			Compact *i*PC 8.4" MPC KT1 2●AX 00●
Touch screen	Size		8.4"
	Type		SVGA active-matrix colour TFT LCD
	Definition		800 x 600
	No. of colours		262144
	Brightness		≥ 200 cd/m² adjustable
	Optimum viewing angle		Horizontal 120°, vertical 100°
Touch panel			Analog resistive, 1 million cycles
Front	Signalling		ON LED: switched on DISK LED: accessing hard disk
	I/O ports		–
	Material		Aluminum alloy with IP 65 membrane on hardened steel frame
	Screen protection		Polyethylene sheet
Degree of protection			IP 65

CPU characteristics

Type			Compact *i*PC 8.4" MPC KT1 2NAX 00●
Processor			Intel Celeron M 1 GHz
Internal hard disk			80 GB min. IDE, 2.5"
Flash disk			–
RAM Memory slot	With Windows XP Pro	**MB**	SDRAM 512 to 1 GB 1 slot
DVD-ROM drive			–
Floppy disk drive			–
Expansion slots	PCMCIA cards		–
	PCI port		1 PCI bus slot
Built-in I/O ports	Ethernet TCP/IP port		2 RJ45 ports, links: 1 x 10/100/1000BASE-T 1 x 10/100BASE-T
	USB ports		4 USB 2.0 ports
	Serial port COM 1		1 RS 232C link (9-way male SUB-D connector)
	Serial port COM 2		1 RS 232C link (9-way male SUB-D connector)
	Audio		1 line out
	PS/2 keyboard port		–
	PS/2 pointing device port		–
Operating system			Windows XP Pro
Power supply	Voltage		100 to 240 V ∿ (threshold values 85 to 265 V), EN 61131-2-compliant
	Frequencies	**Hz**	50/60 (threshold values 47/63), EN 61131-2-compliant
	Micro-breaks	**ms**	20
Consumption		**VA**	Up to 120
Material			Hardened steel
Mounting			On panel or enclosure door (8 fixing bolts supplied)
Environment	Certifications		UL 508, CSA 142, IEC 61131-2
	Interference immunity		High-frequency interference, compliant with IEC 61131-2, EN 61000-6-2, FCC (Class A)
			Electromagnetic emissions, EN 55011 (Group 1, Class A), EN 61000-3-2, EN 61000-3-3
	Temperature In operation	**°C**	+5 to +50
	In storage	**°C**	-20 to +60
	Relative humidity	**%**	10 to 85
	Operating altitude	**m**	0 to 3000, max.
	Storage altitude	**m**	0 to 12,000, max.
	Vibration resistance	**m/s²**	9.8 at 10 to 25 Hz/3 axes for 30 minutes

Characteristics

Front panel characteristics

Type			Compact *i*PC 12" MPC KT2 2●AX 00●
Touch screen	Size		12"
	Type		XGA active-matrix color TFT LCD
	Definition		1024 x 768
	No. of colours		262144
	Brightness		≥ 250 cd/m² adjustable
	Optimum viewing angle		Horizontal 120°, vertical 100°
Touch panel			Analog resistive, 1 million cycles
Front	Signalling		ON LED: switched on DISK LED: accessing hard disk
	I/O ports		1 USB link (12 Mbps), protected by IP 65 cover
	Material		Aluminum alloy with IP 65 membrane on hardened steel frame
	Screen protection		Polyethylene sheet
Degree of protection			IP 65

CPU characteristics

Type			Compact *i*PC 12" MPC KT2 2NAX 00●
Processor			Intel Celeron M 1.3 GHz
Internal hard disk			80 GB min. IDE, 2.5"
Flash disk			–
RAM Memory slot	With Windows XP Pro	**MB**	SDRAM 512 to 1 GB 1 slot
DVD-ROM drive			–
Floppy disk drive			–
Expansion slots	PCMCIA cards		1 slot (taking a maximum of 1 x type III card or 1 x type I card)
	PCI port		1 PCI bus slot
Built-in I/O ports	Ethernet TCP/IP port		2 RJ45 ports, links: 1 x 10/100/1000BASE-T 1 x 10/100BASE-T
	USB ports		4 USB 2.0 ports
	Serial port COM 1		1 RS 232C link (9-way male SUB-D connector)
	Serial port COM 2		–
	Audio		1 line out
	PS/2 keyboard port		–
	PS/2 pointing device port		–
Operating system			Windows XP Pro
Power supply	Voltage		100 to 240 V ∼ (threshold values 85 to 265 V), EN 61131-2-compliant
	Frequencies	**Hz**	50/60 (threshold values 47/63), EN 61131-2-compliant
	Micro-breaks	**ms**	10
Consumption		**VA**	Up to 120
Material			Hardened steel
Mounting			On panel or enclosure door (8 fixing bolts supplied)
Environment	Certifications		UL 508, CSA 142, IEC 61131-2
	Interference immunity		High-frequency interference, compliant with IEC 61131-2, EN 61000-6-2, FCC (Class A)
			Electromagnetic emissions, EN 55011 (Group 1, Class A), EN 61000-3-2, EN 61000-3-3
	Temperature In operation	**°C**	+5 to +50
	In storage	**°C**	-10 to +60
	Relative humidity	**%**	10 to 85
	Operating altitude	**m**	0 to 3000, max.
	Storage altitude	**m**	0 to 12,000, max.
	Vibration resistance	**m/s²**	9.8 at 10 to 25 Hz/3 axes for 30 minutes

2

Characteristics

Front panel characteristics

Type			Compact *i*PC 15" MPC KT5 5●●X 20●
Touch screen	Size		15"
	Type		SVGA active-matrix colour TFT LCD
	Definition		1024 x 768
	No. of colours		16 777 216
	Brightness		≥ 250 cd/m² adjustable
	Optimum viewing angle		Horizontal 120°, vertical 100°
Touch panel			Analog resistive, 1 million cycles
Front	Signalling		ON LED: switched on DISK LED: accessing hard disk
	I/O ports		1 USB link (12 Mbps), protected by IP 65 cover
	Material		Aluminum alloy with IP 65 membrane on hardened steel frame
	Screen protection		Polyethylene sheet
Degree of protection			IP 65

CPU characteristics

Type			Compact *i*PC 15" MPC KT5 5●●X 20●	MPC KT5 5MAX 20●
Processor			Pentium M 1.6 GHz	
Internal hard disk			80 GB min. IDE, 2.5"	–
Flash disk			–	16 GB
RAM Memory slot	With Windows XP Pro	**MB**	SDRAM 512 to 2 GB 2 slots	
DVD-ROM drive			Yes	
Floppy disk drive			3.5", 1.44 MB	
Expansion slots	PCMCIA cards		2 slots (taking a maximum of 1 x type III card or 2 x type I cards)	
	PCI port		1 PCI bus slot	
Built-in I/O ports	Ethernet TCP/IP port		2 RJ45 ports, links: 1 x 10/100/1000BASE-T 1 x 10/100BASE-T	
	USB ports		4 USB 2.0 ports	
	Serial port COM 1		1 RS 232C link (9-way male SUB-D connector)	
	Serial port COM 2		1 RS 232C link (9-way male SUB-D connector)	
	Serial port COM 3		1 RS 232C link (9-way male SUB-D connector)	
	Serial port COM 4		1 RS 232C link (9-way male SUB-D connector)	
	Audio		1 line out 1 line in 1 mic in	
Operating system			Windows XP Pro	Windows XP Pro and Vijeo Designer RT
Power supply	Voltage		24 V ⎓ 100 to 240 V ∿ (threshold values 85 to 265 V), EN 61131-2-compliant	100 to 240 V ∿ (threshold values 85 to 265 V), EN 61131-2-compliant
	Frequencies	**Hz**	50/60 (threshold values 47/63), EN 61131-2-compliant	–
	Micro-breaks	**ms**	20	
Consumption		**VA**	Up to 1520	
Material			Hardened steel	
Mounting			On panel or enclosure door (8 fixing bolts supplied)	
Environment	Certifications		UL 508, UL 1604, CSA, IEC 61131-2	
	Interference immunity		High-frequency interference, compliant with IEC 61131-2, EN 61000-6-2, FCC (Class A)	
			Electromagnetic emissions, EN 55011 (Group 1, Class A), EN 61000-3-2, EN 61000-3-3	
	Temperature In operation	**°C**	+5 to +50	
	In storage	**°C**	-20 to +60	
	Relative humidity	**%**	10 to 85	
	Operating altitude	**m**	0 to 3000, max.	
	Storage altitude	**m**	0 to 12,000, max.	
	Vibration resistance	**m/s²**	9.8 at 10 to 25 Hz/3 axes for 30 minutes	

Industrial PCs
Magelis Compact *i*PC PC Panels

References

Compact *i*PCs

Magelis Compact *i*PCs are "hardened" PCs adapted to the restrictions of industrial environments, and combine compact dimensions with advanced performance and openness to applications under Windows XP pro.
Powered by a 100 to 240 V ∼ supply, they are equipped with an 8.4", 12" or 15" active-matrix backlit colour TFT LCD touch screen, a USB port on the front panel (in addition to the standard USB ports - except for the 8.4" version), a 40 GB min. hard disk,
a slot for a PCI card and at least one slot for a PCMCIA card.

Compact *i*PC - Hardware

■ The 8.4" **MPC KT1 2●AX 00●** models (Intel Celeron M 1 GHz processor) feature two Ethernet ports: 1 x 10/100BASE-T and 1 x 10/100/1000BASE-T (RJ45 connectors). They also have a total of 4 USB ports.
■ The 12" **MPC KT2 2●AX 00●** models (Intel Celeron M 1.3 GHz processor) feature two Ethernet ports: 1 x 10/100BASE-T and 1 x 10/100/1000BASE-T (RJ45 connectors). They also have a total of 5 USB ports, one of which is on the front panel.
■ The 15" **MPC KT5 5●●X 20●** models (Intel Pentium M 1.6 GHz processor) feature two Ethernet ports: 1 x 10/100BASE-T and 1 x 10/100/1000BASE-T (RJ45 connectors). They also have a total of 5 USB ports, one of which is on the front panel.

Compact *i*PC - Software bundle

Magelis Compact *i*PC hardware is also available in the form of "bundles", which are supplied together with **Vijeo Designer RT** application software.

⚠ Vijeo Designer can only be used on Magelis Compact *i*PCs in the HMI Edition-Vijeo Designer RT version for **MPC KT1 2NAX 00H** (8.4"),
MPC KT2 2NAX 00R (12") or **MPC KT5 5NAX 20H** (15").


MPC KT1 2NAX 00N

General Purpose Compact iPC with 8.4" screen

With hard disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Celeron M 1 GHz 100 to 240 V ∿	512 MB expandable up to 1024 MB	–	Client edition	**MPC KT1 2NAX 00N**	4.500
			HMI edition, Vijeo Designer RT	**MPC KT1 2NAX 00H**	4.500


MPC KT2 1NAX 00N

General Purpose Compact iPC with 12" screen

With hard disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Celeron M 1.3 GHz 100 to 240 V ∿	512 MB expandable up to 1024 MB	–	Client edition	**MPC KT2 2NAX 00N**	4.500
			HMI edition, Vijeo Designer RT	**MPC KT2 2NAX 00R**	4.500


MPC KT5 5NAX 20N

General Purpose Compact iPC with 15" screen

With hard disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Pentium M 1.6 GHz 100 to 240 V ∿	512 MB expandable up to 1024 MB	–	Client edition	**MPC KT5 5NAX 20N**	4.500
			HMI edition, Vijeo Designer RT	**MPC KT5 5NAX 20H**	4.500
24 V ⎓			Client edition	**MPC KT5 5NDX 20N**	4.500
			HMI edition, Vijeo Designer RT	**MPC KT5 5NDX 20H**	4.500

Heavy duty Compact iPC with 15" screen

With Flash disk 16 GB

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Pentium M 1.6 GHz 100 to 240 V ∿	512 MB expandable up to 1024 MB	–	Client edition	**MPC KT5 5MAX 20N**	4.500
			HMI edition, Vijeo Designer RT	**MPC KT5 5MAX 20H**	4.500

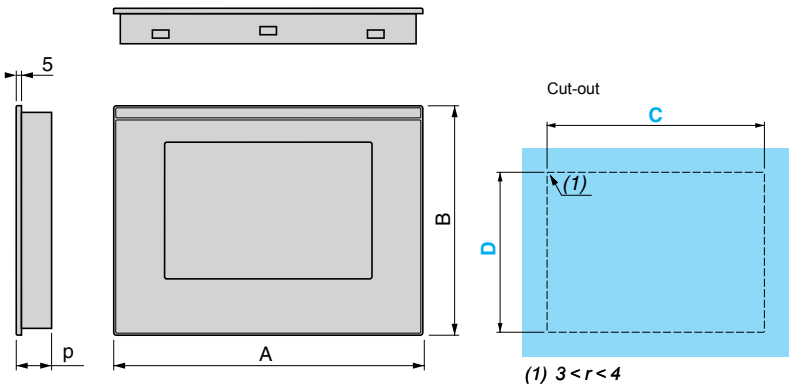
Separate parts for Compact *i*PC

Designation	Characteristics	Compatible with *(1)*	Reference	Weight kg
RAM expansion kit	512 MB	8.4" models, Celeron M MPC KT1 2NAX 00●	**MPC YK0 5RAM 512**	–
		12" models, Celeron M MPC KT2 2NAX 00●	**MPC YK0 5RAM 512**	–
		15" models, Pentium M MPC KT5 5NAX 20●	**MPC YK0 5RAM 512**	–
	1024 MB	8.4" models, Celeron M MPC KT1 2NAX 00●	**MPC YK2 2RA1 024**	–
		12" models, Celeron M MPC KT2 2NAX 00●	**MPC YK2 2RA1 024**	
		15" models, Pentium M MPC KT5 5NAX 20●	**MPC YK2 2RA1 024**	
Replacement power supply connector	AC connector	All Compact *i*PC models with AC power supply MPC KT● ●●AX ●0●	**MPC YN0 0PWA CTE**	–
Maintenance kits	Include panel mounting brackets and seals	8.4" models MPC KT1 2NAX 00●	**MPC YK1 0MNT KIT**	
		12" models MPC KT2 2NAX 00●	**MPC YK2 0MNT KIT**	–
		15" models MPC KT5 5NAX 20●	**MPC YK5 0MNT KIT**	–
Screen protection	Protective film for Compact *i*PC	8.4" models MPC KT1 2NAX 00●	**MPC YK1 0SPS KIT**	
		12" models MPC KT2 2NAX 00●	**MPC YK2 0SPS KIT**	–
		15" models MPC KT5 5NAX 20●	**MPC YK5 0SPS KIT**	–

(1) And software bundles where these are available

Dimensions

MPC KT1 2●AX 00●/MPC KT2 2●AX 00●/MPC KT5 5●●X 20●



(1) 3 < r < 4

	A	B	C	D	p
MPC KT1 2●AX 00●	230	177	218.5^{+1}_{0}	165.5^{+1}_{0}	120
MPC KT2 2●AX 00●	313	239	301.5^{+1}_{0}	227.5^{+1}_{0}	103.0
MPC KT5 5●●X 20●	395	294	383.5^{+1}_{0}	282.5	103.0

Industrial PCs
Magelis Smart and Compact *i*PC correspondence tables

Magelis Smart 15" correspondence table		
Type	**Old range**	**New range**
Web edition	**MPC ST5 2NDJ 00T**	**MPC ST5 2NDJ 20T**
CF 1 GB HMI edition	**MPC ST5 2NDJ 10T**	**MPC ST5 2NDJ 20T**
HMI edition	**MPC ST5 2NDJ 10R**	**XBT GTW 750**

Industrial PCs
Magelis Smart and Compact *i*PC correspondence tables

Magelis Compact *i*PC correspondence table

Type	Old range	New range *(1)*
667 MHz - Windows 2000	**MPC KT5 2NAA 00N**	**MPC KT5 5NAX 20N**
667 MHz - Windows XP Pro	**MPC KT5 2NAX 00N**	**MPC KT5 5NAX 20N**
1.7 GHz - Windows 2000	**MPC KT5 5NAA 00N**	**MPC KT5 5NAX 20N**
1.7 GHz - Windows XP Pro	**MPC KT5 5NAX 00N**	**MPC KT5 5NAX 20N**
667 MHz VL RT - Windows 2000 and Vijeo Look RT 1024	**MPC KT5 2NAA 00A**	**MPC KT5 5NAX 20N + VJL SMD RTL V26M**
1.7 GHz VL RT - Windows 2000 and Vijeo Look RT 1024	**MPC KT5 5NAA 00A**	**MPC KT5 5NAX 20N + VJL SMD RTL V26M**
1.7 GHz VL BT - Windows 2000 and Vijeo Look BT 1024	**MPC KT5 5NAA 00B**	**MPC KT5 5NAX 20N + VJL SMD BTL V26M**
667 MHz VL RT - Windows XP Pro and Vijeo Look RT 1024	**MPC KT5 2NAX 00A**	**MPC KT5 5NAX 20N + VJL SMD BTL V26M**
1.7 GHz VL RT - Windows XP Pro and Vijeo Look RT 1024	**MPC KT5 5NAX 00A**	**MPC KT5 5NAX 20N + VJL SMD RTL V26M**
1.7 GHz VL BT - Windows XP Pro and Vijeo Look BT 1024	**MPC KT5 5NAX 00B**	**MPC KT5 5NAX 20N + VJL SMD BTL V26M**
667 MHz VD RT - Windows XP Pro and Vijeo Designer RT	**MPC KT5 2NAX 00R**	**MPC KT5 5NAX 20H**
1.7 GHz VD RT - Windows XP Pro and Vijeo Designer RT	**MPC KT5 5NAX 00R**	**MPC KT5 5NAX 20H**

(1) Windows XP Pro pre-installed

Industrial PCs
Magelis Smart BOX, Magelis Compact PC BOX

Application			Embedded boxes	
				
Model			**Smart BOX**	**Compact PC BOX**
Compatible screen			iDisplay	
CPU	Processor		Intel Celeron M 600 MHz	Intel Celeron M 1 GHz
	Storage		1 GB Compact Flash	80 GB min. hard disk
	RAM		256 MB expandable up to 1024 MB	512 MB expandable up to 1024 MB
	DVD-ROM drive		–	–
	Expansion slots		–	1 PCI bus slot
	Ethernet TCP/IP network		2 RJ45 ports: 1 x 10/100/1000BASE-T and 1 x 10/100BASE-T	
	I/O ports		4 x USB 2.0, 2 x RS432, 1 x VGA RGB video port	
	Operating system		Windows Embedded Xpe SP2 (6 languages)	Windows XP Pro pre-installed
General purpose (hard disk)	Base (Window XP)	100 to 240 V ∿		**MPC KN0 2NAX 00N**
Heavy duty (Compact Flash)	Client edition	100 to 240 V ∿	**MPC SN0 1NAJ 00T**	
		24 V ⎓	**MPC SN0 1NDJ 00T**	
	HMI edition, Vijeo Designer Run Time	100 to 240 V ∿	**MPC SN0 1NAJ 00H**	
		24 V ⎓	**MPC SN0 1NAJ 00H**	
Pages			2/39	2/40

Industrial PCs
Magelis Flex PC BOX and Front Panels

Applications			Flex PC BOX	
				
Model			**Flex PC BOX F**	**Flex PC BOX H**
Compatible screen			Front Panel, *i*Display	
CPU	Processor		Intel Celeron M 1.86 GHz or Duo Core 2 GHz	
	Storage		One or two 80 GB min. hard disks, Flash disk 16 GB	
	RAM		512 MB expandable up to 2 GB	
	DVD-ROM drive		Yes, DVD drive, DVD writer available as an option	
	Expansion slots		2 PCI bus slots	4 PCI bus slots
	Ethernet TCP/IP network		2 RJ45 ports: 1 x 10/100/1000BASE-T and 1 x 10/100BASE-T	
	I/O ports		4 x USB 2.0, 4 x RS432, 1 x DIO 1 x DVI-I video port (RGB support)	
	Operating system		Windows XP Pro pre-installed	
General purpose (hard disk)	Base (Window XP)	100 to 240 V ∿	**MPC FN0 ●NAX 00N**	**MPC HN0 ●N●X 00N**
		24 V ⎓	**MPC FN0 ●NDX 00N**	**MPC HN0 5NDX 00N**
Heavy duty (Flash disk)	Base (Window XP)	100 to 240 V ∿	**MPC FN0 5MAX 00N**	**MPC HN0 5MAX 00N**
	HMI edition, Vijeo Designer Run Time	100 to 240 V ∿	**MPC FN0 5MAX 00H**	**MPC HN0 5MAX 00H**
Pages			2/41	2/42

Applications		Screens for Flex PC BOX			
					
Model		**Front Panel**			
12" screen TFT (800 x 600)	Data entry via keyboard and touch screen	**MPC YB2 0NNN 00N**			
15" screen TFT (1024 x 768)	Data entry via touch screen		**MPC YT5 0NNN 00N**		
	Data entry via keyboard and touch screen			**MPC YB5 0NNN 00N**	
19" screen TFT (1280 x 1024)	Data entry via touch screen				**MPC YT9 0NNN 00N**
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Magelis BOX industrial PCs
Magelis Smart BOX, Magelis Compact PC BOX
Magelis Flex PC BOX

Magelis Flex PC BOX H and 19" front panel

Magelis Flex PC BOX F and 15" front panel

Magelis Compact PC BOX

Magelis Smart BOX

Presentation

For situations where the HMI needs to be separated from a CPU operating under a Windows environment, the range of Magelis BOX industrial PCs offers a variety of solutions with graded power ratings that are designed to meet the HMI and SCADA requirements associated with both process applications and machines:

- Connection to standard PC hardware:
  - Network: Two Ethernet ports (10/100/1G and 10/100)
  - USB: Four USB ports for storage, WiFi connection, etc.
  - Printers: Numerous printers are supported.
- Applications processed in the Microsoft Windows environment:
  - SCADA
  - Use of multimedia data: audio, images, video
  - Support for all types of Office files: Word, Excel, PowerPoint, etc.
  - Third-party software run in Windows
- Integration into distributed architectures:
  - Client/server architecture
  - Access to Intranet/Internet network

The Magelis BOX range consists of four CPUs and two screen families:

- **Embedded BOX Smart BOX**, with Intel Celeron M 600 MHz processor, data storage on 1 GB Compact Flash card, 256 MB of memory, expandable to 1024 MB
- **Compact PC BOX**, with Intel Celeron M 1 GHz processor, data storage on 80 GB min. hard disk, 512 MB memory, expandable to 1024 MB; expansion slot available for PCI card
- **Flex PC BOX F**, with Intel Celeron M 1.86 GHz or Core Duo 2 GHz processor, data storage on one or two 80 GB min. hard disks 16 GB Flash disk, 512 MB memory, expandable to 2 GB; two expansion slots for PCI card
- **Flex PC BOX H**: As Flex PC BOX F, but with four expansion slots for PCI card

Compatible flat screens:

- **Magelis *i*Display (industrial display)** in two sizes:
  - 15" with touch screen, with or without keyboard
  - 19" with touch screen

  Smart BOX and Compact PC BOX CPUs are only compatible with the Magelis *i*Display.
- **Magelis *i*PC front panel** (for Flex PC BOX CPUs only) in 3 sizes:
  - 12" with touch screen and keyboard
  - 15" with touch screen, with or without keyboard
  - 19" with touch screen

  Magelis Flex PC BOX F and Magelis Flex PC BOX H CPUs can be connected to a Magelis *i*PC front panel. Depending on the requirements of the application in question, they may also be connected to a second Magelis *i*Display interface.

Description: page 2/28
References: pages 2/39 to 2/42
Dimensions: pages 2/46 to 2/49

Presentation *(continued)*

General Purpose and Heavy Duty versions

Embedded BOX and PC BOX CPUs are available in three versions *(1)*: General Purpose, Heavy Duty and Optimized.

■ **General Purpose**: Version for "standard" industrial environments, ambient temperatures generally ranging between 5°C and 35°C, and moderate shock and vibration conditions. General Purpose models feature industrial hard disks.

■ **Heavy Duty**: "Hardened" versions of industrial PCs, designed to operate in environments where harsher conditions prevail in terms of both temperature (between 0°C and 50°C) and vibrations, thanks to their storage media:
□ Magelis Flex BC BOX F/H: 16 GB Flash disk

■ **Optimized**: Versions of industrial PCs that are completely static: not a single moving part is used. They are designed to operate in harsh environments (0°C to 50°C) and require no maintenance. These PCs use Windows XP Embedded operating systems and a Compact Flash card for storage purposes:
□ Embedded Box Smart BOX: 1 GB Compact Flash

Integrated diagnostics

Diagnostic functions, specifically designed to simplify maintenance work, are integral features of the Smart BOX, Compact PC BOX and Flex PC BOX F/H CPUs:
■ Monitoring of the internal temperature of the CPU, with information provided to the user in the following ways if set values are exceeded:
□ The display of an on-screen message
□ A change in state on a DIO output
□ The starting up of a system task, e.g. sending an e-mail
□ Log: in the Windows Event Manager
■ Monitoring of the integrity of the hard disk on every startup

The Magelis Flex PC BOX F/H CPUs have an integrated RAS interface *(2)*, comprising:
- 1 alarm output
- 1 reset input
- 1 general purpose input
- 1 general purpose output

Combined HMI edition offers

The combined offers feature the Smart BOX, Compact PC BOX and Flex PC BOX F/H CPUs, along with Vijeo Designer Run Time software.

This type of offer enables users to acquire, at an attractive price, a pre-installed and tested industrial-grade system, which is correctly dimensioned to suit software application requirements and is supported across the entire Schneider Electric sales network.

(1) Excluding Embedded Box Smart BOX, which is available in Optimized version only
(2) RAS: Reliability, availability, serviceability

References:
pages 2/39 to 2/42

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Embedded BOX industrial PCs
Magelis Smart BOX

Magelis Smart BOX: MPC SN0 1N●J 00●

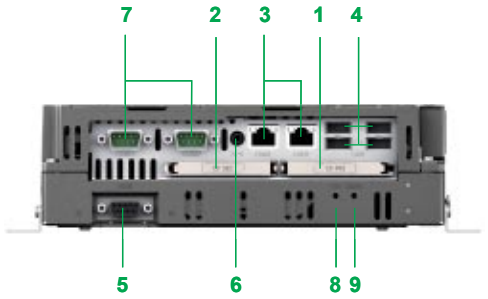
Magelis Smart BOX CPUs

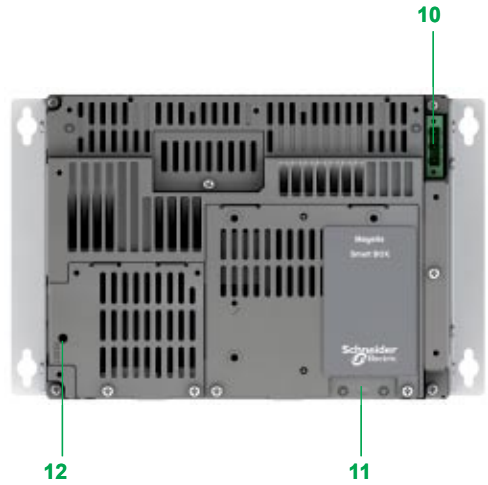
Presentation

Magelis Smart BOX CPUs are designed to operate in harsh industrial environments and offer state-of-the-art technology.

Four Magelis Smart BOX CPU **MPC SN0 1N●J 00●** models are available. The characteristics they share are:
- *Optimized* type with 1 GB Compact Flash mass memory
- Celeron M 600 MHz processor
- Windows XPe SP2 operating system pre-installed on all *Client edition* **MPC SN0 1N●J 00T** and *HMI edition* **MPC SN0 1N●J 00H** models.

The CPUs differ in terms of the following functions and characteristics:
- Vijeo Designer Run Time pre-installed on *HMI edition* **MPC SN0 1N●J 00H** models
- 100 - 240 V ∿ power supply for Magelis Smart BOX **MPC SN0 1NAJ 00●** models, supplied with external AC/DC adaptor
- 24 V ⎓ power supply for **MPC SN0 1NDJ 00●** models





Description

Magelis Smart BOX CPUs comprise the following elements:

1 Slot for 1 GB primary (system) Compact Flash card
2 Slot for secondary Compact Flash card
3 1 Ethernet 10/100 Base-T port and 1 Ethernet 10/100/1000 Base-T port
4 4 USB ports
5 RGB video port: Connector for external screen, e.g. *i*Display
6 Audio output for loudspeaker
7 Connectors for COM1 and COM2 ports
8 Status and power supply indicator
9 Disk access indicator
10 Power supply connector
11 Attachment point for USB holder
12 Reset switch

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Embedded BOX industrial PCs
Magelis Smart BOX

Characteristics of Magelis Smart BOX CPUs

Type		Heavy Duty Magelis Smart BOX MPC SN0 1N●J 00●
Processor		Intel Celeron M 600 MHz
Storage		1 GB Compact Flash
RAM		256 MB SDRAM, expandable to 1024 MB
Built-in I/O ports	Ethernet ports	1 Ethernet TCP/IP 10/100BASE-T link (RJ45 connector) 1 Ethernet TCP/IP 10/100/1000 BASE-T link (RJ45 connector)
	USB	4 USB 2.0 links
	Serial links	2: COM1, COM2, RS 232 type (9-way male SUB-D connector)
	Video	1 connection for RGB external video screen
	Audio	1 audio output for loudspeakers (mini-jack connector)
Operating system		Windows XPe, 6 languages depending on edition □ HMI edition: English, French, German, Italian, Simplified Chinese and Spanish □ Client edition: English, French, German, Italian, Spanish and Swedish
Compatible screen from Magelis offer		iDisplay
Power supply	Alternating current	
	Voltages	100 to 240 V ∼ (threshold values 98 to 264 V), EN 61131-2-compliant
	Frequencies	50/60 Hz (threshold values 47/63 Hz), EN 61131-2-compliant
	Micro-breaks	10 ms
	Direct current	
	Voltages	24 V ⎓ (threshold values 23 to 25 V)
	Micro-breaks	1 ms max.
Consumption	Alternating current	130 VA
	Direct current	40 W max.
Material		Nickel steel
Mounting		Horizontal or on a wall (in an enclosure). Supplied with 2 attachment sets for mounting purposes.

Environmental characteristics of Magelis Smart BOX CPUs

Type		MPC SN0 1N●J 00●
Degree of protection		IP 20 Standards: IEC/EN 60529, NEMA 250, EN 61131-2
Pollution level		Designed for use in environments with pollution level 2
Temperature		
	In operation	0 to 50°C, compliant with EN 61131-2, UL 1604
	In storage	- 20 to 60°C, compliant with IEC 60068-2-2 tests Bb and Ab, IEC 60068-2-14 test Na and EN 61131-2
Operating altitude		0 to 2000 m. Standard EN 61131-2
Resistance to vibrations		
	In operation	0.075 mm amplitude from 10 to 57.6 Hz 1 g amplitude from 57.6 to 150 Hz Standard EN 61131-2
	Out of service (in storage)	3.5 mm amplitude from 5 to 9 Hz 1 g amplitude from 9 to 150 Hz Standard EN 61131-2
Shock resistance	In operation	15 g peak for 11 ms. Standard IEC 60068-2-27 test Ea and EN 61131-2
Humidity		10 to 90% RH -Wet-bulb temperature: 29°C max. -Without condensation
Interference immunity		
	High-frequency interference	Compliant with EN 61131-2, IEC 61000-4-3/6 level 3
	Electromagnetic waves	Class A/EN 55022/55011
Additional standards		
	Information Technology Equipment	IEC/EN 60950 C-Tick, N998
	Industrial Control Equipment	UL 508, CSA 22.2, no. 142

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PC BOX industrial PCs
Magelis Compact PC BOX

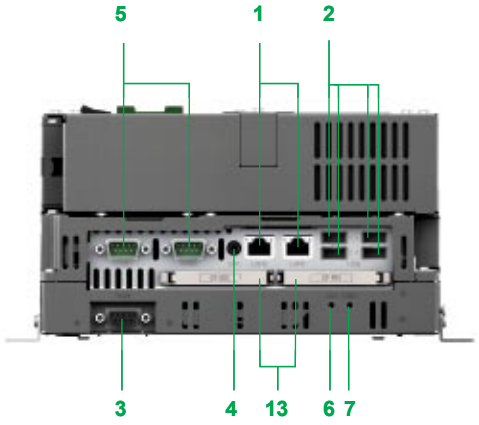
Magelis Compact PC BOX: MPC KN0 2NAX 00N

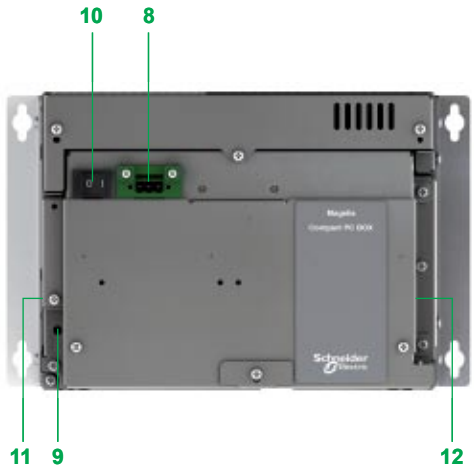
Magelis Compact PC BOX CPUs

Presentation

Magelis Compact PC BOX CPUs are designed to operate in either standard industrial or harsh industrial environments and offer state-of-the-art technology.

The main characteristics of the **MPC KN0 2NAX 00N** Compact PC BOX CPUs are:
- Celeron M 1 GHz processor
- PCI card expansion: 1 slot
- 100-240 V ∿ power supply
- Windows XP Pro SP2 operating system pre-installed.
- 80 GB min. hard disk mass memory





Description

Magelis Compact PC BOX CPUs comprise the following elements:

1 1 Ethernet 10/100 Base-T port and 1 Ethernet 10/100/1000 Base-T port
2 4 USB ports
3 RGB video port: Connector for external *i*Display screen
4 Audio output for loudspeaker
5 Connectors for COM1 and COM2 ports
6 Status and power supply indicator
7 Disk access indicator
8 Power supply connector
9 Reset switch
10 On/Off switch
11 Cooling fan
12 PCI expansion unit interface
13 Slots for 2 Compact Flash cards

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PC BOX industrial PCs
Magelis Compact PC BOX

Characteristics of Magelis Compact PC BOX CPUs

Type		General Purpose Magelis Compact PC BOX **MPC KN0 2NAX 00N** Hard disk
Processor		Intel Celeron M 1 GHz
Storage		80 GB min. hard disk
RAM		512 MB SDRAM, expandable to 1024 MB
Slots for Compact Flash cards		2
Expansion slots		1 PCI 2.2 bus slot
Built-in I/O ports	Ethernet ports	1 Ethernet TCP/IP 10/100BASE-T link (RJ45 connector) 1 Ethernet TCP/IP 10/100/1000 BASE-T link (RJ45 connector)
	USB	4 USB 2.0 links (at rear)
	Serial links	2: COM1, COM2, RS 232 type (9-way male SUB-D connector)
	Video	1 connection for RGB external video screen
	Audio	1 audio output for loudspeakers (mini-jack connector)
Floppy disk drive		1
Operating system		Windows XP Pro SP2 pre-installed
Compatible screens from Magelis offer		iDisplay
Power supply	Alternating current	
	Voltages	100 to 240 V ∿ (threshold values 85 to 265 V)
	Frequencies	50/60 Hz (threshold values 47/63 Hz), EN 61131-2-compliant
	Micro-breaks	20 ms max.
	Isolation	1500 V ∿, 20 mA for 1 minute
Consumption		120 VA
PCI expansion		
	Capacity	- 5 V ⎓, 1.5 A - 12 V ⎓, 0.5 A - 12 V ⎓, 0.1 A - 3.3 V ⎓, 0.5 A
	Consumption	10.9 W between 5°C and 45°C (ambient temperature) Linear decrease to 7.6 W between 45°C and 50°C
Material		Nickel steel
Mounting		In enclosure; horizontal or on a wall 2 attachment sets supplied

Environmental characteristics of Magelis Compact PC BOX CPUs

Type		MPC KN0 2NAX 00N
Degree of protection		IP 20 Standards: IEC/EN 60529, NEMA 250, EN 61131-2
Pollution level		Designed for use in environments with pollution level 2
Temperature	In operation	5 to 50°C, compliant with EN 61131-2, UL 1604
	In storage	- 20 to 60°C, compliant with IEC 60068-2-2 tests Bb and Ab, IEC 60068-2-14 test Na and EN 61131-2
Operating altitude		0 to 2000 m. Standard EN 61131-2
Resistance to vibrations	In operation	0.075 mm amplitude from 10 to 57.6 Hz 1 g amplitude from 57.6 to 150 Hz Standard EN 61131-2
	Out of service (in storage)	3.5 mm amplitude from 5 to 9 Hz 1 g amplitude from 9 to 150 Hz Standard EN 61131-2
Shock resistance	In operation	15 g peak for 11 ms. Standard IEC 60068-2-27 test Ea and EN 61131-2
Humidity		10 to 85% RH -Wet-bulb temperature: 29°C max. -Without condensation
Interference immunity	High-frequency interference	Compliant with EN 61131-2, IEC 61000-4-3/6 level 3
	Electromagnetic waves	Class A/EN 55022/55011
Additional standards	Information Technology Equipment	IEC/EN 60950 C-Tick, N998
	Industrial Control Equipment	UL 508, CSA 22.2, no. 142

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PC BOX industrial PCs
Magelis Flex PC BOX

Magelis Flex PC BOX F: MPC FN0 ●●●X 00●

Magelis Flex PC BOX H: MPC HN0 ●●●X 00●

Magelis Flex PC BOX CPUs

Presentation

Magelis Flex PC BOX high-end CPUs are designed to respond to the needs of industrial applications with the most rigorous demands in terms of processor power and PCI card expansion.

Magelis Flex PC BOX F: **MPC FN0 ●●●X 00●**, with 2 PCI card slots
Magelis Flex PC BOX H: **MPC HN0 ●●●X 00●**, with 4 PCI card slots

These two Magelis Flex PC BOX families are available in a General Purpose version for standard industrial environments and a Heavy Duty version for industrial environments where harsher conditions prevail.

■ **General Purpose** with 80 GB min. hard disk, two processor levels and basic RAM that can be expanded to 2 GB

□ Intel Celeron M 1.86 GB processor, standard memory: 512 MB
□ Core Duo M 2 GHz processor, standard memory: 1024 MB
General Purpose Magelis Flex PC BOX F/H models are available with a 24 V ⎓ or 100 to 240 V ∿ power supply, in Base Windows XP edition only.

■ **Heavy Duty** with Core Duo M 2 GHz processor, standard RAM: 1024 MB, expandable to 2 GB, and 16 GB Flash disk in:
□ HMI edition, featuring pre-installed Vijeo Designer Run Time software
□ Base Windows XP edition
Heavy Duty Magelis Flex PC BOX F/H CPUs are only available with a 100 to 240 V ∿ power supply.

All Magelis Flex PC BOX F/H CPUs can be connected either directly or remotely to a Magelis front panel-type flat screen or Magelis *i*Display flat screen, and feature:
□ 2 Ethernet TCP/IP ports with RJ45 connector, of which one 10/100/1000BASE-T
□ 4 x 12 Mbps USB ports
□ 4 serial COM ports (RS 232)
□ 1 DVD-ROM drive (reader); option of replacement with a CD/DVD drive (writer)
MPC YN0 0CDW 30N
□ 1 RAS port
□ 1 DVI-I video port with RGB support, making it possible to connect a Magelis *i*Display screen in addition to the main Magelis front panel screen, for example

System Monitor

The System Monitor function featured in Flex PC BOX F/H CPUs enables you to monitor several parameters or system functions:
- CPU temperature
- Fan speed
- Supply voltages
- Disk
- Backlight, etc.

System Monitor controls the usable RAS port in order to signal an alarm (by means of a digital output), or to initiate a Flex PC BOX restart. Alerts are also signalled in the form of a pop-up message or a Windows alarm (Event Viewer).

RAID 1 option

The RAID 1 option **MPC YN0 0RAI D0N** (for General Purpose versions only) involves configuring a second disk within the system in exactly the same way as the first. This increases the system's tolerance to disk errors and enables it to function provided that at least one disk is operational. The defective disk can be replaced without the need to stop the Flex PC BOX. The option includes a disk cartridge with a minimum 80 GB capacity and RAID software for installation.

Flex PC BOX with Battery Backup

The Flex PC BOX equipped with Battery Backup **MPC HN0 5NBX 00N** (for Flex PC Box H only) enables the system to continue operating for around 5 minutes (depending on the system load) in the event of a power failure. UL 60950 certification only.

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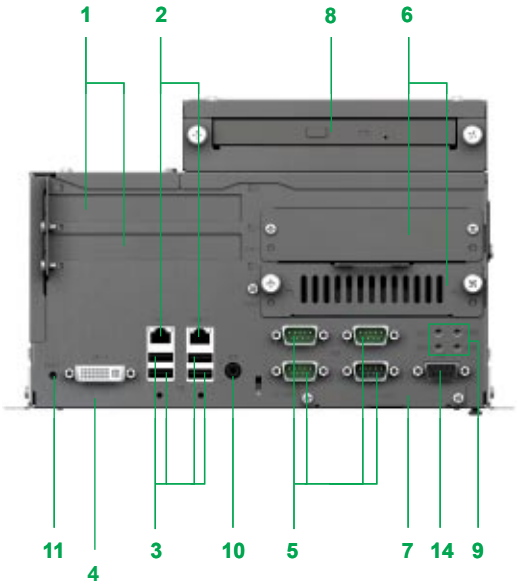
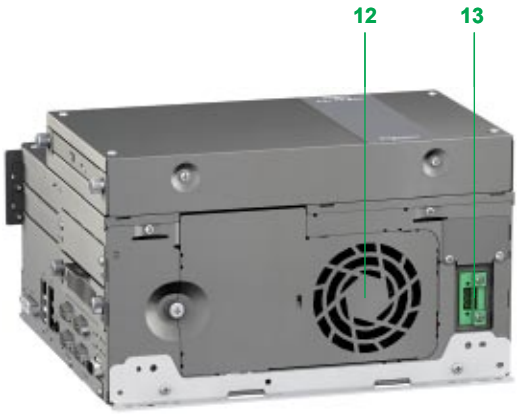
PC BOX industrial PCs
Magelis Flex PC BOX





Magelis Flex PC BOX CPUs

Description

Magelis Flex PC BOX CPUs comprise the following elements:

1 PCI expansion slots
- Magelis Flex PC BOX F CPUs: 2 PCI cards
- Magelis Flex PC BOX H CPUs: 4 PCI cards

2 1 Ethernet 10/100 Base-T port and 1 Ethernet 10/100/1000 Base-T port
3 4 USB ports
4 DVI-I interface
5 4 connectors for COM1 to COM4 ports
6 2 hard disk slots
7 1 slot for Compact Flash card
8 1 slot for DVD-ROM drive (reader)
9 4 indicators:
- 2 disk status indicators
- 1 power supply/RAS access indicator
- 1 disk access indicator

10 Audio output for loudspeaker
11 Reset switch
12 Cooling fan
13 Power supply connector and on/off switch (models with AC supply only)
14 RAS port

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PC BOX industrial PCs
Magelis Flex PC BOX

Characteristics of Magelis Flex PC BOX CPUs

Type		General Purpose Flex PC BOX **MPC ●N0 ●N●X 00●** Hard disk	Heavy Duty Flex PC BOX **MPC ●N0 5●AX 00●** Flash disk
Processor		Intel Celeron M 1.86 GHz or Core Duo 2 GHz	
Storage		80 GB min. hard disk, option of adding a hard disk	≥ 16 GB Flash disk, option of adding a Flash disk
RAID function		Option	–
RAM		512 MB SDRAM, expandable to 2 GB	
DVD-ROM drive (reader)		Yes	
DVD drive (writer)		Option	
Video controller	Built-in	–	
Video memory		64 MB max.	
Built-in I/O ports		- 1 Ethernet TCP/IP 10/100/1000 BASE-T link (RJ45 connector) - 1 Ethernet TCP/IP 10/100BASE-T link (RJ45 connector) - 4 USB links (12 Mbps) - 4 RS 232 serial links, COM1 to COM4 (9-way male SUB-D connector) - 1 connection for DVI-I external video screen (29-way connector)	
RAS interface *(1)*		On 9-way female SUB-D connector - 1 alarm output - 1x 2-channel general purpose input - 1x 2-channel general purpose output - 1 reset input	
Expansion slots		- 2 PCI bus slots for MPC FN0 ●●●X 00● - 4 PCI bus slots for MPC HN0 ●●●X 00●	
Slot for Flash card memory		1 Compact Flash card reader (type I/II-compatible)	
Audio port		Stereo output for loudspeaker (mini-jack stereo)	
Video		DVI-I, 29-way	
Operating system		Windows XP Pro SP2 pre-installed	
Compatible screens		- Front Panels - iDisplay	
Power supply	**Alternating current**		
	Voltage	100 to 240 V ∼ (threshold values 85 to 265 V ∼)	
	Frequency	50/60 Hz (threshold values 47 to 63 Hz), EN 61131-2-compliant	
	Consumption	120 VA max.	
	Micro-breaks	20 ms max.	
	Isolation	1500 V ∼, 20 mA for 1 minute	
	Direct current		
	Voltage	24 V ⎓ (threshold values 19.8 to 28.8 V ⎓)	
	Consumption	120 W max.	
	Micro-breaks	5 ms max.	
	Isolation	1000 V ⎓, 10 mA for 1 minute	
	PCI expansion		
	Capacity	- 5 V ⎓, 1.5 A - 12 V ⎓, 0.5 A - 12 V ⎓, 0.1 A - 3.3 V ⎓, 0.5 A	
	Consumption	10.9 W max. between 5°C and 45°C (ambient temperature) Linear decrease to 7.6 W between 45°C and 50°C	
Material		Nickel steel	
Mounting		In a type 4X or 12 enclosure	

Characteristics of Flash disk *(Heavy Duty Flex PC BOX only)*

Capacity	16 GB
Average time between 2 failures at 25°C	> 4,000,000 hours
Data integrity	< 1 non-recoverable error per 10^{14} bits read

(1) RAS: Reliability, availability, serviceability

Environmental characteristics of Magelis Flex PC BOX units

Type		General Purpose Magelis Flex PC BOX Hard disk	Heavy Duty Magelis Flex PC BOX Flash disk
Degree of protection		IP 65/NEMA4x/12 for the screen front panels. IP 20 screen sides and back panels, and for the control units as a whole. Standards: IEC/EN 60529, NEMA 250, EN 61131-2	
Pollution level		Designed for use in environments with pollution level 2. Standard: IEC/EN 61010-1	
Temperature			
	In operation	5 to 50°C, compliant with EN 61131-2, UL 1604	
	In storage	- 20 to 60°C, compliant with IEC/EN 60068-2-2 tests Bb and Ab, IEC/EN 60068-2-14 test Na and EN 61131-2	
Operating altitude		0 to 2000 m. Standard EN 61131-2.	
Resistance to vibrations			
	In operation	0.075 mm amplitude from 10 to 57.6 Hz 1 g amplitude from 57.6 to 150 Hz Standard EN 61131-2	3.5 mm amplitude from 5 to 9 Hz 1 g amplitude from 9 to 150 Hz Standard EN 61131-2
	Out of service (in storage/transit)	3.5 mm amplitude from 10 to 57.6 Hz 1 g amplitude from 57.6 to 150 Hz Standard EN 61131-2	
Shock resistance	In operation	15 g for 11 ms. Standard IEC/EN 60068-2-27 test Ea and EN 61131-2	
Ambient humidity	In operation	10 to 85% RH - Wet-bulb temperature: 29°C max. - Without condensation	
Storage humidity		10 to 85% RH - Wet-bulb temperature: 29°C max. - Without condensation According to EN 61131-2	
Interference immunity			
	High-frequency interference	Compliant with EN 61131-2, IEC 61000-4-3/6 level 3	
	Electromagnetic emissions	Class A/EN 55022/55011	
Additional standards			
	Information Technology Equipment	IEC/EN 60950	
	Industrial Control Equipment	UL 508/cUL, UL 1604/cUL	

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PC BOX industrial PCs
Front Panels for Magelis Flex PC BOX

MPC YB2 0NNN 00N

MPC YB5 0NNN 00N

MPC YT5 0NNN 00N

MPC YT9 0NNN 00N

Presentation

The front panel flat screens are designed for use with Magelis Flex PC BOX F/H CPUs

The screens utilize TFT LCD technology and are available in 3 sizes:

■ 12"
MPC YB2 0NNN 00N with data entry via touch screen and keyboard, SVGA 800 x 600 resolution

■ 15"
MPC YB5 0NNN 00N with data entry via touch screen and keyboard
MPC YT5 0NNN 00N with data entry via touch screen
Both featuring XGA 1024 x 768 resolution

■ 19"
MPC YT9 0NNN 00N with data entry via touch screen, SVGA 1280 x 1024 resolution

All models feature:
□ A USB port on the front (with protective cover)
□ A pointing device

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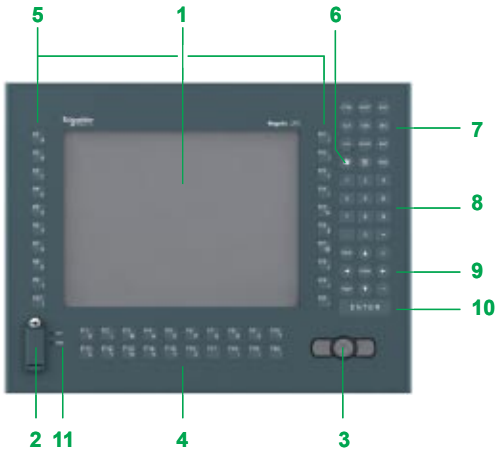
PC BOX industrial PCs
Front Panels for Magelis Flex PC BOX



Description

12" and 15" front panel with touch screen and keyboard MPC YB2/YB5 0NNN 00N

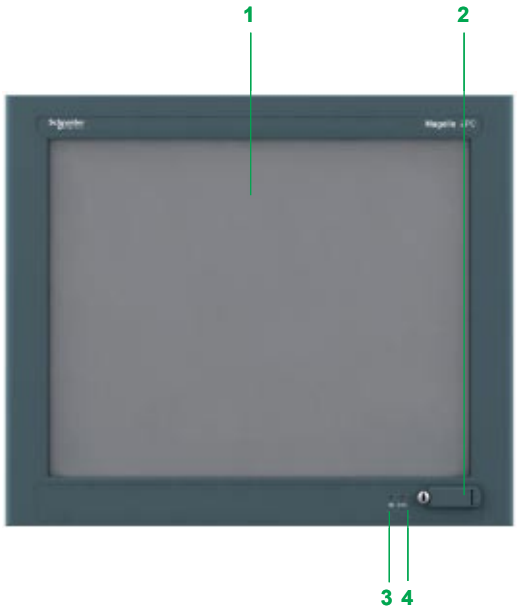
The **MPC YB2/YB5 0NNN 00N** Front Panels with touch screen and keyboard feature the following on the front:

1 A colour TFT active-matrix LCD screen with high-definition analog touch panel:
- SVGA 800 x 600 for the 12" front panel **MPC YB2 0NNN 00N**
- XGA 1024 x 768 for the 15" front panel **MPC YB5 0NNN 00N**

2 A USB cover for access to:
- A type A USB connector
- A hardware reset button

3 A mouse button and left/right-click buttons
4 20 function and character keys, F1 to F20
5 20 special function and character keys, R1 to R20
6 A key for switching between function/alphanumeric mode with an LED to indicate whether character entry is active
7 Window navigation keys
8 Numeric keys
9 Cursor keys
10 Enter key
11 Two LEDs:
- A power supply/RAS access LED
- An IDE/disk access LED

On the back:
■ A connection port for the Magelis Flex PC BOX



15" and 19" front panel with touch screen MPC YT5/YT9 0NNN 00N

The **MPC YB2/YB5 0NNN 00N** Front Panels with touch screen and keyboard feature the following on the front:

1 A colour TFT active-matrix LCD screen with high-definition analog touch panel:
- XGA 1024 x 768 for the 15" front panel **MPC YT5 0NNN 00N**
- SXGA 1280 x 1024 for the 19" front panel **MPC YT9 0NNN 00N**

2 A type A USB connector with cover
3 A power supply/RAS access LED
4 A disk access/IDE LED

On the back:
■ A connection port for the Magelis Flex PC BOX

Magelis industrial PCs
Front Panels for Flex PC BOX

Characteristics of Front Panels

Type	MPC ●●● 0NNN 20N	YB2	YT5	YB5	YT9
Screen	Type	12" SVGA active-matrix colour TFT LCD	15" XGA active-matrix colour TFT LCD		19" SXGA active-matrix colour TFT LCD
	Definition	800 x 600	1024 x 768		1280 x 1024
	No. of colours	262,144			
	Brightness	≥ 200 cd/m², adjustable			
Data entry	Via	Keyboard and touch screen	Touch screen	Keyboard and touch screen	Touch screen
Keyboard	Alphanumeric keys	70 IBM standard keys	–	70 IBM standard keys	–
	User function keys	2 x 20 keys	–	2 x 20 keys	–
Touch panel		Resistive analog, resolution: 1024 x 1024			
Front panel	Pointing device	Built-in			
	USB port	1			
Mounting		On any Magelis Flex PC BOX CPU			
Power supply		From Magelis Flex PC BOX CPU			

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Embedded BOX industrial PCs
Magelis Smart BOX

MPC SN0 1N●J 00●

Magelis Smart BOX CPUs

Magelis Smart BOX CPUs are able to accommodate iDisplay flat screens and are equipped with:

- An Intel Celeron M 600 MHz processor
- A 1 GB Compact Flash card
- 256 MB of RAM as standard, expandable to 1024 MB
- Two Ethernet TCP/IP ports:
  - 10/100BASE-T, 10/100 Mbps (RJ45 connector)
  - 10/100/1000 BASE-T, 10/100/1000 Mbps (RJ45 connector)
- Four 12 Mbps USB ports
- Two serial COM ports (RS 232)
- An RGB video port
- A pre-installed Windows Embedded XPe SP2 operating system

Heavy Duty Magelis Smart BOX

With 1 GB Compact Flash

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Celeron M 600 MHz 100 to 240 V ∿	256 MB, expandable to 1024 MB	–	Client edition	**MPC SN0 1NAJ 00T**	–
			HMI edition, Vijeo Designer RT	**MPC SN0 1NAJ 00H**	–
Celeron M 600 MHz 24 V ⎓			Client edition	**MPC SN0 1NDJ 00T**	–
			HMI edition, Vijeo Designer RT	**MPC SN0 1NDJ 00H**	–

Separate parts for Magelis Smart BOX

Designation	Characteristics	Compatible with	Reference	Weight kg
Compact Flash memory card	2 GB, with Windows XPe SP2 software in 6 languages (English, Chinese, French, German, Italian, Spanish) and Framework .NET pre-installed	Smart BOX	**MPC YN1 1CF2 10M**	–

Description: page 2/28
Characteristics: page 2/29
Dimensions: pages 2/46 to 2/49

MPC KN0 2NAX 00N

Magelis Compact PC BOX CPUs

Magelis Compact PC BOX CPUs are able to accommodate iDisplay flat screens, and are equipped with:

- An Intel Celeron M 1 GHz processor
- An 80 GB min. hard disk
- 512 MB of RAM as standard, expandable to 1024 MB
- Two Ethernet TCP/IP ports:
  - 10/100BASE-T, 10/100 Mbps (RJ45 connector)
  - 10/100/1000 BASE-T, 10/100/1000 Mbps (RJ45 connector)
- A PCI bus slot
- Four 12 Mbps USB ports
- Two serial COM ports (RS 232)
- An RGB video port
- A pre-installed Windows XP Pro SP2 operating system

General Purpose Compact BOX

With 80 GB min. hard disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Celeron M 1 GHz 100 to 240 V ∼	512 MB, expandable to 1024 MB	1 PCI bus	Client edition	**MPC KN0 2NAX 00N**	–

MPC FN0 ●N●X 00N

Magelis Flex PC BOX CPUs

Magelis Flex PC BOX CPUs are able to accommodate iDisplay and front panel flat screens. They are equipped with:

- ■ An Intel Celeron M 1.86 GHz or Core Duo 2 GHz processor
- ■ Either one or two 80 GB min. hard disks or a 16 GB Flash disk
- ■ RAM expandable to 2 GB:
  - □ 512 MB standard memory with Celeron M processor
  - □ 1024 MB standard memory with Core Duo M processor
- ■ DVD-ROM drive (reader)
- ■ Two Ethernet TCP/IP ports:
  - □ 10/100BASE-T, 10/100 Mbps (RJ45 connector)
  - □ 10/100/1000 BASE-T, 10/100/1000 Mbps (RJ45 connector)
- ■ Two or four PCI bus slots
- ■ Four 12 Mbps USB ports
- ■ Four serial COM ports (RS 232)
- ■ One DIO
- ■ A DVI-I video port with RGB support
- ■ A pre-installed Windows XP Pro operating system

General Purpose Magelis Flex PC BOX F

With 80 GB hard disk MIN.

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Celeron M 1.86 GHz 100 to 240 V ∼	512 MB, expandable to 2 GB	2 PCI bus	Base Windows XP	**MPC FN0 2NAX 00N**	–
Celeron M 1.86 GHz 24 V ⎓				**MPC FN0 2NDX 00N**	–
Core Duo 2 GHz 100 to 240 V ∼	1024 MB, expandable to 2 GB			**MPC FN0 5NAX 00N**	–
Core Duo 2 GHz 24 V ⎓				**MPC FN0 5NDX 00N**	–

Heavy Duty Magelis Flex PC BOX F

With 16 GB Flash disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Core Duo 2 GHz 100 to 240 V ∼	1024 MB, expandable to 2 GB	2 PCI bus	HMI edition, Vijeo Designer RT	**MPC FN0 5MAX 00H**	–

With 16 GB Flash disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Core Duo 2 GHz 100 to 240 V ∼	1024 MB, expandable to 2 GB	2 PCI bus	Base Windows XP	**MPC FN0 5MAX 00N**	–

MPC HN0 ●N●X 00N

General Purpose Magelis Flex PC BOX H

General Purpose with ≥ 80 GB hard disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Celeron M 1.86 GHz 100 to 240 V ∿	512 MB, expandable to 2 GB	4 PCI bus	Base Windows XP	**MPC HN0 2NAX 00N**	–
Core Duo 2 GHz 100 to 240 V ∿	1024 MB, expandable to 2 GB			**MPC HN0 5NAX 00N**	–
Core Duo 2 GHz 100 to 240 V ∿ With backup battery				**MPC HN0 5NBX 00N** *(1)*	–
Core Duo 2 GHz 24 V ⎓				**MPC HN0 5NDX 00N**	–

Heavy Duty Magelis Flex PC BOX H

With 16 GB Flash disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Core Duo 2 GHz 100 to 240 V ∿	1024 MB, expandable to 2 GB	4 PCI bus	HMI edition, Vijeo Designer RT	**MPC HN0 5MAX 00H**	–

With 16 GB Flash disk

Processor Supply voltage	RAM	Slots available for expansion	Edition	Reference	Weight kg
Core Duo 2 GHz 100 to 240 V ∿	1024 MB, expandable to 2 GB	4 PCI bus	Base Windows XP	**MPC HN0 5MAX 00N**	–

(1) Certified to UL60950, not certified to UL508

PC BOX industrial PCs
Front Panels for Magelis Flex PC BOX

MPC YB2 0NNN 00N

MPC YT5 0NNN 00N

MPC YB5 0NNN 00N

MPC YT9 0NNN 00N

Front Panels for Magelis Flex PC BOX

Screen size	Type of screen	Data entry via	Reference	Weight kg
12"	SVGA colour TFT (800 x 600)	Touch screen and keyboard	**MPC YB2 0NNN 00N**	–
15"	XGA colour TFT (1024 x 768)	Touch screen	**MPC YT5 0NNN 00N**	–
		Touch screen and keyboard	**MPC YB5 0NNN 00N**	–
19"	SXGA colour TFT (1280 x 1024)	Touch screen	**MPC YT9 0NNN 00N**	–

Description: pages 2/36 and 2/37
Characteristics: page 2/38
Dimensions: pages 2/46 to 2/49

MPC YN0 0HDS 30N

MPC YN0 0FSE 00N

MPC YN0 0BBU 00N

Separate parts for Magelis Flex PC BOX

Designation	Characteristics	Compatible with	Reference	Weight kg
RAID redundant hard disk	80 GB min. removable cartridge and RAID software	Flex PC BOX	**MPC YN0 0RAI D0N**	–
Hard disk	80 GB min. removable cartridge	Flex PC BOX	**MPC YN0 0HDS 30N**	–
Flash disk	16 GB removable cartridge	Flex PC BOX	**MPC YBC 0SSD 16N**	–
PCI expansion	Adaptor for 2 PCI cards	Flex PC BOX	**MPC YN0 0FSE 00N**	–
Maintenance kit	–	Flex PC BOX	**MPC YN0 0MKT 00N**	–
DVD drive (writer)	CD/DVD drive (writer)	Flex PC BOX	**MPC YN0 0CDW 30N**	–
RAM expansion kit	512 MB	Flex PC BOX	**MPC YFR AM05 12N**	–
	1 GB	Flex PC BOX	**MPC YFR AM10 24N**	–
	2 GB	Flex PC BOX	**MPC YFR AM20 48N**	–
Screen adaptor *Frame 1*	Mechanical mounting interface for replacing an old front panel with a new one (see table below)	Flex PC BOX	**MPC YN0 0FPF R1N**	–
Screen adaptor *Frame 2*			**MPC YN0 0FPF R2N**	–
Screen adaptor *Frame 3*			**MPC YN0 0FPF R3N**	–

Screen adaptor selection table

From: \ To:	MPC YB2 0NNN 00N	MPC YT5 0NNN 00N	MPC YB5 0NNN 00N
MPC NA2 0NNN 00N			
MPC NB2 0NNN 00N			
MPC NT2 0NNN 00N			
MPC NA5 0NNN 00N			
MPC NA5 0NNN 10N			
MPC NB5 0NNN 00N			
MPC NB5 0NNN 10N			
MPC NT5 0NNN 00N			
MPC NT5 0NNN 10N			

Adaptor	Colour code
MPC YN0 0FPF R1N *(Frame 1)*	
MPC YN0 0FPF R2N *(Frame 2)*	
MPC YN0 0FPF R3N *(Frame 3)*	
Adaptation not possible	

Embedded BOX and PC BOX industrial PCs

Magelis Smart BOX, Magelis Compact PC BOX, Magelis Flex PC BOX and Front Panels

Separate parts for all Magelis *i*PC ranges

Designation	Size	Reference	Weight kg
Protective sheets (5 peel-off sheets)	8.4" models	**MPC YK10 SPS KIT**	–
	12" models	**MPC YK20 SPS KIT**	–
	15" models	**MPC YK50 SPS KIT**	0.200
	19" models	**MPC YK90 SPS KIT**	–

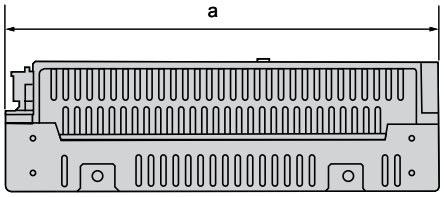
Designation	Description	Reference	Weight kg
Power supply connector	Replacement connector for AC supply voltage, for all Magelis *i*PCs and *i*Display screens	**MPC YN0 0PWA CTE**	–

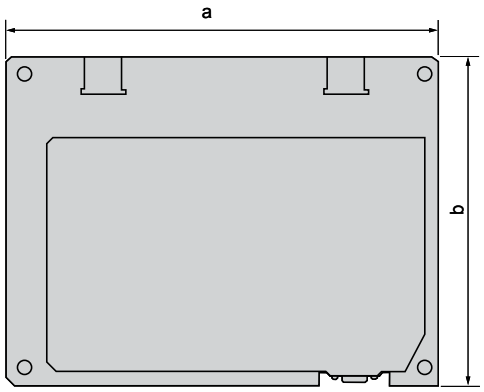
Embedded BOX and PC BOX industrial PCs
Magelis Smart BOX, Magelis Compact PC BOX

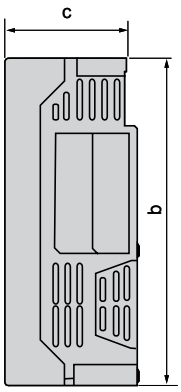
Dimensions

Magelis Smart BOX MPC SN01 N●J 00●

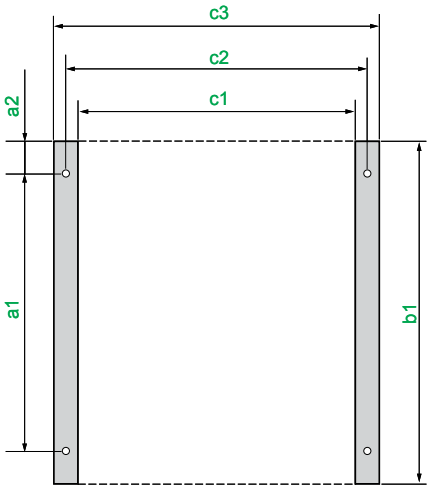
a	b	c	a1	a2	b1	c1	c2	c3
217	164	65	130	15	160	217	238	255





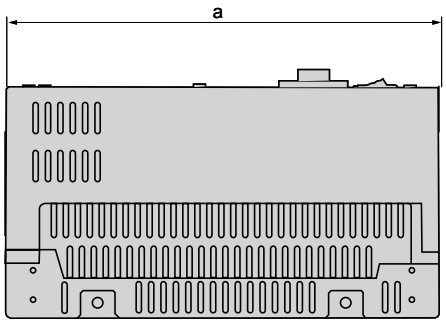


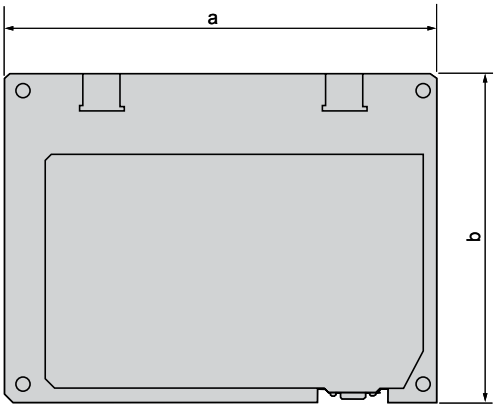
Mounting

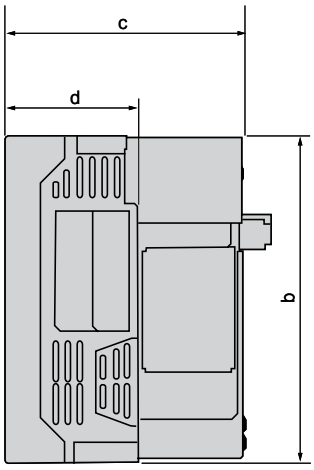


Magelis Compact PC BOX MPC KN02 ●AX 00●

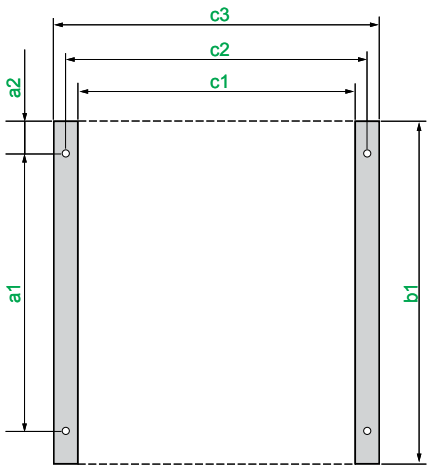
a	b	c	d	a1	a2	b1	c1	c2	c3
217	164	119	65	130	15	160	217	238	255







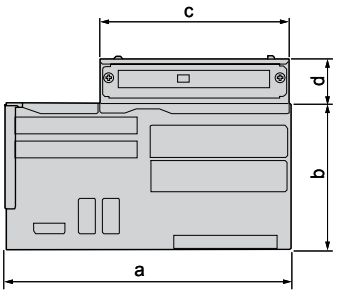
Mounting

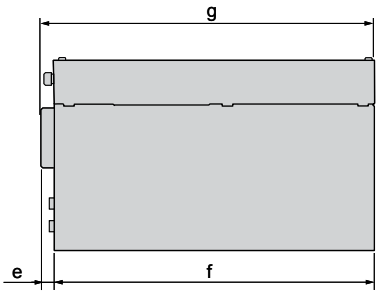


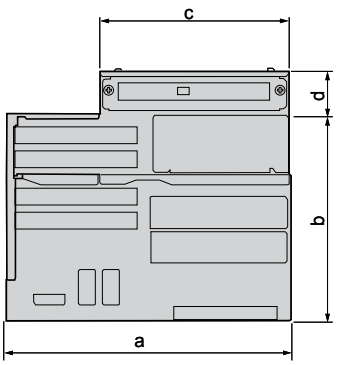
Dimensions (continued)

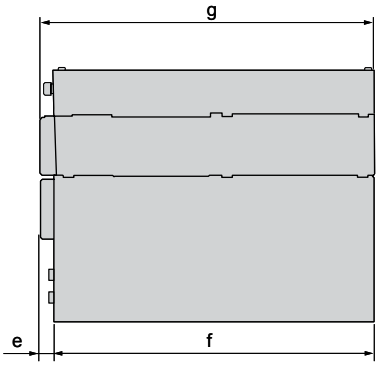
Magelis FLEX PC BOX MPC ●N0 ●●X 00●

	a	b	c	d	e	f	g	a1	a2	a3	b1	c1	c2	c3
MPC FN0 ●●X 00●	243	125	161	38	12	277	289	255	14	6	275	243	258	270
MPC HN0 ●●X 00●	243	176	161	38	12	277	289	255	14	6	275	243	258	270

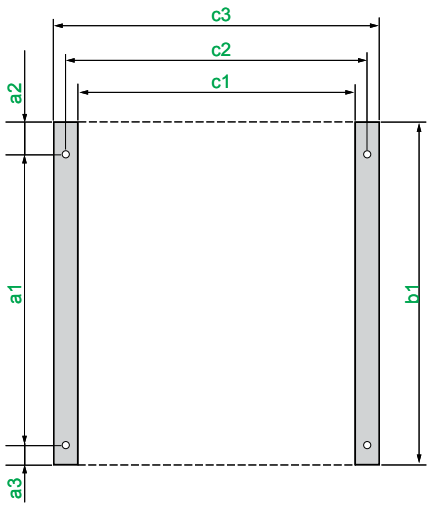








Mounting



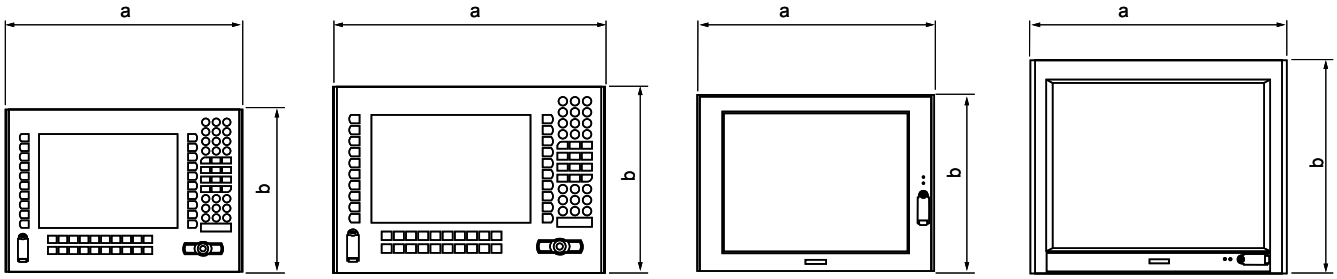
Mounting

The Magelis Smart BOX, Magelis Compact PC BOX and Magelis FLEX PC BOX CPUs are mounted either horizontally or on a wall, with the aid of the attachment sets supplied. Use M4 screws.

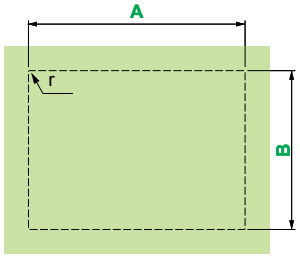
Dimensions (continued)

Front panel MPC Y●● 0NNN 00N

Type	Reference	a	b	A	B
12" touch screen and keyboard	**MPC YB2 0NNN 00N**	425	325	383.5	282.5
15" touch screen and keyboard	**MPC YB5 0NNN 00N**	488	367	441.5	313.5
15" touch screen	**MPC YT5 0NNN 00N**	425	325	383.5	282.5
19" touch screen	**MPC YT9 0NNN 00N**	460	390	419.5	352.5



Cut-out

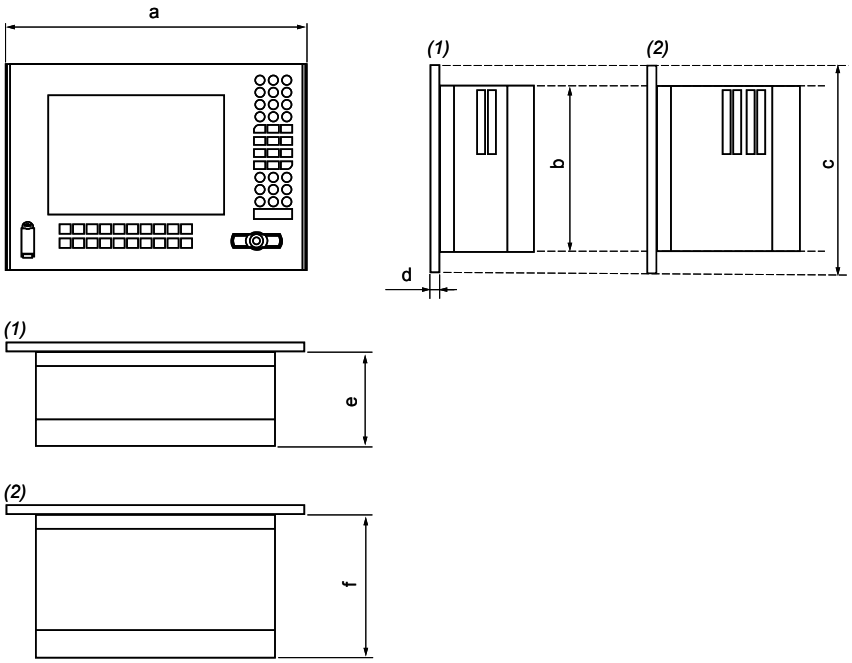


3 < r < 4

Dimensions (continued)

Front panel assemblies - Magelis Flex PC BOX

Type	Reference	a	b	c	d	e	f
12" touch screen and keyboard	**MPC YB2 0NNN 00N**	425	243	325	10	193.5	244.5
15" touch screen and keyboard	**MPC YB5 0NNN 00N**	488	333.4	367	10	193	244
15" touch screen	**MPC YT5 0NNN 00N**	425	304	325	10	193	244
19" touch screen	**MPC YT9 0NNN 00N**	460	441	390	12.7	206.5	258.5



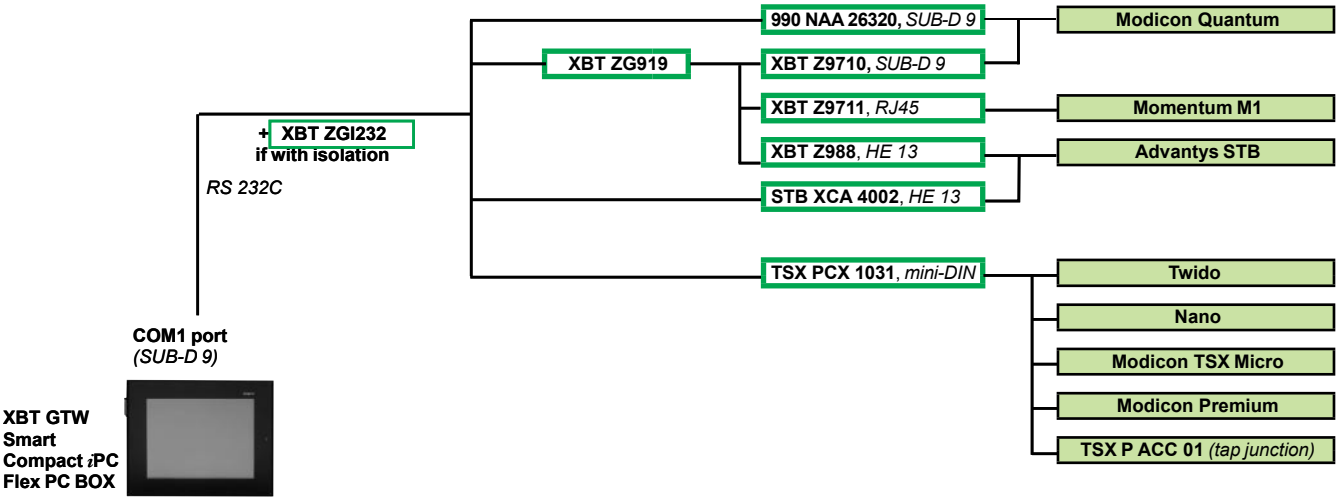
(1) Magelis Flex PC BOX F CPU with 2 slots
(2) Magelis Flex PC BOX H CPU with 4 slots

Embedded BOX and PC BOX industrial PCs

Magelis Smart, Magelis Compact *i*PC, Magelis Flex PC BOX

XBT GTW terminals and Smart, Compact *i*PC and Flex PC BOX industrial PCs

Connections to Schneider Electric devices

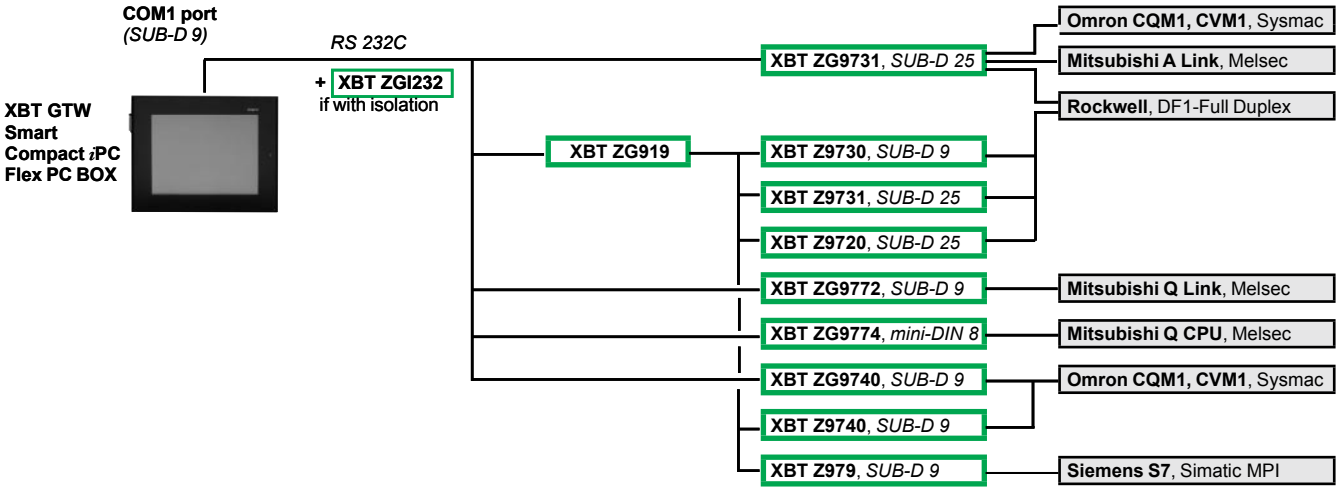


Embedded BOX and PC BOX industrial PCs

Magelis Smart, Magelis Compact *i*PC, Magelis Flex PC BOX

XBT GTW terminals and Smart, Compact *i*PC and Flex PC BOX industrial PCs

Connections to third-party devices



Industrial PCs
Magelis iDisplay

Applications		Flat screens	
			
Model		*i*Display	
15" screen XGA (1024 x 768)	Data entry via keyboard and touch screen		●
	Data entry via touch screen	●	
19" screen SXGA (1280 x 1024)	Data entry via touch screen		
Pages		2/55	

Model		*i*Display
Screen	Type	Active-matrix colour TFT LCD
	Size	15"
	Resolution	XGA 1024 x 768
	No. of colours	16 777 216
	Brightness	≥ 200 cd/m² adjustable
Touch panel		Resistive analog
Keyboard		-
Inputs	Image	VGA or DVI-D port
Outputs	Touch panel	USB or RS 232C port
Supply	Voltages	100 to 240 V ∿ (threshold values 98 to 264 V), EN 61131-2-compliant
Type		**MPC YT5 0NAN 00N** / **MPC NB5 0NAN 00N**
Pages		2/55

Flat screens

*i*Display
●
2/55

*i*Display
Active-matrix colour TFT LCD
19"
SXGA 1280 x 1024
16 777 216
≥ 200 cd/m² adjustable
Resistive analog
-
VGA or DVI-D port
USB or RS 232C port
100 to 240 V ∼ (threshold values 85 to 264 V), EN 61131-2-compliant

MPC YT9 0NAN 00N
2/55

Industrial PCs
*i*Display flat screens

MPC YT5 0NAN 00N

MPC NB5 0NAN 00N

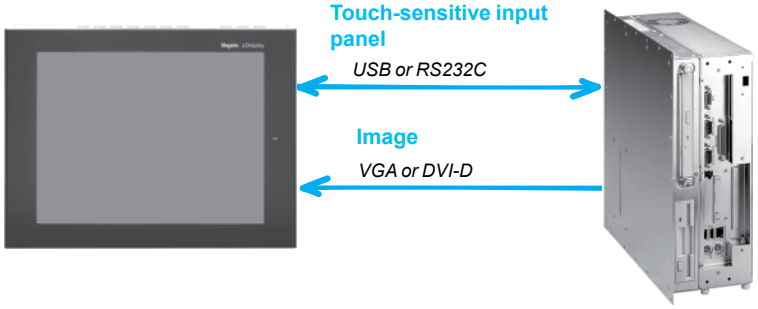
Presentation

Magelis *i*Display screens are monitors with industrial flat screens designed for use in conjunction with PCs.
A choice of two screen sizes (15" and 19") offers greater flexibility. Featuring the latest TFT LCD technology, they offer top-class visualization and extended service life. Their touch screen interface makes for easy setup of user-friendly and highperformance HMIs.
The Magelis *i*Display screen **MPC NB5 0NAN 00N** also has a 70-key (standard IBM) keyboard and user function keys (2 x 20 keys).

Certified in accordance with automation product standards, designed for use in harsh industrial environments and offering an excellent screen size/dimensions ratio, they can be installed easily on any machine and in any device, and are suitable for use in any type of environment.

With the same dimensions and screen size as Magelis Smart and Compact *i*PC industrial PCs, Magelis *i*Display screens can be used to visualize the development of installations with optimum ease and simplicity.

Architecture



Characteristics of Magelis *i*Display flat screens

Type		MPC YT5 0NAN 00N	MPC NB5 0NAN 00N	MPC YT9 0NAN 00N
Environment				
Product certification		UL 508, CSA, IEC 61131-2	UL 1604, UL 508, IEC 61131-2	UL 508, CSA, IEC 61131-2
Temperature	In operation	0 to +50°C, compliant with EN 61131-2, UL		
	In storage	-10 to +60°C, compliant with IEC 68-2-2 tests Bb and Ab, IEC 68-2-14 test Na, and EN 61131-2	-20 to +60 °C	
Electrical characteristics				
Supply	Voltages	100 to 240 V ∿ (threshold values 98 to 264 V), EN 61131- 2-compliant	100 to 240 V ∿	100 to 240 V ∿ (threshold values 85 to 264 V), EN 61131-2-compliant
	Frequencies	50/60 Hz (threshold values 47/63 Hz), EN 61131-2-compliant	50/60 Hz	
	Micro-breaks	≤ 20 ms	10 ms	
Consumption		120 VA	200 VA	
Operating characteristics				
Screen	Type	Active-matrix colour TFT LCD		
	Size	15"		19"
	Resolution	XGA 1024 x 768		SXGA 1280 x 1024
	No. of colours	16 777 216		
	Brightness	≥ 200 cd/m² adjustable		
	Backlighting (service life)	50,000 hours		
Touch panel		Analog resistive, 35 million cycles		
Keyboard		–	70 keys (standard IBM) 2 x 20 function keys	–
Inputs	Image	VGA or DVI-D port		
Outputs	Touch panel	USB or RS 232C port		

Industrial PCs
iDisplay flat screens

References

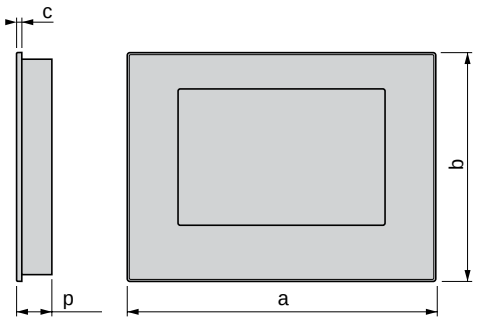
Designation	Characteristics	Interface	Reference	Weight kg
Flat screen for flush mounting, IP 65 front panel supplied with 3 m cable	15", XGA (1024 x 768)	Touch	**MPC YT5 0NAN 00N**	–
		Touch and keyboard	**MPC NB5 0NAN 00N**	–
	19", SXGA (1280 x 1024)	Touch	**MPC YT9 0NAN 00N**	–

Separate parts

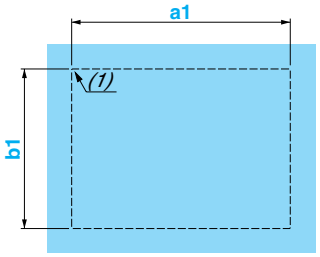
Designation	Reference	Weight kg
Maintenance kit: mounting brackets + seals for Magelis iPC 19"	**MPC YK9 0MNT KIT**	–
Protective film for screen on Magelis iPC 19"	**MPC YK9 0SPS KIT**	–

Dimensions

iDisplay flat screens MPC YT● 0NAN 00N and MPC NB5 0NAN 00N



Cut-out



(1) 3 < r < 4

	a	b	c	p	a1	b1
MPC YT5	395	294	5	60	383.5 $^{+1}_{0}$	282.5 $^{+1}_{0}$
MPC NB5	483	365	10	31	441.5 $^{+1}_{0}$	313.5 $^{+1}_{0}$
MPC YT9	460	390	12.7	65	419.5 $^{+1}_{0}$	352.5 $^{+1}_{0}$

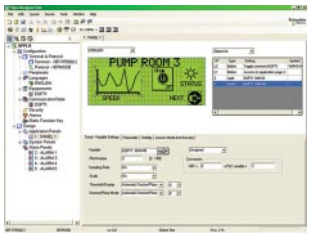
Mounting

Magelis iDisplay flat screens can be mounted on a panel or cabinet door using the fixing parts (3 x 4 spring clips) supplied with each screen.

Contents

3 - HMI software

HMI Software

Applications			**Traditional architecture, HMI executed on PC platform or dedicated terminal** **Configuration software for operator dialogue applications**
			
Target products	Type		Magelis XBT N *(1)* Magelis XBT R/RT *(1)*
	Operating system on terminals		Proprietary Magelis
Functions	Reading/writing of PLC variables		Yes
	Display of variables		Yes
	Data processing		–
	Sharing of variables between HMI applications		–
	Saving of variables to external database		–
Development of graphics applications	Native library of graphic objects		Yes
	Container	Active X	–
		Java Beans	–
	Curves and alarms		Yes *(2)*
	Scripts		–
Online modification of applications			–
Communication between PLCs and HMI application			Via I/O drivers
Uploading of applications			Yes
Simulation of HMI applications			Yes
Redundancy			–
Recipe management			–
Report printing			–
Access security			Linked to user profiles
Software compatible with OS			Windows 2000, Windows XP or Windows Vista
Type of software			**Vijeo Designer Lite**
Pages			3/7

(1) Magelis XBT terminals behave transparently on restoration of power.
(2) Depending on model

Traditional architecture, HMI executed on PC platform or dedicated terminal

Configuration software for operator dialogue applications

Magelis XBT G *(1)*
Magelis XBT GT *(1)*
Magelis XBT GK *(1)*
Magelis XBT GTW *(1)*

Except Magelis XBT GTW: Windows XP embedded

Yes

Yes

Yes, using expression editor or Java programming

–

–

Yes

–

Yes

Yes, with log

Java

–

Via I/O drivers

Yes

Yes

–

Yes

Real-time alarms, log data

Linked to user profiles

Windows XP or Windows Vista

Vijeo Designer

3/17

HMI software
Vijeo Designer Lite configuration software

Presentation

Vijeo Designer Lite configuration software can be used when creating user-interface applications to control simple automation systems for:
■ XBT N/R/RT Small Panels

For Magelis XBT GT/GK Advanced Panels, refer to the information on Vijeo Designer configuration software (pages 3/8 to 3/10).

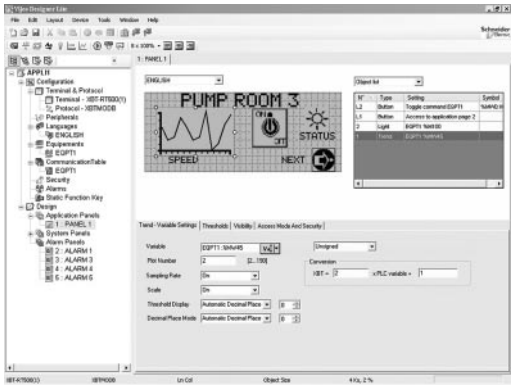
Vijeo Designer Lite has been designed with simplicity in mind and is inspired by the same user-friendly philosophy as Vijeo Designer. It has been developed so that users with no previous experience can follow intuitive methods for creating applications with the help of wizards.

Vijeo Designer Lite formats page contents using WYSIWYG (*What you see is what you get*): everything created using this software is displayed in exactly the same way as it appears on the user-interface screen.

Since Vijeo Designer Lite is capable of simultaneously defining, within the same project, as many versions in different languages as the compact terminal's memory can support, users have the option of internationalizing their applications.

The interface and documentation for Vijeo Designer Lite are also available in six languages: English, French, German, Italian, Simplified Chinese and Spanish.

As applications created with Vijeo Designer Lite are independent of the protocol used, the same user-interface application can be used with the various PLCs offered by the major suppliers.
Vijeo Designer Lite works on compatible PCs with Windows 2000, XP or Vista operating software.



Configuration

With Vijeo Designer Lite configuration software, user-interface applications can be developed quickly and easily thanks to its very simple and user-friendly tools.

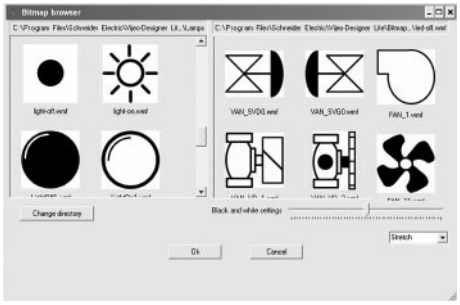
The development environment has two main windows:
■ Application browser: This is a logical guide to designing applications. All project-related information is clearly and permanently displayed.
■ Dialogue view: This displays context-based information on selections made in the application browser. Information is arranged on tabs.

Vijeo Designer Lite applications have different types of pages:
■ Application pages, which can be interlinked
■ Alarm pages
■ Preconfigured system pages
Pages can contain text or bitmaps, as well as all kinds of variables and graphic objects.

Applications can be configured without dialogue boxes. Instead, preconfigured lists of parameters are available to help users make their selections and avoid errors.
Vijeo Designer Lite comes with a toolset:
■ Graphics editor
■ Library of pictograms and symbols
■ Editor for linking to PLC variables
■ Simulator
■ Application printing

References:
page 3/7

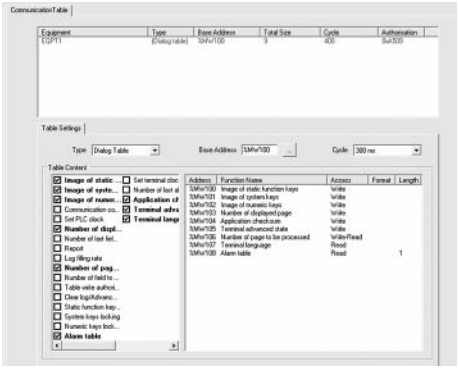
HMI software
Vijeo Designer Lite configuration software



Symbols library

Graphics editor
The graphics editor in Vijeo Designer Lite makes it easy for developers of user-interface applications to create pages based on objects:
- Point, line, rectangle, ellipse
- Text and image
- Graphic, trend curve, button, indicator
- Enumerated list and scrolling text

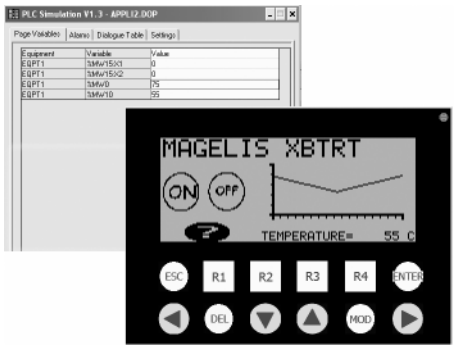
Symbols library
The symbols library makes the process of creating pages even more efficient.
It contains pictograms which are easily recognizable within industrial contexts as well as drawings of the main components used in automation.
With Vijeo Designer Lite, the user can instantaneously link these graphic symbols with function keys on the terminal.



Communication table

Links with PLC variables
Vijeo Designer Lite also enables the user to link symbols with the internal variables of Schneider Electric PLCs by importing Twido Soft, PL7 and Concept automation database files.

Communication table
The Communication table in Vijeo Designer Lite provides the user with an easy way of configuring all data exchanged between the Magelis compact XBT terminal and the main device.
The Communication table can also be used to define:
- Access to data: read/write
- All the alarm conditions



Simulation

Simulator
Vijeo Designer Lite makes it possible to simulate the entire user-interface application at design office level without using a Magelis compact terminal or a PLC.
The simulator program can be used to thoroughly check the following application characteristics:
- Navigation between pages
- Entry of variable data
- Variable display
- Alarm display

Application printing
The print function for Vijeo Designer Lite can be used with part or all of the HMI application. It is possible to send the data to a printer or to print to file.

References:
page 3/7

HMI software
Vijeo Designer Lite configuration software

Characteristics of Vijeo Designer Lite applications

Schneider Electric protocols	
	Vijeo Designer Lite supports Schneider Electric protocols: - Modbus RTU Master, Slave - Unitelway

Characteristics of the Vijeo Designer Lite software

Operating system compatibility	Windows 2000 Windows XP Professional Windows Vista Professional, 32-bit
Application validation	Calculation of the maximum memory space occupied by the application. Verification of the capacity of the target (Magelis compact XBT terminal) configured to run the application in total security: - Physical memory capacity - Available functions If applicable: - Disabling of application upload/download - Direction towards sections of the online help, which will provide tips for optimizing the application
Interface languages	Vijeo Designer Lite software screens and online help available in English, French, German, Italian, Simplified Chinese and Spanish
Documentation	Available in electronic format in English, French, German, Italian, Simplified Chinese and Spanish. Not available in hard copy
User licences	Four types of licence are available: - *Single*: one station - *Group*: 3 stations - *Team*: 10 stations - *Facility*: unlimited number of stations on one site Supplied with or without transfer cable(s), for serial link or USB port (see table of references for each Magelis compact terminal on page 3/7).
Registration	Recommended (via fax, e-mail or website www.schneider-electric.com/swregistration), provides access to additional resources such as application examples, etc.
Third-party protocols	
	Vijeo Designer Lite also supports the following protocols and PLCs:
Mitsubishi	Melsec FX protocol (CPU)
Omron	Sysmac protocols
Rockwell Automation	Allen-Bradley protocols: DF1-Full Duplex, RS DataHighway 485
Siemens	Simatic PPI protocols

References:
page 3/7

HMI software
Vijeo Designer Lite configuration software

References

All licences for the Vijeo Designer Lite configuration software listed below consist of a CD-ROM containing:
- Vijeo Designer Lite V1.2 software
- User documentation in electronic format
- The communication protocols described on page 3/6.
- XBT L1001 development software for converting existing XBT applications

Single-station licences

Designation	Licence type	Application transfer cable included		Reference	Weight kg
		PC-side port	Terminal side Magelis XBT/ Magelis iPC		
Vijeo Designer Lite configuration software	*Single* (1 station)	–	*– (1)*	**VJD SND TMS V12M**	0.125
		USB		**VJD SUD TMS V12M**	0.675

Multistation licences

Designation	Licence type	Number of stations *(1)*	Reference	Weight kg
Vijeo Designer Lite configuration software	*Group*	3	**VJD GND TMS V12M**	0.125
	Team	10	**VJD TND TMS V12M**	0.125
	Facility	Unlimited number of stations on one site	**VJD FND TMS V12M**	0.125

(1) Separate parts: For application transfer cables (PC to XBT N/R/RT terminal), see page 1/20.

HMI software
Vijeo Designer configuration software

Presentation

The cross-platform Vijeo Designer configuration software can be used to create operator-dialogue applications for controlling automation systems for:
- Terminals from the Magelis XBT GT and XBT GK ranges
- XBT GTW open terminals
- Magelis Smart HMI edition and Magelis Compact *i*PC HMI edition, PC BOX industrial PCs

Vijeo Designer and a suitable terminal can be combined to provide a solution for each and every control station requirement, at the cost of a simple software reconfiguration.

Because it supports video-image streaming, the Magelis Vijeo Designer offer provides access to new types of application. Users can visualize their processes immediately, or subject to a delay, on the same screen as the HMI dialogue.
Vijeo Designer uses Magelis Ethernet TCP/IP connectivity and is, therefore, able to support WEB Gate remote access, the sharing of application data between terminals, the transfer of recipes and logs for variables, and much more - all with total security.

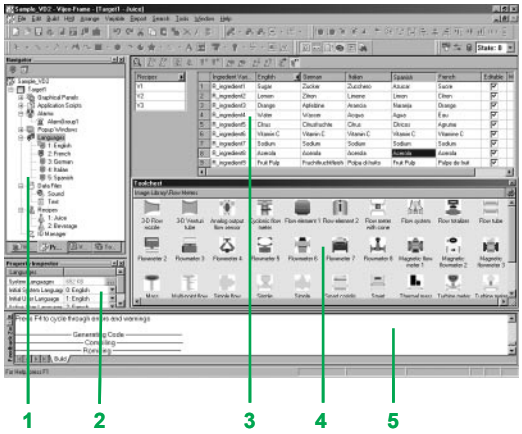
Applications can take on an international nature, thanks to the ability of Vijeo Designer to support up to 15 languages simultaneously in one project (40 alphabets are available on the XBT GT/GK terminal.
The interface and documentation for Vijeo Designer are available in 7 languages: English, French, German, Italian, Portuguese, Simplified Chinese and Spanish.

Vijeo Designer is the HMI component of SoMachine.
Vijeo Designer will run on any PC with Windows XP Professional or Vista. It supports WYSIWYG simulation *(1)* of the expanded application (without XBT GT/GK/GTW terminal or target Magelis *i*PC), the simulation of PLC variables (I/O, internal bits and words) and ensures that the application runs in total security on the XBT GT/GK/GTW terminal, Magelis Smart, Compact *i*PC HMI edition or PC BOX.

Note: *For other semi-graphic Magelis XBT terminals, please refer to information on Vijeo Designer Lite development software.*

Configuration

Vijeo Designer configuration software enables operator-dialogue projects to be processed quickly and easily thanks to its advanced ergonomics using up to five configurable windows:
1. Browser window
2. Object List window
3. Recipes window
4. Library of Animated Graphic Objects and Image Objects window
5. Report window



The software also offers a complete set of application-management tools for:
- Project creation, whereby a project comprises one or a number of applications for XBT GT/GK/GTW, Smart, Compact *i*PC and PC BOX with sharing of variables between terminals (up to 8 terminals and 300 variables)
- Recipe management (32 groups of 256 recipes with up to 1024 ingredients)
- Cross-referencing of application variables
- Documentation of mimics for an application
- A simulation mode enabling easy testing of the application from the design office
- Barcode reader management via:
  - USB port on multifunction XBT GT terminals, XBT GT/GK/GTW keyboard terminals, Magelis Smart, Compact *i*PC HMI edition and PC BOX industrial PCs
  - COM1 or COM2 serial port on XBT GT/GK/GTW *(2)*
- Support for USB keyboards and mice on all terminals with a USB connector (only one peripheral can be connected at any one time)
- Recovery of symbols files for PLC variables generated by TwidoSuite, PL7, Concept, ProWORX 32 and Unity Pro software *(3)*
- Report printing

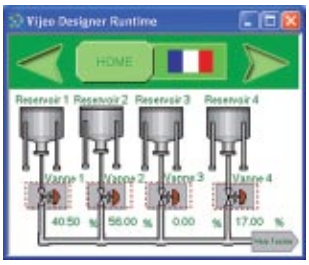
(1) What you see is what you get: what you see is exactly what you get on the screen of the target terminal
(2) Except XBT GT11 terminals
(3) DDT structured types and "unlocated" variables are supported.

HMI software
Vijeo Designer configuration software

Graphics editor

The graphics editor in Vijeo Designer offers interface consistency for simple objects as well as for more sophisticated ones. It enables application developers to create mimics easily based on:

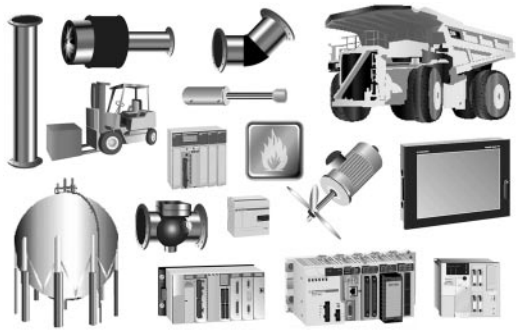
- Simple objects to be configured:
  - Points, lines, rectangles, ellipses, arcs
  - Bar graphs, gauges, tanks, fillers, pie charts, curves
  - Polylines, polygons, regular polygons, Bézier curves, scales
  - Texts, images or alarm summary, etc.
- Preconfigured advanced objects: Switches, radio buttons, indicators, buttons, tanks, bar graphs, potentiometers, selector switches, text or number fields, enumerated lists, etc.
- Screen masks and skeletons for type applications



Object animations

8 types of graphic-object animation support the rapid creation of animated mimics on the basis of:

- Pressing the touch panel
- Change of colour
- Filling
- Movement
- Rotation
- Size
- Visibility
- Display of associated value



Library of animated graphic objects

The library of animated graphic objects makes the creation of mimics very efficient thanks to the numerous "ready-made" animation objects. It includes more than 4000 "industrial" vector images in 2 or 3 dimensions. Simply "drag and drop" the object using the mouse to position it on the mimic being created.
User-defined objects can be added to this library using the same simple "drag and drop" method.

Java scripts

Vijeo Designer supports the processing of information using Java language scripts. This function facilitates the running of complex animations, the automation of tasks within the terminal and the management of calculations in order to relieve the load on the PLC programs.
The scripts (50 lines, max.) can be associated with:

- Variables
- Operator actions
- Screens
- The application itself

```
//-----------------------------------
//Script Created: 10 09, 2001
//
// Description:
//
//-----------------------------------

// Replace this line with your script
int pos;

if (movebottles.getIntValue() != 0) // If conveyor is OFF, do not move bottles
{
        pos = BottlePos.getIntValue();
        if (pos >= 1000)
                pos = 0;                        // If bottle position has been the out of display area, reset position.
        pos = pos + 10 + 2 * ConveyorSpeed.getIntValue();
        BottlePos.write(pos);
}
```

User-customizable resources

To enable applications to be customized in accordance with customer requirements, Vijeo Designer features a new resource concept, i.e. the possibility of defining styles (colours, images, character fonts, text lists).
To customize a generic application in accordance with customer requirements quickly, simply assign these styles to the objects concerned.
The resource concept is supported by the following native objects: *Meter, Bar Graph, Slider, Potentiometer, Selector, Text List* and *Image List*.

HMI software
Vijeo Designer configuration software

Data Manager: Transfer recipes, videos, images, etc. via Ethernet or USB, by simply clicking the mouse.

Alarm management

Report printing

Advanced functions

Based on new information technologies, Vijeo Designer features a large number of advanced functions for processing a higher volume of data, both faster and more reliably:

- ■ Multimedia data management in the most popular formats:
  - □ Image display (jpeg, bmp, emf and png files)
  - □ Text display and processing (txt files)
  - □ Sound-message processing (wav files)
- ■ Alarm or curve logs recorded
- ■ In/out zoom function for a focused analysis of trend curve displays
- ■ Alarm management All variables can be categorized as "Alarms" and can be customized in respect of visualization and acknowledgment. These Boolean and analog-threshold type alarms can be printed in real time.
- ■ Multimode application transfer: via serial link, USB, Ethernet and Compact Flash memory card (on multifunction terminals)
- ■ Backup of application source files on the terminal or *i*PC to facilitate maintenance
- ■ User-friendly data exchange between PC and terminal using the Data Manager tool
- ■ Integrated FTP server for downloading/uploading recipes via Ethernet TCP/IP and restoring logs to XBT GT/GK/GTW and Magelis *i*PC terminals
- ■ Multiport communication for multifunction terminals - 2 serial links and 1 Ethernet network can be active simultaneously.
- ■ Action table for associating a particular behaviour with an event
- ■ Using a USB memory stick (up to 2 GB) to download an application, retrieve data or exchange recipes

WEB Gate remote connection

Vijeo Designer can provide a WEB Gate remote connection for any platform equipped with an Ethernet port and Compact Flash or hard disk memory, i.e. XBT GT/GK/GTW (XBT GT2110 and higher), Magelis Smart, Compact *i*PC HMI edition and PC BOX.

WEB Gate supports remote visualization of Vijeo Designer applications with Internet Explorer on any PC running Windows XP or Windows Vista. The size of the page displayed is determined by the terminal.
WEB Gate supports the display of pages similar to those in the Vijeo Designer application, or of different pages, i.e. startup pages and navigation pages can be differentiated in order to indicate the type of access (terminal/WEB Gate).
It is possible to have more than one connection at the same time, with the number of connections depending on the size of the application.
WEB Gate's high-security mode excludes any risk of applications jamming as a result of variables being modified via the terminal and WEB Gate at the same time.
For increased confidentiality:

- ■ WEB Gate access can be restricted to only those PCs whose IP address appears in the licensing list.
- ■ Some Vijeo Designer functions are not supported by WEB Gate:
  - □ Application shutdown, restart
  - □ Terminal configuration
  - □ Read an acoustic animation (sound file)
  - □ Display a recorded video sequence

WEB Maintenance remote diagnostics

In addition to WEB Gate, Vijeo Designer features the embedded diagnostics service WEB Maintenance - Transparent Ready WEB Server Class B15 *(1)* - this server's navigation bar features an option for accessing the WEB Gate function.

Note: *Terminals programmed using Vijeo Designer can be accessed directly via their names. This function is supported by the DHCP and DNS network services.*

(1) Please consult our "Control and automation, Ethernet TCP/IP and the Web" catalogue.

HMI software
Vijeo Designer configuration software

Characteristics of Vijeo Designer applications

General characteristics						
Number of targets	32, either XBT GT/GK/GTW terminals or Magelis Smart HMI edition, Compact iPC HMI edition and PC BOX industrial PCs					
Number of internal and external variables	8000					
Number of lines per Java script	50 *(1)*					
Sharing data between terminals	Up to 300 variables between 8 terminals, without router PLC. Proprietary protocol above TCP/IP.					
Internationalization	Up to 15 languages supported by 34 western alphabets, 4 Asian alphabets, 2 middle eastern alphabets:					
Western alphabets	Afrikaans Swedish Russian Norwegian Italian Greek	Belarusian Albanian Czech Serbian Polish Latvian	Spanish Bulgarian German Turkish Slovak Portuguese	Dutch Estonian Catalan English Ukrainian Slovenian	Lithuanian Hungarian Finnish Croatian Basque	Romanian Macedonian Indonesian French Danish
Asian alphabets	Simplified Chinese	Korean	Japanese	Taiwanese		
Middle eastern alphabets	Hebrew	Arabic				
Functions	Languages can be programmed or selected dynamically via the menu. The character fonts are embedded in the application. The process is based on the export/import of texts in CSV format, which can be edited by the translator (each text is stamped with a unique ID).					
Keyboards that can be used to enter data	Three types of keyboard are available: - Standard AZERTY or QWERTY - Alphabetical - Compact, suitable for small screens and for pages with priority display zones					
Storage of source code	- The application source code can be stored either on the terminal or on the iPC. - A password ensures confidentiality. - On request, the application can be verified each time the terminal starts up by means of a CRC calculation *High Security* function).					
Characteristics of pages						
Internal or external variables	800					
Objects	800					
Switches	30					
Pop-up windows	3					
Number of lines per Java script	50 *(1)*					
Library of graphic objects						
Number of objects available	> 4000					
Type	2D and 3D "industrial" vector images					
Can be expanded?	Yes					
Recipes						
Number of groups	32					
Composition of a group	Up to 1024 ingredients for 256 recipes					
Multilingual support	Complete for labels and ingredients					
Action tables						
Number of actions	100					
Composition	Maximum of 16 commands per action					
Action type	- Periodic - Planned - Conditioned - Event-based					

(1) Indicative data for a script executed cyclically

Characteristics of Vijeo Designer applications (continued)

Alarms

No. of alarms activated, record or logs	9999
Type	Any variable (internal or external, Boolean or analog-threshold) can act as an alarm.
Easy customization	Any alarm-type variable can be customized in respect of visualization and acknowledgment.
Associated reflex functions	Any alarm-type variable can be associated with reflex functions linked to the appearance of the alarm concerned: - Action on appearance - Action on selection - Message for the alarm bar, etc.

Integrated diagnostics

The PLC "Diag buffer" function can be accessed via the following protocols:

	Modicon M340 Unity Pro	Premium PL7	Premium Unity Pro	Quantum Unity Pro
UNITE series		■	■	
UNITE-TCP/IP XWAY		■	■	
UMAS Modbus TCP	■		■	■
UMAS Modbus RTU	■			■
UMAS Modbus Plus			■	■
UMAS UNITE series			■	
UMAS UNITE-TCP/IP XWAY			■	
UMAS Modbus TCP USB PPP	■			

■ Accessible
Not accessible

Video functions

Platform	XBT GT terminals	XBT GTW terminals Magelis Smart HMI edition Magelis Compact *i*PC HMI edition PC BOX
Video source	NTSC, PAL video channel	Webcam
Input format	Composite video (chrominance+luminance) via RCA plug	Webcam via USB port
Display resolution	NTSC: 640 x 480 pixels PAL: 768 x 576 pixels	Depending on webcam characteristics (usually 640 x 480 pixels)
Duration of dynamic memorization	10 mins. max., can be configured, in circular memory (MPEG-4 format)	–
Recording of sequences		
Media	Compact Flash card	Compact Flash card Hard disk
Number of sequences	Up to 200	
Recording format	Simple MPEG-4 profile	
Recording resolution	320 x 240 pixels	
Typical recording rate	3.2 MB/minute	Determined by the CODEC used on the PC
Typical capacity	Up to 28 sequences lasting up to 10 minutes can be stored on a 1 GB Compact Flash card.	Determined by the space available on the hard disk

Characteristics of Vijeo Designer applications (continued)

Screen capture	
Format	JPEG
Resolution	Display resolution
Ranges supported	XBT GT terminals (XBT GT 1105 and higher), Magelis Smart HMI edition, Magelis Compact iPC HMI edition and PC BOX industrial PCs
Video window included	Yes
Backup	
Format	JPEG
XBT GT 1105 terminals and higher	On Compact Flash card
Magelis Compact iPC industrial PCs	On Compact Flash card On hard disk
Transfer	Via USB memory stick or Data Manager on the terminal or on an iPC equipped with an Ethernet connection or USB port
Printing	
XBT GT 1105 terminals and higher	Via USB port *(1)* or Ethernet port, with a compatible printer *(2)*: □ PCL5 - HP Officejet Pro - HP LaserJet □ PCL3 - HP Deskjet series - HP Business InkJet - HP Officejet Pro - HP LaserJet - HP Photosmart series □ ASCII
With the Magelis Smart and Compact iPC HMI edition industrial PCs and later	With any printer equipped with a suitable driver for Windows
Creating and printing reports and barcodes	
Creating reports	Reports are created in the same way and with the same *wysiwyg* editor as for Vijeo Designer pages.
Report printing	
XBT G terminals	Text printer via: □ Parallel port □ COM port
XBT GT terminals	Text printer via: □ COM port □ USB port with PIO adapter NB: printers with a USB port and network printers are not supported.
Magelis iPC, PC BOX	Based on Windows printing configuration, using a text printer via: □ Parallel port □ COM port □ Network
Barcode printing	
	Can be done by sending special characters to switch the printer to barcode printing mode Main barcode types supported: □ UPC-A □ UPC-E □ JAN/EAN8 □ JAN/EAN13 □ ITF □ CODE39 □ CODE93 □ CODE128 □ CODABAR (NW-7)
Internet Explorer browser object	
Support	Pages created in Vijeo Designer for Magelis Smart, Compact and iPC HMI edition can feature a Microsoft Internet Explorer browser object.
Possible functions	Display, in all or part of the Vijeo Designer screen page, of: - HTML format pages: e.g., websites, pages from Microsoft Office Word, Excel and Powerpoint documents saved in HTML format - Documents in Adobe pdf format - Macromedia Flash presentations - Video sequence *(streaming)* originating from a video server on IP - Any other Active X featuring a USB port

(1) A printer can be connected to the USB port of XBT GT terminals (XBT GT 1105 and higher) as long as the printer connection is serial or parallel. A serial-to-USB or parallel-to-USB conversion cable is also required.

(2) For a complete list of Hewlett Packard and other manufacturer printers supported, please consult your Regional Sales Office.

Characteristics of Vijeo Designer applications (continued)

Displaying user documentation pages on the XBT GT/GK

Support	User documentation stored on the Compact Flash card of the XBT GT/GK can be displayed with Vijeo Designer, provided it is in HTML V4.01 CSS 1.0 format. Most DTP software supports export to HTML format: Adobe Acrobat, Microsoft Word, Microsoft Powerpoint, etc.

Schneider Electric applications

Support	Pages created with Vijeo Designer for Magelis Smart, Compact *i*PC and PC BOX can run Schneider Electric software in a window that is independent of the Windows system.
Possible functions	It is also possible to run frequently-used application software as and when required, including: - Unity Pro - Twido Suite - Advantys STB configuration software - PL7 - PowerSuite, etc.

Traceability, logs

	Vijeo Designer offers increased flexibility for implementing data traceability by means of sampling and management of log files. Every variable can be written in a recording group. All data is time and date-stamped (based on GMT) to facilitate comparison of data from different sites. *Time Zone* and DST are also supported so that local characteristics such as the change from winter to summer time can be taken into account. A recording group defines the following elements:
Recording type	- Periodic - Event-based
Storage media	- Compact Flash memory card - SRAM terminal memory (for alarms) - Hard disk (Magelis Compact *i*PC and PC BOX)
Maximum size	- Maximum number of recordings - Maximum file size
Capacity	The designer of the application concerned is entirely free to select the number of variables sampled and the sampling frequency (these will be determined by the media present on the target). The following are typical example values:

Target terminal	XBT GT/GK	XBT GTW	Magelis Smart HMI edition	PC BOX Magelis Compact *i*PC HMI edition
Number of variables sampled	100	250		
Target storage medium	Compact Flash card			Hard disk
Maximum duration and size of samples per variable	Up to 5 years of recordings Up to 8 MB of samples per variable			

Data Manager

	The user-friendly Data Manager tool is used to transfer data from and to a terminal. This copyright-free program does not require Vijeo Designer to be installed and can be installed independently for the following types of transfer:
Logs	- Recovery of log data for variables - Conversion into a single CSV format file
Recipes	- Transfer from and to terminal - Modification using an integrated editor
Project	- Download to PC of the project stored on the Compact Flash memory card
Video sequences, screen captures	- Download to PC

Data sharing

	Vijeo Designer offers the possibility of sharing data between terminals (this option simply needs to be configured). The system works without a router PLC. Up to 300 variables can be shared between a maximum of 8 terminals. The exchange protocol is a TCP/IP proprietary upper layer. The high-security mode excludes any risk of applications jamming, which can occur when attempts are made to modify a variable via more than one terminal at the same time.
Restrictions	Vijeo Designer imposes the following restrictions on the sharing of data:
Sharing of external variables on the terminal	These variables cannot be used in the following objects: - *Trend graphs* - *Data graphs* These variables cannot be saved via the terminal.
System and recipe variables	The direct sharing of these variables by means of configuration settings is not supported. However, sharing can be programmed using the *ReadFromVar* and *WriteToVar functions*.

Characteristics of Vijeo Designer applications (continued)

Terminal access security	
	Access to all or some of the objects in Vijeo Designer can be made subject to users proving that they are in possession of sufficient rights (user name and password).
Type of right	- Application: pages, buttons with confirmation, etc. - Data Manager: access via FTP service - Web Gate: intranet/extranet access (IP address filtering)
Number of users per group of rights	Up to 100
Number of groups of rights	Up to 20
Automatic locking	If active: automatic blocking of access via keyboard if no entries are made for a set period of time
Target security	
	Vijeo Designer can increase the confidentiality of applications on Magelis Smart HMI edition, Compact iPC HMI edition and PC BOX by putting protection mechanisms in place at two levels:
BIOS	- Disabling of startup via peripheral connected to USB port - Disabling of USB ports - Password protection for BIOS access
Run-Time Vijeo Designer	- Hiding of Windows taskbar - Disabling of toggling between tasks (ALT+TAB) - Disabling of Windows Security Manager (CTRL+ALT+DEL), including the Task Manager - Disabling of Windows shortcuts - Disabling of the "Windows logo" key on the keyboard - Disabling of shortcut to exit run time (CTRL+Z)
Schneider Electric protocols	
	Vijeo Designer supports Schneider Electric protocols: - Modbus RTU Master - Modbus TCP/IP Master - Modbus Plus *(1)* - ELAU PacDrive - Unitelway - UniTE TCP/IP - USB terminal port for Modicon M340 CPUs - FIPIO *(5)*, FIPWAY *(5)* All Schneider Electric drivers offer IEC access to input and output bits/words: Modbus (RTU and TCP/IP), Modbus Plus (GMU and USB), Uni-Telway, Xway. Direct I/O access authorizes access to hardware input and output registers. Register addresses comply with the syntax of IEC standards and the address rules for UNITY configuration software (%I, %IW, %Q, %QW). If requested by the user, the variables associated with a PLC can be read ("on demand scan" function). The DDT and unlocated variables of Unity Pro are supported.
Third-party protocols	
	Vijeo Designer also supports the following protocols and PLCs:
Mitsubishi	Melsec protocols: A/Q CPU (SIO), A/Q Ethernet (TCP), A Link (SIO), QnA CPU (SIO), Q Ethernet (UDP), FX (CPU), FX 3U (CPU). Except for Melsec-A Link (SIO), Mitsubishi serial link protocols do not work on the RJ45 port *(1)*.
Omron	Sysmac protocols: FINS (SIO), LINK (SIO), FINS (Ethernet) and Trajexia. OMRON serial link protocols do not work on the RJ45 port. *(2)*
Rockwell Automation	Allen-Bradley protocols: DF1-Full Duplex, RS DataHighway 485, Ethernet IP *(3)* (PLC5, SLC500, MicroLogix, ControlLogix), Ethernet IP native *(2)* (ControlLogix), DeviceNet Slave *(6)*
Siemens	Simatic protocols: MPI (S7-300/400), MPI Direct, RK512/3964R (S7-300/400), PPI, Siemens Ethernet. The S7-300/400 MPI Adapter and RK512/3964R - RS485 connection serial link protocols do not work on the RJ45 port. *(2)* Profibus DP protocol: via XBT ZG PDP *(4)*

(1) Via USB cable: XBT ZG UMP for XBT GT 2●●● and higher, TSX C USB MBP for Smart and Compact iPC
(2) They are supported on XBT GT (SUB-D connector, XBT GT2 and higher).
(3) Certified ODVA compatibility
(4) Certified by Profibus Foundation
(5) Via the USB FIPIO module: TSX CUSB FIP
(6) Via the Device Net module: XBT ZGDVN

3

Characteristics of the Vijeo Designer software (continued)

Operating system compatibility	Windows XP Professional Windows Vista
Graphic library	Library of vector graphic objects shared with Vijeo Citect
Number of objects available	> 4000
Type	2D and 3D "industrial" vector images
Can be expanded?	Yes
Application validation	Calculation of the maximum memory space occupied by the application. Verification of the capacity of the target (XBT GT terminal, Magelis Smart and Compact *i*PC HMI edition) configured to run the application in total security: - Limits of the physical memory - Available functions If applicable: - Disabling of application upload/download - Direction towards sections of the online help, which will provide tips for optimizing the application
Interface languages	Vijeo Designer software screens and online help available in English, French, German, Italian, Simplified Chinese, and Spanish
Documentation	Available in electronic format in English, French, German, Italian, Simplified Chinese, and Spanish. Not available in hard copy
Self-learning	Multimedia tool (1 hour 30 minutes) in English/French included
User licences	Four types of licence are available: - *Single*: one station - *Group*: 3 stations - *Team*: 10 stations - *Facility*: Unlimited number of stations on one site Supplied with or without transfer cable(s) for USB port: **XBT ZG 935**, see table of references for each Magelis terminal on page 3/17.
Saving	Recommended (via fax, e-mail or website www.schneider-electric.com/swregistration), provides access to additional resources such as application examples, etc.

Services

Switch2VijeoDesigner: migration of XBTL 1000 applications	The Switch2VijeoDesigner service offer makes it even easier to migrate XBTL 1000 applications created on XBT F terminals to VijeoDesigner applications for use on XBT GT/GK terminals. The service provides: □ Analysis of the complexity of migration: hardware, software, communication with PLCs, etc. □ Analysis of the new functional requirements □ Proposal for migration methodology The possible deliverables include: □ Simple conversion □ Full migration of complex machines □ Migration to SCADA system □ Standardization process for multiple machines For more information on this service offer, please consult your Regional Sales Office.

HMI software
Vijeo Designer configuration software

VJD SUD TGS V50M

References

All licences for the Vijeo Designer configuration software listed below consist of a DVD containing:
- ◻ Vijeo Designer software, including:
  - Copyright-free *stand-alone* installation of Data Manager
- ◻ User documentation in electronic format, including:
  - Online help
  - User manual for the supported targets
  - Setup manual for the different protocols supported
- ◻ A multimedia self-learning tool lasting 1 hour 30 minutes in English/French
- ◻ The communication protocols described on page 3/15

Note: Vijeo Designer V5.0 supports applications created with any version of Vijeo Designer ≥ V4.0. When updating an earlier application, please contact your Regional Sales Office for Schneider Electric.

Single-station licences

Designation	Licence type	Application transfer cable included		Reference	Weight kg
		PC-side port	Terminal side Magelis XBT/ Magelis *i*PC		
Vijeo Designer configuration software	*Single* (1 station)	–	*– (1)*	**VJD SND TGS V50M**	0.125
		USB	XBT GT/GK/GTW Magelis Smart HMI edition Magelis Compact *i*PC HMI edition PC BOX	**VJD SUD TGA V50M**	0.330

Multistation licences

Designation	Licence type	Number of stations *(1)*	Reference	Weight
Vijeo Designer configuration software	*Group*	3	**VJD GND TGS V50M**	0.125
	Team	10	**VJD TND TGS V50M**	0.125
	Facility	Unlimited number of stations on one site	**VJD FND TGS V50M**	0.125

(1) Separate parts: for application transfer cables (PC to Magelis terminal XBT GT/GK/GTW), see page 1/57.

4 - Services

Technical information

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Some countries require certain electrical components to undergo certification by law. This certification takes the form of a certificate of conformity to the relevant standards and is issued by the official body in question. Where applicable, certified devices must be labelled accordingly. Use of electrical equipment on board merchant vessels generally implies that it has gained prior approval (i.e. certification) by certain shipping classification societies.

Abbreviated name	Certification body	Country
CSA	Canadian Standards Association	Canada
C-Tick	Australian Communication Authority	Australia, New Zealand
GOST	Scientific research institute for GOST standards	CIS, Russia
UL	Underwriters Laboratories	USA

Abbreviated name	Classification society	Country
IACS	International Association of Classification Societies	International
ABS	American Bureau of Shipping	USA
BV	Bureau Veritas	France
DNV	Det Norske Veritas	Norway
GL	Germanischer Lloyd	Germany
LR	Lloyd's Register	UK
RINA	Registro Italiano Navale	Italy
RMRS	Russian Maritime Register of Shipping	CIS, Russia
RRR	Russian River Register	

The tables below provide an overview of the situation as at **01/02/2009** in terms of which certifications (listed next to their respective bodies) have been granted or are pending for our automation products. Up-to-date information on which certifications have been obtained by products bearing the Schneider Electric brand can be viewed on our website: **www.schneider-electric.com**

Product certifications

Certified / *Certification pending*	Certifications						
	UL	**CSA**	**ACA** (C-Tick)	**GOST**	**Hazardous locations** Class I, div 2 *(1)*	**ATEX**	**TÜV Rheinland**
	USA	Canada	Australia	CIS, Russia	USA, Canada	Europe	
Advantys OTB	■	■			■		
Advantys STB	■	■	■	■	FM	Cat. 3 G	
Advantys Telefast ABE 7	■	■	■				
ConneXium	■	■			*(2)*		
Magelis *i*PC, Magelis XBT GTW	*(3)*	■		*(2)*	UL	*(2)*	
Magelis XBT GT	■	■	■	*(2)*	CSA/UL	Cat. 3 G-D	
Magelis XBT GK	■	■	■	■	CSA		
Magelis XBT N/R	■	■	■	■	CSA/UL	Cat. 3 G-D	
Magelis XBT RT	■	■	■	■	CSA/UL	Cat. 3 G-D	
Modicon M340	■	■	■	■	CSA		
Modicon Momentum	■	■	■				
Modicon Premium	■	■	■	*(2)*	CSA		
Modicon Quantum	■	■	■	*(2)*	FM *(2)*		
Modicon Quantum Safety	■	■	■	*(2)*	CSA		SIL 2 *(4)*
Modicon TSX Micro	■	■	■	■	■		
Phaseo	*(3) (5)*	■	■	■			
Twido	*(6)*	*(6)*		■	CSA/UL *(6)*		

(1) ***Hazardous locations****: According to UL 1604, CSA 22.2 N° 213 and FM 3611, certified products are only approved for use in hazardous locations categorized as Class I, division 2, groups A, B, C and D, or in non-classified locations.*

(2) Depends on product; please visit our website: **www.schneider-electric.com**

(3) North American certification **cULus** *(Canada and USA)*

(4) According to IEC 61508. Certified by TÜV Rheinland for integration into a safety function of up to SIL2 level.

(5) Except for power supplies and function modules in the Universal range: UL certification pending

(6) Except for AS-Interface module **TWD NOI 10M3***; CE only.*

Specific certifications		
BG	Germany	Safety module **TSX DPZ 10D2A** (Modicon TSX Micro) Safety modules **TSX PAY 262/282** (Modicon Premium)
SIMTARS	Australia	Modicon TSX Micro automation platform Modicon Premium (PL7) automation platform
AS-Interface	Europe	Master module **TWD NOI 10M3** (Twido) Master module **TSX SAZ 10** (Modicon TSX Micro) Master modules **TSX SAY 1000** (Modicon Premium)

Merchant navy certifications

	Shipping classification societies							
Certified / Certification pending	ABS	BV	DNV	GL	LR	RINA	RMRS	RRR
	USA	France	Norway	Germany	UK	Italy	CIS	CIS
Advantys OTB								
Advantys STB	*(1)*							
Advantys Telefast ABE 7								
ConneXium				*(2)*				
Magelis *i*PC, Magelis XBT GTW								
Magelis XBT GT								
Magelis XBT GK								
Magelis XBT N/R								
Magelis XBT RT								
Modicon M340	*(2)*	*(2)*	*(2)*	*(2)*	*(2)*	*(2)*		
Modicon Momentum								
Modicon Premium *(3)*								
Modicon Quantum	*(2)*	*(2)*	*(2)*	*(2)*	*(2)*	*(2)*	*(2)*	
Modicon TSX Micro								
Phaseo								
Twido			*(4)*	*(4)*	*(4)*			

(1) Also covers US Navy requirements **ABS-NRV** part 4.
(2) Depends on product; please visit our website: www.schneider-electric.com.
(3) Modicon Premium, also certified by KRS (Korean Register of Shipping).
(4) Except for: Compact bases **TWD LC●●40DRF**, *Extreme base* **TWD LEDCK1**, *communication modules* **499 TWD 01100**, **TWD NCO1M** *and* **TWD NOI 10M3** *and tap junctions* **TWD XCA ISO/T3RJ**.
Certifications pending for I/O extension modules (discrete **TM2 D** *and analogue* **TM2 A**).

EC regulations

European Directives

The open nature of the European markets assumes harmonization between the regulations set by different European Union member states.
European Directives are texts whose aim is to remove restrictions on free circulation of goods and which must be applied within all European Union states.
Member states are obligated to incorporate each Directive into their national legislation, while at the same time withdrawing any regulation that contradicts it.
Directives - and particularly those of a technical nature with which we are concerned - merely set out the objectives to be fulfilled (referred to as "essential requirements").
The manufacturer is obligated to implement any and all measures to ensure that its products meet the requirements of each Directive that applies to its equipment.
As a general rule, the manufacturer certifies compliance with essential requirements of the Directive(s) that apply to its product by applying a CE mark. The CE mark has been applied to our products where applicable.

Significance of the CE mark

■ The appearance of a CE mark on a product indicates the manufacturer's certification that the product conforms to the relevant European Directives; this is a prerequisite for placing a product which is subject to the requirements of one or more Directives on the market and for allowing its free circulation within European Union states.
■ The CE mark is intended for use by those responsible for regulating national markets.

Where electrical equipment is concerned, conformity to standards indicates that the product is fit for use. Only a warranty by a well-known manufacturer can provide assurance of a high level of quality.
As far as our products are concerned, one or more Directives are likely to apply in each case; in particular:
■ The Low Voltage Directive (2006/95/EC)
■ The Electromagnetic Compatibility Directive (2004/108/EC)
■ The ATEX CE Directive (94/9/EC)

Product reference index