Human/Machine Interfaces

Catalogue

2011

Schneider Electric

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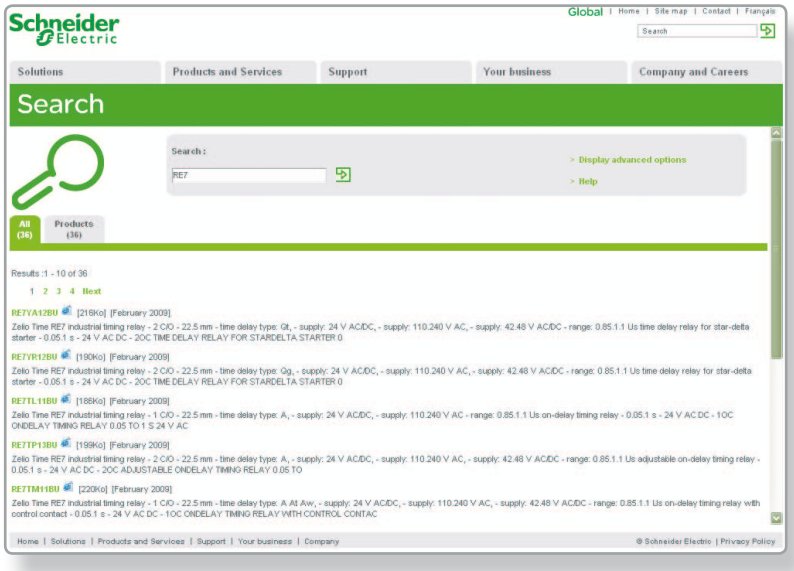
Browse the “product data sheet” to check out :

- characteristics,
- dimensions,
- curves, ...
- and also the links to the user guides and the CAD files.

1 From the home page, type the model number* into the “Search” box.

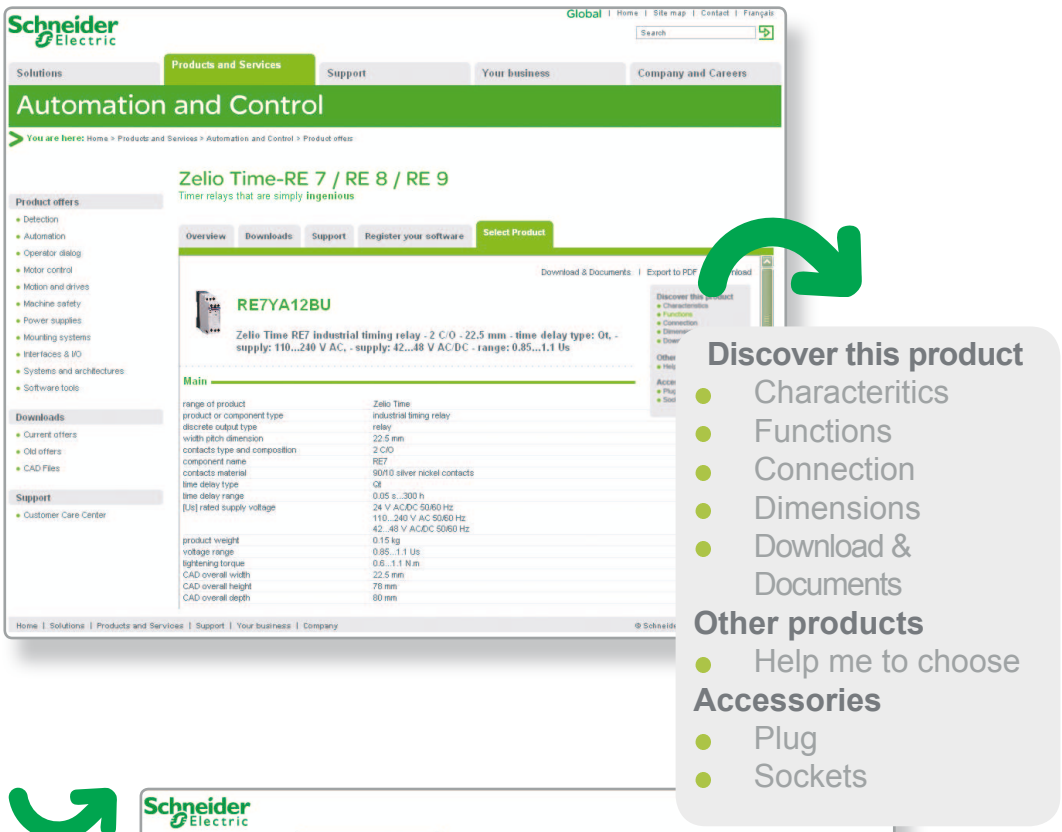
* type the model number without any blank, replace “●” by “*”

2 Under ”All” tab, click the model number that interests you.

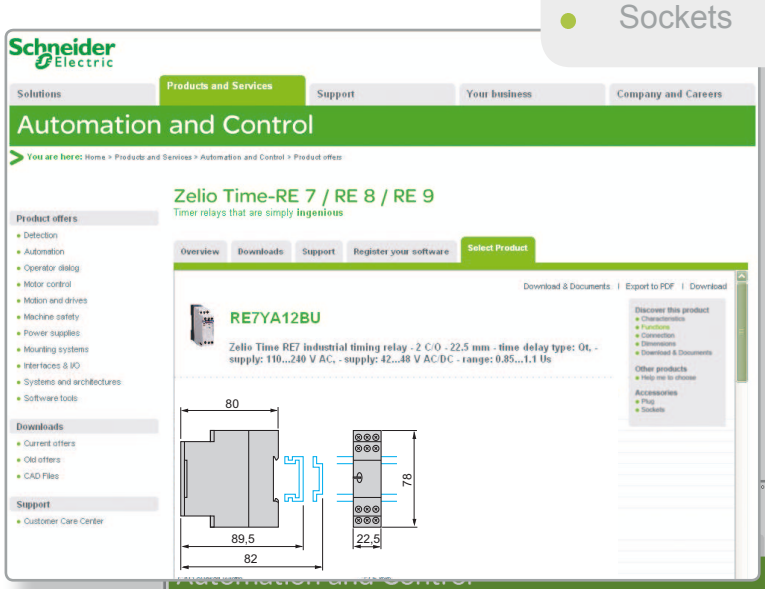


3 The product data sheet displays.

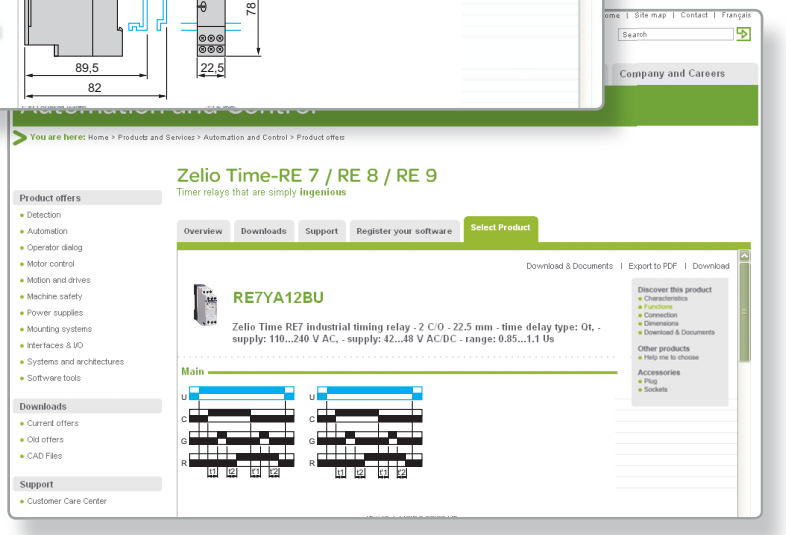
Example : Zelio Time data sheet



Example : Zelio Time data sheet



Example : Zelio Time data sheet



☑ You can get this information in one single pdf file.

Human/Machine Interfaces

Contents

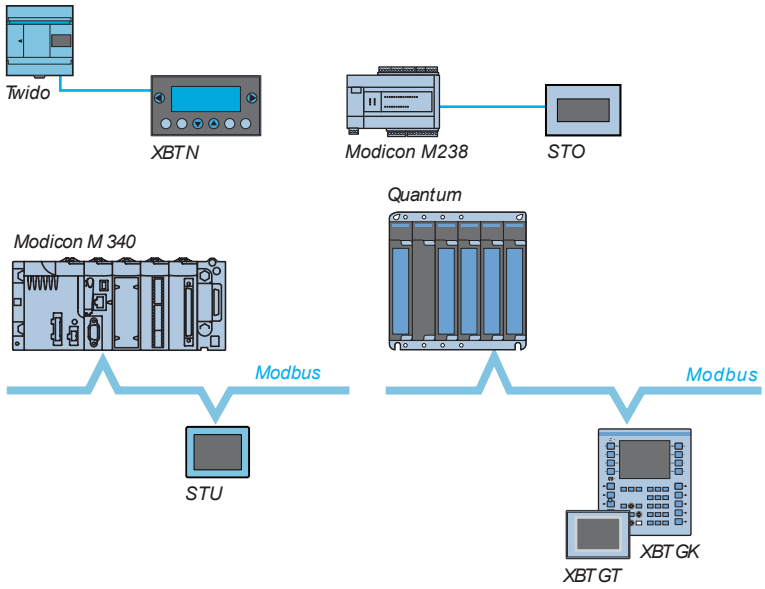
1 - Operator dialogue terminals

Operator dialogue terminals
Architectures, connection to automation systems

Presentation

Magelis operator dialogue terminals communicate with automation system equipment:
- Via serial link
- By means of integration into an Ethernet TCP/IP architecture

Communication via serial link



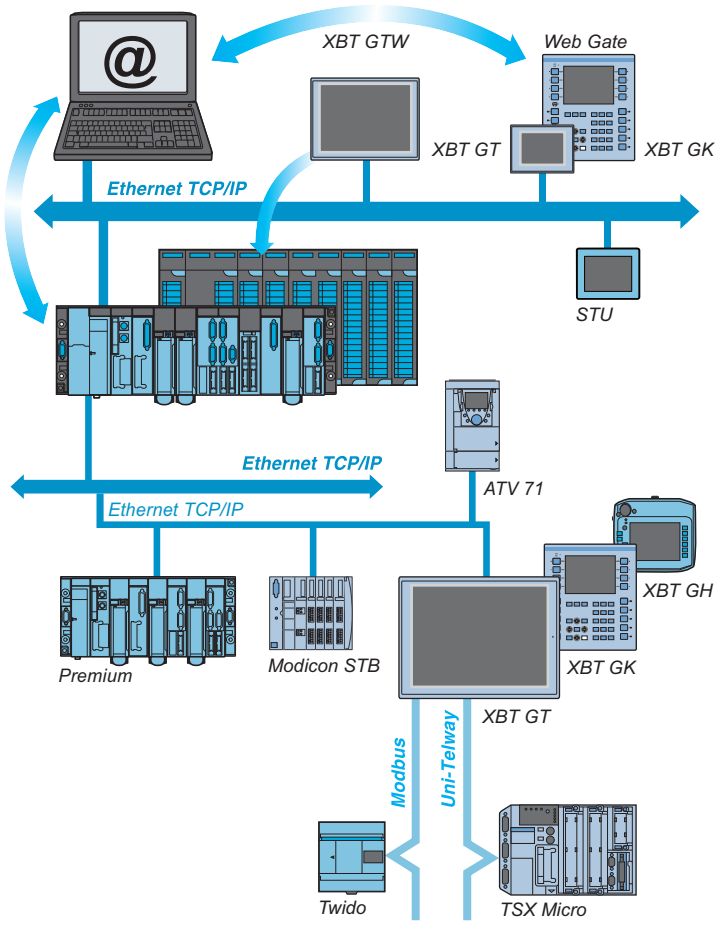
All Magelis terminals feature an integrated RS 232 C or RS 422/485 asynchronous serial link.

Use of the Uni-TE or Modbus protocol makes it easy to set up communication with Schneider Electric PLCs.

Third-party protocols enable connection to PLCs offered by major manufacturers 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

Presentation (continued)
Integration into 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 various services offered for the terminals are:

- **Modbus TCP/IP messaging** (for XBT GT, XBT GK, XBT GH and XBT GTW, access with Ethernet TCP/IP Modbus protocol)
- **Browse function** with XBT GTW or standard PC
- **Web Gate function:** Diagnostics to remotely control the application
- **FTP server:** Transfer of data files with the terminal
- **Data Sharing function:** Data exchange on Ethernet between 8 terminals (maximum)
- **E-mail function**

Operator dialogue terminals
Magelis Small Panels

Applications		**Display of graphic pages**		
Type of terminal		**Small Panels with touch screen**		
				
Display	Type	Monochrome STN LCD (200 x 80 pixels), backlit - Green, orange and red, or - White, pink and red	Colour QVGA TFT LCD (320 x 240 pixels)	
	Capacity	3.4" (monochrome)	3.5" (colour)	5.7" (colour)
Data entry		Via touch screen		
Memory capacity	Application	16 MB Flash		
	Expansion	–		
Functions	Maximum number of pages	Limited by internal FLASH EPROM memory capacity		
	Variables per page	Unlimited		
	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, curves, buttons, LEDs		
	Recipes	32 groups of 64 recipes		
	Curves	Yes, with log		
	Alarm logs	Yes		
	Real-time clock	Access to the PLC real-time clock		
	Alarm relay	–		
	Buzzer	Yes		
Communication	Asynchronous serial link	RS 232C/RS 485 *(1)* RS 232C using Zelio protocol *(2)*	RS 232C/RS 485	
	Downloadable protocols	Uni-TE, Modbus and for PLC brands: Allen-Bradley, Omron, Mitsubishi, Siemens		
	Printer link	USB for serial or parallel printer		
	USB ports	1 host type A and 1 device type mini-B		
	Networks	1 Ethernet TCP/IP port (10BASE-T/100BASE-TX) *(3)*	1 Ethernet TCP/IP port (10BASE-T/100BASE-TX)	
Development software		Vijeo Designer (on Windows XP, Windows Vista and Windows 7)		
Operating system		Magelis		
References		**HMI STO 5●●**	**HMI STU 655**	**HMI STU 855**
Page		1/10		

(1) Only HMI STO 511/512.
(2) Only HMI STO 501.
(3) Only HMI STO 531/532.

Display of text messages and/or semi-graphic pages	Display of text messages and/or semi-graphic pages Control and configuration of data	
Small Panels with keypad	**Small Panels with keypad**	**Small Panels with touch screen and keypad**
		
Green backlit monochrome LCD, height 5.5 mm or Green, orange or red backlit monochrome LCD, height 4.34…17.36 mm	Green, orange or red backlit monochrome LCD, height 4.34…17.36 mm	Green, orange or red backlit monochrome matrix LCD (198 x 80 pixels), height 4…16 mm
2 lines of 20 characters or 1 to 4 lines of 5 to 20 characters (monochrome)	1 to 4 lines of 5 to 20 characters (monochrome)	2 to 10 lines of 5 to 33 characters (monochrome)
Via keypad with 8 keys (4 customizable)	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	128/200 application pages 256 alarm pages	200 application pages 256 alarm pages
40…50	40…50, bargraph, buttons, LEDs	50
Alphanumeric		Alphanumeric, bargraph, buttons, LEDs
–		
Yes		
Yes *(5)*	Yes	
Access to the PLC real-time clock	Access to the PLC real-time clock	
–		
–		Yes *(4)*
RS 232C/RS 485		
Uni-TE, Modbus and for PLC brands: Allen-Bradley, Omron, Mitsubishi, Siemens		
RS 232C serial link *(5)*		
–		
–		
Vijeo Designer Lite (on Windows 2000, Windows XP and Windows Vista)		
Magelis		
XBT N ●●●●	**XBT R ●●●**	**XBT RT ●●●**
1/18	1/19	1/22

(4) Only XBT RT511.
(5) Depending on model.

Operator dialogue terminals
Small Panels with touch screen
Magelis STO, STU

Magelis STO 3.4" Small Panel

Magelis STU 3.5" Small Panel

Magelis STU 5.7" Small Panel

Exploded view of Magelis STU Small Panel: Simple installation using 22 mm diameter hole

Presentation

The Magelis Small Panels offer includes the following touch screen terminals:
- ■ Magelis STO, with 3.4" monochrome screen, available with 2 different types of backlighting:
  - □ Green, orange, red
  - □ White, pink, red
- ■ Magelis STU, with 3.5" and 5.7" TFT colour screens.

Operation

The features of Magelis STO and STU terminals draw on key technological innovations:
- ■ All Magelis STO and STU models are equipped with:
  - □ 2 USB V2.0 ports for data transfer
- ■ Magelis STU and STO 531/532 models feature:
  - □ 1 RJ45 port, enabling integration of an Ethernet TCP/IP network and the use of the services associated with this (in particular, the Web Gate function)
- ■ The Magelis STO 501 model features:
  - □ 1 RS 232C serial link port (9-way removable screw terminal block), enabling direct communication with the Zelio Logic SR2/SR3 range of controllers (see page 1/7)

No panel cut-out required to install Magelis STU models

No panel cut-out is required to install a Magelis STU Small Panel. All you need to do is drill a hole measuring 22 mm in diameter - just as if you were installing a pushbutton.

The front module (comprising the screen) is connected to the rear module (comprising the terminals and connectors). The two modules are fixed together via a hole measuring 22 mm in diameter.

Description:
pages 1/8 and 1/9

References:
page 1/10

Operator dialogue terminals
Small Panels with touch screen
Magelis STO, STU

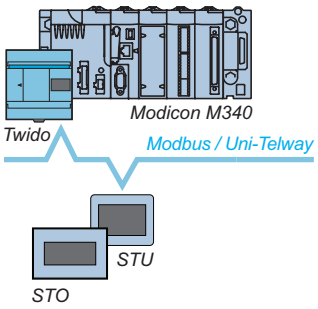
Display of a video sequence

Configuration

Magelis STO/STU terminals can be configured using Vijeo Designer software in a Windows XP, Windows Vista or Windows 7 environment.

Vijeo Designer software boasts an advanced user interface with many configurable windows, enabling operator dialogue projects to be developed quickly and easily.

See page 4/8.



Example of serial link architecture

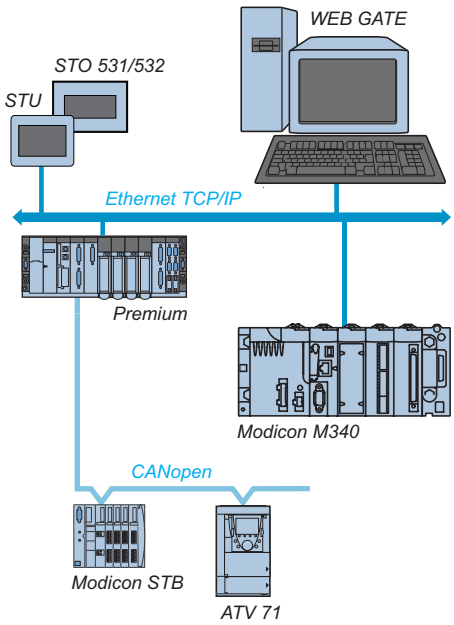
Communication

Magelis STO/STU terminals communicate with PLCs via an integrated serial link, using the following communication protocols:

- **Schneider Electric** (Uni-TE, Modbus)
- **Third-party**: Mitsubishi Electric, Omron, Allen-Bradley and Siemens

The Magelis STO 501 terminal is dedicated exclusively to communication with Zelio Logic SR2/SR3 range controllers.
It communicates with these controllers via a direct connection cable SR2 CBL 09 (see page 1/25) , using Zelio protocol, which is included in Vijeo Designer V6.0.

Magelis STU and STO 531/532 terminals are connected on Ethernet TCP/IP networks via Modbus TCP or a third-party protocol.



Example of Ethernet TCP/IP network architecture

Description:
pages 1/8 and 1/9

References:
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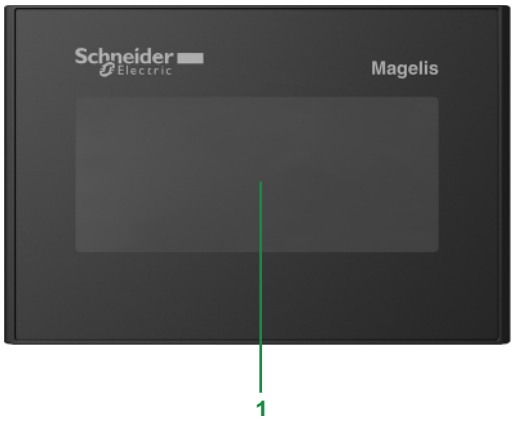
Operator dialogue terminals
Small Panels with touch screen
Magelis STO 3.4"

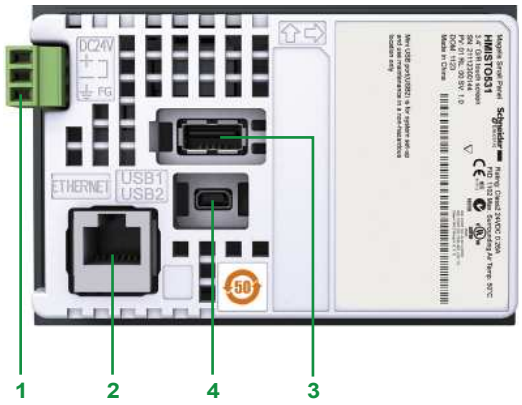
Description
Magelis STO 3.4" Small Panels



Front panel

The front panels of Magelis STO Small Panels comprise:

1 A touch screen for displaying synoptic views (3.4" backlit monochrome) with:
- Green, orange or red backlighting for STO 511, STO 531 and STO 501 terminals
- White orange or red backlighting for STO 512 and STO 532 terminals



Magelis STO 511/512/531/532 Small Panels

Rear panel

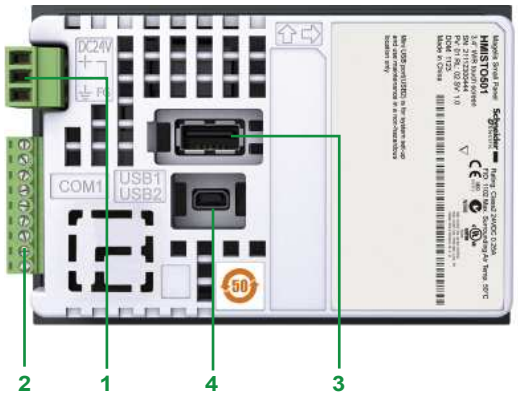
Magelis STO Small Panelshave the following on the rear panel:

1 A removable screw terminal block for 24 V ⎓ power supply

2 A connector for connecting to PLCs or controllers, depending on the terminal model:
- Magelis STO 511/ 512: An RJ45 (COM1) connector for RS 232C or RS 485 serial link
- Magelis STO 531/532: An RJ45 (ETHERNET) connector for Ethernet 10BASE-T/ 100BASE-TX link
- Magelis STO 501: A 9-way removable screw terminal block (COM1) for RS 232C serial link using Zelio protocol

3 A USB type A host connector for:
- Connection of a peripheral device
- Connection of a USB memory stick
- Application transfer

4 A USB mini-B device connector for application transfer



Magelis STO 501 Small Panel

Presentation:
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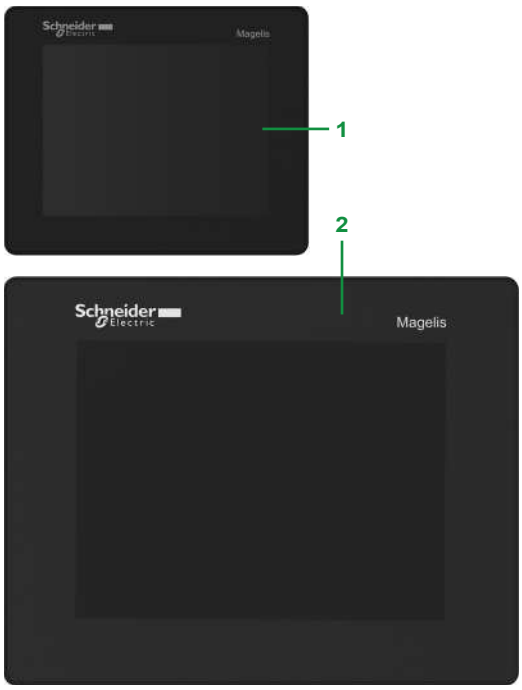
References:
page 1/10

Operator dialogue terminals
Small Panels with touch screen
Magelis STU 3.5" and STU 5.7"

Description
Magelis STU 3.5" and STU 5.7" Small Panels

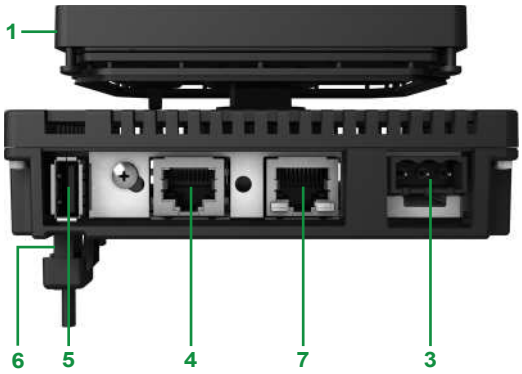


Front module

The front panels of Magelis STU Small Panels comprise, depending on the model:

1 Magelis STU 655: A touch screen for displaying synoptic views (3.5" colour TFT)

2 Magelis STU 855: A touch screen for displaying synoptic views (5.7" colour TFT)



Rear of product

Magelis STU 655 and Magelis STU 855 Small Panels have the following on the rear:

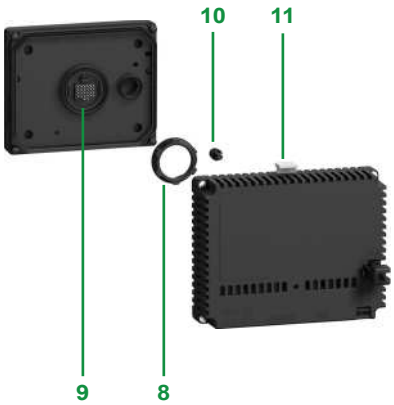
3 A removable screw terminal block for 24 V ⎓ power supply

4 An RJ45 connector for RS 232C or RS 485 serial link connection to PLCs (COM1)

5 A USB type A host connector for:
- Connection of a peripheral device
- Connection of a USB memory stick
- Application transfer

6 A USB mini-B device connector for application transfer (on the left-hand side)

7 An RJ45 connector for the Ethernet TCP/IP 10BASE-T/100BASE-TX link



Fixing system

A Magelis STU Small Panel is made up of a front module (comprising the screen) and a rear module (comprising the CPU plus terminals and connectors). The two modules are fixed together via a hole measuring 22 mm in diameter. The fixing system contains the following elements:

8 An fixing nut

9 A seal

10 An anti-rotation tee (can be used as an option)

11 A release mechanism: simply press to separate the two modules once they have been fixed together

Presentation:
page 1/6

References:
page 1/10

Operator dialogue terminals
Small Panels with touch screen
Magelis STO, STU

HMI STO 511

Magelis STO monochrome touch screen terminals

3.4" screen

Type of screen	Number of ports	Application memory capacity	Compact Flash memory	Embedded Ethernet	Reference	Weight kg
STN Green, orange, red	1 COM1 *(1)* 2 USB	16 MB	No	–	**HMI STO 511**	1.000
	1 ETHERNET *(2)* 2 USB	16 MB	No	1	**HMI STO 531**	1.000
STN White, pink, red	1 COM1 *(1)* 2 USB	16 MB	No	–	**HMI STO 512**	1.000
	1 ETHERNET *(2)* 2 USB	16 MB	No	1	**HMI STO 532**	1.000
STN Green, orange, red	1 COM1 *(1)* 2 USB	16 MB	No	–	**HMI STO 501**	1.000

HMI STU 655

Magelis STU colour touch screen terminals

Type of screen	Number of ports	Application memory capacity	Compact Flash memory	Embedded Ethernet	Reference	Weight kg
3.5" screen						
TFT	1 COM1 *(1)* 1 ETHERNET *(2)* 2 USB	16 MB	No	1	**HMI STU 655**	1.000
5.7" screen						
TFT	1 COM1 *(1)* 1 ETHERNET *(2)* 2 USB	16 MB	No	1	**HMI STU 855**	–

HMI STU 855

Software

Configuration software

Description	Operating system	Reference	Weight kg
Vijeo Designer	Windows XP Professional (32-bit) Windows Vista (32-bit) Windows 7 (32-bit)	**See page 4/13**	–

(1) RS 232C or RS 485 serial link.
(2) Ethernet 10BASE-T/100BASE-TX link.
(3) RS 232C serial link using Zelio protocol, for direct connection to Zelio Logic SR2/SR3 controllers.

Separate components (1)

Description	Description/function	Compatible with	Reference	Weight kg
Accessories kit	Contains: ■ An anti-rotation tee ■ A USB A type clip ■ A USB mini-B type clip ■ An adaptor panel for mounting on an enclosure of 1 mm in thickness	HMI STU 655 HMI STU 855	**HMIZSUKIT**	–
Protective sheets	5 peel-off sheets for protecting the screen	HMI STO 5●●	**HMIZS60**	–
		HMI STU 655	**HMIZS61**	–
		HMI STU 855	**HMIZS62**	–
USB clip	Holds the USB A type connection in place	HMI STO 5●●	**HMIZSCLP1**	–
	Holds the USB mini-B type connection in place	HMI STO 5●●	**HMIZSCLP3**	–

Replacement parts (2)

Description	Description/function	Compatible with	Reference	Weight kg
Nuts	Set of 10 nuts, 22 mm (front module of the HMI STU is fixed to the enclosure using a 22 mm nut (see page 1/6))	HMI STU 655 HMI STU 855	**ZB5AZ901**	–
Bezel key	Enables the fixing nut to be tightened	HMI STU 655 HMI STU 855	**ZB5AZ905**	–
Seal	Dust and damp proofs the connection between the front and rear modules of the HMI STO 5●●	HMI STO 5●●	**HMIZS50**	–

(1) Non-exhaustive list: other separate components are listed on pages 1/24 onwards.
(2) Non-exhaustive list: other replacement parts are listed on page 1/24.

Operator dialogue terminals

Magelis XBT N, XBT R Small Panels with keypad,
Magelis XBT RT Small Panels with touch screen and keypad

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 terminals XBT RT 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 service keys (ESC, ENTER), non-configurable
- These keys are complemented by:
  - 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 service keys, non-configurable, and 12 function or numeric entry keys (depending on context)
  - On XBT RT terminals in "control" or "entry" mode: 4 customizable and configurable function keys
    4 service keys (non-configurable)

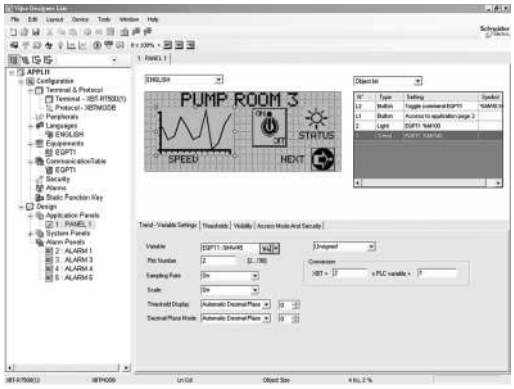
Description:
pages 1/15 to 1/17

References:
pages 1/18, 1/19 and 1/22

Operator dialogue terminals

Magelis XBT N, XBT R Small Panels with keypad, Magelis XBT RT Small Panels with touch screen and keypad

Configuration



Vijeo Designer Lite

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

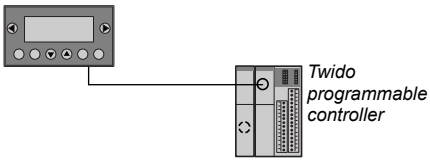
Vijeo Designer Lite software uses the concept of pages: each page can be viewed in its entirety.
A 2, 4 or 10-line window, depending on the terminal model to be configured, is used to view the screen of this virtual terminal.

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

See page 4/4.

Communication

XBT N terminal

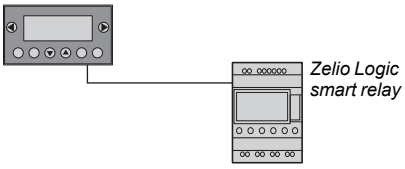


Connection example with Twido programmable controller

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.

XBT N terminal



Connection example with Zelio Logic smart relay

XBT N401, XBT R411 and XBT RT 511 terminals communicate with Zelio Logic smart relays via a direct connection cable and using the Zelio protocol, which is included in Vijeo Designer Lite V1.3.

Operator dialogue terminals
Magelis XBT N, XBT R Small Panels with keypad, Magelis XBT RT Small Panels with touch screen and keypad

Functions

On their front panel, XBT N/R/RT terminals have function keys and service keys (depending on how the keys have been configured for “control” and “entry” modes). XBT RT terminals feature 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 have the following functions:
- Accessing a page
- Impulse command
- “Toggle” command
- ...

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 for:
- Accessing a page
- Memorising memory bits
- Toggling memory bits (ON/OFF)
- Resetting memory bits to 1/0

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 for:
- Accessing a page
- Memorising/toggling memory bits
- Modifying a numeric field via a virtual numeric keypad

Service keys

Service keys ◀, **ESC**, **DEL**, ▼, ▲, **MOD**, **ENTER** and ▶ 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 in which to enter data. Enable entry in the next field, on each press, from left to right and top to bottom.

ENTER Confirm a selection or entry, acknowledge an alarm

The “arrow” keys are used to:

◀ ▶
- Change the page within a menu
- Display the current alarms
- Change a digit in a variable field in which data is being entered
- Activate the function associated with a functional link

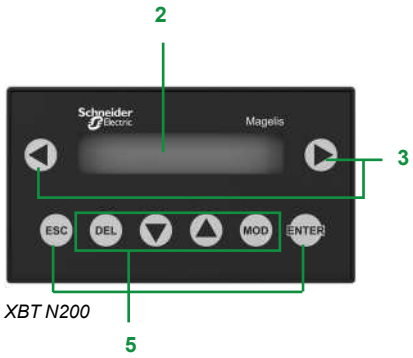
▼ ▲
- Move up and down within a page (XBT N40●)
- Select the value of a digit
- Select a value from a list of choices
- Increment or decrement the value of a variable field

Description:
pages 1/15 to 1/17

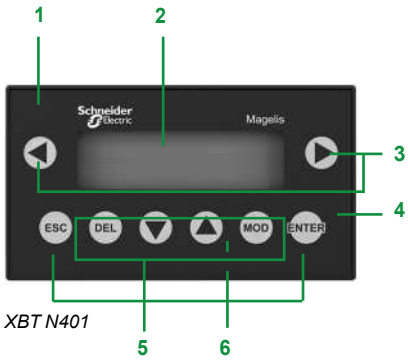
References:
pages 1/18, 1/19 and 1/22

Operator dialogue terminals
Magelis XBT N Small Panels with keypad

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 Two non-customizable command or contextual link keys
4 An “alarm” LED (model XBT N401)
5 Six service keys, four of which (framed) can be configured as function keys and customized using labels
6 Two system LEDs in entry mode or four LEDs that can be controlled by the 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 Four customizable blank labels
■ Two spring clips for fixing the terminal on the panel

XBT N200

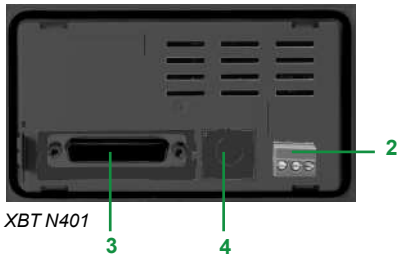
On the rear panel

XBT N200/N400 terminals

1 An RJ45 connector for point-to-point serial link and connection for 5 V ⎓ power supply (supplied by PLC)

XBT N401/N410/NU400 terminals

2 A removable screw terminal block for 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)



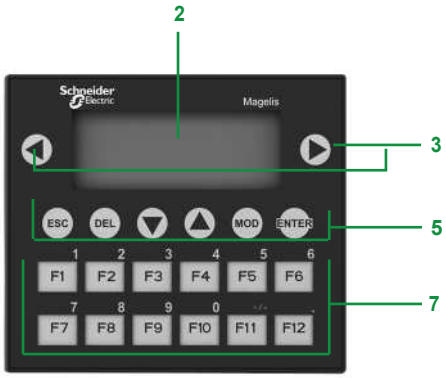
XBT N401

Presentation:
pages 1/12 and 1/13

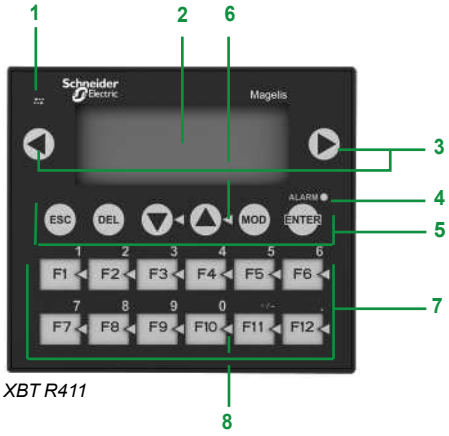
References:
page 1/18

1

Description of XBT R terminals with keypad



XBT R400



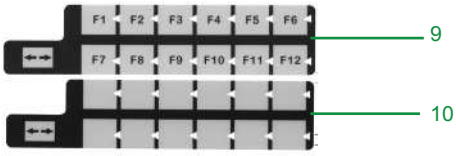
XBT R411

XBT R terminals comprise:

On the front panel:

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

Supplied separately:



■ A sheet of labels comprising:
9 A “control” label (F1...F12)
10 Two customizable blank labels

■ Four spring clips for fixing the terminal on the panel

XBT R400

XBT R411

On the rear panel

XBT R400 terminals

1 An RJ45 connector for point-to-point serial link and connection for 5 V ⎓ power supply (supplied by PLC)

XBT R410/R411 terminals

2 A removable screw terminal block for 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)

Presentation:
pages 1/12 and 1/13

References:
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Operator dialogue terminals
Magelis XBT RT Small Panels with touch screen and keypad

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:

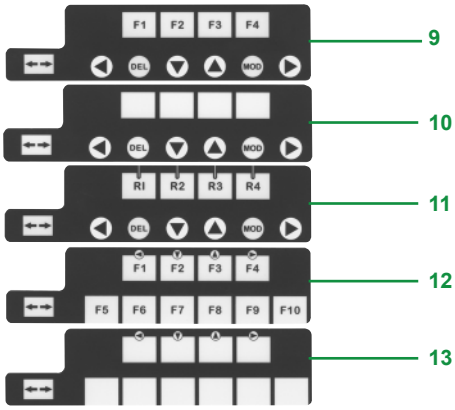
XBT RT terminals

1 An ultra-bright backlit LCD display: 198 x 80 pixels (matrix)
2 Two service keys
3 Function or service keys which can be configured and customized using labels
4 Matrix touch screen (11 x 5 cells)

XBT RT511 terminal

5 A communication monitoring LED
6 A “touch panel or keys being pressed” LED
7 An “alarm” LED
8 Six or ten 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 customizable blank “control” label
11 An “entry” label (R1…R4)
12 A “touch-sensitive” label (F1…F10)
13 Two customizable blank “touch-sensitive” labels

On the rear panel

XBT RT500 terminal

1 An RJ45 connector for point-to-point serial link and connection for 5 V ⎓ power supply (supplied by PLC)

XBT RT511 terminal

2 A removable screw terminal block for 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

Presentation:
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Operator dialogue terminals
Small Panels with keypad
Magelis XBT N


XBT N200


XBT N400/N410/NU400


XBT N401

Magelis XBT N Small Panels

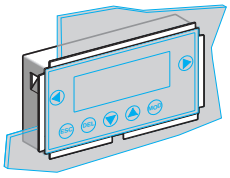
Downloadable exchange protocol	Compatible PLCs	Supply voltage	Type of screen	Reference	Weight kg
Terminal with 2 lines of 20 characters (with alphanumeric screen)					
Uni-TE, Modbus	Twido, Nano, TSX Micro, Premium, Modicon M340	5 V ⎓ via PLC terminal port	Green backlit LCD	**XBT N200**	0.360
Terminals 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
Uni-TE, Modbus	Twido *(1)*, 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 *(2)* (122 x 32 pixels)	**XBT N401**	0.380
Zelio	Zelio Logic				
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 Vijeo Designer Lite	Windows 2000, XP and Vista	See page 4/7	–

Accessories *(4)*

521377


XBT ZN01

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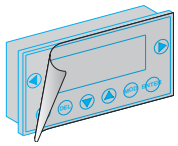
XBT ZN02

Description	Details	For use with	Reference	Weight kg
Accessory for flush mounting	Kit for applications requiring a higher degree of protection or customization of the control desk, using flat inner insulation (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 available with 4 signalling LEDs.
(3) Factory preloaded application for monitoring, diagnostics and adjustment of 1 to 8 TeSys model U motor starters.
(4) For other accessories, see page 1/24.
(5) For other connection cables and accessories, see pages 1/24 to 1/27.
(6) Adaptor **XBT ZN999** *is designed for use with* **XBT N200/N400** *terminals (new version) and cable* **XBT Z978** *(replaced by* **XBT Z9780***), or with* **XBT N200/N400** *terminals (old version) and the new* **XBT Z9780** *cable.*

Note: *The new version of the XBT N terminal can be distinguished from the old version by its exterior, as it features the* **Schneider Electric** *logo on the front panel (on the left above the screen).*

Presentation: pages 1/12 and 1/13
Description: page 1/15

Operator dialogue terminals
Small Panels with keypad
Magelis XBT R

XBT R400/R410

XBT R411

Magelis XBT R 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
Uni-TE, Modbus	Twido *(1)*, 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 *(2)* (122 x 32 pixels)	**XBT R411**	0.550
Zelio	Zelio Logic				

Software

Description	Operating system	Reference	
Configuration software Vijeo Designer Lite	Windows 2000, XP and Vista	See page 4/7	–

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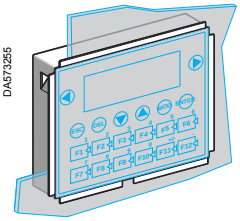

XBT ZR01

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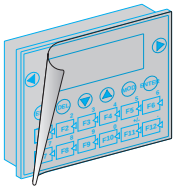


XBT ZR02

Accessories *(3)*

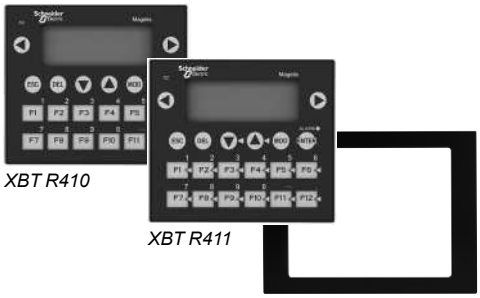
Description	Details	For use with	Reference	Weight kg
Accessory for flush mounting	Kit for applications requiring a higher degree of protection or customization of the control desk, using flat inner insulation (not included)	All XBT R	**XBT ZR01**	–
Protective sheets	10 peel-off sheets	All XBT R	**XBT 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 available with 16 signalling LEDs.
(3) For other accessories, see pages 1/24 to 1/27.

Presentation: pages 1/12 and 1/13
Description: page 1/16

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

Equivalent product table - XBT P 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 products

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 + adaptor SR2 CBL 06**		25-way SUB-D/ USB	2.5 m	**XBT Z915 + adaptor SR2 CBL 06**
Serial printer cable							
XBT P	Printer port, 9-way SUB-D	2.5 m	**XBT Z936**	XBT R	Printer port, mini-DIN 8	2.5 m	**XBT Z926**

Operator dialogue terminals
Equivalent product tables
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 connector**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connector**	**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 Automation, Allen-Bradley PLCs

Old range XBT P					XBT R range				
Type of terminal	**Type of connector**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connector**	**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	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 connector**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connector**	**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 connector**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connector**	**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	RS 485	1.8 m	**XBT Z908**
On connection box 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 connector**	**Serial port**	**Length**	**Reference**	**Type of terminal**	**Type of connector**	**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/ RS 422	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
Small Panels with touch screen and keypad
Magelis XBT RT

XBT RT500

XBT RT511

Magelis XBT RT 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
Uni-TE, Modbus	Twido, Nano, TSX Micro, Premium, TSX Series 7, Momentum, Quantum, other Modbus slave devices, Modicon M340	24 V ⎓ external supply	Green, orange or red backlit LCD (198 x 80 pixels) + 13 signalling LEDs + buzzer	**XBT RT511**	–
Zelio	Zelio Logic				

Software

Description	Operating system	Reference	
Configuration software Vijeo Designer Lite	Windows 2000, XP and Vista	See page 4/7	–

Presentation: pages 1/12 and 1/13
Description: page 1/17

Operator dialogue terminals
Small Panels
Separate components for Magelis XBT N/R/RT and Magelis STO/STU

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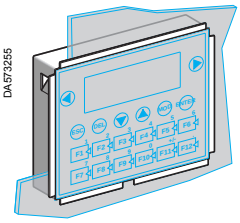

XBT ZR01

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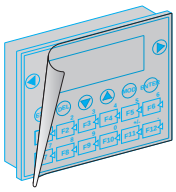


XBT ZR02

Accessories *(1)*

Description	Details	For use with	Reference	Weight kg
Accessory for flush mounting	Kit for applications requiring a higher degree of protection or customization of the control desk, using flat inner insulation (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) For other accessories, see page 1/24.
For other connection cables and accessories, see pages 1/24 to 1/27.
(2) Also included in kit XBT Z 945.

Operator dialogue terminals
Small Panels
Separate components for Magelis XBT N/R/RT and Magelis STO/STU

Accessories

Type	Compatibility	Sold in lots of	Unit reference	Weight kg
External 5 V adaptor *(1)*	XBT N200/N400 XBT R400 XBT RT500	1	**XBT ZRT PW**	–
XBT RT download adaptor *(2)*	XBT RT500/511	1	**XBT ZRT999**	–
Spring clips (replacement parts)	XBT N/R/RT/GT HMI STO	12	**XBT Z3002**	0.200
Power supply connector (replacement parts)	XBT N/R/RT	10	**XBT Z3004**	0.200
	HMI STO	5	**HMI ZS PWO**	–
	HMI STU	5	**XBT ZG PWS1**	–

Connection to PCs and printers

Used	Compatibility	Length	Peripheral side connector	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**	–
	HMI STO/STU	2.5 m	USB type A male	**XBT ZG935**	–
	HMI STO/STU	1.8 m	USB type mini-B male	**BMX XCA USB H018**	0.230
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
	HMI STO/STU	1.8 m	9-way male SUB-D	**HMI ZURS**	–
USB host extension cable	HMI STO/STU	2 m	USB type A male, dust and damp proof	**XBT ZG USB**	0.220
USB device extension cable	HMI STO/STU	2 m	USB type mini-B male, dust and damp proof	**HMI ZS USBB**	–

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

Operator dialogue terminals

Small Panels

Separate components for Magelis XBT N/R/RT and Magelis STO/STU

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) and HMI STO/STU 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
Modicon STB	HE13 (NIM)	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
Direct connection of XBT N/R/RT (XBT N401/R411/RT511) terminals to Schneider Electric PLCs via the 2nd mini-DIN serial port and Vijeo Designer Lite 1.3 minimum						
Zelio Logic	Programming port (specifically for Zelio Logic)	–	Zelio	3 m	**SR2 CBL 08**	–
Direct connection of the HMI STO 501 terminal to Zelio Logic SR2/SR3 controllers						
Zelio Logic SR2/SR3 *(3)*	Programming port (specifically for Zelio Logic)	RS 232C	Zelio	2.5 m	**SR2 CBL 09**	–

(1) For XBT N200/N400/R400/RT500, use a cable with adaptor **XBT ZRT PW** and a 5 V ⎓ power supply.
(2) Angled SUB-D connector.
(3) Cable included with 9-way removable screw terminal block.

Operator dialogue terminals
Small Panels
Separate components for Magelis XBT N/R/RT and Magelis STO/STU

Cables for connecting Magelis terminals (continued)

Direct connection of XBT RT500/RT511 and Magelis STO/STU terminals to Modicon STB I/O *(1)*

Modicon STB		HE13 (NIM)	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 312/32/61/71 variable speed drives ATS 48 starter Lexium 32, Preventa XPSMC		RJ45	RS 485	Modbus	2.5 m	**XBT Z938**	0.210

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

TeSys U, T ATV 312/32/61/71 variable speed drives ATS 48 starter Lexium 32, 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 and Magelis STO/STU 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 42 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 adaptor* **XBT ZRT PW** and a 5 V ⎓ power supply.
(2) For Magelis **XBT N200/N400/R400/RT500**, , , *use a cable with adaptor* **XBT ZRT PW** and a 5 V ⎓ power supply.
(3) Adaptor **XBT ZG939** *to be used with cables with " + (3) " after the reference.*

Operator dialogue terminals
Small Panels
Separate components for Magelis XBT N/R/RT and Magelis STO/STU

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
	Connection box TSX P ACC 01	8-way female mini-DIN	2.5 m	**XBT Z968**	0.180
			5 m	**XBT Z9681**	0.340
			10 m	**XBT Z9686**	
			20 m	**XBT Z9687**	
			25 m	**XBT Z9688**	
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 and Magelis STO/STU terminals

Type of bus/network	Tap-off units	Type of connector	Length	Reference	Weight kg
Uni-Telway serial link	Connection box 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 GT, GK, GH and 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) or (640 x 480 pixels) *(3)*	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	Applications	32 MB Flash EPROM	16 MB Flash EPROM *(3)*	32 MB Flash EPROM
	Expansion	–	By means of 128, 256, 512 MB, 1, 2 or 4 GB CF card (except XBT GT2110)	
Functions	Maximum number of pages	Limited by internal Flash EPROM memory capacity	Limited by capacity of internal Flash EPROM memory or CF card memory	
	Variables per page	Unlimited (8000 variables max.)		
	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, LED		
	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	–	*(3)*	1 audio input (microphone), 1 composite video input (digital or analogue 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 *(3)*	1
	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	
Development software		Vijeo Designer (on Windows XP, Windows Vista and Windows 7)		
Operating system		Magelis (200 MHz RISC CPU)	Magelis (133 MHz RISC CPU) *(3)*	Magelis (266 MHz RIS CPU)
Type of terminal		**XBT GT11/13**	**XBT GT21/22/23/24/29**	**XBT GT42/43**
Page		1/47		

(1) Depending on model.
(2) Uni-TE version V2 for Twido controller and TSX Micro/Premium platform.
(3) For XBTGT 2430, 32 MB Flash EPROM, 1 sound output, 2 USB ports, 266 MHz RISC CPU.
(4) For XBT GT 5430.

Display of text messages, graphic objects and synoptic views
Control and configuration of data

Touch screen Advanced Panels

Backlit colour STN LCD or colour TFT LCD (640 x 480 pixels or 800 x 600 pixels) *(4)*	Backlit colour TFT LCD (800 x 600 pixels)	Backlit colour TFT LCD (1024 x 768 pixels)
10.4" (colour)	12.1" (colour)	15" (colour)
Via touch screen		
–		
–		
–		
–		
32 MB Flash EPROM		
By means of 128, 256, 512 MB, 1, 2 or 4 GB CF card		
Limited by capacity of internal Flash EPROM memory or CF card memory		
Unlimited (8000 variables max.)		
Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, LED		
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 audio input (microphone), 1 composite video input (digital or analogue video camera), 1 audio output (loudspeaker) *(1)*		
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)		
2		
Modbus Plus with USB gateway		
Ethernet TCP/IP (10BASE-T/100BASE-TX)		
RS 232C (COM1) serial link, USB port for parallel printer		
Vijeo Designer (on Windows XP, Windows Vista and Windows 7)		
Magelis (266 MHz RIS CPU)		
XBT GT52/53/54	**XBT GT63**	**XBT GT73**

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

Applications		**Display of text messages, graphic objects and synoptic views Control and configuration of data**	
Type of terminal		**Advanced Panels with keypad**	
			
Display	Type	Colour TFT LCD (320 x 240 pixels) or monochrome STN	Colour TFT LCD (640 x 480 pixels)
	Capacity	5.7" (monochrome or colour)	10.4" (colour)
Data entry		Via keypad and/or touch screen (configurable) and/or by industrial pointer	
	Static function keys	10	12
	Dynamic function keys	14	18
	Service keys	8	
	Alphanumeric keys	12	
Memory capacity	Application	16 MB Flash EPROM	32 MB Flash EPROM
	Expansion	By means of 128, 256, 512 MB, 1, 2 or 4 GB CF card	
Functions	Maximum number of pages	Limited by capacity of internal Flash EPROM memory or CF card memory	
	Variables per page	Unlimited (8000 variables max.)	
	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, LED	
	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 - 3 outputs
	Multimedia I/O	–	–
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/RS 422/485 (COM1) RS 485 (COM2)	
	USB ports	1	*2*
	Bus and networks	Modbus Plus, Fipway with USB gateway, PROFIBUS DP and Device Net with optional card	
		Ethernet TCP/IP (10BASE-T/100BASE-TX)	
	Printer link	RS 232C (COM1) serial link, USB port for parallel printer	
Development software		Vijeo Designer (on Windows XP, Windows Vista and Windows 7)	
Operating system		Magelis (CPU 266 MHz RISC)	
Type of terminal		**XBT GK 21/23**	**XBT GK 53**
Page		1/48	

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

Display of text messages, graphic objects and synoptic views Control and configuration of data			
Portable Advanced Panels	**Open touch screen Advanced Panels**		
			
Colour TFT LCD (640 x 480 pixels)	Colour TFT LCD (800 x 600 pixels)	Colour TFT LCD (800 x 600 pixels)	Colour TFT LCD (1024 x 768 pixels)
5.7" (colour)	8.4" (colour)	12" (colour)	15" (colour)
Via touch screen	Via touch screen		
11	–		
–	–		
–	–		
–	–		
32 MB Flash EPROM	1 GB CF system card included with terminal, expandable to 4 GB	2 GB CF system card included with terminal, expandable to 4 GB	
By means of 128, 256, 512 MB, 1, 2 or 4 GB CF card			
Limited by capacity of internal Flash EPROM memory or CF card memory			
Unlimited (8000 variables max.)			
Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, LED			
32 groups of 64 recipes comprising 1024 ingredients max.			
Yes, with log			
Yes			
Built-in			
–			
1 audio output			
Uni-TE (2), Modbus, Modbus TCP/IP and for PLC brands: Mitsubishi, Omron, Rockwell Automation and Siemens	Uni-TE *(2)*, Modbus, Modbus TCP/IP *(1)* and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens		
RS 232C/RS 422-485 (COM1)	RS 232C (COM1) RS 232C (COM2)	RS 232C (COM1)	RS 232C (COM1) RS 232C (COM2)
1	4	4 + 1 on front	
–	Modbus Plus with USB gateway		
1 Ethernet port (10BASE-T/100BASE-TX)	1 TCP/IP Ethernet port (10BASE-T/100BASE-TX) and 1 Ethernet port (10BASE-T/100BASE-TX/1 GB)		
–	RS 232C (COM1 or COM2) serial link, USB port for parallel printer		
Vijeo Designer (on Windows XP, Windows Vista and Windows 7)			
Magelis (266 MHz RISC CPU)	Windows XP Embedded		
XBT GH 2460	**XBT GTW 450**	**XBT GTW 652**	**HMI GTW 7353**
1/48	1/49		

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

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

Presentation

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

The Magelis Advanced Panels touch screen terminals offer consists of:
- A range of 20 touch screen terminals (XBT GT) available with a wide choice of screen sizes (3.8", 5.7", 7.5", 10.4" 12.1" and 15") in various versions (monochrome, colour, STN or TFT)
- An XBT GT 5.7" terminal (XBT GT 2930) equipped with a screen featuring an anti-reflection coating and a backlit display that is twice as intense for applications in brightly-lit environments, in particular those which are exposed to sunlight
- A range of 3 keypad/touch screen terminals (XBT GK), sizes 5.7" and 10.4" (monochrome, colour).
- A range of touch screen/open terminals (GTW), sizes 8.4", 12" and 15", with Windows XP Embedded operating system for open access to new automation functions
- A portable touch screen terminal (XBT GH) with 5.7" colour screen and safety devices (emergency stop, enabling grip switch, etc.)

Operation

Magelis Advanced Panels feature new information and communication technologies, which, depending on the model, include:
- High level of communication (embedded Ethernet, multilink, Web server and FTP)
- External storage of data (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 analogue camera)
- Management of peripherals: printers, bar code readers, loudspeakers, etc.

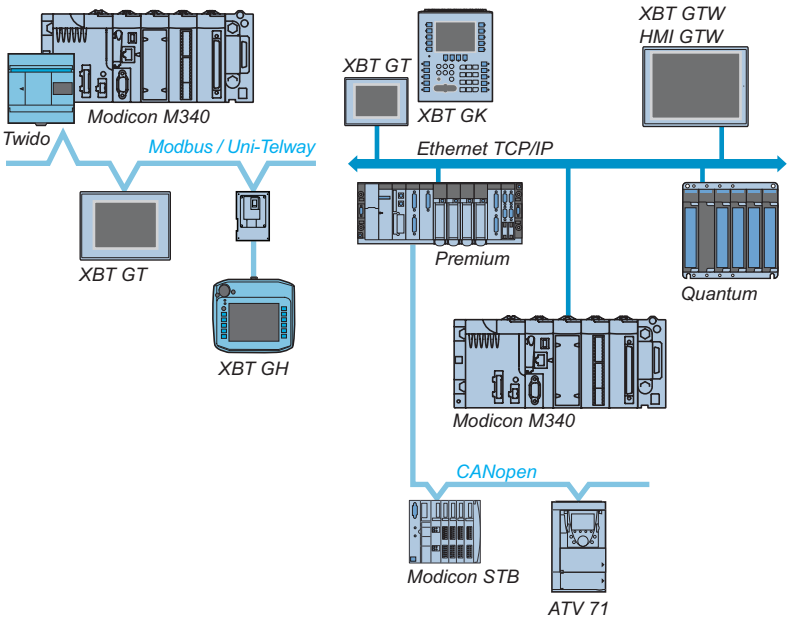
Operator dialogue terminals
Magelis GT, GK, GH and GTW Advanced Panels

Display of a video sequence

Configuration

Magelis Advanced Panels can be configured using Vijeo Designer software in a Windows XP and Windows Vista environment.
Vijeo Designer software boasts an advanced user interface with many configurable windows, enabling projects to be developed quickly and easily. This version can process composite video signals from a camera or camcorder.
See page 4/8.

Communication



Magelis Advanced Panels 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).

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

Functions

Magelis Advanced Panels offer the following functions:
- Display of animated mimics with 8 types of animation (pressing the touch panel, colour changes, filling, movement, rotation, size, visibility and 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
- Page calls initiated by the operator
- Multilingual application management (10 languages at the same time)
- 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)
- Sound messages management (multifunction range)
- Composite video signal management from camera or camcorder on XBT GT and digital video signal (Webcam) management on Magelis GTW

Magelis Advanced Panels have been designed for Transparent Ready architectures and equipment (combination of Web and Ethernet TCP/IP technologies). Therefore, all terminals with an Ethernet port feature a built-in FTP server for data file transfer and a Web Gate function for remote access to the application of the terminal from a PC with an Internet browser.

The latest version of Vijeo Designer thus allows Magelis Advanced Panels to browse HTML pages and send e-mails.

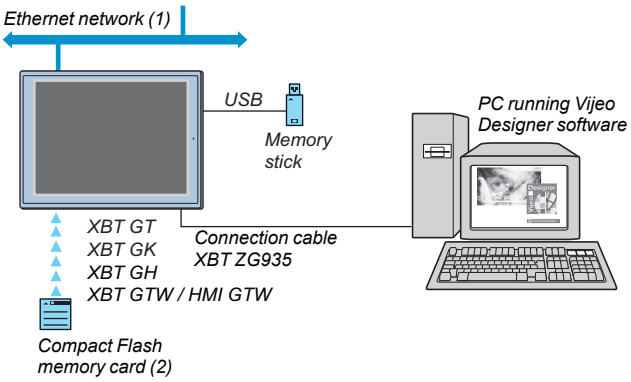
The flexible nature of Windows XP Embedded enables Internet Explorer or Office Readers (.pdf, .doc, .xls, .ppt documents) to be used on touch screen/open Magelis GTW Advanced Panels while a Vijeo Designer application is running.

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

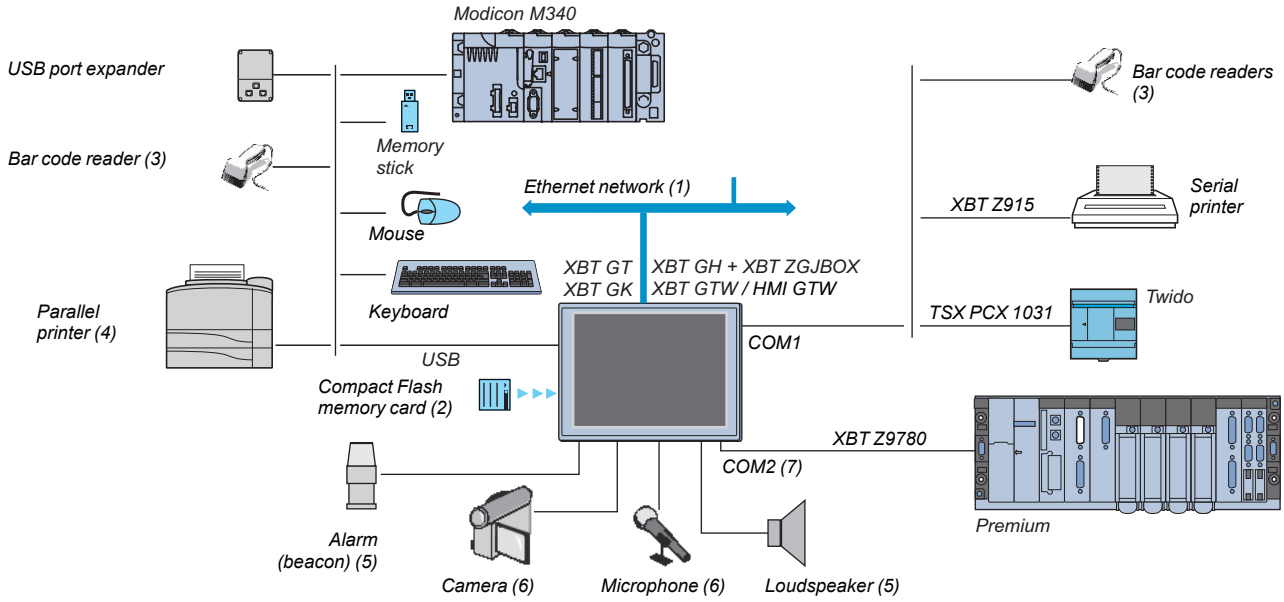
Panel operating modes

The following illustrations show the equipment that can be connected to Magelis Advanced Panels according to their two operating modes.

Edit mode



Operating mode



(1) With ***XBT GT••30/XBT GT••40, XBT GK••30/XBT GTW•••0/XBT GH2460***
(2) Memory card, except XBT GT11/13/2110
(3) Validated with DataLogic Gryphon bar code reader
(4) Validated with Hewlett Packard printer via USB/PIO converter
(5) With any multifunction XBT GT, XBT GK, XBT GTW and HMI GTW 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

Improve environmental resistance with Conformal Coating

The Conformal Coating service offer consists of varnishing the electronic cards to prolong the service life of the terminals and enable them to be used in corrosive environments. The varnishing increases resistance to condensation, dusty atmospheres and chemical corrosion (sulphurous and halogenous atmospheres).

For further information on this service offer, please consult our Customer Care Centre.

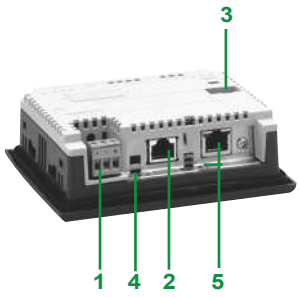
Operator dialogue terminals
Advanced Panels
Magelis XBT GT with 3.8" screen

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 LED indicating the operating mode of the terminal



Rear panel

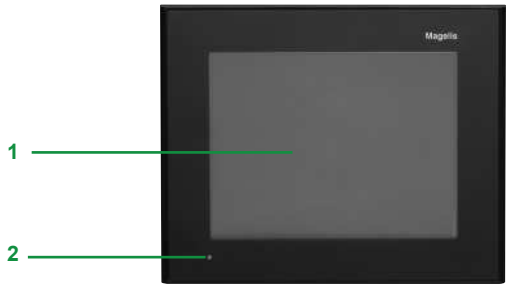
The rear panels of Magelis XBT GT1105/1135/1335 Advanced Panels comprise:

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 peripheral connection, application transfer 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

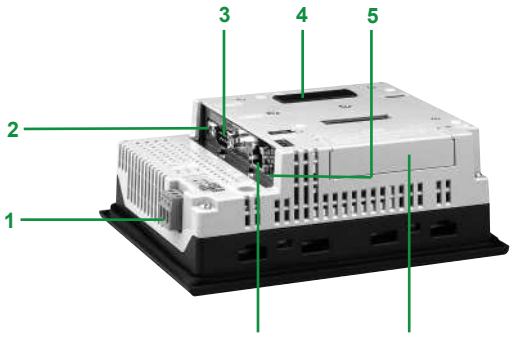
Description

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 indicator (green, orange and red) showing the terminal's operating mode

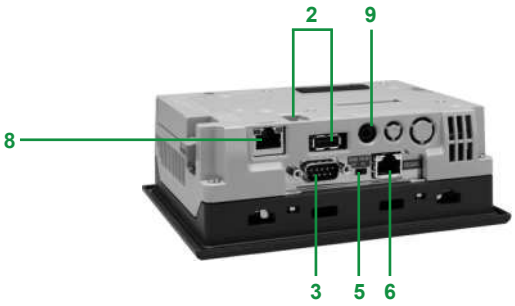


The rear panel comprises:

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 (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, GT2330 and GT 2930 only:
8 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX

On XBT GT2430 only:
8 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX
9 A mini-jack connector for audio output



(1) See page 1/57 for details of the required connection accessories.

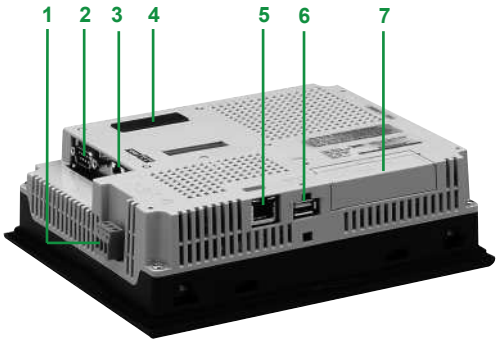
Operator dialogue terminals
Advanced Panels
Magelis XBT GT with 7.5" screen

Description

Magelis XBT GT4230 & 43●0 Advanced Panels

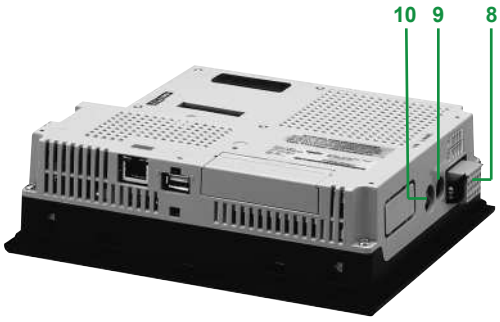
The front panel comprises:

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



The rear panel comprises:

1 A removable screw terminal block for 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 hinged cover
8 A removable I/O connector, 12 spring terminals for loudspeaker connection, one input (reset) and 3 outputs (alarm, buzzer, run)



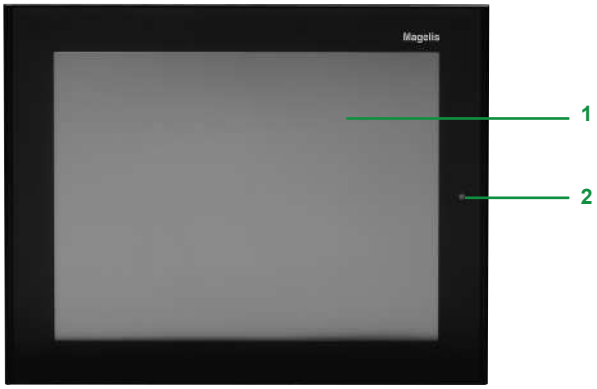
On XBT GT4340 only:

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

(1) See page 1/57 for details of the required connection accessories.

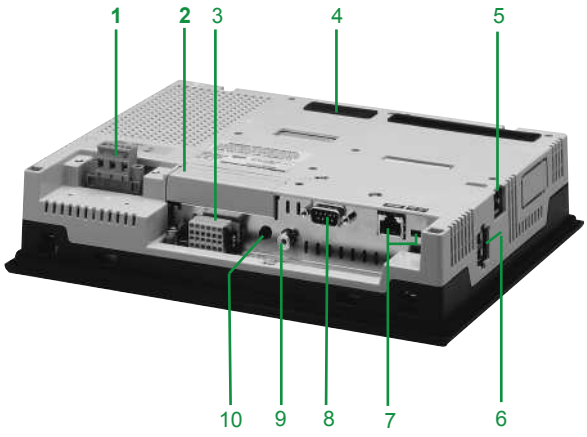
Description

Magelis XBT GT5230, XBT GT53●0 & XBT GT 5430 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 indicator (green, orange and red) showing the terminal's operating mode



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 hinged cover
3 A removable I/O terminal block *(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)

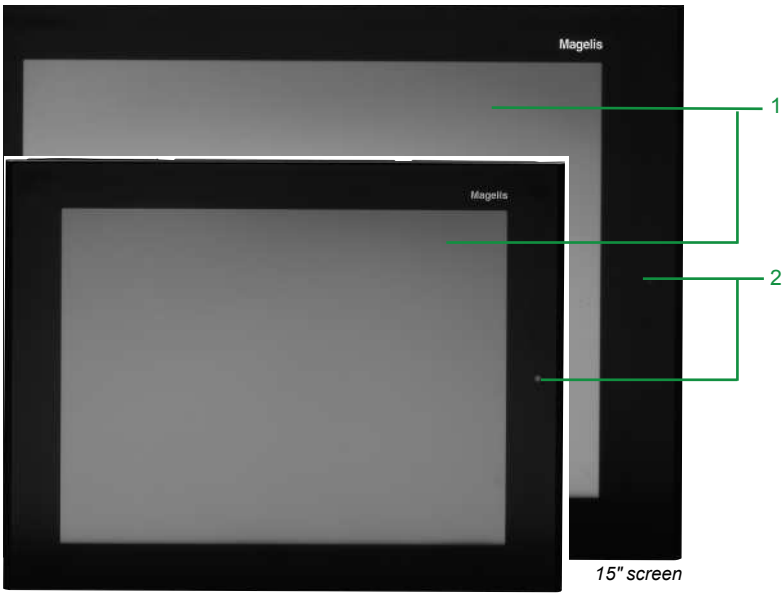
On XBT GT5340 only:

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

(1) On model XBT GT5230, this removable terminal block is located on the rear panel of the terminal.
(2) See page 1/57 for details of the required connection accessories.

Operator dialogue terminals
Advanced Panels
Magelis XBT GT with 12.1" or 15" screen

Description
Magelis XBT GT63●0 & XBT GT7340 Advanced Panels

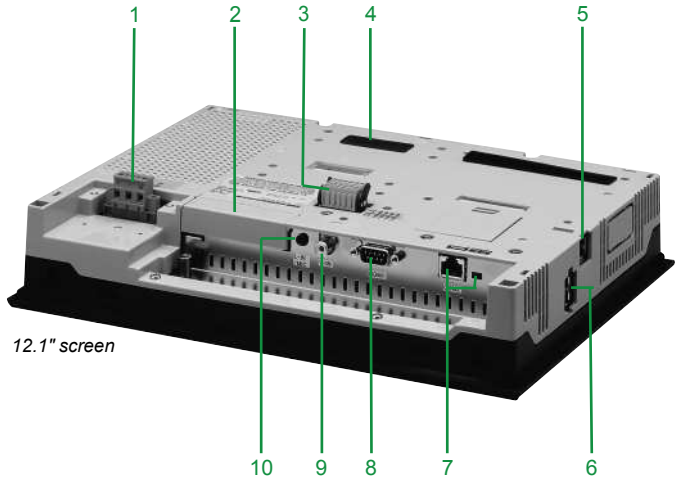


15" screen

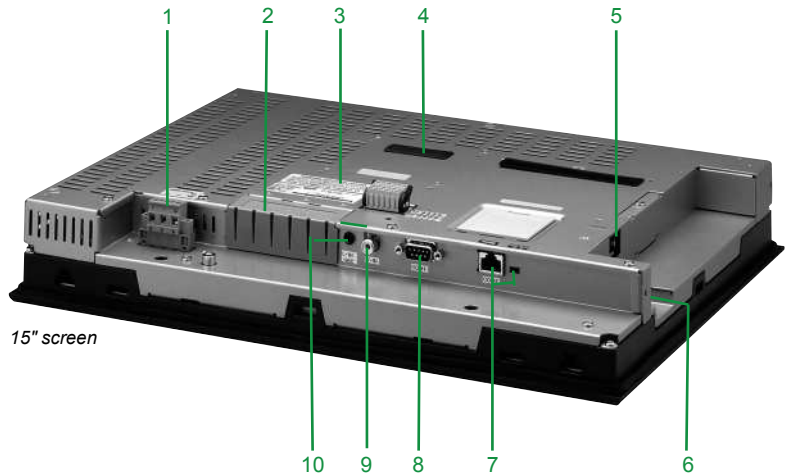
12.1" screen

The front panel comprises:

1 A touch screen for displaying synoptic views (12.1" or 15" colour TFT, depending on model)
2 A multicolour indicator (green, orange and red) showing the terminal's operating mode



12.1" screen



15" screen

The rear panel comprises:

1 A removable screw terminal block for 24 V ⎓ power supply
2 A slot for Compact Flash memory card, with hinged 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:

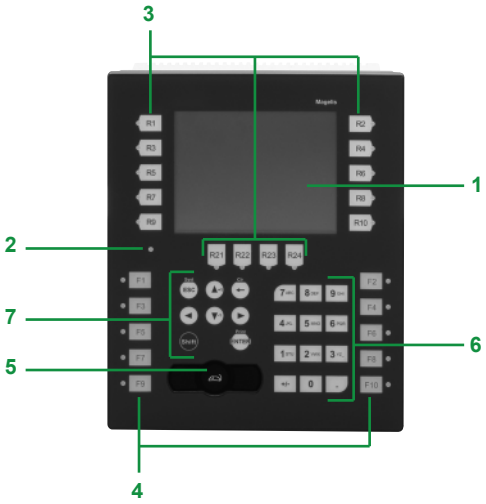
9 A mini-jack connector for connecting a microphone
10 An RCA connector for connecting a digital or analogue video camera (NTSC/PAL)

(1) See page 1/57 for details of the required connection accessories.

Presentation: pages 1/32 and 1/33
References: pages 1/47 to 1/57
Connections: pages 1/58 to 1/61
Substitution: pages 1/62 to 1/65

Description

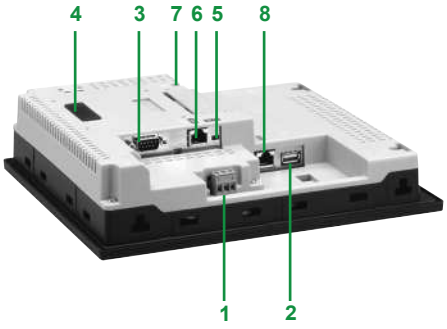
XBT GK2120 & XBT GK2330 Advanced Panels



The front panel comprises:

1 A touch screen for displaying synoptic views (5.7" monochrome or colour), configurable using Vijeo Designer
2 A multicolour indicator (green, orange and red) showing the terminal's operating mode
3 Fourteen dynamic keys (Ri) with 3-colour LED (green, orange, red)
4 Ten static keys (Fi) with 3-colour LED (green, orange, red) and customizable labels
5 An industrial pointer "", configurable using Vijeo Designer
6 Twelve alphanumeric keys (0...9, +/-, .), which can be pressed several times in succession to access characters (A...Z)
7 Eight service keys:

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



The rear panel comprises:

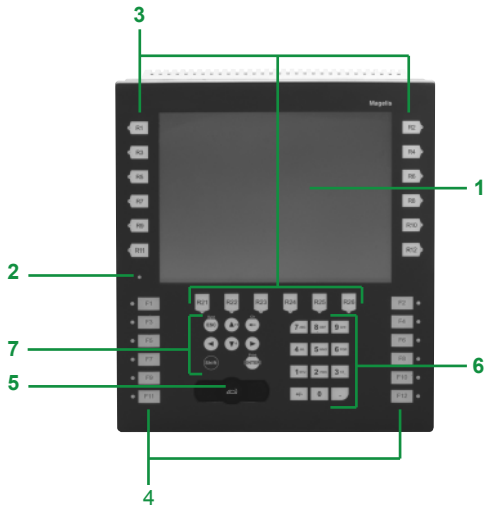
1 A removable screw terminal block for 24 V ⎓ power supply
2 A USB type A host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
3 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)
4 An expansion unit interface 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) See page 1/57 for details of the required connection accessories.

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

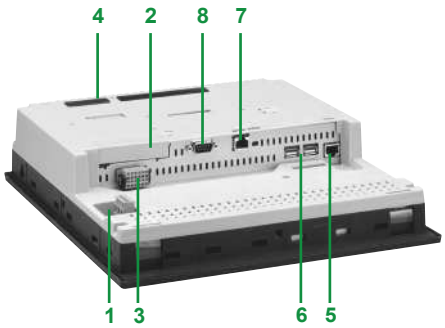
Description
XBT GK5330 Advanced Panels



The front panel comprises:

1 A touch screen for displaying synoptic views (10.4" colour TFT), configurable using Vijeo Designer
2 A multicolour indicator (green, orange and red) showing the terminal's operating mode
3 Eighteen dynamic keys (Ri) with 3-colour LED (green, orange, red)
4 Twelve static keys (Fi) with 3-colour LED (green, orange, red) and customizable labels
5 An industrial pointer "", configurable using Vijeo Designer
6 Twelve alphanumeric keys (0...9, +/-, .), which can be pressed several times in succession to access characters (A...Z)
7 Eight service keys:

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



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 hinged 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)

Presentation: pages 1/32 and 1/33
References: pages 1/47 to 1/57
Connections: pages 1/58 to 1/61
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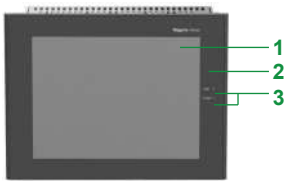
Operator dialogue terminals
Advanced Panels
Magelis XBT GTW with 8.4" or 12" screen

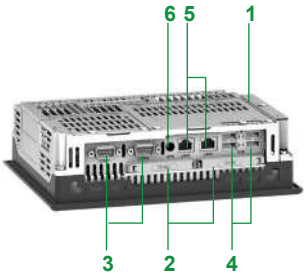


Description of XBT GTW terminals

8.4" touch screen front panel, XBT GTW 450

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

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



Underside, 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:

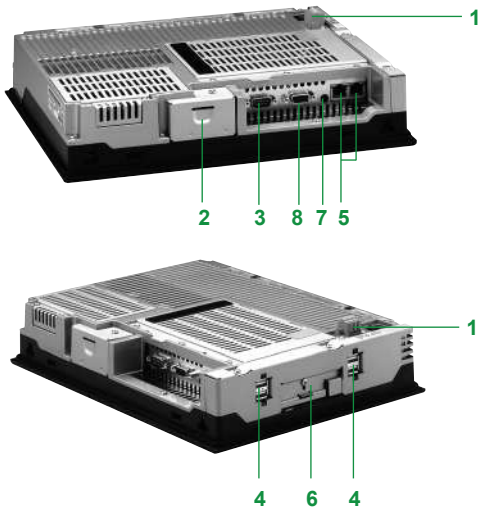
1 A removable screw terminal block for connecting 24 V ⎓ power supply
2 Two Compact Flash memory card slots, one for the card containing the operating system and integrated software, and the other free
3 Two 9-way male SUB-D connectors marked COM1 and COM2 for the RS 232 serial link
4 Four USB 2.0 ports
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

12" touch screen front panel, XBT GTW 652

The touch screen front panel of terminal **XBT GTW 652** comprises:

1 A 15" SVGA active matrix colour TFT LCD screen (maximum display area 800 x 600 points) with high-definition analogue touch panel
2 An aluminum alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs marked:
- ON (green), terminal switched on
- DISK (green), accessing IDE bus (accessing Compact Flash memory, etc.)

4 A USB port (dust and damp proof)

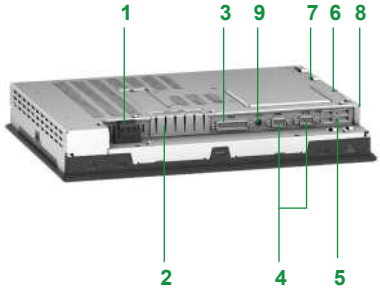


Underside and side panels, 12"

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 RS 232 serial link
5 Four 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 additional PCMCIA type II cards
9 A mini-jack connector for loudspeaker

Operator dialogue terminals
Advanced Panels
Magelis HMI GTW with 15" screen
Software pre-installed on Magelis XBT GTW/HMI GTW



Description of HMI GTW terminals

15" touch screen front panel, HMI GTW 7353

The touch screen front panel of terminal **HMI GTW 7353** comprises:

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

4 A USB port (dust and damp proof)

Underside, 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 RS 232 serial link
5 Four 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 additional PCMCIA type III cards
9 A mini-jack connector for loudspeaker

Pre-installed software

Magelis XBT GTW and HMI GTW terminals have the following software installed on the Compact Flash system card, in addition to Windows XP Embedded:

- Vijeo Designer Run Time, unlimited use after activation of authorization code
- Vijeo Citect web client dll on XBT GTW 652/HMI GTW 7353
- Internet Explorer
- Acrobat Reader
- Word/Excel/PowerPoint viewer
- Framework .Net on XBT GTW 652/HMI GTW 7353

Presentation: pages 1/32 and 1/33
References: pages 1/47 to 1/57
Connections: pages 1/58 to 1/61
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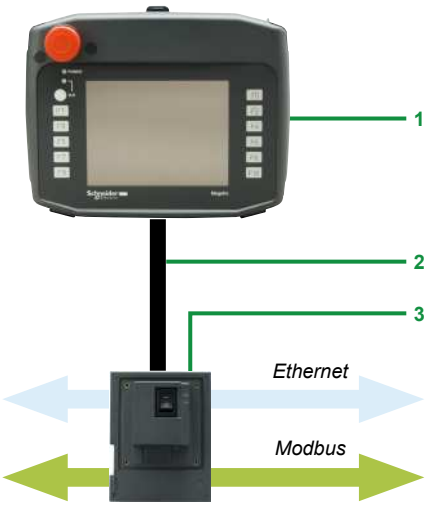
Operator dialogue terminals
Advanced Panels
Magelis XBT GH with 5.7" screen
Junction box XBT ZGJBOX, cables XBT ZGHL

Description



Overview

The Magelis XBT GH2460 **1** is a portable graphic display terminal with a 5.7" touch screen.
It enables connection on the Ethernet or Modbus network at any point where an XBT ZGJBOX junction box **3** is installed.

The connection between the terminal and junction box is established using an XBT ZGHL3 or XBT ZGHL10 cable **2**.

Advanced Panels XBT GH2460

The front panel comprises:

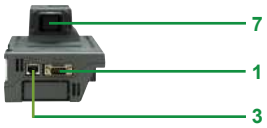
1 A touch screen for displaying synoptic views (5.7" colour), configurable using Vijeo Designer
2 A multicolour indicator (green, orange and red) showing the terminal's operating mode
3 Eleven function keys Fi
4 An operating key with O.P. LED (green) for touch screen validation
5 An emergency stop button with 2 NC safety contacts and 1 NO auxiliary contact for stopping the machine if necessary

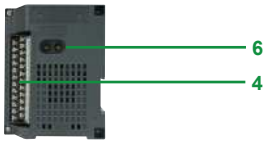
The rear panel comprises:

6 A USB type A host connector for peripheral connection and application transfer (with protective cover)
7 A slot for a Compact Flash memory card (also protected by the cover)
8 A key switch for switching the Magelis XBT GH on/off
9 A 3-position enabling grip switch for protecting the operator (the OK signal is only sent when the grip switch is in the centre position)
10 A 24-way connector for connecting the 3 m or 10 m flexible interface cable between the Magelis XBT GH and the junction box
11 A stylus for the touch screen
12 Two holes for inserting re-usable labels in the function keys

Operator dialogue terminals
Advanced Panels
Magelis XBT GH with 5.7" screen
Junction box XBT ZGJBOX, cables XBT ZGHL

Description (continued)





XBT ZGJBOX junction box for XBT GH

It comprises:

1. A 9-way SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)
2. An ON/OFF switch for the junction box
3. An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX
4. A 24-way screw terminal block for connecting 24 V ⎓ power supply and output signals from the Magelis XBT GH terminal
5. An LED indicating the status of the link with the Magelis XBT GH, 3 colours (green, orange and red)
6. Two thumbwheels for configuring the station number on the junction box
7. A 32-way connector for connecting the Magelis XBT GH terminal using the 3 m or 10 m flexible cable (XBT ZGHL3 or XBT ZGHL10)

XBT ZGHL3 and XBT ZGHZ10 flexible cables

For connecting the Magelis XBT GH terminals to their XBT ZGJBOX junction boxes

Operator dialogue terminals
Advanced Panels
Magelis XBT GT


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	Number of ports	Application memory capacity	Compact Flash memory	Composite video input	Number of Ethernet ports	Reference	Weight kg
Optimum, 3.8" QVGA screen							
STN Amber or red	1 COM1 1 USB	32 MB	No	No	–	**XBT GT1105**	–
					1	**XBT GT1135**	
Optimum, 5.7" QVGA screen							
STN Blue mode	1 COM1 1 COM2 1 USB	16 MB	No	No	–	**XBT GT2110**	1.000
Multifunction, 5.7" QVGA screen							
STN Black and white	1 COM1 1 COM2 1 USB	16 MB	Yes	No	–	**XBT GT2120**	1.000
					1	**XBT GT2130**	1.000

Colour touch screen terminals *(1)*

Type of screen	Number of ports	Application memory capacity	Compact Flash memory	Composite video input	Embedded Ethernet	Reference	Weight kg
Optimum, 3.8" QVGA screen							
TFT	1 COM1 1 USB	32 MB	No	No	1	**XBT GT1335**	1.000
Multifunction, 5.7" QVGA screen							
STN	1 COM1 1 COM2 1 USB	16 MB	Yes	No	–	**XBT GT2220**	1.000
TFT	1 COM1 1 COM2 1 USB	16 MB	Yes	No	1	**XBT GT2330**	1.000
TFT High Brightness	1 COM1 1 COM2 1 USB	16 MB	Yes	No	1	**XBT GT2930**	1.000
Multifunction, 5.7" VGA screen							
TFT	1 COM1 1 COM2 2 USB	32 MB	Yes	No	1	**XBT GT2430**	–
Multifunction, 7.5" VGA screen							
STN	1 COM1 1 COM2 1 USB	32 MB	Yes	No	1	**XBT GT4230**	1.800
TFT	1 COM1 1 COM2 1 USB	32 MB	Yes	No	1	**XBT GT4330**	1.800
				Yes	1	**XBT GT4340**	1.800
Multifunction, 10.4" VGA							
STN	1 COM1 1 COM2 2 USB	32 MB	Yes	No	1	**XBT GT5230**	3.000
TFT	1 COM1 1 COM2 2 USB	32 MB	Yes	No	1	**XBT GT5330**	2.500
				Yes	1	**XBT GT5340**	2.500
Multifunction, 10.4" SVGA							
TFT	1 COM1 1 COM2 2 USB	32 MB	Yes	No	1	**XBT GT 5430**	2.500
Multifunction, 12.1" SVGA							
TFT	1 COM1 1 COM2 2 USB	32 MB	Yes	No	1	**XBT GT6330**	3.000
				Yes	1	**XBT GT6340**	3.000
Multifunction, 15" XGA							
TFT	1 COM1 1 COM2 2 USB	32 MB	Yes	Yes	1	**XBT GT7340**	5.600

(1) Fixing kit (screw clips), locking device for USB connectors (except **XBT GT 11●0***) and instruction sheet included with terminals. Setup documentation for XBT GT terminals is included in electronic format with Vijeo Designer configuration software (see page 4/13).*

Presentation: pages 1/32 and 1/33 | Description: pages 1/36 to 1/46 | Connections: pages 1/58 to 1/61 | Substitution: pages 1/62 to 1/65

Operator dialogue terminals
Advanced Panels
Magelis XBT GK, XBT GH

XBT GK2120/2330

XBT GK5330

XBT GH2460

XBT ZGJBOX

XBT ZGHL●●

Keypad/touch screen terminals (1)

Type of screen	Number of ports	Application memory capacity	Compact Flash memory	Video input	Number 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 COM1 1 COM2 1 USB	32 MB	Yes	No	1	**XBT GK2330**	–
Multifunction, 10.4" screen							
TFT Colour mode	1 COM1 1 COM2 2 USB	32 MB	Yes	No	1	**XBT GK5330**	–

Portable touch screen terminal

Type of screen	Number of ports	Application memory capacity	Compact Flash memory	Video input	Number of Ethernet ports	Reference	Weight kg
Multifunction, 5.7" screen							
TFT Colour mode	1 COM1 1 USB	32 MB	Yes	No	1	**XBT GH2460** (2)	–

Connection components

Description	Usage	Length	Reference	Weight kg
Junction box for XBT GH	Specifically for XBT GH terminal, it enables: ■ 24 V ⎓ power supply to XBT GH terminal ■ Connection of various safety inputs/outputs ■ Connection on multiprotocol serial link (9-way SUB-D) or Ethernet TCP/IP (RJ45). Can be mounted on 35 mm ⊔ rail	–	**XBT ZGJBOX** (2) (3)	–
Interface cable for XBT GH	For connecting XBT GH terminal to junction box XBT ZGJBOX	3 m	**XBT ZGHL3** (2)	–
		5 m	**XBT ZGHL5** (2)	–
		10 m	**XBT ZGHL10** (2)	–

(1) Fixing kit (spring clips), locking device for USB connectors, customizable label sheets and instruction sheet included with terminals.
(2) XBT GH terminal is connected to junction box XBT ZGJBOX using cable XBT ZGHL●●, to be ordered separately (see table above). Description on page 1/48.
(3) A junction box is required at each XBT GH terminal connection point.

Operator dialogue terminals

Advanced Panels

Magelis XBT GTW with 8.4" or 12" screen
Magelis HMI GTW with 15" screen

XBT GTW450

XBT GTW652

HMI GTW 7353

Open touch screen terminals *(1)*

Type of screen	Number of ports	Application memory capacity	Compact Flash memory	Video input	Number of Ethernet ports	Reference	Weight kg
Multifunction, 8.4" screen							
TFT	1 COM1 1 COM2 4 USB	256 MB RAM expandable to 1 GB, for system and application	1 GB expandable to 4 GB	No	2	**XBT GTW450**	3.500
Multifunction, 12" screen							
TFT	1 COM1 1 COM2 5 USB	512 MB RAM expandable to 1 GB, for system and application	2 GB expandable to 4 GB	No	2	**XBT GTW652**	3.800
Multifunction, 15" screen							
TFT	1 COM1 1 COM2 5 USB	512 MB RAM expandable to 1 GB, for system and application	2 GB expandable to 4 GB	No	2	**HMI GTW 7353**	6.000

(1) Fixing kit (screw clips), locking device for USB connectors and instruction sheet included with terminals. Setup documentation for GTW terminals is included in electronic format with Vijeo Designer configuration software (see page 4/13).

Operator dialogue terminals
Advanced Panels
Separate components for Magelis GT/GK/GH/GTW

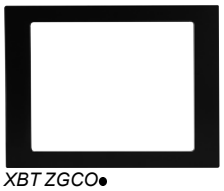
XBT ZGM●●●

Separate components

Description	Characteristics	Compatible with	Reference	Weight kg
Compact Flash memory cards	128 MB, blank	All XBT terminals except XBT GT1●●●/GT2110	**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**	–
	2 GB, with pre-installed software: ■ Windows XP Embedded SP9 in 9 languages (English, French, Spanish, Italian, German, Swedish, Chinese, Russian, Portuguese) ■ .NET Run Time framework ■ Web Application ■ Vijeo Designer Run Time trial version (21 days)	XBT GTW 450	**HMI YPSC 42E01**	–
	2 GB, with pre-installed software: ■ Windows XP Embedded SP9 in 9 languages (English, French, Spanish, Italian, German, Swedish, Chinese, Russian, Portuguese) ■ .NET Run Time framework ■ Vijeo Citect Web Client ■ Office Reader ■ Vijeo Designer Run Time trial version (21 days)	HMI GTW 7353	**MPC YN5 2CF2 20T**	–
Maintenance kits	Includes panel mounting fixings and seals	8.4" models MPC ST1 1N●J 00T	**MPC YK1 0MNT KIT**	–
		12" models MPC ST2 1N●J20●	**MPC YK2 0MNT KIT**	–
		15" models MPC ST5 2NDJ 10	**MPC YK5 0MNT KIT**	–
Protective sheets (5 peel-off sheets)	–	XBT GT1105/GT1135/GT1335	**XBT ZG60**	–
	–	XBT GT1100/GT1130	**XBT ZG61**	–
	–	XBT GT21●0/GT2220/GT2●30	**XBT ZG62**	0.200
	–	XBT GT4230/GT43●0	**XBT ZG64**	0.200
	–	XBT GT53●0/XBT GT54●0	**XBT ZG65**	0.200
	–	XBT GT5230/GT63●0	**XBT ZG66**	0.200
	–	XBT GK 2●●0/GH2460	**XBT ZG68**	–
	–	XBT GK 5330	**XBT ZG69**	–
	–	XBT GT7340/HMI GTW 7353	**MPC YK5 0SPS KIT**	0.200
	–	XBT GTW450	**MPC YK1 0SPS KIT**	–
	–	XBT GTW652	**MPC YK2 0SPS KIT**	–
Protective covers (5 covers)	–	XBT GT2●●●	**XBT ZG70**	–
		XBT GT53●●	**XBT ZG71**	–
Spring fixing clips Sold in lots of 12	–	XBT GT terminals (number of spring clips depends on terminal)	**XBT Z3002**	–
Wall mounting kit	Fixing components for mounting XBT GH terminal on a wall	XBT GH terminal	**XBT ZGWMKT**	–
Neck strap	For use with XBT GH hand-held terminal	XBT GH terminal	**XBT ZGNSTP**	–
Emergency stop button protection	For preventing accidental operation of the emergency stop button	XBT GH terminal	**XBT ZGESGD**	–

Presentation: pages 1/32 and 1/33 | Description: pages 1/36 to 1/46 | Connections: pages 1/58 to 1/61 | Substitution: pages 1/62 to 1/65

Operator dialogue terminals
Advanced Panels
Replacement parts for Magelis GT/GK/GH/GTW


XBT ZGCO●


XBT ZGUSB

Separate components (continued)

Description	Details	Length	Reference	Weight kg
Mechanical adaptors for substitution of old range Magelis terminals	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 XBT terminal 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**	–
Adaptor for Compact Flash cards	Enables a PC with a PCMCIA card slot to take a Compact Flash card	–	**XBT ZGADT**	0.050

Spare parts

Description	For use with	Reference	Weight kg
Seals	XBT GH (for junction box)	**XBT ZG5H**	–
	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 lamps	XBT GT5230	**XBT ZG43**	0.100
	XBT GT53●0	**XBT ZG45**	0.200
	XBT GT53●0 PV ⩾ 3/XBT GT54●0	**XBT ZG45B**	0.200
	XBT GT63●0	**XBT ZG46**	0.200
	XBT GT7340	**XBT ZG47**	0.200
USB fastenings Sold in lots of 5	XBT GT1●●0/GT2●●0/GT4●●0	**XBT ZGCLP1**	–
	XBT GT1●●5/GT5●●0/GT6●●0/GT7●●0	**XBT ZGCLP2**	–
	XBT GK	**XBT ZGCLP3**	–
Fixing kit	4 clips and screws (max. tightening torque: 0.5 Nm) included with all XBT GT terminals	**XBT ZG FIX**	0.100
Extension connector protection	XBT GT/GK, except XBT GT1●●●	**XBT ZGCNC**	0.030
Power supply connector Sold in lots of 5	XBT GT1●●●/GT2●●● XBT GT4●●● XBT GK2●●●	**XBT ZGPWS1**	0.030
	XBT GT5●●●/6●●●/7●●● XBT GK5●●● XBT GTW●●●	**XBT ZGPWS2**	–
Auxiliary connector	XBT GT4●●●/5●●●/6●●●/7●●●, XBT GK5●●●	**XBT ZGAUX**	–
Sheets of customizable labels Sold in lots of 10	XBT GK2●●0	**XBL YGK2**	0.030
	XBT GK5●●●	**XBL YGK5**	–
	XBT GH	**XBT YGH2**	–
Stylus Sold in lots of 5	XBT GH	**XBT ZGPEN**	–
Emergency stop button protection	XBT GH	**XBT ZGESD**	–
Hand strap	XBT GH	**XBT ZGHSTP**	–

Presentation: pages 1/32 and 1/33
Description: pages 1/36 to 1/46
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Application transfer cables - Terminal to PC

Type of terminal (terminal end connector)	Connector (PC end)	Type	Length	Reference (1)	Weight kg
XBT GT2●●0...GT7340, XBT GT1●●5, XBT GK, XBT GH 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 for XBT GT/ GK/GTW terminal (except XBT GT1●●●) *(2)*	25-way female SUB-D	RS 232C (COM1)	2.5 m	**XBT Z915**	0.200

Adaptors and isolation boxes 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	RJ45 connector	0.2 m	**XBT ZG939**	–
Adaptors for XBT GT2●●0...7340/ XBT GK (COM1 port) **XBT GTW** (COM1 and COM2 ports)	25-way SUB-D	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	For use with	Link to isolate	Reference	Weight kg
Serial link isolation boxes for XBT GT2●●0...7340/ XBT GK	- Connection to serial port of XBT terminal - Isolated link on 9-way SUB-D connector *(3)* - Box power supply via USB port of terminal. Incorporates a USB port expander.	RS 232C/RS 485 (COM1)	**XBT ZGI232**	–
		RS 485 (COM2)	**XBT ZGI485**	–

(1) Cable included (depending on model) with Vijeo Designer software packages (see page 4/13).
(2) Parallel printer (see page 1/33).
(3) Male connector with **XBT ZGI232**, *female connector with* **XBT ZGI485**

Operator dialogue terminals
Advanced Panels
Connection accessories for Magelis GT/GK/GH/GTW

TSX PCX 1031

Cables for connecting XBT GT to other Schneider Electric products

Automation product type	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 XBT GH (Junction box)	COM1	2.5 m	**XBT Z9018**	0.170
			XBT GTW●●, RS 232 XBT GH (Junction box)	COM1	2.5 m	**TSX PCX 1031**	–
Modicon M340 Modicon M238	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 XBT GH (Junction box)	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
					4.5 m	**BMX XCA USB H045**	–
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 XBT GH (Junction box)	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 XBT GH (Junction box)	COM1	2.5 m	**XBT Z9710** + *(3)*	0.210
					3.7 m	**990 NAA 263 20**	0.290
Modicon STB	HE13 (NIM, network interface module)	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 XBT GH (Junction box)	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 XBT GH (Junction box)	COM1	2.5 m	**XBT Z9711** + *(3)*	0.210
TeSys U, T starters ATV 312/61/71 variable speed drives ATS 48 starters Lexium 05 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 XBT GH (Junction box)	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
Advanced Panels
Connection accessories for Magelis GT/GK/GH/GTW

Cables and adaptors for connecting XBT 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/ GH (Junction box)	9-way SUB-D/25-way SUB-D	RS 422	5 m	**XBT ZG9773**	–
Connection cable, ***Q Link (SIO)***	GT2●●0...7340 /GK/GTW/ GH (Junction box)	9-way SUB-D/9-way SUB-D	RS 232C	5 m	**XBT ZG9772**	–
Connection cable, ***Q CPU (SIO)***	GT2●●0...7340 /GK/GTW/ GH (Junction box)	9-way SUB-D/mini-DIN	RS 232C	5 m	**XBT ZG9774**	–
Connection cable, ***A Link (SIO)***	GT2●●0...7340 /GK/GTW/ GH (Junction box)	9-way SUB-D/25-way SUB-D	RS 232C	5 m	**XBT ZG9731**	–
Connection cable, ***FX (CPU)***	GT2●●0...7340 /GK/ GH (Junction box)	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/ GH (Junction box)	9-way SUB-D/flying leads other end	RS 422	5 m	**XBT ZG9778** + *(4)*	–
Adaptor case ***FX (CPU),*** ***A CPU (SIO)*** ***QnA CPU (SIO)***	GT2●●0...7340 /GK/ GH (Junction box)	2-port case Screw terminal/2 x 9-way SUB-D	RS 422	–	**XBT ZG979**	–

XBT ZG9772

XBT ZG9731

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/ GH (Junction box)	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/ GH (Junction box)	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 1/52).*
(4) Adaptor **XBT ZGCOM1** *(9-way female/female SUB-D) to be used with cables with " + (4)"* after the reference *(***XBT ZG9778***).*

Operator dialogue terminals
Advanced Panels
Connection accessories for Magelis GT/GK/GH/GTW

XBT ZG9731

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

Rockwell Automation, 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/ GH (Junction box)	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/ GH (Junction box)	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/ GH (Junction box)	9-way SUB-D/9-way SUB-D	RS 232C (COM1)	3 m	**XBT ZG9292**	–
	GT2●●0...7340 /GK	RJ45/flying leads other end	RS 485 *(7)* (COM2)	3 m	**VW3 A8 306 D30**	0.150
		RJ45/9-way SUB-D	RS 485 *(7)* (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/ GH (Junction box)	9-way SUB-D/flying leads other end	RS 422 (COM1)	2.5 m	**XBT ZG9722**	0.210
Universal adaptor, RS 422/485	GT2●●0...7340 /GK/ GH (Junction box)	9-way SUB-D/Screw terminal	RS 422 (COM1)	–	**XBT ZG949** + *(5)*	–
		9-way SUB-D/Screw terminal	RS 485 (COM2)	–	**XBT ZG949** + *(6)*	–

(1) Adaptor **XBT ZG939** *to be used with cables with " + (1) " after the reference (see page 1/52).*
(2) Adaptor **XBT ZG909** *to be used with cables with " + (2) " after the reference (see page 1/52).*
(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 box **XBT ZGI485** *and 9-way male/female SUB-D adaptor* **XBT ZGCOM2**.
(7) Non-isolated RS 485 serial link, 12 Mbps (187.5 kbps with **XBT GT11●0/2110**).

Operator dialogue terminals
Advanced Panels
Connection accessories for Magelis GT/GK/GH/GTW


TSX SCA 62


TSX P ACC 01


TSX SCA 64


LU9 GC3


VW3 A8 306 TF10


TWDXCAISO

Connection of XBT terminals via serial links and Ethernet network

Type of bus/ network	Tap-off units	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) GT2●●0...7340/GK (COM2)	3 m	**VW3 A8 306**	0.150
			GT2●●0...7340/GK (COM1) GH (Junction box)	1.8 m	**XBT Z908** + *(2)*	0.240
	Connection box **TSX P ACC01**	8-way female mini-DIN	GT1●●● (COM1) GT2●●0...7340/GK (COM2)	2.5 m	**XBT Z9780**	0.180
			GT2●●0...7340/GK (COM1) GH (Junction box)	2.5 m	**XBT Z9018**	–
Modbus serial link	Subscriber socket **TSX SCA 64**	15-way female SUB-D	GT1●●● (COM1) GT2●●0...7340/GK (COM2)	3 m	**VW3 A8 306**	0.150
			GT2●●0...7340/GK (COM1) GH (Junction box)	1.8 m	**XBT Z908** + *(2)*	0.240
	8-port Modbus splitter box **LU9 GC3**	RJ45	GT1●●● (COM1)	3 m	**VW3 A8 306R30**	0.060
				2.5 m	**XBT Z9980**	–
	2-port tap-off junction **TWDXCAISO** **TWDXCAT3RJ**		GT2●●0...7340/GK (COM1) GH (Junction box)	2.5 m	**XBT Z9008**	–
	T-connector	With integrated cable, RJ45 fitted	GT1●●● (COM1) GT2●●0...7340/GK (COM2)	1 m	**VW3 A8 306 TF10**	–
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●●● GH (Junction box)	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**	–

(2) Adaptor **XBT ZG909** *to be used with cables with " + (2) " after the reference (see page 1/52).*

Operator dialogue terminals
Advanced Panels
Connection accessories for Magelis GT/GK/GH/GTW

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 *(1)*	**TSXCUSBFIP**	–
Modbus Plus	USB gateway	XBT GT/GK *(1)*	**XBTZGUMP**	–
		XBT GTW	**TSXCUSBMBP**	–
PROFIBUS DP	Card on bus expansion	XBT GT/GK *(1)*	**XBTZGPDP**	–
Device Net	Card on bus expansion	XBT GT/GK *(1)*	**XBTZGDVN**	–

ABL 7RM24025

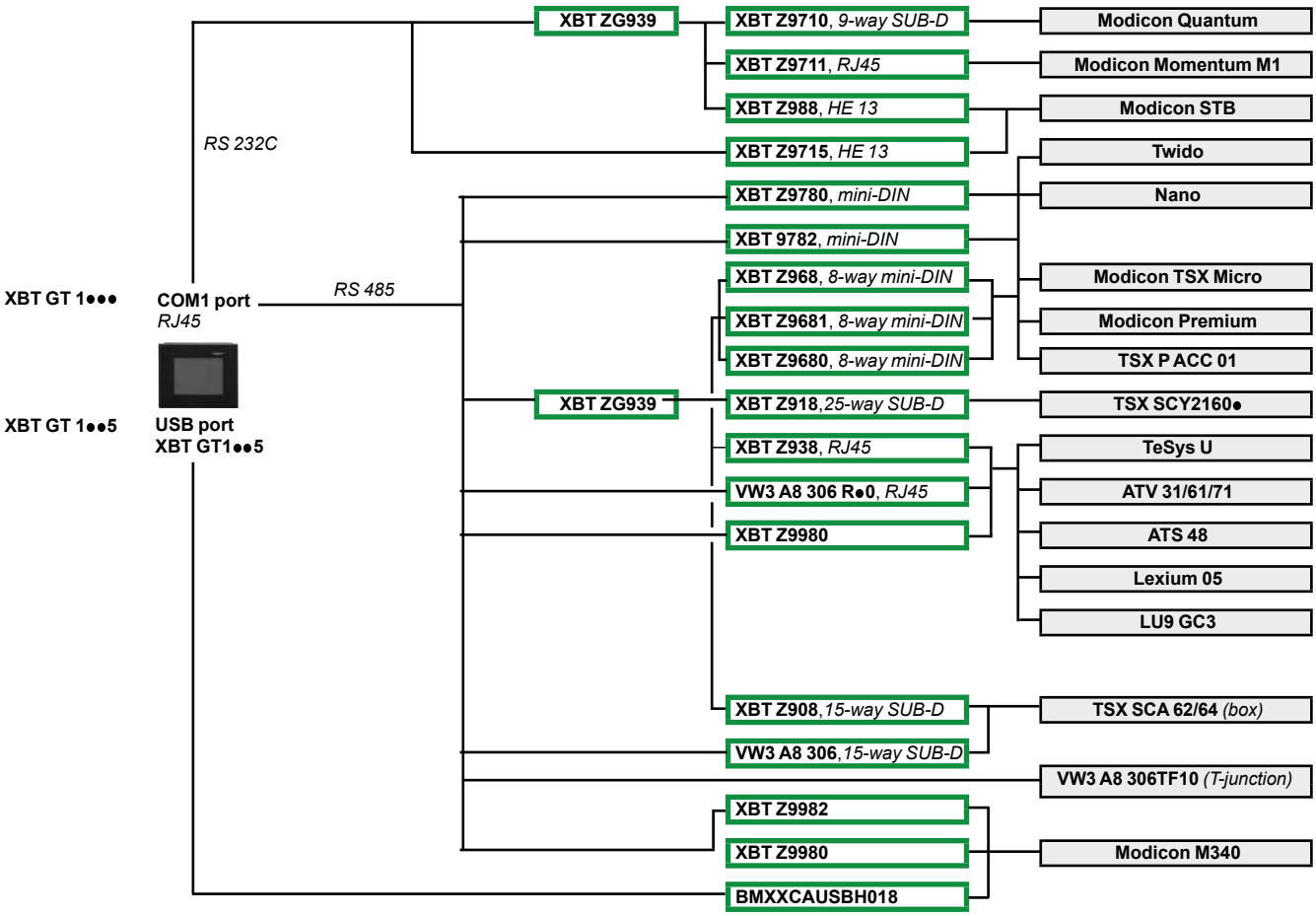
Modular regulated switch mode power supplies *(2)*

Input voltage/ output voltage	Use with XBT	Nominal power	Nominal current	Reference	Weight kg
100...240/24 V single-phase wide range line supply 47...63 Hz	GT1100...6340 /GK/GH	30 W	1.2 A	**ABL 8MEM24012**	0.195
	GT7340/GTW	60 W	2.5 A	**ABL 7RM24025**	0.255

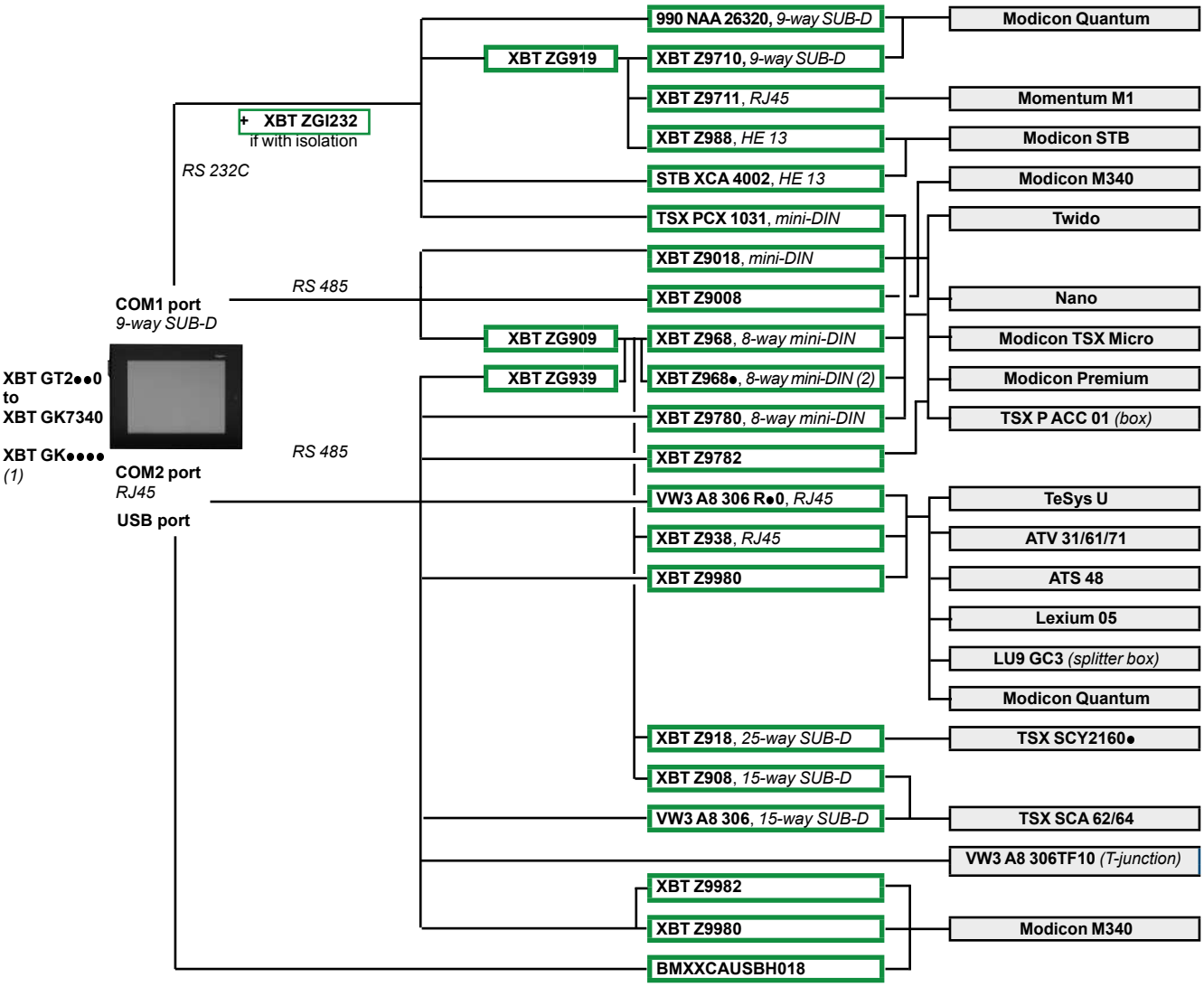
(1) Except XBT GT1●●●.
(2) Dimensions: H x W x D = 90 x 54 x 59 mm (ABL 8MEM24012), 90 x 72 x 59 mm (ABL 7RM24025). For further information, please consult our website www.schneider-electric.com

Operator dialogue terminals
Advanced Panels
Wiring system

XBT GT11●5 terminals and Schneider Electric products



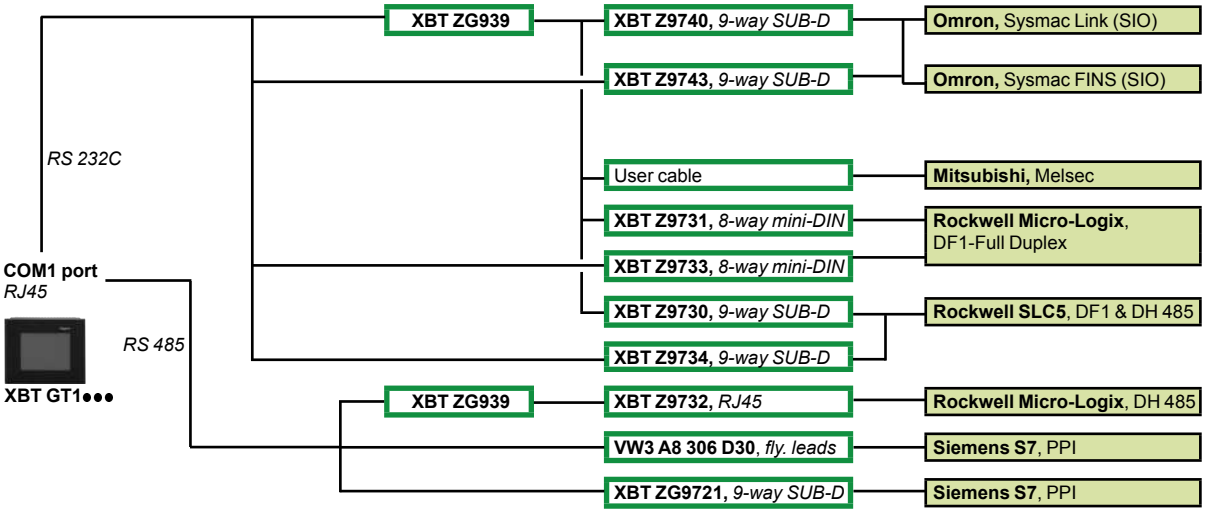
XBT GT2●●0/GT7340/GK●●●● terminals and Schneider Electric products



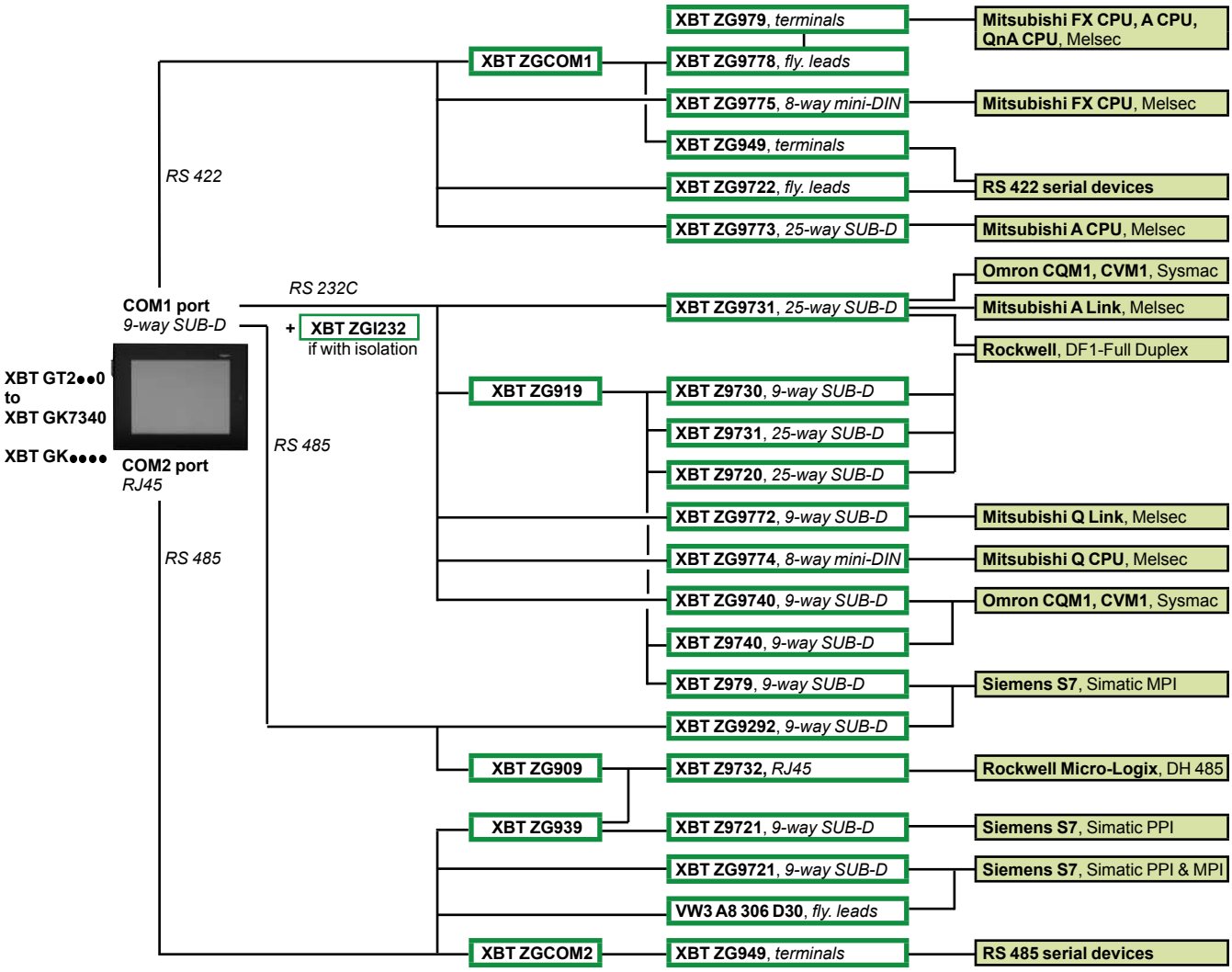
(1) XBT GK USB port only
(2) ● defines the length:
- **0**, *2.5 m (elbowed connector)*
- **1**, *5 m*
- **6**, *16 m*
- **7**, *20 m*
- **8**, *25 m*

Operator dialogue terminals
Advanced Panels
Wiring system

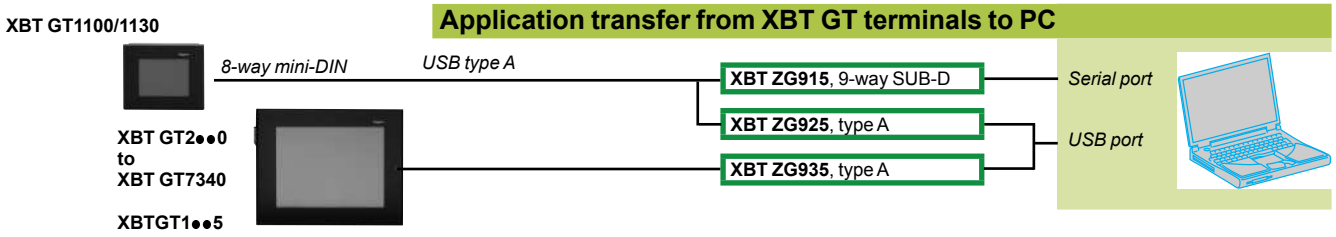
XBT GT11●5 terminals and third-party PLCs



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



Application transfer from XBT GT terminals to PC



Operator dialogue terminals
Equivalent product tables
Magelis XBT F/GT, 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 ZGCO1
XBT F032310	XBT GT2220	XBT ZGCO1

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 ZGCO3
XBT F034110	XBT GT5330	XBT ZGCO3
XBT F034510	XBT GT5330	XBT ZGCO3
XBT F034610	XBT GT5330	XBT ZGCO3

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 ZGCO1

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 ZGCO3
XBT FC044510	XBT GT5330	XBT ZGCO3
XBT FC044610	XBT GT5330	XBT ZGCO3
XBT FC064310	XBT GT5330	XBT ZGCO3
XBT FC064510	XBT GT5330	XBT ZGCO3
XBT FC064610	XBT GT5330	XBT ZGCO3
XBT FC084310	XBT GT5330	XBT ZGCO3
XBT FC084510	XBT GT5330	XBT ZGCO3
XBT FC084610	XBT GT5330	XBT ZGCO3

Equivalent product table - Magelis XBT F/XBT GK

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

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

The dimensions of the products are identical.

Operator dialogue terminals
Equivalent product tables
Magelis XBT G/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 products

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, RS 232C, 9-way SUB-D	**Existing cable + XBT ZG919**
	COM2, RS 485, RJ45	**Existing cable + RS 485/RS 232C converter + XBT ZG939**
COM1, RS 485, 25-way SUB-D	COM1, RS 485, 9-way SUB-D	**Existing cable + XBT ZG909**
	COM2, RS 485, RJ45	**Existing cable + XBT ZG939**
COM2, RS 232C, 9-way SUB-D	COM1, RS 232C, 9-way SUB-D	**Existing cable**
	COM2, RS 485, 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 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.

1

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, RS 232C	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 connector**	**Physical link**	**Length**	**Substituted reference**	**Type of terminal**	**Type of connector**	**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 other end	COM1, RS 422	5 m	**XBT ZG9777**	XBT GT	9-way SUB-D/flying leads other end	COM1, RS 422	5 m	**XBT ZG9778 + XBT ZGCOM1**
Adaptor case, FX (CPU), A CPU (SIO) and QnA CPU (SIO) protocols									
XBT G	2-port case Screw terminal/ 2 x 9-way SUB-D	COM1, RS 422	–	**XBT ZG979**	XBT GT	2-port case Screw terminal/2 x 9-way SUB-D	COM1, RS 422	–	**XBT ZG979**
Adaptor case, A Link (SIO) and Q Link (SIO) protocols									
XBT G	1-port case Screw terminal/ 1 x 25-way SUB-D	COM1, RS 422	–	**XBT ZG989**	XBT GT	–	–	–	**–**

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 connector**	**Physical link**	**Length**	**Substituted reference**	**Type of terminal**	**Type of connector**	**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 Automation, Allen-Bradley PLCs

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

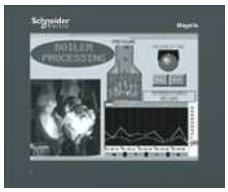
2 - HMI Controllers

HMI Controllers Magelis

Software platform

HMI Controllers

Magelis XBT GC HMI Controller
Magelis XBT GT, XBT GK Advanced Panels + control function

Applications		**Display of text messages, graphic objects and mimics Control and configuration of data**		
		IEC 1131-2 control function		
Terminal type		**HMI Controllers**		
				
Display	Type	Back-lit monochrome (amber or red mode) STN LCD (320 x 240 pixels)	Backlit monochrome STN LCD (320 x 240 pixels)	Colour STN LCD (320 x 240 pixels)
	Capacity	3.8” (monochrome)	5.7” (monochrome)	5.7” (colour)
Data entry		Via touch screen		
	Static function keys	–		
	Dynamic function keys	–		
	Service keys	–		
	Alphanumeric keys	–		
Memory capacity	Application	16 MB EPROM Flash		
	Extension	–		
Functions	Maximum number of pages and maximum number of instructions	Limited by internal Flash EPROM memory capacity		
	Variables per page	Unlimited (8000 variables max.)		
	Programmed logic	5 languages according to IEC 1131-2 (LD, ST, FBD, SFC, IL)		
	Counting/positioning	4 x 100 kHz fast counter inputs/4 x 65 kHz pulse train outputs		
	Control (PID)	Yes		
	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, indicator		
	Recipes	32 groups of 64 recipes comprising 1024 ingredients max.		
	Curves	Yes, with log		
	Alarm logs	Yes		
	Real-time clock	Built-in		
I/O	Integrated	12 x 24 V ⎓ digital inputs 6 sink or source transistor outputs *(1)*	16 x 24 V ⎓ digital inputs 16 sink or source transistor outputs *(1)*	
	I/O modular extensions	Two M238 I/O modules max.	Three M238 I/O modules max.	
Communication	Downloadable protocols	–	Uni-TE, Modbus, Modbus TCP/IP *(1)* and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens	
	Asynchronous serial link	–	RS 232C/RS 422/485 (COM1)	
	USB ports	1		
	Buses and networks	1 CANopen master with optional module (XBT ZGC CAN)		
		–		Ethernet TCP/IP (10BASET/100 BASE-TX)
	Printer link	USB port for parallel printer		
Design software		SoMachine with Windows XP and Vista (see page 2/31)		
Operating system		Magelis (131 MHz RISC CPU)		
Terminal type		**XBT GC 1100 T/U**	**XBT GC 2120 T/U**	**XBT GC 2230 T/U**
Pages		2/10	2/10	2/10

(1) Depending on model

Display of text messages, graphic objects and mimics Control and configuration of data	
IEC 1131-2 control function	
Touch screen Advanced Panels + control function	**Advanced Panels with keypad + control function**
	
Back-lit monochrome or colour STN LCD or colour TFT LCD (320 x 240 pixels to 1024 x 708 pixels) *(1)*	Monochrome STN LCD or colour TFT LCD (320 x 240 pixels or 640 x 480 pixels) *(1)*
5.7” (monochrome or colour) 7.5”, 10.4”, 12.1” or 15” (colour) *(1)*	5.7” (monochrome or colour) or 10.4” (colour) *(1)*
Via touch screen	Via keypad and/or touch screen (configurable) and/or by industrial pointer
–	10 or 12 *(1)*
–	14 or 18 *(1)*
–	8
–	12
16 MB Flash EPROM or 32 MB Flash EPROM *(1)*	
By 128 MB to 4 GB CF card *(1)*	
Limited by internal Flash EPROM memory capacity	
Unlimited (8000 variables max.)	
5 languages according to IEC 1131-2 (LD, ST, FBD, SFC, IL)	
–	
Yes	
Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, indicator	
32 groups of 64 recipes comprising 1024 ingredients max.	
Yes, with log	
Yes	
Built-in	
–	
–	
Uni-TE, 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)	
1 or 2 *(1)*	
1 CANopen master with external module (XBT ZG CANM) which is mandatory for the control function	
Ethernet TCP/IP (10BASET/100BASE-TX) *(1)*	
USB port for parallel printer	
SoMachine with Windows XP and Vista (see page 2/31)	
Magelis (131 MHz RISC or 266 MHz RISC CPU) *(1)*	Magelis (133 MHz RISC CPU)
XBT GT 2●/4●/5●/63/73 + XBT ZG CANM	**XBT GK 2●/53 + XBT ZG CANM**
1/47 and 2/22	1/48 and 2/22

HMI Controllers
Magelis XBT GC HMI Controller
Magelis XBT GT/GK Advanced Panels with control

Magelis XBT GC HMI Controllers

XBT GT Advanced Panels

XBT GK Advanced Panels

Module XBT ZG CANM

HMI function: Magelis XBT GT/GK Advanced Panels
+
Control function: XBT ZG CANM CANopen master module

Presentation

Magelis HMI Controllers are part of Schneider's Flexible Machine Control concept, a key element in MachineStruxure™.

The Magelis HMI Controller offer brings together Human Machine Interface and control functions within in a single product. This reduces the amount of equipment required and the associated costs throughout the life cycle of the machine.

This offer features two product ranges:
- The compact range: Magelis XBT GC HMI Controllers
- The modular range: Magelis XBT GT/GK Advanced Panels + XBT ZC CANM CANopen module

Magelis XBT GC HMI Controllers
(compact range)

The compact design of Magelis XBT GC HMI Controllers optimizes setup.

This range comprises six touch screen terminals, with the following, depending on the model:
- 3.8” monochrome screen, 12 integrated inputs/6 integrated outputs (sink or source)
- 5.7” monochrome or colour screen, 16 integrated inputs/16 integrated outputs (sink or source)
- A wide choice of communication interfaces (USB, serial link, CANopen and Ethernet)

In order to adapt easily to different configurations, it is possible to add digital or analog I/O expansion modules at the rear of the Controller.

Magelis XBT GT/GK Advanced Panels + XBT ZC CANM CANopen module
(modular range)

This range is made up of the complete Magelis XBT GT or Magelis XBT GK Advanced Panels offers combined with a control part using the XBT ZG CANM CANopen module. During operation, this module controls the I/O and the peripherals distributed via the CANopen bus.

The combination with Magelis XBT GT or Magelis XBT GK Advanced Panels gives a wide choice of screen sizes and types of data entry, depending on the model:
- 17 XBT GT touch screen terminals:
  - 5.7” monochrome or colour screens
  - 7.5”, 10.4”, 12.1” and 15” colour screens
- 3 XBT GK terminals with keypad and/or touch screen:
  - 5.7” monochrome or colour screens
  - 10.4” colour screens

This combination also offers numerous advanced functions such as video, data management (sharing of data, log), etc.

Operation

With their fast, multitasking processors, all the HMI Controllers combine HMI and control functions and share the same screen and communication features and dimensions.

The internal memory can be freely used by both the HMI function and the control function.
Processing is split 75% on the HMI part and 25% on the control part. The processing can be configured for 3 tasks, including 1 master task.

XBT GC HMI Controllers also share the same I/O modules, the same Telefast pre-wired system and the same peripherals on the CANopen bus as the M238 logic controller.

Functions:
pages 2/6 to 2/7

Description:
pages 2/8 to 2/9

References:
pages 2/10 to 2/11

HMI Controllers
Magelis XBT GC HMI Controller
Magelis XBT GT/GK Advanced Panels with control

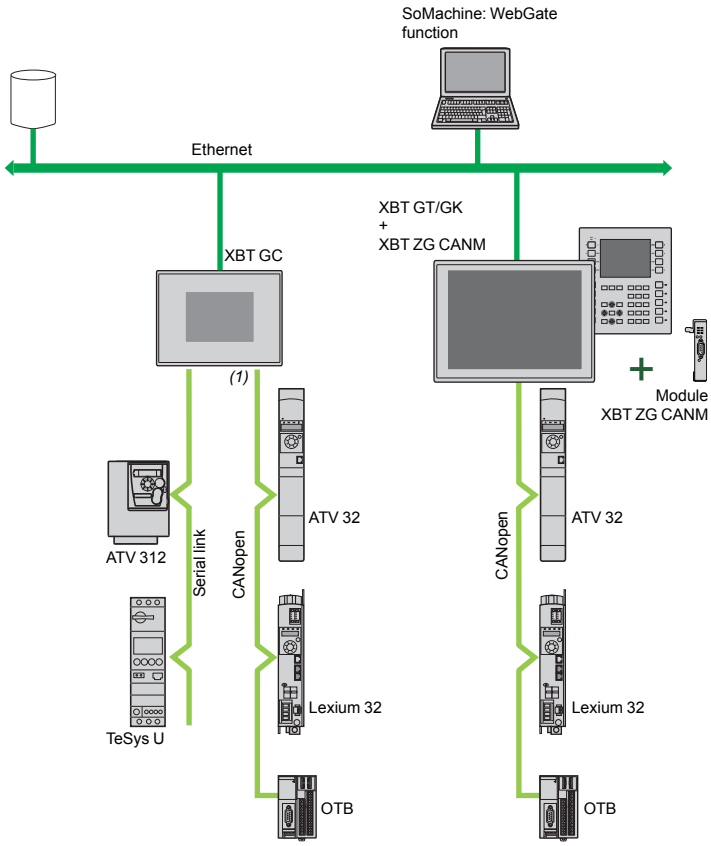
SoMachine

Vijeo Designer (included in SoMachine)

Configuration

Magelis XBT GC HMI Controllers and Magelis XBT GT/GK Advanced Panels are configured using Schneider Electric's unique machine automation software, SoMachine.
This software, combining both HMI and control functions, is based on Vijeo Designer software in the Windows XP and Windows Vista environment.
SoMachine software boasts an advanced user interface with many configurable windows, enabling unique projects to be developed quickly and easily.
See page 2/28.

Communication



(1) With XBT ZGC CAN CANopen master module

Examples of communication architectures

Depending on the model, Magelis HMI Controllers and Magelis XBT GT/GK Advanced Panels communicate with automation devices via 1 or 2 integrated serial links using the following communication protocols:
- Schneider Electric (Uni-TE, Modbus)
- Third-party: Mitsubishi Electric, Omron, Allen-Bradley and Siemens

Depending on the model, they can be connected to Ethernet TCP/IP networks with the Modbus TCP protocol or a third-party protocol, and can be used as the CANopen master to control all the peripherals which can be connected on this bus.

HMI Controllers
Magelis XBT GC HMI Controller
Magelis XBT GT/GK Advanced Panels with control

Functions

Magelis HMI Controllers are part of Schneider's Flexible Machine Control concept, a key element in MachineStruxure™.

Magelis XBT GC HMI Controllers and Magelis XBT GT/GK Advanced Panels offer the following HMI functions:
- Display of animated mimics with 8 types of animation (pressing the touch panel, colour changes, filling, movement, rotation, size, visibility and value display)
- Control, modification of numeric and alphanumeric values
- Display of current date and time
- Real-time curves and trend curves with log
- Alarm display, alarm log and management of alarm groups
- Multi-window management
- Page calls initiated by the operator
- Multilingual application management (10 languages simultaneously)
- Recipe management
- Data processing via Java script
- Application support and USB key external memory logs
- Management of serial printers and barcode readers

Magelis XBT GC HMI Controllers and Magelis XBT GT/GK Advanced Panels *(1)* have been designed for Transparent Ready architectures and equipment (combination of Web and Ethernet TCP/IP technologies).

With the WebGate function, it is possible to control or carry out maintenance remotely.

Magelis XBT GC HMI Controllers and Magelis XBT GT/GK Advanced Panels offer the following functions for control:
- Execution of programmed logic sequences with the five IEC 1131-2 languages (LD, ST, FBD, SFC, IL)
- Management of equipment on the CANopen fieldbus

In addition to these functions, Magelis XBT GC HMI Controllers manage:
- Integrated and remote I/O on expansion modules
- Remote analog I/O on expansion modules

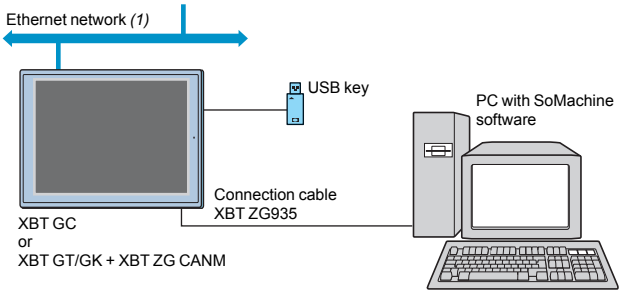
(1) Depending on model

HMI Controllers
Magelis XBT GC HMI Controller
Magelis XBT GT/GK Advanced Panels with control

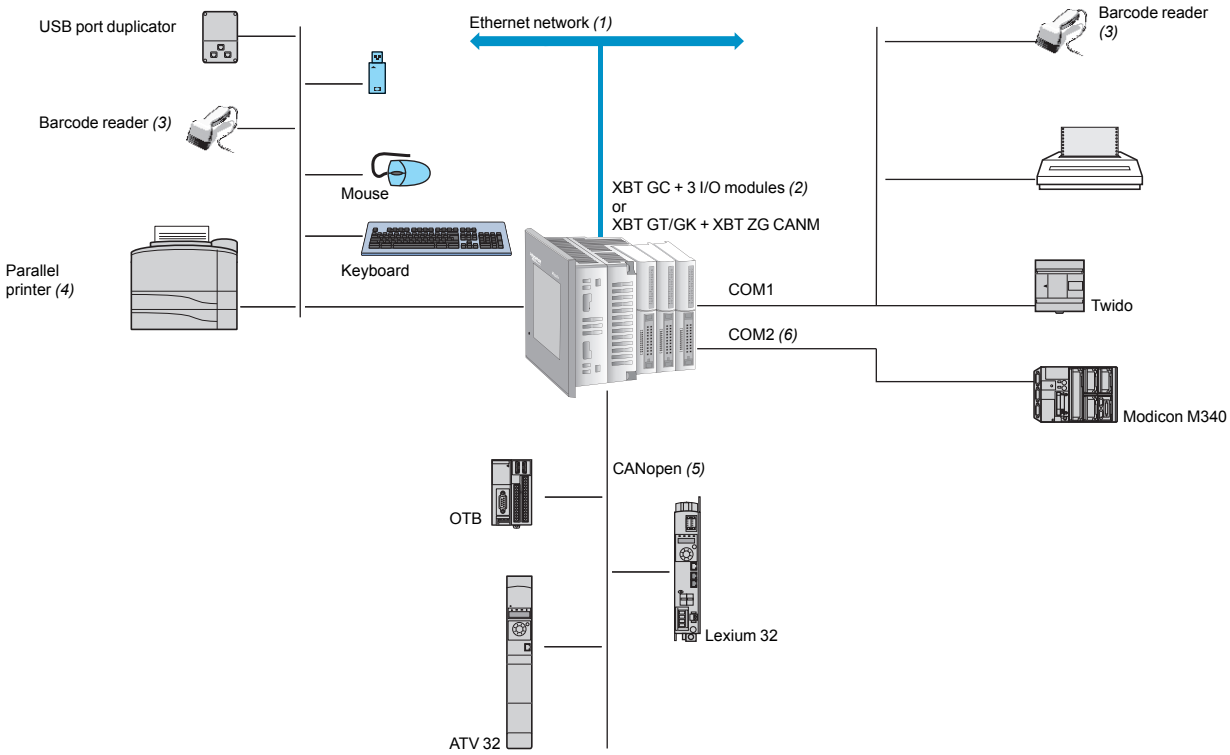
Operating modes for the terminals

The illustrations below show which equipment can be connected to XBT terminals based on their two operating modes.

Edit mode



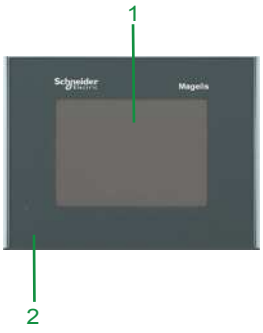
Run mode



(1) With XBT GC 2230T/U, XBT GT●●30, XBT GT●●40, XBT GK●●30
(2) With XBT GC●●●●T/U, maximum 2/3 I/O modules according to model
(3) Should be a DataLogic Gryphon barcode reader
(4) Should be a Hewlett Packard printer via a USB/PIO converter
(5) Requires:
- for XBT GC: XBT ZGC CAN CANopen master module
- for XBT GT/GK: XBT ZG CANM CANopen master module
(6) With XBT GT/GK

Presentation: pages 2/4 to 2/5
Description: pages 2/8 to 2/9
References: pages 2/10 to 2/11

HMI Controllers
XBT GC HMI Controller with 3.8” screen

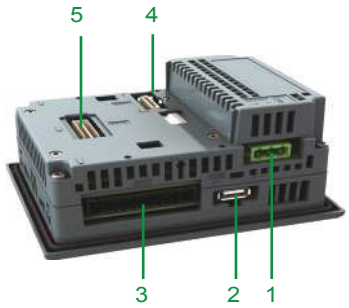


Description

Magelis XBT GC1100 T/U HMI Controller

The front panel comprises:

1 A touch screen for displaying mimics (3.8” amber or red mode monochrome)
2 A control indicator showing the terminal's operating mode



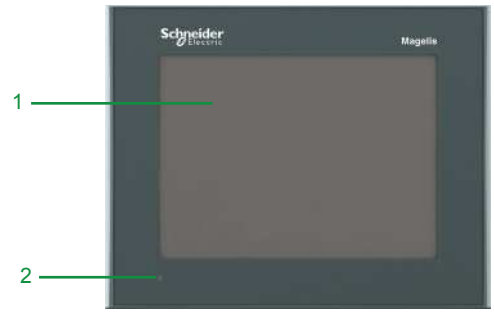
The rear panel comprises:

1 A removable screw terminal block for 24 V ⎓ power supply
2 A type A USB master connector for peripheral connection and application transfer
3 A removable terminal block for 12 digital inputs and 6 digital outputs
4 An interface for connecting M238 logic controller I/O expansion modules
5 An interface for connecting the CANopen bus master module (see page 2/22)
6 Digital (TM2 D●●) or analog (TM2 A●●) I/O expansion module (to be ordered separately, see pages 2/12 and 2/13)
It is possible to combine a maximum of two I/O expansion modules, depending on the module type (see page 2/14).

Presentation:
pages 2/4 to 2/5

Functions:
pages 2/6 to 2/7

References:
pages 2/10 to 2/11

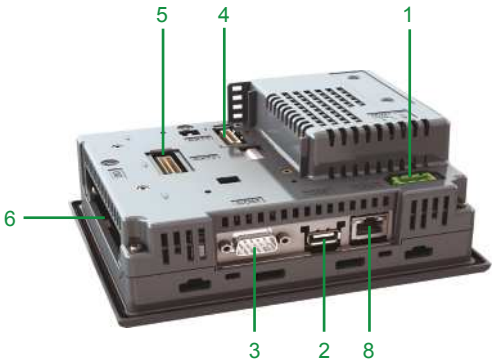


Description

Magelis XBT GC2●20 and XBT GC2●30 HMI Controller

The front panel comprises:

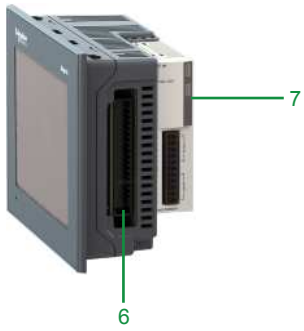
1 A touch screen for displaying mimics (5.7” monochrome or colour)
2 A multicolour indicator (green, orange and red) showing the terminal's operating mode



The rear panel comprises:

1 A removable screw terminal block for 24 V ⎓ power supply
2 A type A USB master connector for peripheral connection and application transfer
3 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)
4 An interface for connecting the M238 logic controller I/O expansion module
5 An interface for connecting the CANopen bus master module (see page 2/22)
6 A removable terminal block for 16 digital inputs and 16 digital outputs
7 Digital (TM2 D●●) or analog (TM2 A●●) I/O expansion module (to be ordered separately, see pages 2/12 and 2/13)
It is possible to combine a maximum of three I/O expansion modules, depending on the module type (see page 2/15).

For XBT GC2230 only:
8 An RJ45 connector for Ethernet TCP/IP 10BASE-T/100BASE-TX link



HMI Controllers
XBT GC HMI Controller

XBT GC1100●

XBT GC2●●●●

Magelis XBT GC HMI Controller *(1)*

Type of screen	No. of ports	Application memory capacity	Compact Flash memory	Integrated I/O	No. of Ethernet ports	Reference	Weight kg
3.8" screen							
STN amber or red	1 USB	16 MB	No	12 I/6 O source	-	**XBT GC1100T**	0.400
				12 I/6 O sink	-	**XBT GC1100U**	0.400
5.7" screen							
STN black and white mode	1 COM 1 1 USB	16 MB	No	16 I/16 O source	-	**XBT GC2120T**	1.000
				16 I/16 O sink	-	**XBT GC2120U**	1.000
5.7" screen							
STN colour	1 COM 1 1 USB	16 MB	No	16 I/16 O source	1	**XBT GC2230T**	1.000
				16 I/16 O sink	1	**XBT GC2230U**	1.000

(1) Terminals supplied with mounting kit (screw clips), locking device for USB connectors, spring clip for expansion modules (except XBT GC 1100) and instruction sheet. The setup documentation for XBT GC terminals is supplied in electronic format with SoMachine software (see page 2/31).

Presentation: pages 2/4 to 2/5
Functions: pages 2/6 to 2/7
Description: pages 2/8 to 2/9

HMI Controllers
Separate parts for Magelis XBT GC HMI Controller

XBT ZGUSB

Separate parts

Designation	Compatibility	Size	Length	Reference	Weight kg
Protective sheets	XBT GC 1100	–		**XBT ZG60**	
(5 peel-off sheets)	XBT GC2●●0	–		**XBT ZG62**	0.200

Designation	Description	Length	Reference	Weight kg
Remote USB port location for type A XBT terminal	Enables the USB port to be located remotely on the rear of the XBT terminal on a panel or cabinet door (Ø 21 mm fixing device)	1 m	**XBT ZGUSB**	–
Remote USB port location for mini type B XBT terminal		-	**XBT ZGUSBB**	–
XBT GC connection to CANopen master fieldbus	Connection via card on bus extension	-	**XBT ZGCCAN**	–
Cable for transferring application to PC	USB TTL connector	2 m	**XBT ZG 935**	–

Replacement parts

Designation	Used for	Reference	Weight kg
Installation gaskets	XBT GC1100	**XBT ZG51**	0.030
	XBT GT21●0	**XBT ZG52**	0.030
USB spring clip	XBT GC 1100	**XBT ZGCLP2**	–
	XBT GC 2●●0	**XBT ZGCLP4**	–
Mounting kit	4 clips and screws (max. tightening torque: 0.5 Nm), included with all XBT GC terminals	**XBT ZG FIX**	0.100
Spring clip for expansion modules on XBT GC	XBT GC2●●0 terminals	**XBT ZGCHOK**	0.030
Power supply connector	XBT GC1●●● / GC2●●●	**XBT ZGPWS1**	0.030
Direct I/O connector	XBT GC1000	**XBT ZG DIO1**	–
	XBT GC2000	**XBT ZG DIO2**	–

Presentation: pages 2/4 to 2/5
Functions: pages 2/6 to 2/7
Description: pages 2/8 to 2/9

HMI Controllers
Magelis XBT GC HMI Controller
Digital I/O expansion modules

TM2 DDI 8DT

TM2 DDO 8● T/DRA 8RT

TM2 DDO 32●K

TM2 DDM 24DRF

Digital I/O expansion modules

Digital I/O expansion modules are mounted on the rear of XBT GC controller bases. The maximum permitted number of digital and/or analog I/O modules depends on the type of XBT GC terminal and the thickness of the modules (see combination rule on page 2/14).

Digital input modules *(1)*

Input voltage	No. of channels	No. of common points	Connection	Thickness mm (Type)	Reference	Weight kg
24 V ⎓ sink/source	8	1	By removable screw terminal block (provided)	23.5 (B)	**TM2 DDI 8DT**	0.085
	16	1	By removable screw terminal block (provided)	23.5 (B)	**TM2 DDI 16DT**	0.100
			By HE 10 connector	23.5 (B)	**TM2 DDI 16DK** *(2)*	0.065
	32	2	By HE 10 connector	29.7 (C)	**TM2 DDI 16DK** *(2)*	0.100
120 V ∼	8	1	By removable screw terminal block (provided)	23.5 (B)	**TM2 DAI 8DT**	0.081

Digital output modules *(1)*

Input voltage	No. of channels	No. of common points	Connection	Thickness mm (Type)	Reference	Weight kg
Transistors 24 V ⎓	8, sink 0.3 A	1	By removable screw terminal block (provided)	23.5 (B)	**TM2 DDO 8UT**	0.085
	8, sink 0.5 A	1	By removable screw terminal block (provided)	23.5 (B)	**TM2 DDO 8TT**	0.085
Transistors 24 V ⎓	16, sink 0.1 A	1	By HE 10 connector	17.6 (A)	**TM2 DDO 16UK**	0.070
	16, sink 0.4 A	1	By HE 10 connector	17.6 (A)	**TM2 DDO 16TK** *(2)*	0.070
	32, sink 0.1 A	2	By HE 10 connector	29.7 (C)	**TM2 DDO 32UK**	0.105
	32, sink 0.4 A	2	By HE 10 connector type	29.7 (C)	**TM2 DDO 32TK** *(2)*	0.105
2 A relays (Ith) **230 V ∼ /30 V ⎓**	8 (NO contact)	2	By removable screw terminal block (provided)	23.5 (B)	**TM2 DRA 8RT**	0.110
	16 (NO contact)	2	By removable screw terminal block (provided)	23.5 (B)	**TM2 DRA 16RT**	0.145

Digital mixed I/O modules *(1)*

No. of I/O	No./type of inputs	No./type of outputs	No. of common points	Connection	Thickness mm (Type)	Reference	Weight kg
8	4 I, 24 V ⎓ sink/source	4 relay O (NO contact) 2 A (Ith)	Inputs: 1 common Outputs: 1 common	By removable screw terminal block (provided)	23.5 (B)	**TM2 DMM 8DRT**	0.095
24	16 I, 24 V ⎓ sink/source	8 relay O (NO contact) 2 A (Ith)	Inputs: 1 common Outputs: 2 common	By spring terminal block	39.1 (D)	**TM2 DMM 24DRF**	0.140

(1) Please refer to the "Modicon M238 logic controller" catalogue.
(2) Module supports use of the Modicon Telefast ABE 7 pre-wired system.

XBT GC references:
page 2/10

Analog I/O expansion modules

Analog I/O expansion modules are mounted on the rear of XBT GC controller bases. The maximum number of digital and/or analog I/O modules depends on the type of XBT GC terminal and the thickness of the modules (see combination rule on page 2/15).

TM2 AMI 2LT

TM2 ARI 8LRJ

TM2 ARI 8LT

Analog input modules *(1)*

Channel type	Input range	Output range	Resolution	Connected by	Thickness mm (Type)	Reference	Weight kg
2 inputs	0…10 V 4…20 mA	–	12-bit	Removable screw terminal block (provided)	23.5 (B)	**TM2 AMI 2LT**	0.085
	Thermocouple J, K, T	–	12-bit	Removable screw terminal block (provided)	23.5 (B)	**TM2 AMI 2LT**	0.085
4 inputs	0…10 V 0…20 mA 2, 3 or 4 wire Pt100/1000 Ni100/1000 temperature probe	–	12-bit	Removable screw terminal block (provided)	23.5 (B)	**TM2 AMI 4LT**	0.085
8 inputs	0…10 V 4…20 mA	–	10-bit	Removable screw terminal block (provided)	23.5 (B)	**TM2 AMI 8LT**	0.085
	2 or 3-wire Pt100/1000 temperature probe	–	12-bit	RJ11 connector	23.5 (B)	**TM2 ARI 8LRJ**	–
				Removable screw terminal block (provided)	23.5 (B)	**TM2 ARI 8LT**	–
	PTC/NTC	–	10-bit in NTC Detection of 2 thresholds in PTC	Removable screw terminal block (provided)	23.5 (B)	**TM2 ARI 8LT**	0.085

Analog output modules *(1)*

1 output	–	0…10 V 4…20 mA	12-bit	Removable screw terminal block (provided)	23.5 (B)	**TM2 AMO 1HT**	0.085
2 outputs	–	± 10 V	11-bit + sign	Removable screw terminal block (provided)	23.5 (B)	**TM2 AVO 2HT**	0.085

Analog I/O modules *(1)*

2 inputs and 1 output	0…10 V 4…20 mA	0…10 V 4…20 mA	12-bit	Removable screw terminal block (provided)	23.5 (B)	**TM2 AMM 3HT**	0.085
	Thermocouple J, K, T 2 or 3-wire Pt100 temperature probe	0…10 V 4…20 mA	12-bit	Removable screw terminal block (provided)	23.5 (B)	**TM2 ALM 3LT**	0.085
4 inputs and 1 output	0…10 V 4…20 mA	0…10 V 4…20 mA	12-bit	Removable screw terminal block (provided)	23.5 (B)	**TM2 AMM 6HT**	0.085

Separate parts

Designation	Description	Reference	Weight kg
Earthing plate	Support equipped with 10 male Faston connectors for connecting the cable shielding (via 6.35 mm Faston connectors, not included) and the functional earths (FE)	**TM2 XMT GB**	0.045
Mounting kit Sold in lots of 5	For plate or panel mounting of analog modules	**TWD XMT 5**	0.065

(1) For characteristics, please refer to the "Modicon M238 logical controller" catalogue.

XBT GC references:
page 2/10

HMI Controllers
Magelis XBT GC HMI Controller
I/O expansion modules

XBT GC1●●●

TM2 D●●
TM2 A●●

XBT GC1●●●	**Combinations of two expansion modules**			
Combinations of 2 I/O expansion modules with XBT GC1●●●	**Type** *(1)*	**Type** *(1)*	**Total thickness (mm)**	
	A	A	35.2	Permitted combinations
	A	B	41.1	
	B	B	47.0	
	A	C	47.3	
	B	C	53.2	
	A	D	56.7	
	C	C	59.4	
	B	D	62.6	Prohibited combinations
	C	D	68.8	
	D	D	78.2	

(1) For digital (TM2 D●●) and analog (TM2 A●●) I/O expansion module types, see pages 2/12 and 2/13:
- *Type A: thickness 17.6 mm*
- *Type B: thickness 23.5 mm*
- *Type C: thickness 29.7 mm*
- *Type D: thickness 39.1 mm*

XBT GC references:
page 2/10

HMI Controllers
Magelis XBT GC HMI Controller
I/O expansion modules

TM2 D●●
TM2 A●●

XBT GC2●●●

XBT GC2●●● Combinations of two expansion modules

Combinations of 2 I/O expansion modules with XBT GC2●●●	Type *(1)*	Type *(1)*	Total thickness (mm)	
	A	A	35.2	Permitted combinations
	A	B	41.1	
	B	B	47.0	
	A	C	47.3	
	B	C	53.2	
	A	D	56.7	
	C	C	59.4	
	B	D	62.6	Prohibited combinations
	C	D	68.8	
	D	D	78.2	

XBT GC2●●● Combinations of three expansion modules

Combinations of 3 I/O expansion modules with XBT GC2●●●	Type *(1)*	Type *(1)*	Type *(1)*	Total thickness (mm)	
	A	A	A	5.8	Permitted combinations with hook *(2)*
	A	A	B	58.7	
	A	B	B	64.6	
	B	B	B	70.5	
	All other combinations			–	Prohibited

(1) For digital (TM2 D●●) and analog (TM2 A●●) I/O expansion module types, see pages 2/12 and 2/13:
- *Type A: thickness 17.6 mm*
- *Type B: thickness 23.5 mm*
- *Type C: thickness 29.7 mm*
- *Type D: thickness 39.1 mm*

(2) Hook included with product

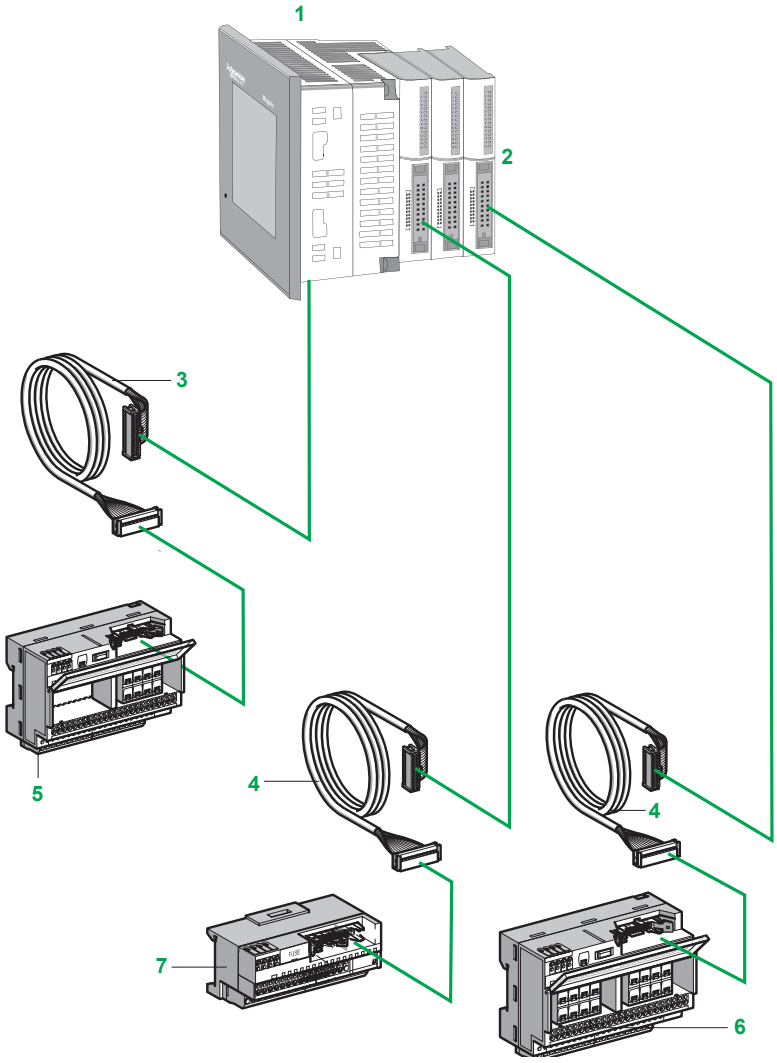
XBT GC references:
page 2/10

HMI Controllers

Modicon Telefast® pre-wired system for Magelis XBT GC HMI Controller

Connection sub-bases for digital I/O (integrated or on expansion modules)

Presentation



1 **XBT GC** equipped with 22 or 38-way direct I/O connectors. The modularity options offered have 18 or 32 I/O.
2 Digital I/O expansion modules equipped with 20-way HE10 connectors. The modularity options offered have 16 or 32 I/O.

3 2 m AWG 28/0.08 mm² cordsets, depending on the model:
□ For **XBT GC 1100T/U**: **XBT ZG ABE1** preassembled cordset with a 26-way HE 10 connector and a 22-way Direct I/O-XBT GC connector at each end
□ For **XBT GC 2●●●T/U**: **XBT ZG ABE2** preassembled cordset with two 20-way HE10 connectors and a 38-way Direct I/O-XBT GC connector
4 **ABF T20E●●0** preassembled cordset with a 20-way HE 10 connector at each end, available in 0.5, 1, 2 and 3 m lengths (AWG 28/0.08 mm²)

5 Depending on model:
□ For **XBT GC 1100T**: **ABE 7B20MPN2●** or **ABE 7B20MRM20** 20-channel sub-base for the bases
□ For **XBT GC 2●●●T**: **ABE 7E16EPN20** or **ABE 7E16SPN2●** 16-channel sub-base

6 **ABE 7E16SPN22** or **ABE 7E16SRM20** 16-channel sub-base for digital outputs integrated or on expansion modules
7 **ABE 7E16EPN20** or **ABE 7E16SPN20** 16-channel sub-base for digital inputs or outputs integrated or on expansion modules

HMI Controllers

Modicon Telefast® pre-wired system for Magelis XBT GC HMI Controller

Connection sub-bases for digital I/O (integrated or on expansion modules)

Combinations involving modular bases and I/O expansion modules

		XBT GC				Digital I/O expansion modules	
		Integrated digital I/O				Inputs	Outputs (source)
		XBT GC 1100T		XBT GC 2●●●T		TM2 DDI 16DK (16 I) TM2 DDI 32DK (32 I)	TM2 DDO 16TK (16 O) TM2 DDO 32TK (32 O)
Integrated in Twido programmable controllers		12 I	6 O source	16 I	16 O source		
Connection block types		Direct I/O, 22-way		Direct I/O, 38-way		HE 10, 20-way	
Connection to XBT GC programmable HMI Controller		**XBT ZG ABE1**		**XBT ZG ABE2**		**ABF T20E●●0** (HE 10, 20-way)	
Passive connection sub-bases							
20-channel	**ABE 7B20MPN2●**		*(1)*				
16-channel	**ABE 7E16EPN20**						
	ABE 7E16SPN2●						
Output adaptor sub-bases							
20-channel	**ABE 7B20MRM20**		*(2)*				
16-channel	**ABE 7E16SRM20**						

Compatible

Incompatible

Note: Telefast cables and modules are not compatible with XBT GC units with sink outputs (U suffix).

(1) 6 channels used for 8 available

(2) 6 channels used for 8 available with 2 transistor outputs and 4 relay outputs

HMI Controllers

Modicon Telefast® pre-wired system for Magelis XBT GC HMI Controller

Connection sub-bases for digital I/O (integrated or on expansion modules)

ABE 7B20MPN20

ABE 7E16EPN20

ABE 7E16SRM20

References

For XBT GC 1100T bases

Number of I/O	No./ type of inputs	No./ type of outputs	Compatibility	LED per chnnl	Fuse	Reference	Weight kg
20	12, sink 24 V ⎓	6, sink 24 V ⎓	XBT GC1100T	No	No	**ABE 7B20MPN20**	0.430
				Yes	Yes	**ABE 7B20MPN22**	0.430
	12, sink 24 V ⎓	2, source 24 V ⎓, 2 A and 4, relay	XBT GC1100T	No	No	**ABE 7B20MRM20**	0.430

For expansion modules or XBT GC 2●● bases

Number of inputs	Input type	Compatibility	LED per chnnl	Fuse	Reference	Weight kg
16	Sink 24V ⎓	TM2 DDI16DK/ DDI32K and XBT GC2●●●T	No	No	**ABE 7E16EPN20**	0.430

Number of outputs	Output type	Compatibility	LED per chnnl	Fuse	Reference	Weight kg
16	Source 24 V ⎓	TM2 DDO16TK/ DDO32TK and XBT GC2●●●T	No	No	**ABE 7E16SPN20**	0.450
			Yes	Yes	**ABE 7E16SPN22**	0.450
	Relay 24 V ⎓, 250 V∿, 3 A		No	No	**ABE 7E16SRM20**	0.430

Connection cables for XBT GC

Type of signal	Compatibility	Connection type		Gauge Cross-sect.	Length *(1)*	Reference	Weight kg
		XBT GC side	Telefast side				
Digital I/O	XBT GC 1100T	Direct I/O 22-way	HE 10 26-way	AWG 28 0.08 mm²	2.0 m	**XBT ZG ABE1**	0.180
	XBT GC 2●●0T	Direct I/O 38-way	2 x HE 10 20-way		2.0 m	**XBT ZG ABE2**	0.180
	TM2 DDI16DK/ DDI32DK/ DDO16TK/ DDO32TK	HE 10 20-way	HE 10 20-way	AWG 28 0.08 mm²	0.5 m	**ABF T20E050**	0.060
					1 m	**ABF T20E100**	0.080
					2 m	**ABF T20E200**	0.140

Accessories

Designation	Number of shunted terminals	Characteristics	Order in multiples of	Unit reference	Weight kg
Optional snap-on terminal blocks	20	–	5	**ABE 7BV20**	0.060
	12+8	–	5	**ABE 7BV20TB**	0.060
Quick-blow fuses 5 x 20, 250 V, UL	–	0.125 A	10	**ABE 7FU012**	0.010
		0.315 A	10	**ABE 7FU030**	0.010
		1 A	10	**ABE 7FU100**	0.010
		2 A	10	**ABE 7FU200**	0.010

(1) For cable lengths > 2 m, please contact our Customer Care Centre.

HMI Controllers

Modicon Telefast® pre-wired system for Magelis XBT GC HMI Controller

Connection sub-bases for digital I/O (integrated or on expansion modules)

References (continued)

Separate parts

Designation	Type	Compatibility	Reference	Weight kg
Connectors Sold in lots of 5	HE 10 female 26-way	TWD LMDA20DTK/ LMDA40DTK	**TWD FCN2K26**	–
	HE 10 female 20-way	TM2 DDI16DK/ DDI32DK/ DDO16TK/ DDO32TK	**TWD FCN2K20**	–
Screw terminals Sold in lots of 5	10-way	TM2 DDI●DT/DAI8DT/ DDO8●T/DRA●RT	**TWD FTB2T10**	–
	11-way	TM2 DMM8DRT/ AMI●●T/ARI8HT	**TWD FTB2T11**	–

Designation	Compatibility	Connection type		Gauge/ Cross-sect.	Length	Reference	Weight kg
		Twido side	Other end				
Cables for digital I/O	TM2 DDI16DK/ DDI32DK/ DDO16TK/ DDO32TK	HE 10 20-way	Flying leads	AWG 22 0.035 mm^2	3 m	**TWD FCW30K**	0.405
					5 m	**TWD FCW50K**	0.670
Rolled ribbon cable	20 conductors	–	–	AWG 28 0.08 mm^2	20 m	**ABF C20R200**	1.310

HMI Controllers
CANopen bus
CANopen master bus module for XBT GC

XBT GC + XBT ZGC CAN

Presentation

The **XBT ZGC CAN** module provides the CANopen bus master function for Magelis **XBT GC** HMI Controllers.

SoMachine software is used to configure the CANopen machine bus for the Magelis XBT GC HMI Controllers (see page 2/28).

The various services on offer include:

■ For Schneider Electric slaves such as ATV 312/61/71 variable speed drives and Lexium 32 servo drives one or more profiles are supplied for configuring the slave according to a predefined mode.
The use of profiles means that the user has a defined operating mode without having to configure it.

■ For third-party slaves:

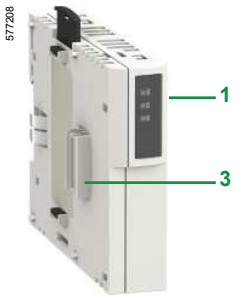
□ The user can choose from an editable list by simply importing an EDS (Electronic Data Sheet) description file.

□ The slave can be positioned on the bus with definition of the slave number, speed, monitoring, etc.

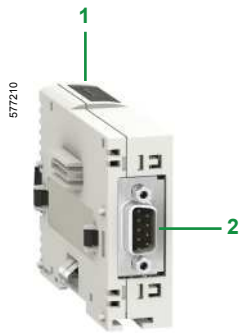
□ The user can select variables from the list of variables managed by the slave.

□ Variables can be linked to exchange data.

□ Exchange data can be symbolized.



XBT ZGC CAN



Description

The **XBT ZGC CAN** CANopen master bus module features:

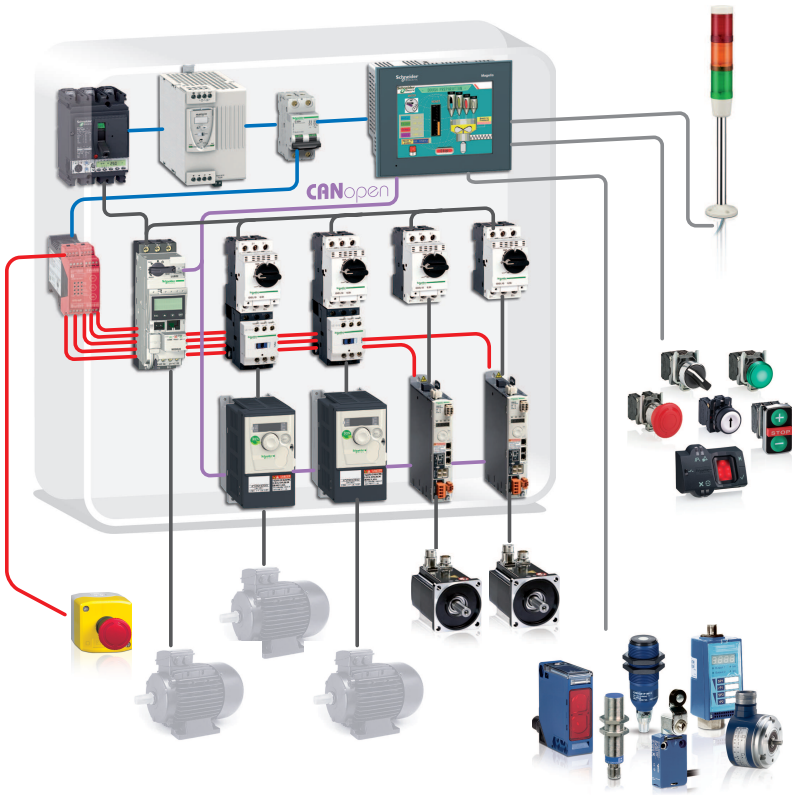
1 3 LEDs (PWR, RUN and ERR) providing power supply and module operation status information
2 A 9-way male SUB-D connector for the CANopen bus
3 A connector for the **XBT GC** HMI Controller

Reference

Description	Reference	Weight kg
CANopen bus master module for Magelis XBT GC HMI Controller Conformity class M10	**XBT ZGC CAN**	0.100

HMI Controllers
CANopen bus
CANopen master bus module for XBT GC

Example architecture



The above configuration shows an example architecture based on the Magelis **XBT GC** HMI Controller.

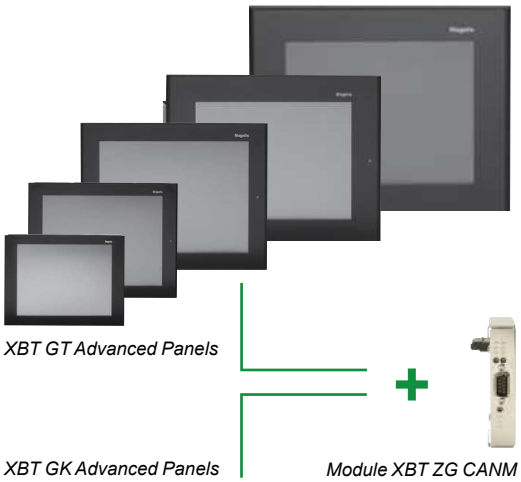
The **XBT ZGC CAN** expansion module provides the CANopen bus master function for the **XBT GC** HMI Controller.

The CANopen bus is made up of a master station, the Magelis **XBT GC** HMI Controller and slave stations. The master is in charge of configuration, exchanges and diagnostics to the slaves.

The CANopen bus is used to manage various slaves such as:
- Digital slaves
- Analog slaves
- Variable speed drives
- Motor starters
- ...

For an example connection from a *Distributed CANopen Optimized* architecture, see page 2/26.

HMI Controllers
CANopen bus
CANopen master bus module for XBT GT/GK



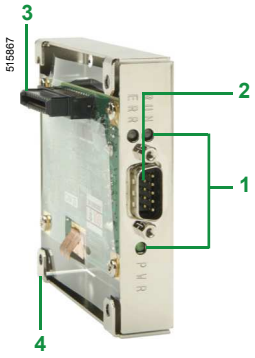
HMI function: Magelis XBT GT/GK Advanced Panels
+
Control function: XBT ZG CANM CANopen master module

Presentation

The **XBT ZG CANM** CANopen master bus module provides the control function for the **XBT GT** (5.7”, 10.4”, 12.1” or 15”) and **XBT GK** (5.7” or 10.4”) ranges of Advanced Panels (see page 2/24).

SoMachine software is used to configure the CANopen machine bus for this module (see page 2/28).

The various services on offer include:
- For Schneider Electric slaves such as ATV 312/61/71 variable speed drives and Lexium 32 servo drives one or more profiles are supplied for configuring the slave according to a predefined mode.
The use of profiles means that the user has a defined operating mode without having to configure it.
- For third-party slaves:
  - The user can choose from an editable list by simply importing an EDS (Electronic Data Sheet) description file.
  - The slave can be positioned on the bus with definition of the slave number, speed, monitoring, etc.
  - The user can select variables from the list of variables managed by the slave.
  - Variables can be linked to exchange data.
  - Exchange data can be symbolized.



XBT ZG CANM

Description

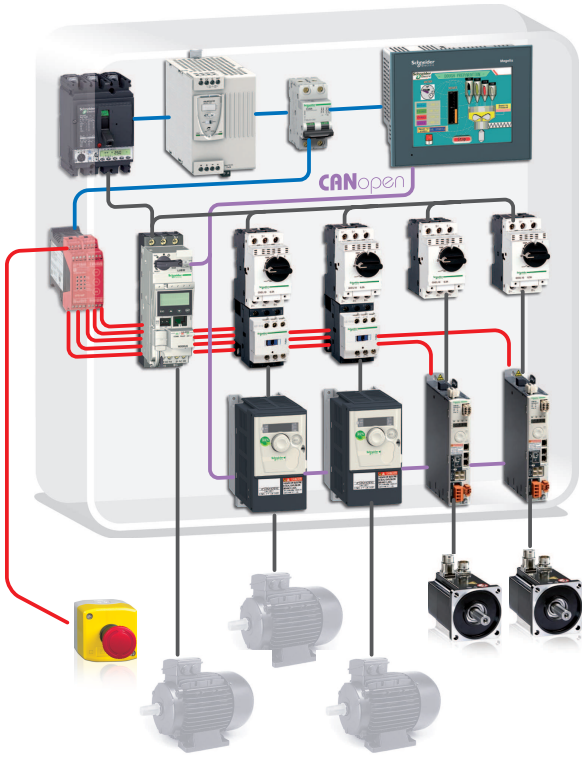
The **XBT ZG CANM** CANopen master bus module features:
1. 3 LEDs (PWR, RUN and ERR) providing power supply and module operation status information
2. A 9-way male SUB-D connector for connecting to the CANopen bus
3. A connector for connecting to the rear of the Magelis XBT GT/GK Advanced Panels
4. Positions for fixing screws

Reference

Description	Reference	Weight kg
CANopen bus master module for Magelis XBT GT/GK Advanced Panels Conformity class M10	**XBT ZG CANM**	0.100

HMI Controllers
CANopen bus
CANopen master bus module for XBT GT/GK

Example architecture



TThe above configuration shows an example architecture based on an **XBT GT/GK** Advanced Panel.

The **XBT ZG CANM** expansion module provides the CANopen bus master function for the Magelis **XBT GT/GK** Advanced Panel.

The CANopen bus is made up of a master station, the Magelis **XBT GT/GK** Advanced Panel and slave stations. The master is in charge of configuration, exchanges and diagnostics to the slaves.

The CANopen bus is used to manage various slaves such as:
- Digital slaves
- Analog slaves
- Variable speed drives
- Motor starters
- ...

For an example connection from a *Distributed CANopen Optimized* architecture, see page 2/26.

HMI Controllers
Magelis XBT GT Advanced Panels


XBT GT21●0 / 2220 / 2330

XBT GK monochrome touch screen terminals compatible with the XBT ZG CANM CANopen master module (1) (2)

Screen type	No. of ports	Application memory capacity	Compact Flash memory	Composite video input	No. of Ethernet ports	Reference	Weight kg
5.7" optimum QVGA screen							
STN blue mode	1 COM 1 1 COM 2 1 USB	16 MB	No	No	–	**XBT GT2110**	1.000
5.7" multifunction QVGA 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


XBT GT4230 / 43●0

XBT GK colour touch screen terminals compatible with the XBT ZG CANM CANopen master module (1) (2)

Screen type	No. of ports	Application memory capacity	Compact Flash memory	Composite video input	Embedded Ethernet	Reference	Weight kg
5.7" multifunction QVGA 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
High Brightness TFT	1 COM 1 1 COM 2 1 USB	16 MB	Yes	No	1	**XBT GT2930**	1.000
5.7" multifunction VGA screen							
TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	**XBT GT2430**	–
7.5" multifunction VGA 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


XBT GT53●0

XBT GT63●0

Multifunction 10.4" VGA screen							
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 10.4" SVGA screen							
TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	**XBT GT 5430**	2.500
Multifunction 12.1" SVGA screen							
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" XGA screen							
TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	Yes	1	**XBT GT7340**	5.600


XBT GT7340

(1) Terminals supplied with mounting kit (screw clips), locking device for USB connectors and instruction sheet. The setup documentation for XBT GT teminals is supplied in electronic format with Vijeo Designer configuration software; please consult our website www.schneider-electric.com.

(2) All data relating to Magelis XBT GT Advanced Panels is available on our site www.schneider-electric.com

XBT GK2120 / 2330

XBT GK5330

XBT GK keypad/touch screen terminals compatible with the XBT ZG CANM CANopen master module (1) (2)

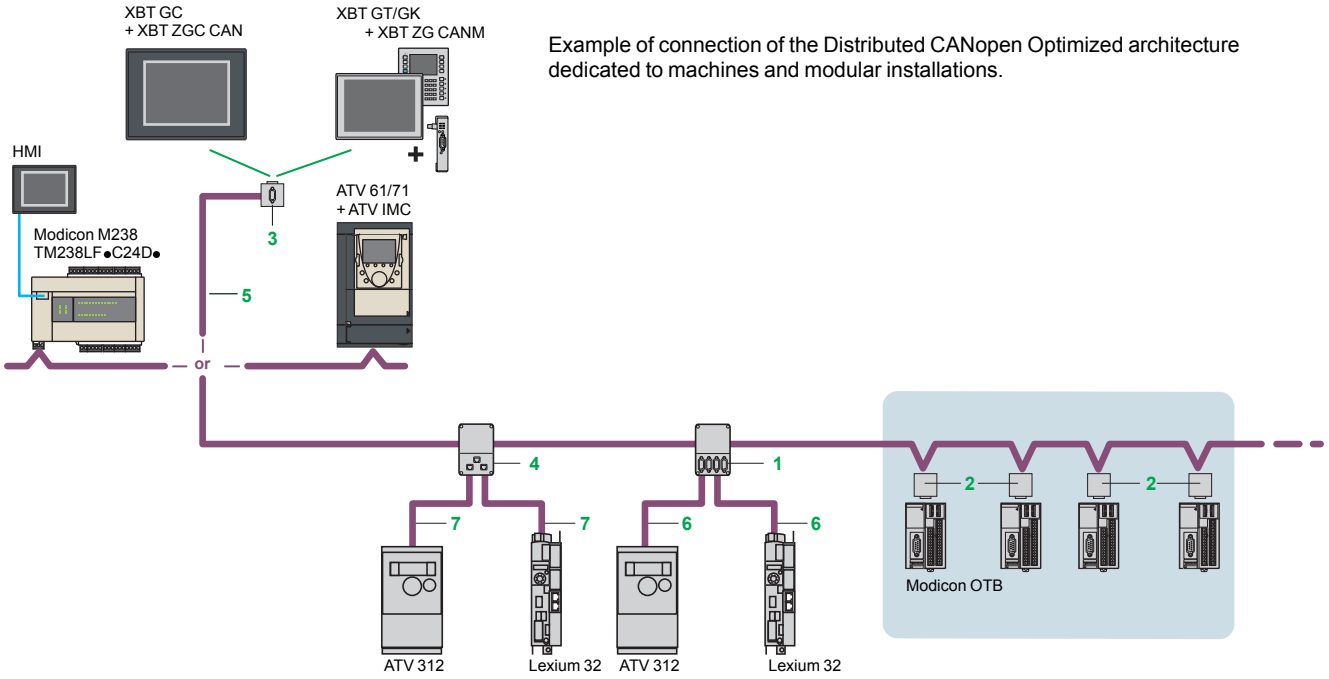
Screen type	No. of ports	Application memory capacity	Compact Flash memory	Video input	No. of Ethernet ports	Reference	Weight kg
5.7" multifunction screen							
STN Black and white	1 COM 1 1 COM 2 1 USB	32 MB	Yes	No	-	**XBT GK2120**	–
5.7" multifunction screen							
TFT Colour mode	1 COM 1 1 COM 2 1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

(1) Terminals supplied with mounting kit (spring clips), locking device for USB connectors, customizable label sheets and instruction sheet.

(2) All data relating Magelis XBT GK Advanced Panels is available on our website www.schneider-electric.com.

HMI Controllers
CANopen bus
Wiring system

Optimized CANopen architecture



Example of connection of the Distributed CANopen Optimized architecture dedicated to machines and modular installations.

References

Standard tap junctions and connectors

Designation	Description	Item no.	Length	Unit reference	Weight kg
IP 20 CANopen tap junction	4 SUB-D ports. Screw terminal block for connecting the trunk cables Line termination	1	–	**TSX CAN TDM4**	0.196
IP 20 CANopen connectors (9-way female SUB-D) Switch for line termination	Right angle	2	–	**TSX CAN KCDF 90T**	0.046
	Straight *(1)*	–	–	**TSX CAN KCDF 180T**	0.049
	Right angle with 9-way SUB-D for connecting a PC or diagnostic tool	3	–	**TSX CAN KCDF 90TP**	0.051
M12 IP 67 connectors	Male	–	–	**FTX CN 12M5**	0.050
	Female	–	–	**FTX CN 12F5**	0.050
IP 20 CANopen tap junction for Altivar and Lexium 32	2 RJ45 ports	4	–	**VW3 CAN TAP2**	0.250
Daisy chain taps	Equipped with: - 2 spring terminal blocks for daisy chain connection of the CANopen bus - 1 preassembled cordset with RJ45 connector for connecting the drive	–	0.6	**TCS CTN 026M 16M**	–
	Equipped with: - 2 RJ45 connectors for daisy chain connection of the CANopen bus - 1 preassembled cordset with RJ45 connector for connecting the drive	–	0.3	**TCS CTN 023F 13M03**	–
CANopen line terminators	For RJ45 connector Sold in lots of 2	–	–	**TCS CAR013M120**	–
	For screw terminal block connector Sold in lots of 2	–	–	**TCS CAR01NM120**	–

(1) To connect to the Altivar IMC card.

TSX CAN TDM4

VW3 CAN TAP2

TSX CAN KCD F90T

TSX CAN KCD F180T

TSX CAN KCD F90TP

TCS CAR013M120

HMI Controllers
CANopen bus
Wiring system

VW3 CAN A71

AM0 2CA 001V000

FTX DP21●●

References (continued)

IP 20 standard cables and preassembled cordsets

Designation	Description	Item no.	Length	Unit reference	Weight kg
CANopen cables (2 x AWG 22 2 x AWG 24)	For standard environment *(1)*, CE marking: Low smoke zero halogen Flame-retardant (IEC 60332-1)	5	50 m	**TSX CAN CA50**	4.930
			100 m	**TSX CAN CA100**	8.800
			300 m	**TSX CAN CA300**	24.560
	For standard environment *(1)*, UL certification, CE marking: Flame-retardant (IEC 60332-2)	5	50 m	**TSX CAN CB50**	3.580
			100 m	**TSX CAN CB100**	7.840
			300 m	**TSX CAN CB300**	21.870
	For harsh environment *(2)* or mobile installation, CE marking: Low smoke zero halogen. Flame-retardant (IEC 60332-1). Resistance to oils	5	50 m	**TSX CAN CD50**	3.510
			100 m	**TSX CAN CD100**	7.770
			300 m	**TSX CAN CD300**	21.700
CANopen preassembled cordsets One 9-way female SUB-D connector at each end	For standard environment *(1)*, CE marking: Low smoke zero halogen. Flame-retardant (IEC 60332-1)	–	0.3 m	**TSX CAN CADD03**	0.091
			1 m	**TSX CAN CADD1**	0.143
			3 m	**TSX CAN CADD3**	0.295
			5 m	**TSX CAN CADD5**	0.440
	For standard environment *(1)*, UL certification, label marking CE: flame retardant (IEC 60332-2)	–	0.3 m	**TSX CAN CBDD03**	0.086
			1 m	**TSX CAN CBDD1**	0.131
			3 m	**TSX CAN CBDD3**	0.268
			5 m	**TSX CAN CBDD5**	0.400
CANopen preassembled cordsets	Cordsets with one 9-way female SUB-D connector and one RJ45 connector	6	0.5 m	**TCS CCN 4F3 M05T**	0.100
			1 m	**TCS CCN 4F3 M1T**	0.100
				VW3 M38 05 R010 *(3)*	0.100
			3 m	**VW3 M38 05 R010** *(3)*	0.300
				TCS CCN 4F3 M3T	0.160
	Cordsets with two 9-way SUB-D connectors, one male and one female	–	0.5 m	**TLA CD CBA 005**	0.100
			1.5 m	**TLA CD CBA 015**	0.120
			3 m	**TLA CD CBA 030**	0.190
			5 m	**TLA CD CBA 0**	0.350

IP 20 connection accessories

CANopen connector for Altivar 71 *(4)*	9-way female SUB-D. Switch for line termination. Cables exit at 180°	–	–	**VW3 CAN KCDF 180T**	0.100
Adaptor for Altivar 71 drive	SUB-D to RJ45 CANopen adaptor	–	–	**VW3 CAN A71**	0.100
CANopen preassembled cordsets	1 RJ45 connector at each end	7	0.3 m	**VW3 CAN CARR03**	0.100
			1 m	**VW3 CAN CARR1**	0.100
CANopen bus adaptor for Lexium 17D	Hardware interface for link conforming to the CANopen standard + 1 connector for connecting a PC terminal	–	–	**AM0 2CA 001V000**	0.110
Y-connector	CANopen/Modbus	–	–	**TCS CTN011M11F**	0.100

(1) Standard environment: no particular environmental constraints, operating temperature between + 5°C and + 60°C, and in fixed installations.
(2) Harsh environment: resistance to hydrocarbons, industrial oils, detergents, solder splashes, relative humidity up to 100%, saline atmosphere, significant temperature variations, operating temperature between - 10°C and + 70°C, or in mobile installations.
(3) Cordset equipped with a line terminator.
(4) For **ATV 71H●●●M3**, **ATV 71HD11M3X**, **HD15M3X**, **ATV 71H075N4**... **HD18N4** *drives, this connector can be replaced by the* **TSX CAN KCDF 180T** *connector.*

SoMachine software suite
Simplify machine programming and commissioning

SoMachine software platform

Presentation

SoMachine is the OEM solution software for developing, configuring and commissioning the entire machine in a single software environment, including logic, motion control, HMI and related network automation functions.

SoMachine allows you to program and commission all the elements in Schneider Electric's Flexible and Scalable Control platform, the comprehensive solution-oriented offer for OEMs, which helps you achieve the most optimized control solution for each machine's requirements.

Flexible and Scalable Control platforms include:

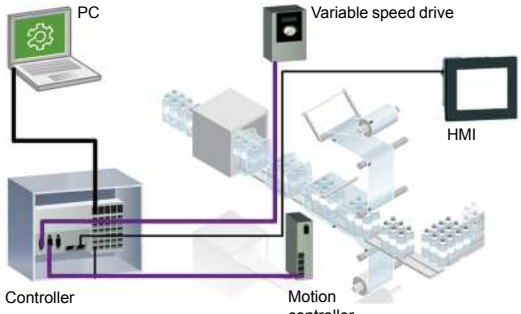
Controllers:
- HMI controllers: XBT GC, XBT GT/GK CANopen,
- Logic controllers: Modicon M238, Modicon M258,
- Motion Controller Modicon LMC 058,
- Integrated Controller Card Altivar IMC,
- Modicon TM2, Modicon TM5 and Modicon TM7 offers

HMI:
- HMI Magelis graphic panels: XBT GT, XBT GK.

SoMachine is a professional, efficient, and open software solution integrating Vijeo-Designer.
It integrates also the configuring and commissioning tool for motion control devices. It features all IEC 61131-3 languages, integrated field bus configurators, expert diagnostics and debugging, as well as outstanding capabilities for maintenance and visualisation.

SoMachine integrates tested, validated, documented and supported expert application libraries dedicated to applications in Packaging, Hoisting and Conveying.

SoMachine provides you:
- One software package
- One project file
- One cable connection
- One download operation



Software solution

Visual graphic user interface

Navigation within SoMachine is intuitive and highly visual. Presentation is optimized in such a way that selecting the development stage of the desired project makes the appropriate tools available. The user interface ensures nothing is overlooked, and suggests the tasks to be performed throughout the project development cycle. The workspace has been streamlined, so that only that which is necessary and relevant to the current task is featured, without any superfluous information.

Learning centre

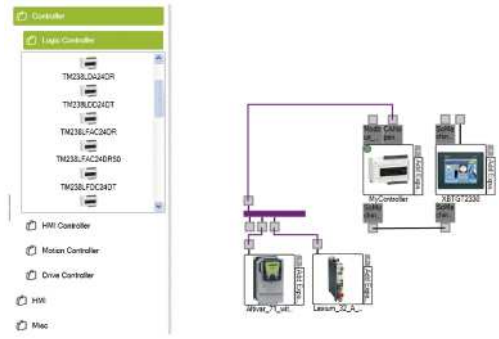
From the home menu, the learning centre provides several tools to get started with SoMachine. An animated file explains briefly the SoMachine interface and concept. An e-learning allows to run a self-training about SoMachine. A third section gives access to several documented examples of simple coding with SoMachine.

Project management

Projects management

The implemented project management principle allows to browse quickly through the existing projects getting the relevant information without the need to open them before selection.
The user can create a new project, starting from several means: using Tested Validated and Documented Architectures, using the provided examples, using an existing project or start with an empty project. There is quick access to the most recently-used projects.

SoMachine software suite
Simplify machine programming and commissioning



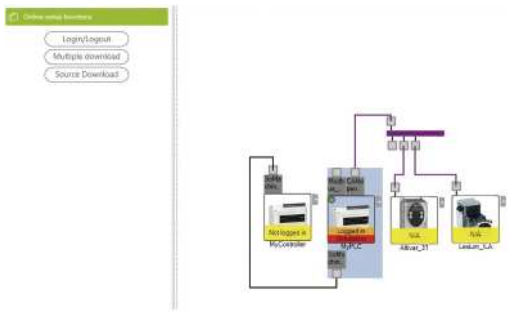
Configuration

Project properties
For each project, the user has the option to define additional information, through simple forms. It's also possible to attach documents, a customer picture and a configuration picture.

Configuration
From the graphic user interface, the user can easily build his architecture and configure the devices of the architecture.

Description of the architecture
A graphic editor can be used to assemble the various elements easily by a simple drag & drop. A devices catalogue is displayed on the left of the screen. It is split into several sections: controllers, HMI, Miscellaneous and search.

Configuration of the device
Directly from the topologic view of the user interface, a simple click drives the user to the configuration screen of the selected device.

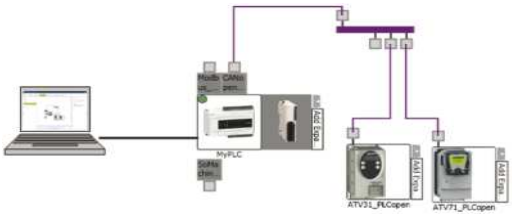


Commissioning

Programming and debug
Programming is an essential step, and the user has to carefully design it to be as efficient as possible. Advanced control and HMI functions cover all the needs of an OEM engineer in terms of creating the control and visualisation system.
Powerful tools allow debug and functional tests such as simulation, step by step execution, break points and trace.

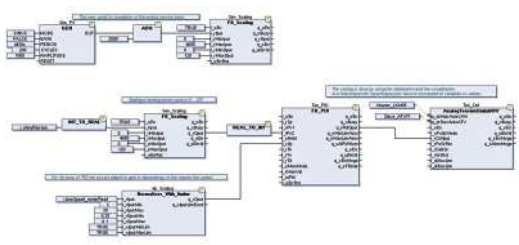
Commissioning
For an easy and fast diagnostic, the menu commissioning allows the user to check the online state of his architecture.Through the topologic view of the configuration, the devices display if you are logged in or not, as well as if they are in run or stop mode.

Documentation
Because a printed file of the project is an important element, it is possible to build and customize the project report:
- select the items to be included in the report,
- organize the sections,
- define the page layout
- and then launch the printing.



Transparency

Transparency *(1)*
SoMachine supports Device Type manager (DTM) because it is a field device tool (FDT) container.
With DTM's representing field device in SoMachine, direct communications are possible to every single device via SoMachine, the controller and the field bus CANopen, thus avoiding the individual cable connections to each device for configuration.
From the SoMachine unique environment, the remote devices can be set-up off-line and tuned on-line.



Application Function Blocks

Dedicated OEM application libraries (AFB libraries)
SoMachine can be extended through its solution extension DVD. It integrates tested, validated, documented and supported expert application libraries dedicated to many OEM applications. Their simple configuration speeds up design, commissioning, installation and troubleshooting.
These libraries cover the following applications:
- Packaging,
- Hoisting,
- Conveying.

Tested Validated Documented Architectures (TVDA)
SoMachine provides a variety of preset projects with ready-to-use architectures you can adapt to individual requirements. Some of them are generic TVDA, they are based on controllers configuration. The solution extension DVD brings specific application solutions oriented TVDA's to SoMachine.

(1) Available: second quarter 2011.

SoMachine software suite
Simplify machine programming and commissioning

SoMachine characteristics

Overview

IEC 61131-3 programming languages	■ IL (Instruction List) ■ LD (Ladder Diagram) ■ SFC (Sequential Function Chart) ■ ST (Structured Text) ■ FBD (Function Block Diagram) ■ CFC (Continous Function Chart)
Controller programming services	■ Multi-tasking: Mast, Fast, Event ■ Functions (Func) and Function Blocks (FBs) ■ Data Unit Type (DUTs) ■ On-line changes ■ Watch windows ■ Graphical monitoring of variables (trace) ■ Breakpoints, step-by-step execution ■ Simulation ■ Visualization for application and machine set-up
HMI-based services	■ Graphics libraries containing more than 4000 2D and 3D objects. ■ Simple drawing objects (points, line, rectangles, ellipses, etc …) ■ Preconfigured objects (button, switch, bar graph, etc …) ■ Recipes (32 groups of 256 recipes with max. 1024 ingredients) ■ Action tables ■ Alarms ■ Printing ■ Java scripts ■ Multimedia file support: wav, png, jpg, emf, bmp ■ Variable trending
Motion services	■ Embeded devices configuration and commissioning ■ CAM profile editor ■ Sample application trace ■ Motion and drive function blocks libraries for inverters, servos and steppers ■ Visualization screens
Global services	■ User access and profile ■ Project documentation printing ■ Project comparison (control) ■ Variable sharing based on publish/subscribe mechanism ■ Library version management
Integrated fieldbus configurators	■ Control network: □ Modbus Serial Line □ Modbus TCP ■ Field bus: □ CANopen □ CANmotion □ AS-interface ■ Connectivity: □ Profibus-DP □ Ethernet IP
Expert and solutions libraries	■ PLCopen function blocks for Motion control □ Exemple: MC_MoveAbsolute, MC_CamIn, ServoDrive, ... ■ Packaging function blocks □ Exemple: Analog film tension control, rotary knife, lateral film position control, ... ■ Conveying function blocks □ Exemple: tracking, turntable, conveyor , ... ■ Hoisting function blocks □ Exemple: anti-sway, anti-crab, hoisting position synchronisation, ...

SoMachine software suite
Simplify machine programming and commissioning

Product offer

SoMachine software is delivered on a DVD, it is a product oriented version that includes all SoMachine features related to generic hardware (M238, M258, LMC058, XBT GC), as well as generic TVDA

The solution features are added to SoMachine by installing its solution extension DVD. It includes all SoMachine solutions hardware, plus all the dedicated application libraries and TVDA.

References

- SoMachine is available in 6 languages:
  - English
  - French
  - German
  - Italian
  - Spanish
  - Simplified Chinese.

- System Requirements:
  - Processor: Pentium 3 - 1.2 GHz or higher
  - RAM Memory: 2 GByte; recommended: 3 GByte
  - Hard Disk: 3.5 GB, recommended: 4 GB
  - OS: Windows XP Professional, Windows 7 32 bits
  - Drive: DVD reader
  - Display: 1024 × 786 pixel resolution or higher
  - Peripherals: a Mouse or compatible pointing device
  - Peripherals: USB interface
  - Web Access: Web registration requires Internet access

- The documentation is supplied in electronic format: complete on-line help plus pdf version.

SoMachine software for generic controllers

Supported controllers	TVDA	Nb. of licence	Reference	Weight kg
■ M238 ■ M258 ■ LMC058 ■ XBT GC ■ XBT GT/GK with control function	□ Optimized HW XBT GC □ Optimized HW M238 □ Optimized CANopen M238 □ Optimized AS-Interface M238 □ Optimized CANopen XBT GC/GT/GK □ Performance HW M258 □ Performance CANopen M258 □ Performance CANmotion LMC058	Trial (30 days)	**MSD CHNSFNV30**	–
		1 (Single)	**MSD CHNLMUA**	–
		10 (Team)	**MSD CHNLMTA**	–

SoMachine solution extension for Solution controllers *(1)*

Added controllers	Added TVDA	Added libraries	Nb. of licence	Reference	Weight kg
■ M238S ■ M258S ■ LMC058S ■ XBT GC with CANopen module type S ■ XBT GT/GK with control function type S ■ Altivar IMC	□ Optimized CANopen Altivar IMC □ Performance CANmotion LMC058 □ Hoisting Optimized CANopen M238 □ Conveying Performance CANmotion LMC058	Hoisting Conveying Packaging	1 (Single)	**MSD CHLLMUV30S0**	–
			10 (Team)	**MSD CHLLMTV30S0**	–

(1) For this offer, please contact Schneider electric.

SoMachine software compatibility and controllers

Product type	Version
Logic controller Modicon M238	≥ V1.0
HMI controller XBT GC	≥ V1.0
Logic controller Modicon M238S	≥ V2.0
Logic controller Modicon M258	≥ V2.0
Logic controller Modicon M258S	≥ V2.0
Motion controller Modicon LMC058	≥ V2.0
Motion controller Modicon LMC058S	≥ V2.0
HMI controller XBT GT/GK with control function type S, XBT GC with CANopen module type S	≥ V2.0
Altivar IMC integrated controller card	≥ V2.0
TM5 CANopen Interface	≥ V3.0
TM7 CANopen Interface block	≥ V3.0

Contents

3 - Industrial PCs

Industrial PCs
PC Panels
Magelis Smart and Smart+

Industrial PC			**Maintenance-free PC Panels**	
Model			**8.4" Magelis Smart**	**12" Magelis Smart**
				
Screen	Type		8.4" SVGA active matrix colour TFT LCD	12" SVGA active matrix colour TFT LCD
	Definition		800 x 600	
	Number of colours		262,144	16,777,216
	Brightness		≥ 200 cd/m² adjustable	≥ 250 cd/m² adjustable
Touch screen			Analog resistive, 1 million cycles	
CPU	Processor		Intel Celeron M 600 MHz	Intel Celeron M 1 GHz
	Storage	Flash disk (SLC type SSD)	–	–
		Compact Flash card (SLC type)	2 GB minimum expandable to 4 GB (with OS and software) + 1 free slot	2 GB minimum expandable to 4 GB (with OS and installed software)
	RAM (1 memory slot)		512 MB SDRAM expandable to 1024 MB	
	Expansion slots	PCMCIA memory card	–	1 x free bus slot (taking 1 type II PCMCIA card)
	Ethernet TCP/IP ports		2 RJ45 ports: 1 x 10/100/1000BASE-T and 1 x 10/100BASE-T	
	I/O ports	On the front panel	–	1 x USB 2.0 type A
		Other	4 x USB 2.0 type A 1 x COM1 (RS 232C, 9-way male SUB-D) 1 x COM2 (RS 232C, 9-way male SUB-D) 1 x audio (1 line out, mini-jack)	4 x USB 2.0 type A 1 x COM1 (RS 232C, 9-way male SUB-D) 1 x audio (1 line out, mini-jack) 1 x RAS *(1)*
Standards and certifications			UL 508, CSA 142, IEC 61131-2, ATEX II 3 gas and dust (zone 2/22) *(2)*	
Marine certification			DNV Marine *(2)*	–
Integrated software	Operating system		Windows XP Embedded SP2	
	Human machine interface		Vijeo Designer Run Time 21-day trial version *(3)*	
	Supervision		–	Vijeo Citect Web Client
	Development environment		–	.NET Framework
	Other		Internet Explorer, Outlook Express Client, Microsoft Office Readers	
Power supply			■ 24 V ⎓ (19.2...28.8 V) ■ 100…240 V ∼ *(4)*	■ 24 V ⎓ (19.2...28.8 V) ■ 100…240 V ∼ (85...265 V)
Consumption (without peripherals)			40 W max.	■ 40 W max. (⎓) ■ 95 VA max. (∼)
Degree of protection (when mounted on enclosure door)			IP 65 for front panel, IP 20 for rest of product	IP 65 for front panel when USB port not in use, IP 20 for rest of product
Dimensions	Overall dimensions (W x H x D)		230 x 177 x 65 mm	313 x 239 x 60 mm
	Cut-out (W x H)		218.5 x 165.5 (+1, -0) mm	301.5 x 227.5 (+1, -0) mm
Environment	Operating temperature		0...+ 50°C	
	Vibration resistance during operation		0.075 mm amplitude from 10...57.6 Hz, 1 g from 57.6...150 Hz, according to EN 61131-2	
References		100…240 V ∼	**MPC ST1 1NAJ 00T** *(4)*	
		24 V ⎓	**MPC ST1 1NDJ 00T**	
	Vijeo Citect Web Client	100…240 V ∼		**MPC ST2 1NAJ 20T**
		24 V ⎓		**MPC ST2 1NDJ 20T**
	Vijeo Citect Lite 1200 I/O	100…240 V ∼		
	Vijeo Citect Full 500 I/O	100…240 V ∼		
Pages			3/10	

(1) Reliability, Availability and Serviceability
(2) ⎓ version only

Maintenance-free PC Panels	
15" Magelis Smart	**15" Magelis Smart+**
	
15" XGA active matrix colour TFT LCD	
1024 x 768	
16,777,216	
≥ 250 cd/m^2 adjustable	
Analog resistive, 1 million cycles	
Intel Celeron M 1 GHz	
–	Flash disk (SLC type SSD) ≥ 15 GB (with OS and installed software)
4 GB (with OS and installed software)	1 x free slot
1024 MB SDRAM	
1 free slot (taking 1 type III PCMCIA card or 2 type I PCMCIA cards)	
2 RJ45 ports: 1 x 10/100/1000BASE-T and 1 x 10/100BASE-T	
1 x USB 2.0 type A	
4 x USB 2.0 type A 1 x COM1 (RS 232C, 9-way male SUB-D) 1 x COM2 (RS 232C, 9-way male SUB-D) 1 x audio (1 line out, mini-jack)	
UL 1604 (Haz. Loc Class 1 Div 2), CSA 142, ATEX II 3 gas and dust (zone 2/22) *(2)*	
DNV Marine *(2)*	
Windows XP Embedded SP2	
Vijeo Designer Run Time 21-day trial version *(3)*	
Vijeo Citect Web Client	■ For **HMI PSF7 APL3**: Vijeo Citect Lite 1200 I/O ■ For **HMI PSF7 APF3**: Vijeo Citect Full 500 I/O
.NET Framework	–
Internet Explorer, Outlook Express Client, Microsoft Office Readers	
■ 24 V ⎓ (19.2...28.8 V) ■ 100…240 V ∿ (85...265 V)	
■ 90 W max. (⎓) ■ 150 VA max. (∿)	
IP 65 for front panel when USB port not in use, IP 20 for rest of product	
395 x 294 x 60 mm	
383.5 x 282.5 (+1, -0) mm	
0...+ 50°C	
0.075 mm amplitude from 10...57.6 Hz, 1 g from 57.6...150 Hz, according to EN 61131-2	
	HMI PSF7 AP03
	HMI PSF7 DP03
HMI PSC7 AE03	
HMI PSC7 DE03	
	HMI PSF7 APL3
	HMI PSF7 APF3
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(3) Unlimited usage available by activation of licence **VJDSNRTMPC** *(sold separately, see page 4/13)*
(4) Includes external power supply

Industrial PCs
PC Panels
Magelis Compact *i*PC

Industrial PC			**PC Panels**
Model			**8.4" Magelis Compact *i*PC**
			
Screen	Type		8.4" SVGA active matrix colour TFT LCD
	Definition		800 x 600
	Number of colours		262,144
	Brightness		≥ 200 cd/m² adjustable
Touch screen			Analog resistive, 1 million cycles
CPU	Processor		Intel Celeron M 1 GHz
	Storage	Storage disks	IDE hard disk (HDD) (2.5") ≥ 250 GB
	RAM (slots)	With Windows XP Pro	512 MB SDRAM, expandable to 1024 MB (1 slot)
	Floppy disk drive and DVD-ROM drive		–
	Expansion slots	PCI bus	1 x free PCI bus slot
		Compact Flash and PCMCIA memory cards	2 x free bus slots for Compact Flash card (SLC type)
	Ethernet TCP/IP ports		2 RJ45 ports: 1 x 10/100/1000BASE-T and 1 x 10/100BASE-T
	I/O ports	On the front panel	–
		Other	4 x USB 2.0 type A 1 x COM1 (RS 232C, 9-way male SUB-D) 1 x COM2 (RS 232C, 9-way male SUB-D) 1 x audio (line out, mini jack)
Standards and certifications			UL 508, CSA 142, IEC 61131-2
Installed software	Operating system		Windows XP Pro SP2
	Human machine interface		Vijeo Designer Run Time 21-day trial version *(1)*
	Supervision		–
Power supply			100…240 V ∼ (85...265 V), according to EN 61131-2
Consumption			120 VA max.
Degree of protection (when mounted on enclosure door)			IP 65 for front panel, IP 20 for rest of PC Panel
Dimensions	Overall dimensions (W x H x D)		230 x 177 x 120 mm
	Cut-out (W x H)		218.5 x 165.5 (+1, -0) mm
Environment	Operating temperature		0...+ 50°C
	Vibration resistance during operation		0.075 mm amplitude from 10...57.6 Hz, 1 g from 57.6...150 Hz, according to EN 61131-2
Magelis Compact *i*PC General Purpose (HDD)		100…240 V ∼	**MPC KT1 2NAX 00N**
		24 V ⎓	
Magelis Compact *i*PC Heavy Duty (SSD)		100…240 V ∼	
	Vijeo Citect Lite 1200 I/O	100…240 V ∼	
	Vijeo Citect Full 500 I/O	100…240 V ∼	
Pages			3/16

(1) All Magelis Compact iPC references are supplied with a (21-day) trial version of Vijeo Designer Run Time. Unlimited usage is available by activation of licence **VJDSNRTMPC** *(sold separately, see page 4/13).*

PC Panels	
12" Magelis Compact *i*PC	**15" Magelis Compact *i*PC**
	
XGA active matrix colour TFT LCD	SVGA active matrix colour TFT LCD
1024 x 768	1024 x 768
262,144	16,777,216
≥ 250 cd/m² adjustable	
Analog resistive, 1 million cycles	
Intel Celeron M 1.5 GHz	Pentium M 1.6 GHz
■ For **MPC KT2 2NAX 20N**: IDE hard disk (HDD) (2.5") ≥ 250 GB ■ For **MPC KT2 2MAX 20N**: Flash disk (SLC type SSD) ≥ 15 GB	■ For **MPC KT5 5N●X 20N**: IDE hard disk (HDD) (2.5") ≥ 250 GB ■ For **MPC KT5 5MAX 20●**: Flash disk (SLC type SSD) ≥ 15 GB
512 MB SDRAM, expandable to 1024 MB (1 slot)	■ 512 MB SDRAM, expandable to 2 GB (2 slots) *(2)* ■ 1.5 GB SDRAM, expandable to 2 GB (2 slots) *(3)*
–	1 x 3.5" floppy disk drive, 1.44 MB 1 x DVD-ROM drive
1 x free PCI bus slot	
1 x free bus slot for Compact Flash card (SLC type) 1 x free bus slot for PCMCIA card (taking a maximum of 1 type II card)	1 x free bus slot for Compact Flash card (SLC type) 1 x free bus slot for PCMCIA card (taking a maximum of 1 type III card or 2 x type I cards)
2 RJ45 ports: 1 x 10/100/1000BASE-T and 1 x 10/100BASE-T	
1 x USB 2.0 type A	
4 x USB 2.0 type A 1 x COM1 (RS 232C, 9-way male SUB-D) 1 x RAS (9-way female SUB-D) 1 x audio (line out, mini jack)	4 x USB 2.0 type A 4 x COM1 to COM4 (RS 232C, 9-way male SUB-D) 1 x VGA video (external video screen, RGB support, 15-way female SUB-D) 1 x RAS (25-way male SUB-D) 3 x audio (1 line out, 1 line in, 1 mic in, mini jack) 1 x PS/2 keyboard (6-way female mini-DIN)
UL 508, IEC 61131-2, cUL	UL 508,UL 1604 (Haz. Loc Class 1 Div 2), cULus, IEC 61131-2
Windows XP Pro SP2	
Vijeo Designer Run Time 21-day trial version *(1)*	
–	■ For **MPC KT5 5MAX 20L**: Vijeo Citect Lite 1200 I/O ■ For **MPC KT5 5MAX 20V**: Vijeo Citect Full 500 I/O
100…240 V ∼ (85...265 V), according to EN 61131-2	■ For **MPC KT5 5NDX 20N**: 24 V ⎓ (19.2...28.8 V) ■ For **MPC KT5 5●AX 20●**: 100…240 V ∼ (85...265 V), according to EN 61131-2
120 VA max.	90 W max. (⎓) 150 VA max. (∼)
IP 65 for front panel (when USB port on front panel not in use), IP 20 for rest of PC Panel	
313 x 239 x 103 mm	395 x 294 x 103 mm
301.5 x 227.5 (+1, -0) mm	383.5 x 282.5 (+1, -0) mm
0...+ 50°C	
0.075 mm amplitude from 10...57.6 Hz, 1 g from 57.6...150 Hz, according to EN 61131-2	

MPC KT2 2NAX 20N	**MPC KT5 5NAX 20N**
	MPC KT5 5NDX 20N
MPC KT2 2MAX 20N	**MPC KT5 5MAX 20N**
	MPC KT5 5MAX 20L
	MPC KT5 5MAX 20V

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(2) For **MPC KT5 N●X 20N** *and* **MPC KT5 MAX 20N** *models.*
(3) For **MPC KT5 MAX 20L** *and* **MPC KT5 MAX 20V** *models.*

Industrial PCs
PC Panels
Magelis Smart and Smart+

Presentation

Certified UL 508, Magelis Smart and Smart+ combine all the benefits of a PC Box industrial PC with those of an operator terminal.

On the one hand they offer the openness of PCs to Windows XP: Windows XP Embedded on Compact Flash for Magelis Smart and Windows XP Pro on Flash Disk for Magelis Smart+. They are compatible with standard Windows applications, such as Internet Explorer, Outlook Express and Office readers.
They are also available bundled with the SCADA Vijeo Citect supervisor.

On the other hand they include all the features of industrial terminals:
- Maintenance-free owing to the lack of rotating parts (no fan or hard disk)
- Ultra-slim, compact design
- Compatible with the human machine interface software Vijeo Designer

Magelis Smart and Smart+

Magelis Smart and Smart+ are PC Panels comprising an IP 65 front panel with an 8.4", 12" or 15" SVGA or XGA colour 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 them perfectly suited for use with Transparent Ready architectures and equipment (combination of Web and Ethernet TCP/IP technologies). They therefore allow the viewing of Web pages either locally or remotely, with the same level of ease.

Magelis Smart has Windows XP Embedded installed on its Compact Flash and the following software components:
- Internet Explorer browser and Outlook Express e-mail client
- JVM (Java Virtual Machine)
- Windows Terminal Services Client for client/server architectures
- Office readers for access to device documentation (.pdf, .doc, .xls and .ppt documents)
- Vijeo Citect Client Web for 12" and 15" screens
- Vijeo Designer (demo version)
- .NET Framework.

With these components Magelis Smart can be used for the system diagnostics, viewing and setting of Schneider Electric Transparent Ready products, as well as for access to FactoryCast services (see "Transparent Ready, embedded Web servers") and access to SCADA Vijeo Citect servers (with a Web Client licence).

Magelis Smart+ has Windows XP Pro installed on its Flash disk, making it easy to add third-party software. Magelis Smart+ 15'' is also available bundled with the SCADA Vijeo Citect Lite and Full supervisor.

Vijeo Designer and Vijeo Citect bundle offers

Magelis Smart and Smart+ are supplied with a 21-day trial version of Vijeo Designer Run Time. Continued use of Vijeo Designer requires a licence which is sold separately (see page 3/11).

The Magelis Smart+ and Vijeo Citect bundles comprise:
- A DVD containing the software and documentation
- A USB key with the user rights already registered
- One year's technical support

The Vijeo Citect software can be used immediately upon installation *(1)*. Updates and licence upgrades are available by providing the key number and subject to the usual conditions. This type of bundle offer enables users to acquire, at an attractive price, a tested industrial-grade system, which is correctly dimensioned to suit software application requirements and is supported across the entire Schneider Electric sales network.

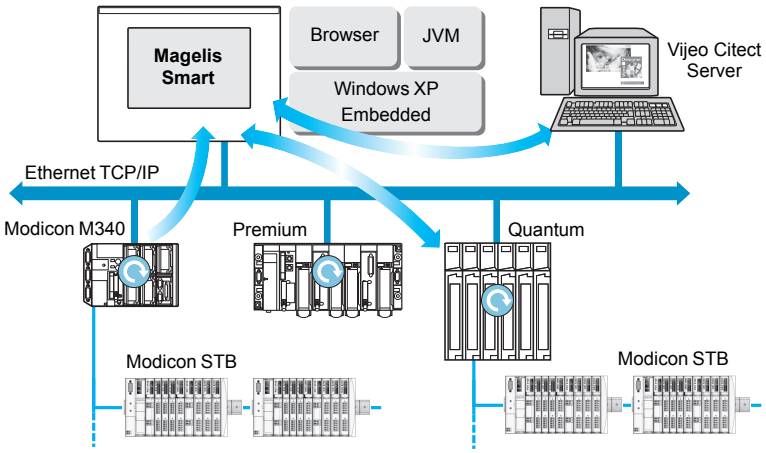
(1) Requires an external DVD drive (not included) for connection to a USB port.

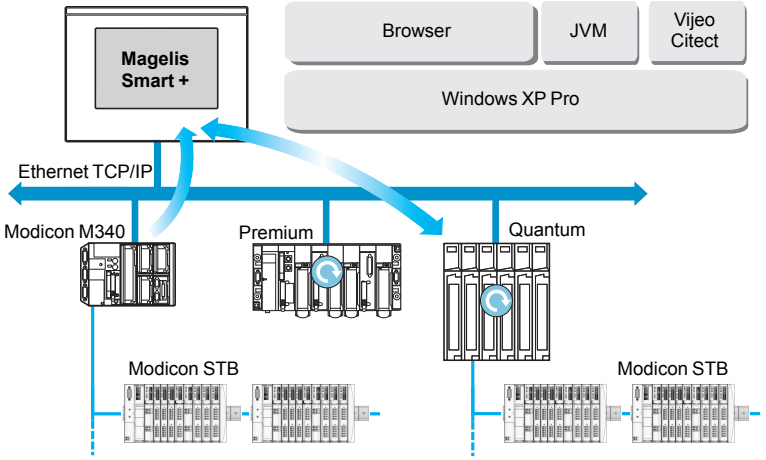
Architecture: page 3/7
Description: pages 3/8 to 3/9
References: pages 3/10 to 3/11

Industrial PCs
PC Panels
Magelis Smart and Smart+

Example Smart and Smart+ architectures

Connections to Vijeo Citect architectures





With its built-in dual Ethernet port, the Magelis Smart or Smart+ can be integrated into "full Ethernet" architectures, such as Transparent Ready (transparent communication on the Ethernet TCP/IP network). Communication and Web services assure the sharing and distribution of data between levels 1, 2 and 3 of the Transparent Ready architecture.

Used as a Client station, Magelis Smart or Smart+ makes it easier to implement Web Client solutions for:
- Basic servers embedded in field devices (Modicon STB/ Momentum distributed I/O, ATV 32/ATV 61/ATV 71 drives, Ositrack identification systems, etc.)
- FactoryCast Web servers embedded in Modicon PLCs (M340, Premium and Quantum) or the FactoryCast gateway
- The following services are available as standard (without the need for additional programming): alarm management, synoptic view management and Web home pages created by the user.
- Other services include basic data management, automatic e-mail transmission triggered by specific process events and arithmetic and logic calculations for data preprocessing.

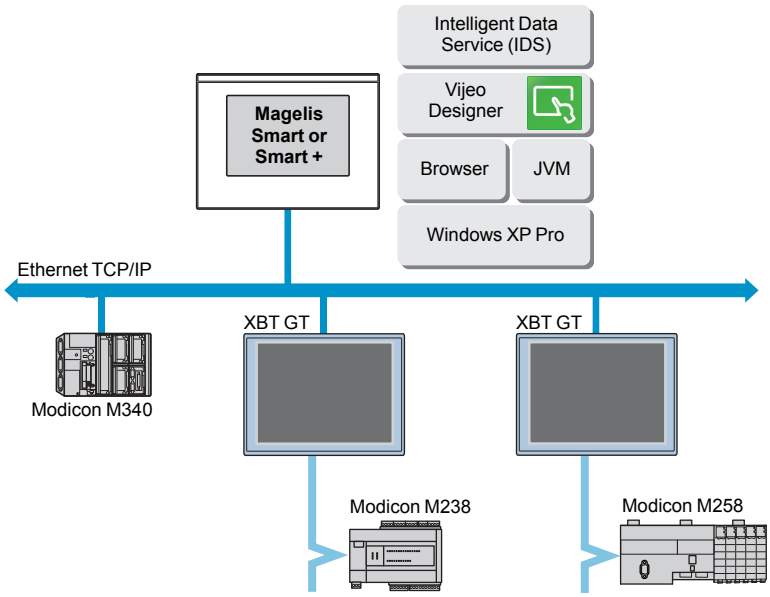
Magelis Smart

With the pre-installed Vijeo Citect Web Client software and by using Internet Explorer, Magelis Smart 12" and 15" are Web Client on a Vijeo Citect server. The Web Client licence must be activated on the Vijeo Citect server.

Magelis Smart +

Smart+ is available bundled with the SCADA Vijeo Citect supervisor.

Human machine interface applications

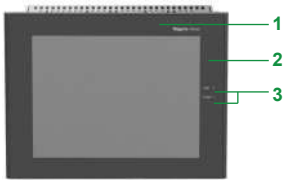


Magelis Smart and Smart+ include a 21-day trial version of Vijeo Designer Run Time. Continued use of Vijeo Designer requires a licence which is sold separately (see page 3/11).

Vijeo Designer can be used to create control applications for Magelis terminals and industrial PCs.

Presentation: page 3/6
Description: pages 3/8 to 3/9
References: pages 3/10 to 3/11

Industrial PCs
PC Panels
Magelis Smart and Smart+

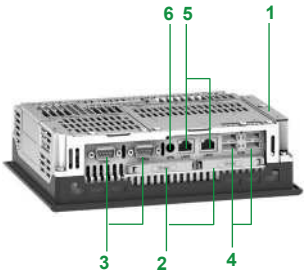


Description of Smart and Smart+

8.4" touch screen front panel

The touch screen front panel of the industrial PC **MPC ST1 1N●J 00●** 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 aluminium alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs marked:
- ON (green), PC switched on
- DISK (green), accessing IDE bus

Underside and left-hand side, 8.4"



The underside and left-hand side of the industrial PC **MPC ST1 1N●J 00●** comprise:
1 A removable screw terminal block for connecting the 24 V ⎓ or 220 V ∿ power supply with the 24 V ⎓ external power supply
2 A slot for the Compact Flash memory card containing the operating system and integrated software, and a free slot for an additional Compact Flash memory card
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 loudspeaker

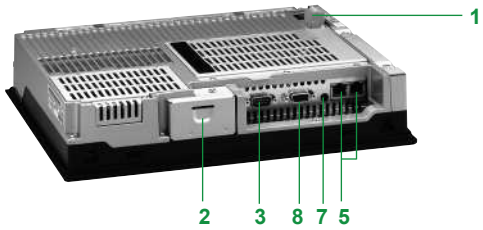
All expansion slots and connection elements are therefore accessible from the rear of the PC.

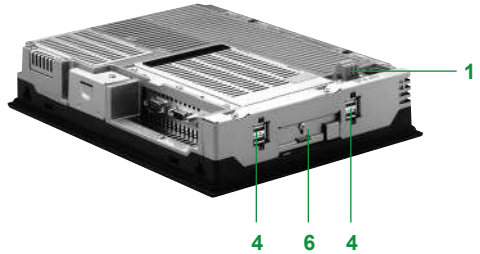
***Note**: AC versions have an On/Off switch.*

12" touch screen front panel

The touch screen front panel of the industrial PC **MPC ST2 1N●J 20T** 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 aluminium alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs marked:
- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing Compact Flash memory, etc.)

4 A USB 2.0 port (dust and damp proof)





Underside and left-hand side, 12"

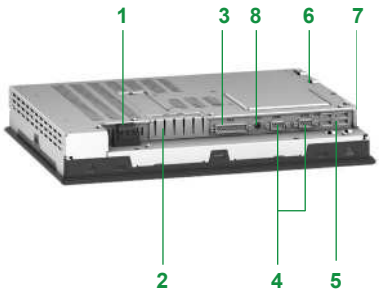
The underside and left-hand side of the industrial PC **MPC ST2 1N●J 20T** comprise:
1 A removable screw terminal block for connecting the AC power supply
2 A slot for the Compact Flash memory card containing the operating system and installed software
3 One 9-way male SUB-D connector marked COM1 for 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 type II card
7 A mini-jack connector for loudspeaker
8 An RAS (Reliability, Availability and Serviceability) connector

All expansion slots and connection elements are therefore accessible from the rear of the PC.

***Note**: AC versions have an On/Off switch.*

Presentation: page 3/6
Architecture: page 3/7
References: pages 3/10 to 3/11



Description of Smart and Smart+ (continued)

15" touch screen front panel

The touch screen front panel of the industrial PC **HMI PS●7 ●●●3** 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 aluminium alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs marked:
- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing Compact Flash memory, etc.)

4 A USB 2.0 port (dust and damp proof)

Underside and left-hand side, 15"

The underside and left-hand side of the industrial PC **HMI PS●7 ●●●3** comprise:

1 A removable screw terminal block for connecting the 24 V ⎓ power supply
2 Depending on model:
- **Smart (HMI PSC7 ●E●3):** a slot for the Compact Flash memory card containing the operating system and installed software
- **Smart+ (HMI PSF7 ●P●3):** a free Compact Flash card slot

3 A 25-way female SUB-D connector marked RAS port 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 loudspeaker

All expansion slots and connection elements are therefore accessible from the rear of the PC.

***Note**: AC versions have an On/Off switch.*

Industrial PCs
PC Panels
Magelis Smart and Smart+

MPC ST1 1N●J 00●

Magelis Smart PC Panel - 8.4" screen *(1)*

With 2 GB Compact Flash

Supply voltage	RAM processor	Free expansion slots	Vijeo Citect	Reference	Weight kg
24 V ⎓	Celeron M 600 MHz 512 MB expandable to 1024 MB	1 Compact Flash	–	**MPC ST1 1NDJ 00T**	3.500
100…240 V ∿ (with external power supply)	Celeron M 600 MHz 512 MB expandable to 1024 MB	1 Compact Flash	–	**MPC ST1 1NAJ 00T**	3.500

MPC ST2 1NAJ 10●

Magelis Smart PC Panel - 12" screen *(1)*

With 2 GB Compact Flash

Supply voltage	RAM processor	Free expansion slots	Vijeo Citect	Reference	Weight kg
24 V ⎓	Celeron M 1 GHz 512 MB expandable to 1024 MB	1 PCMCIA	Web Client	**MPC ST2 1NDJ 20T**	3.800
100…240 V ∿	Celeron M 1 GHz 512 MB expandable to 1024 MB	1 PCMCIA	Web Client	**MPC ST2 1NAJ 20T**	3.800

MPC ST5 2N●J 20●

Magelis Smart PC Panel - 15" screen *(1)*

With 4 GB Compact Flash

Supply voltage	RAM processor	Free expansion slots	Vijeo Citect	Reference	Weight kg
24 V ⎓	Celeron M 1 GHz 1024 MB	1 PCMCIA	Web Client	**HMI PSC7 DE03**	6.000
100…240 V ∿	Celeron M 1 GHz 1024 MB	1 PCMCIA	Web Client	**HMI PSC7 AE03**	6.000

Magelis Smart+ PC Panel - 15" screen *(1)*

15 GB Flash Disk

Supply voltage	RAM processor	Free expansion slots	Vijeo Citect	Reference	Weight kg
24 V ⎓	Celeron M 1 GHz 1024 MB	1 Compact Flash 1 PCMCIA	–	**HMI PSF7 DP03**	6.000
100…240 V ∿	Celeron M 1 GHz 1024 MB	1 Compact Flash 1 PCMCIA	–	**HMI PSF7 AP03**	6.000
			Lite 1200 I/O	**HMI PSF7 APL3**	6.000
			Full 500 I/O	**HMI PSF7 APF3**	6.000

(1) Magelis Smart and Smart+ are supplied with a trial version of Vijeo Designer Run Time. Unlimited usage available by activation of licence **VJDSNRTMPC** *(see page 3/11).*

Presentation: page 3/6
Architecture: page 3/7
Description: pages 3/8 to 3/9

Separate components for Smart and Smart+

Description	Characteristics	Compatible with	Reference	Weight kg
Vijeo Designer Run Time licence	Unlimited	All Smart models	**VJDSNRTMPC**	–
RAM expansion	512 MB	All Smart models	**MPC YK0 5RAM 512**	–
	1024 MB	All Smart models	**MPC YK2 2RA1 024**	–
Compact Flash memory cards	512 MB, blank	All Smart and Smart+ models	**MPC YN0 0CFE 00N**	0.050
	1 GB, blank		**MPC YN0 0CF1 00N**	0.050
	2 GB, blank		**MPC YN0 0CF2 00N**	0.050
	4 GB, blank		**MPC YN0 0CF4 00N**	0.050
	2 GB, with the following pre-installed software: ■ Windows XP Embedded SP9 in 9 languages (English, French, Spanish, Italian, German, Swedish, Chinese, Russian, Portuguese) ■ .NET Framework Run Time ■ Web Application ■ Vijeo Designer Run Time 21-day trial version	Smart 8.4" models MPC ST1 1N●J 00●	**HMI YPSC 42E01**	–
	2 GB, with the following pre-installed software: ■ Windows XP Embedded SP2 in 9 languages (English, French, Spanish, Italian, German, Swedish, Chinese, Russian, Portuguese) ■ .NET Framework Run Time ■ Vijeo Citect Web Client ■ Office Reader ■ Vijeo Designer Run Time 21-day trial version	Smart 15" models MPC ST5 2N●J 20●	**MPC YN5 2CF2 20T**	
PCMCIA adaptor for Compact Flash card	Enables a Smart panel to receive the second Compact Flash card needed for Vijeo Designer in the PCMCIA slot	All Smart models All Compact Flash memory cards	**XBT ZGADT**	0.050
Maintenance kits	Includes panel mounting fixings and seals	8.4" Smart models	**MPC YK1 0MNT KIT**	–
		12" Smart models	**MPC YK2 0MNT KIT**	–
		15" Smart models	**MPC YK5 0MNT KIT**	–
Screen protection	Protective film for Smart panels	8.4" Smart models	**MPC YK1 0SPS KIT**	–
		12" Smart models	**MPC YK2 0SPS KIT**	–
		15" Smart models	**MPC YK5 0SPS KIT**	–
Replacement power supply connectors	AC connector	All Smart and Smart+ models with AC supply MPC ST● ●NAJ ●0● and HMI PSC ●●A●●	**MPC YN0 0PWA CTE**	–

3

Presentation: page 3/6
Architecture: page 3/7
Description: pages 3/8 to 3/9

Industrial PCs
Magelis Compact *i*PC PC panels

Presentation

Magelis Compact *i*PCs are “ruggedized” PCs adapted to the restrictions of industrial environments, and combine compact dimensions with advanced performance.

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

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, featuring 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 offers:
- The choice of three processor speeds: 1 GHz (Intel Celeron M), 1.5 GHz (Intel Celeron M) or 1.6 GHz (Intel Pentium M)

- The characteristics common to all three sizes of Magelis Compact *i*PC are:
  - 512 MB expandable RAM
  - Possible expansion on PCI bus (1 slot)
  - UL 508 certification
  - Availability in 100 to 240 V ∼ version

The 8.4” model has a Celeron M 1 GHz processor.
The 12” model has a Celeron M 1.5 GHz processor, its hard disk (≥ 250 GB) is replaceable and it has a SATA interface. It is also available with a Flash Disk ≥ 15 GB. It also has a slot for a type II PCMCIA card.
The 15” model has a Pentium M 1.6 GHz processor, a hard disk ≥ 250 GB or a Flash Disk ≥ 15 GB depending on the model, and 1 slot for a PCMCIA card that can take 1 type III or 2 type I cards. In addition, the 15” model is also available with 24 V ⎓ power supply.

Magelis Compact *i*PCs also feature:
- 512 MB to 1024 MB RAM (8.4” and 12”), 512 MB to 2 GB RAM (15”)
- 2 Ethernet TCP/IP ports:
  - 1 x 10/100/1000BASE-T
  - 1 x 10/100BASE-T
- USB 2.0 ports
- A 100 to 240 V ∼, 50/60 Hz power supply
- Various standard serial/parallel ports
- A DVD-ROM drive (reader/writer) (15” model)

The Windows XP Pro operating system is installed on Magelis Compact *i*PCs.

Vijeo Designer and Vijeo Citect bundle offers

The Magelis Compact *i*PC is supplied with a 21-day trial version of Vijeo Designer Run Time. Continued use of Vijeo Designer requires a licence which is sold separately (see page 3/17).

In addition, references MPC KT5 5MAX 20L/V are supplied with the Vijeo Citect application software:
- DVD containing the software and documentation
- USB key with the user rights already registered
- One year's technical support

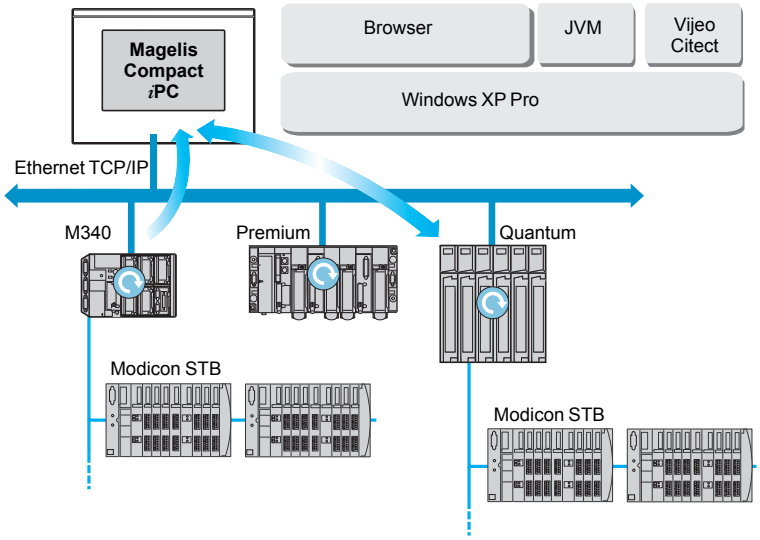
(1) Identical screen size

Architecture: page 3/13
Description: pages 3/14 to 3/15
References: pages 3/16 to 3/17

Industrial PCs
Magelis Compact *i*PC PC panels

Example architectures

Supervision and Transparent Ready applications



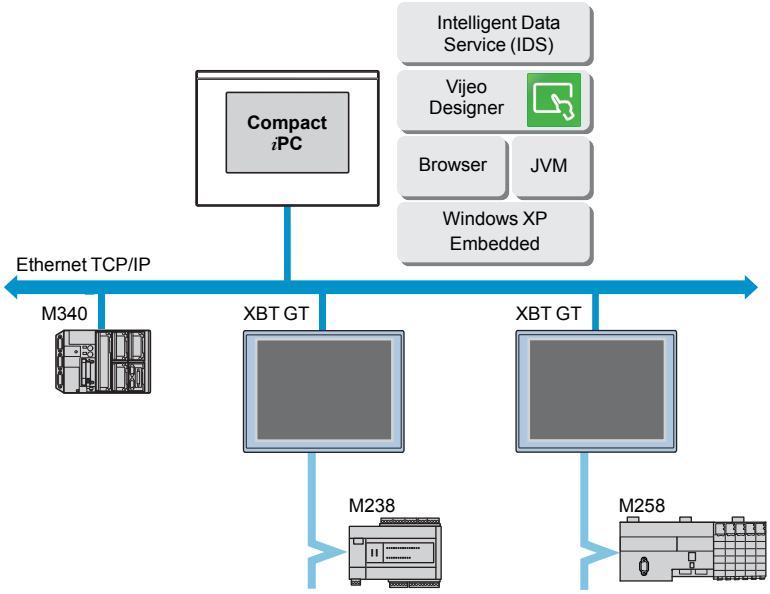
The built-in Ethernet ports on the Magelis Compact *i*PC allow it to be integrated into "full Ethernet" architectures, such as Transparent Ready. Transparent Ready devices with this type of architecture enable transparent communication over the Ethernet TCP/IP network.
Communication services and Web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

Used as a Client station, Magelis Compact *i*PC makes it easier to implement Web Client solutions for:
- Basic servers embedded in field devices (Modicon STB/Momentum distributed I/O, ATV 32, ATV 61 and ATV 71 drives, Ositrack identification systems, etc.)
- FactoryCast Web servers embedded in Modicon PLCs (M340, Premium and Quantum) or the FactoryCast gateway

The following services are available as standard (without the need for additional programming): alarm management, synoptic view management and Web home pages created by the user.
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.

In addition, Vijeo Citect supervisory software is provided pre-installed on Compact *i*PC models with 15" screen **MPC KT5 5 MAX 20L** (Vijeo Citect Lite) and **MPC KT5 5 MAX 20V** (Vijeo Citect Full).

HMI applications



The Magelis Compact *i*PC is supplied with a 21-day trial version of Vijeo Designer Run Time. Continued use of Vijeo Designer requires a licence which is sold separately (see page 3/17).

Vijeo Designer can be used to create control applications for Magelis terminals and industrial PCs.

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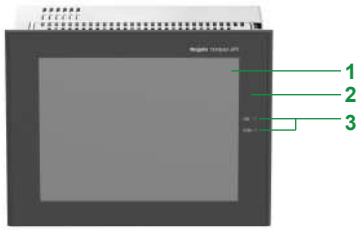
Description: pages 3/14 to 3/15
References: pages 3/16 to 3/17

Industrial PCs
Magelis Compact *i*PC PC Panels

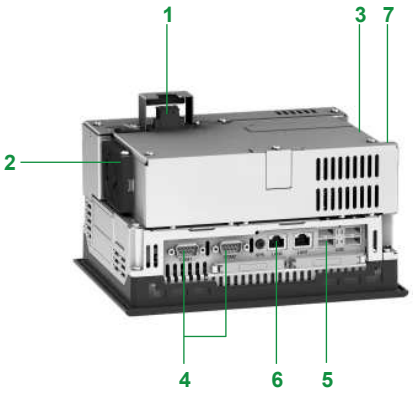


Description of Compact *i*PC

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

The touch screen front panel of the 8.4" **MPC KT1 2NAX 00●** 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 aluminium alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs marked:
- ON (green), PC switched on
- DISK (green), accessing IDE bus (accessing hard disk memory, etc.)



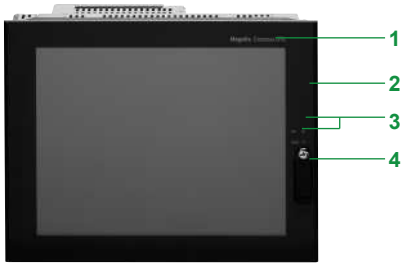
Underside and side, 8.4"

All expansion slots and connection elements are accessible from the rear of the PC:

1 A connector for plugging in the 100 to 240 V ∿ power cable
2 One vent fitted with an anti-dust filter and fan
3 Two free slots for additional Compact Flash memory cards
4 Two 9-way male SUB-D ports marked COM1 and COM2 for serial links
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

***Note**: AC versions have an On/Off switch.*

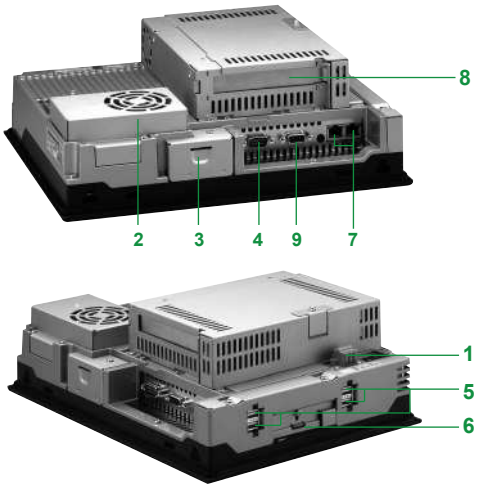


12" touch screen front panel MPC KT2 2●AX 20N

The touch screen front panel of the 12" **MPC KT2 2●AX 20N** 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 aluminium alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs marked:
- 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



Underside and side, 12"

All expansion slots and connection elements are accessible from the rear of the PC:

1 A connector for plugging in the 100 to 240 V ∿ power cable
2 One vent fitted with an anti-dust filter and fan
3 A free slot for an additional Compact Flash memory card
4 One 9-way male SUB-D port marked COM1 for serial links
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

***Note**: AC versions have an On/Off switch.*

Presentation: page 3/12
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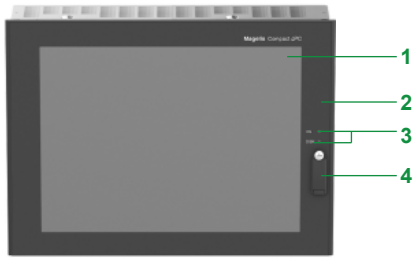


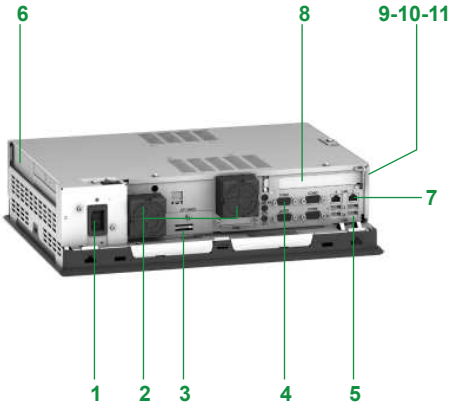
Description of Compact *i*PC (continued)

15" touch screen front panel MPC KT5 5●AX 20●

The touch screen front panel of the 15" **industrial PCs MPC KT5 5●AX 20●** 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 aluminium alloy front panel with IP 65 membrane (mounted on a hardened steel frame)
3 Two LEDs marked:
- 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



Underside and side, 15"

All expansion slots and connection elements are accessible from the rear of the PC:

1 A connector for plugging in the 100 to 240 V ∼ power cable
2 Two vents, each with an anti-dust filter and fan
3 A slot for an additional Compact Flash memory card
4 Four 9-way male SUB-D connectors marked COM1, COM2, COM3 and COM4 for serial links
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 (reader/writer)
10 A 3.5" floppy disk drive
11 A VGA port

***Note**: AC versions have an On/Off switch.*

Industrial PCs
Magelis Compact iPC PC Panels


MPC KT1 2NAX 00N

General Purpose Compact iPC with 8.4" screen *(1)*

With hard disk

Processor Supply voltage	RAM	Free expansion slots	Vijeo Citect	Reference	Weight kg
Celeron M 1 GHz 100…240 V ∼	512 MB expandable to 1024 MB	1 PCI 2 Compact Flash	–	**MPC KT1 2NAX 00N**	4.500


MPC KT2 1NAX 00N

General Purpose Compact iPC with 12" screen *(1)*

With hard disk

Processor Supply voltage	RAM	Free expansion slots	Vijeo Citect	Reference	Weight kg
Celeron M 1.5 GHz 100…240 V ∼	512 MB expandable to 1024 MB	1 PCI 1 Compact Flash 1 PCMCIA (type II)	–	**MPC KT2 2NAX 20N** *(1)*	4.500

With Flash Disk (15 GB min.)

Processor Supply voltage	RAM	Free expansion slots	Vijeo Citect	Reference	Weight kg
Celeron M 1.5 GHz 100…240 V ∼	512 MB expandable to 1024 MB	1 PCI 1 Compact Flash 1 PCMCIA (type II)	–	**MPC KT2 2MAX 20N** *(1)*	4.500


MPC KT5 5NAX 20N

General Purpose Compact iPC with 15" screen *(1)*

With hard disk

Processor Supply voltage	RAM	Free expansion slots	Vijeo Citect	Reference	Weight kg
Pentium M 1.6 GHz 100…240 V ∼	512 MB expandable to 2 GB	1 PCI 1 Compact Flash 1 PCMCIA (1 type III or 2 type I)	–	**MPC KT5 5NAX 20N**	8.000
24 V ⎓	512 MB expandable to 2 GB	1 PCI 1 Compact Flash 1 PCMCIA (1 type III or 2 type I)	–	**MPC KT5 5NDX 20N**	8.000

Heavy Duty Compact iPC with 15" screen *(1)*

With Flash Disk (15 GB min.)

Processor Supply voltage	RAM	Free expansion slots	Vijeo Citect	Reference	Weight kg
Pentium M 1.6 GHz 100…240 V ∼	512 MB expandable to 2 GB	1 PCI 1 Compact Flash 1 PCMCIA (1 type III or 2 type I)	Client Edition	**MPC KT5 5MAX 20N**	8.000
	1.5 GB expandable to 2 GB	1 PCI 1 Compact Flash 1 PCMCIA (1 type III or 2 type I)	Vijeo Citect Lite 1200 I/O	**MPC KT5 5MAX 20L**	8.000
			Vijeo Citect Full 500 I/O	**MPC KT5 5MAX 20V**	8.000

(1) Compact iPC is supplied with a trial version of Vijeo Designer Run Time. For unlimited usage see page 3/17.

Presentation: page 3/12
Architecture: page 3/13
Description: pages 3/14 to 3/15

Separate components for Compact *i*PC

Description	Characteristics	Compatible with *(1)*	Reference	Weight kg
Vijeo Designer Run Time Licence	Unlimited	All Compact *i*PCs	**VJDSNRTMPC**	–
RAM expansion	512 MB	All Compact *i*PCs	**MPC YK0 5RAM 512**	–
	1024 MB	All Compact *i*PCs	**MPC YK2 2RA1 024**	–
Hard disk	≥ 250 GB	12” Compact iPC MPC YNK2 MSD 20N	**MPC YNK2 SHD 20N**	–
Flash disk	≥ 15 GB	12” Compact iPC MPC KT2 2MAX 20N	**MPC YNK2 MSD 20N**	–
Replacement power supply connector	AC connector	All Compact *i*PC models with ∼ power supply MPC KT● ●●AX ●0●	**MPC YN0 0PWA CTE**	–
Maintenance kits	Includes panel mounting fixings and seals	8.4” models MPC KT1 2NAX 00●	**MPC YK1 0MNT KIT**	
		12” models MPC KT2 2●AX 00●	**MPC YK2 0MNT KIT**	–
		15” models MPC KT5 5●AX 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 package variants when available.

Industrial PCs
Magelis Smart
equivalent product table

Magelis Smart equivalent product table

Type	Old range	New range
∼ 8.4" Smart	**MPC ST1 1NAJ 00H**	**MPC ST1 1NAJ 00T + VJDSNRTMPC**
∼ 12" Smart	**MPC ST2 1NAJ 10R**	**MPC ST2 1NAJ 20T + VJDSNRTMPC**
∼ 15" Smart with Vijeo Designer Run Time	**MPC ST5 2NAJ 20H**	**MPC ST5 2NAJ 20T + VJDSNRTMPC or HMI PSC 7AE 03 + VJDSNRTMPC**
⎓ 15" Smart	**MPC ST5 2NDJ 20T**	**HMI PSC 7DE 03**
∼ 15" Smart	**MPC ST5 2NAJ 20T**	**HMI PSC 7AE 03**

Industrial PCs
Magelis Compact *i*PC equivalent product table

Magelis *i*PC equivalent product table

Type	Old range	New range
8.4" Compact *i*PC	**MPC KT1 2NAX 00H**	**MPC KT1 2NAX 00N + VJDSNRTMPC**
12" Compact *i*PC	**MPC KT2 2NAX 00R**	**MPC KT2 2NAX 20N + VJDSNRTMPC**
15" Compact *i*PC	**MPC KT5 5●●X 20H**	**MPC KT55 ●●X 20N + VJDSNRTMPC**

Industrial PCs
Front Panels and Magelis Flex PC BOX

Industrial PCs			Front Panels for Magelis Flex PC BOX			
Model			12" touch screen and keypad	15" touch screen	15" touch screen and keypad	19" touch screen
						
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
	Number of colours		262,144			
	Brightness		≥ 200 cd/m² adjustable			
Touch screen			Analog resistive, resolution 1024 x 1024			
Keypad			70 standard IBM keys and 2 x 20 user function keys	–	70 standard IBM keys and 2 x 20 user function keys	–
Front panel			1 x USB 2.0 type A Built-in pointing device			
Dimensions	Overall dimensions (W x H)/(W x H x D)		425 x 325 mm	488 x 367 mm	425 x 325 mm	460 x 390 mm
	Cut-out (W x H)		383.5 x 282.5 mm	441.5 x 313.5 mm	383.5 x 282.5 mm	419.5 x 352.5 mm
Compatibility			With all Magelis Flex PC BOX units			
CPU	Processor		–			
	Storage	Hard disk (HDD)	–			
		Flash Disk (SSD)	–			
		RAID redundant hard disk	–			
	RAM		–			
	DVD drive (reader/writer)		–			
	Expansion slots	PCI bus	–			
		Flash memory card (CF)	–			
	Ethernet TCP/IP ports		–			
	I/O ports		–			
Certifications			–			
Installed software	Operating system		–			
	Human machine interface		–			
	Supervision		–			
Power supply			Via Magelis Flex PC BOX			
Consumption			See Magelis Flex PC BOX			
Degree of protection (mounting)			IP 65 for front panel screens (when mounted on panel or enclosure door)			
Environment	Operating temperature		See Magelis Flex PC BOX			
	Vibration resistance		See Magelis Flex PC BOX			
Front Panels for Flex PC BOX			MPC YB2 0NNN 00N	MPC YT5 0NNN 00N	MPC YB5 0NNN 00N	MPC YT9 0NNN 00N
Flex PC BOX General Purpose (HDD)		100...240 V ~				
		24 V ⎓				
Flex PC BOX Heavy Duty (SSD)		100...240 V ~				
	Vijeo Citect Full 500 I/O	100...240 V ~				

(1) For 24 V ⎓ Magelis PC BOX versions only.

Magelis Flex PC BOX	
Magelis Flex PC BOX F	**Magelis Flex PC BOX H**
	
–	
–	
–	
–	
–	
–	
–	
243 x 163 x 289 mm	243 x 214 x 289 mm
–	
With all Front Panels for Magelis Flex PC BOX and all Magelis *i*Display screens	
Intel Celeron M 1.86 GHz or Core Duo 2 GHz	
For General Purpose Flex PC BOX **MPC ●N0 ●N●X 00●**: Hard disk ≥ 250 GB (option of adding an additional removable hard disk)	
For Heavy Duty Flex PC BOX **MPC ●N0 5●AX 00●**: Flash disk ≥ 15 GB (option of adding an additional removable hard disk)	
Available as an option, removable RAID disk ≥ 250 GB and RAID software	
512 MB minimum, expandable to 4 GB (management based on operating system capacity)	
Reader/writer as standard for **MPC FN0 5●●X 00N** and **MPC HN0 2NAX 00N**; Reader as standard with writer available as option for the other references	
2 free PCI bus slots	4 free PCI bus slots
1 free slot for Compact Flash card (type I/II compatible)	
2 RJ45 ports: 1 x 10/100/1000BASE-T and 1 x 10/100BASE-T	
4 x USB 2.0 type A 4 x COM1 to COM4 (RS 232C, 9-way male SUB-D) 1 x DVI-I video (for external video screen, RGB support, 29-way connector)	1 x RAS (9-way female SUB-D) 1 x audio (stereo mini-jack)
UL 508, UL 1604 (Haz Loc), ATEX *(1)*	
Windows XP Pro SP2	
Vijeo Designer Run Time 21-day trial version *(2)*	
Vijeo Citect Full Run Time 500 I/O for **MPC ●N0 5MAX 00V**	
■ 100...240 V ∼ (85...265 V) ■ 24 V ⎓ (19.8...28.8 V)	
120 VA max. (∼); 120 W max. (⎓)	
IP 20 (mounting in type 4X or 12 enclosure)	
5...50°C	
For General Purpose Flex PC BOX **MPC ●N0 ●N●X 00●**: 0.075 mm amplitude from 10...57.6 Hz, 1 g from 57.6...100 Hz, according to EN 61131-2 For Heavy Duty Flex PC BOX **MPC ●N0 5●AX 00●**: 3.5 mm amplitude from 5... 9 Hz, 1 g from 9...150 Hz, according to EN 61131-2	
MPC FN0 ●NAX 00N	**MPC HN0 ●N●X 00N**
MPC FN0 ●NDX 00N	**MPC HN0 5NDX 00N**
MPC FN0 5MAX 00N	**MPC HN0 5MAX 00N**
MPC FN0 5MAX 00V	**MPC HN0 5MAX 00V**

(2) All Magelis PC BOX products are supplied with a trial version (21 days) of Vijeo Designer Run Time. Unlimited usage is available by activation of licence **VJDSNRTMPC** *(sold separately, see page 4/13).*

Industrial PCs
Magelis BOX PC

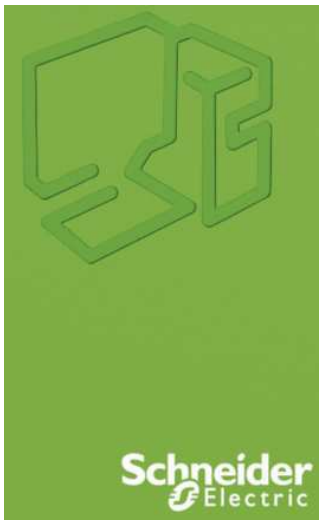
Type		**Universal range - 1 PCI slot**		
Industrial environments		**Maintenance-free**		**Standard**
				
Without fan		★★★★★	★★★★★	★★★★★
Without hard disk		★★★★★	★★★★★	–
CPU *(1)*	Processor	Intel® ATOM™ N270 (1.6 GHz)		
	PCI slot	1 PCI		
	Storage	Compact Flash card ≥ 4 GB (SLC technology)	Flash disk ≥ 32 GB (SLC technology SSD)	Hard disk ≥ 250 GB
	RAM *(2)*	1 GB	HMI BUFN D1PF1: 2 GB HMI BUFN D1P01: 1 GB	1 GB
	Integrated DVD-RW drive	–		
	Slide-in rack for peripheral device	1 x slide-in compact rack for storage disk	1 x slide-in compact rack for storage disk (Flash disk or hard disk included)	
	Integrated ports	2 x Ethernet 10/100/1000 Mbps		
		1 x USB 2.0 (1 A) on the front panel + 4 x USB 2.0 (0.5 and 1 A) on the top		
		2 x RS232C		
		1 x DVI (VGA RGB adaptor, optional)		
	Optional ports	1 x RS232C/RS422/RS485		
	Optional RAID PCI card	RAID PCI card with 2 redundant hard disks		
Operating system		Windows® Embedded Standard 2009	Windows® XP Professional SP3	
Supply	Voltage	24 V ⎓ (± 25%) *(3)*		
	Current (excluding PCI card)	Nominal current 6 A. Typical inrush current 7 A, 50 A < 300 µs		
Mounting		Vertical, at the back of the enclosure (“book” format)		
Overall dimensions (W x H x D in mm)		82 x 270 x 251		
Temperature	Operation	0…50°C, according to IEC 61132-2, UL 508		
Vibration resistance During operation	Continuous	1.75 mm amplitude from 2…9 Hz, 0.5 g from 9…200 Hz *(4)*		0.125 g from 5...100 Hz
	Non-continuous	3.5 mm amplitude from 2…9 Hz, 1 g from 9…200 Hz *(4)*		0.250 g from 5...100 Hz
	Merchant navy IACS E10	1 mm amplitude from 5…13.2 Hz, 0.7 g from 13.2…100 Hz, 90 minutes endurance		–
Shock resistance	during operation	15 g/11 ms according to IEC 60068-2-27 test Ea		
Standards and certifications		CE, cULus (UL 508, CSA 22.2 no. 142), cULus Haz Loc Class I Div 2 (ANSI/ISA 12.12.01, UL 1604, CSA 22.2 no. 213), ATEX Zone 22 (dust), C-Tick, GOST		
Marine certification	Germanischer Lloyd (Bridge Class)	With power supply filter HMI YLFI MAR11		–
Compatible screens		The whole range of Magelis iDisplay screens (see page 3/32)		
Software	Vijeo Designer Run Time Demo	Vijeo Designer Run Time Demo (21-day trial version). Unlimited licence, to be ordered separately (VJDSNRTMPC)		
References	Vijeo Designer Run Time Demo Vijeo Citect Full 500 I/O	–	HMI BUFN D1PF1	–
	Vijeo Designer Run Time Demo	HMI BUCN D1E01	HMI BUFN D1P01	HMI BUHN D1P01
Page		3/28		
Made-to-order configuration		See configured Magelis BOX PC on page 3/30		

(1) For other available options (interface for backup battery, etc.) in made-to-order configuration, see pages 3/29 and 3/30.
(2) Memory capacity not user-expandable; increased capacity available in made-to-order configuration (see page 3/30).

Universal range - 2 PCI slots		Performance range - 2 PCI slots		Performance range - 5 PCI slots	
Maintenance-free	**Standard**	**Harsh**	**Standard**	**Harsh**	**Standard**
					
★★★★★	★★★★★	–	–	–	–
★★★★★	–	★★★★★	–	★★★★★	–
Intel® ATOM™ N270 (1.6 GHz)		Intel® Core™ 2 Duo P8400 (2.26 GHz) + Chipset Intel® 945GME			
2 (1 PCI + 1 PCI Express®)				5 (2 PCI + 3 PCI Express®)	
Flash disk ≥ 32 GB (SLC technology SSD)	Hard disk ≥ 250 GB	Flash disk ≥ 32 GB (SLC technology SSD)	Hard disk ≥ 250 GB	Flash disk ≥ 32 GB (SLC technology SSD)	Hard disk ≥ 250 GB
HMI BUFN D2PF1: 2 GB HMI BUFN D2P01: 1 GB	1 GB	HMI BPFD D27F1: 4 GB HMI BPFD D2701: 2 GB	2 GB	HMI BPFD D57F1: 4 GB HMI BPFD D5701: 2 GB	2 GB
1					
1 x slide-in compact rack for storage disk (Flash disk or hard disk included) 1 x slide-in rack for DVD-RW drive (included) or storage disk via adaptor (optional)				1 x slide-in compact rack for storage disk (Flash disk or hard disk included) 1 x slide-in rack for DVD-RW drive (included) 1 x slide-in rack for storage disk via adaptor (optional)	
2 x Ethernet 10/100/1000 Mbps					
1 x USB 2.0 (1 A) on the front panel + 4 x USB 2.0 (0.5 and 1 A) on the top					
2 x RS232C					
1 x DVI (VGA RGB adaptor, optional)					
1 x RS232C/RS422/RS485, 1 x DVI					
RAID PCI card with 2 redundant hard disks					
Windows® XP Professional SP3		Windows® 7 Ultimate 64-bit			
24 V ⎓ (± 25%) *(3)*					
Nominal current 6 A. Typical inrush current 7 A, 50 A < 300 µs					
Vertical, at the back of the enclosure (“book” format)					
121 x 270 x 251		136 x 270 x 251		217 x 270 x 251	
0…50°C, according to IEC 61132-2, UL 508					
1.75 mm from 2…9 Hz, 0.5 g from 9…200 Hz *(4)*	0.125 g from 5...100 Hz	1.75 mm from 2…9 Hz, 0.5 g from 9…200 Hz *(4)*	0.125 g from 5...100 Hz	1.75 mm from 2…9 Hz, 0.5 g from 9…200 Hz *(4)*	0.125 g from 5...100 Hz
3.5 mm from 2…9 Hz, 1 g from 9…200 Hz *(4)*	0.250 g from 5...100 Hz	3.5 mm from 2…9 Hz, 1 g from 9…200 Hz *(4)*	0.250 g from 5...100 Hz	3.5 mm from 2…9 Hz, 1 g from 9…200 Hz *(4)*	0.250 g from 5...100 Hz
1 mm from 5…13.2 Hz, 0.7 g from 13.2…100 Hz, 90 minutes endurance	–				
15 g/11 ms according to IEC 60068-2-27 test Ea					
CE, cULus (UL 508, CSA 22.2 no. 142), cULus Haz Loc Class I Div 2 (ANSI/ISA 12.12.01, UL 1604, CSA 22.2 no. 213), ATEX Zone 22 (dust), C-Tick, GOST					
With power supply filter HMI YLFI MAR11	–				
The whole range of Magelis *i*Display screens (see page 3/32)					
Vijeo Designer Run Time Demo (21-day trial version). Unlimited licence, to be ordered separately (VJDSNRTMPC)					
HMI BUFN D2PF1	**–**	**HMI BPFD D27F1**	**–**	**HMI BPFD D57F1**	**–**
HMI BUFN D2P01	**HMI BUHN D2P01**	**HMI BPFD D2701**	**HMI BPHD D2701**	**HMI BPFD D5701**	**HMI BPHD D5701**
3/28					
See configured Magelis BOX PC on page 3/30					

(3) For an ∿ power supply, use a Phaseo power supply (see page 3/29).
(4) According to IEC 60068-2-6 Fc.

Industrial PCs
Magelis BOX PC
Universal and Performance ranges



Schneider Electric Magelis BOX PC

Presentation

The Magelis BOX PC industrial PC offer includes products certified for automation applications.

With its Universal (1 or 2 PCI slots) and Performance (2 or 5 PCI slots) ranges, this Magelis BOX PC offer is suitable for all types of use:
- In a maintenance-free environment: Magelis BOX PC without fans (unaffected by dust, no filters to clean, etc.) and without any rotating parts such as a hard disk. Data storage on Compact Flash card or on Flash disk ensures resistance to vibrations and long life.
- In a harsh environment: Magelis BOX PC without hard disk
- In standard environment: Magelis BOX PC with hard disk

This offer is compatible with Magelis *i*Display screens, see page 3/32.

Modular design for greater flexibility

The modular design of Magelis BOX PC allows us to offer a complete and coherent range of referenced products:
- Universal Magelis BOX PC, 1 or 2 PCI slots, based on the Intel® Atom™ N270 processor without a fan (1.6 GHz)
- Performance Magelis BOX PC, 2 or 5 PCI slots, based on the Intel® Core™ 2 Duo P8400 processor (2.26 GHz)
- Compact Flash card ≥ 4 GB (SLC technology), Flash disk ≥ 32 GB (SLC technology SSD) or hard disk ≥ 250 GB, all interchangeable
- 5 USB ports and 2 gigabit Ethernet ports
- Up to 2 DVI ports and 3 communication ports
- DVD-RW drive depending on the model
- Different Microsoft operating systems

In addition to the referenced offer, the flexibility offered by the modular design allows Magelis BOX PC to be made to order (see page 3/30).

Certified for automation applications

Magelis BOX PC have been designed and manufactured for use in automation applications.
Certifications *(1)*:
- cULus (UL 508, CSA 22.2 no. 142), Industrial Control Equipment
- cULus Haz Loc Class I Div 2 (ANSI/ISA 12.12.01, UL 1604, CSA 22.2 no. 213) and ATEX Zone 22 (dust) in explosive atmosphere
- Germanischer Lloyd (Bridge Class) for marine applications, depending on the model
- C-Tick, GOST, CE

Installation of Magelis BOX PC in a control system cabinet is made easy by their "book" format and their 24 V ⎓ power supply. Their resistance to temperature, vibrations and shock allows them to operate continuously in the most difficult environments.

To simplify maintenance, Magelis BOX PC integrate functions for monitoring the internal temperature of both the fans and the hard disk.

Magelis BOX PC have options for high availability applications:
- RAID PCI card with 2 redundant hard disks
- Backup battery (requires the battery-backed power supply interface module available in made-to-order configuration, see page 3/30).

The durability of the range and possibilities of service after discontinuation of sales make them suitable for automation applications.

Vijeo Designer and Vijeo Citect bundle offer

Magelis BOX PC are all supplied with the Vijeo Designer Run Time Demo software (21-day trial version) *(2)*.
Magelis BOX PC and Vijeo Citect bundle offers include the DVD with the software and documentation, the USB key with registered user rights and a 1-year support contract. Updates and upgrades are available by providing the key number and subject to the usual conditions.

(1) All standards and certifications issued by independent bodies can be found and are updated regularly on our website www.schneider-electric.com
(2) Unlimited licence, to be ordered separately (VJDSNRTMPC).

Industrial PCs
Magelis BOX PC
Universal and Performance ranges

PF110300

Universal BOX PC
1 PCI

PF110301

Universal BOX PC/Performance BOX PC
1 PCI + 1 PCI Express®

PF110302

Performance BOX PC
2 PCI + 3 PCI Express®

Presentation (continued)

Integration in IT structures

The 2 built-in Ethernet ports allow the IT and automation data flows to be separated, reinforcing the overall safety of the system.
Magelis BOX PC run on Microsoft operating systems, allowing:
- Connection of the full range of PC peripherals
- Huge data storage capacity
- Ease of connection to computers and databases
- Simultaneous operation of several programs:
  - Vijeo Designer Human/Machine Interface and data traceability with Intelligent Data Service
  - SCADA Vijeo Citect supervisor
  - Office software including web browsers
  - Other software installed by the user

Depending on the model, these operating systems may be:
- Windows® Embedded Standard 2009, write-protected in normal operating mode, so as to avoid any unintended operation
- Windows® XP Professional SP3
- Windows® 7 Ultimate 64-bit supporting more than 3 GB of RAM (dedicated to SCADA supervisor applications which need significant memory expansion).

Windows® Embedded 7 and Windows® 7 Ultimate 32-bit which are also available in made-to-order configurations (see page 3/30).

Range overview

Universal Magelis BOX PC range *(1) (2)*

The Universal BOX PC range is equipped with the Intel® ATOM™ N270 processor without a fan (1.6 GHz) and RAM DDR2 memory.
It is dedicated to the following environments:
- "Maintenance-free" (without a fan, with solid state storage disk):
  - HMI BUCN D1E01:
    - 1 PCI slot/Compact Flash card/Windows® Embedded Standard 2009, etc.
  - HMI BUFN D1P01 and HMI BUFN D1 PF1:
    - 1 PCI slot, Flash disk, Windows® XP Professional SP3, etc.
  - HMI BUFN D2P01 and HMI BUFN D2 PF1:
    - 1 PCI + 1 PCI Express® slot, Flash disk/Windows® XP Professional SP3, etc.
- Standard industrial environments (with hard disk):
  - HMI BUHN D1P01:
    - 1 PCI slot/hard disk/Windows® XP Professional SP3, etc.
  - HMI BUHN D2P01:
    - 1 PCI + 1 PCI Express® slot/hard disk/Windows® XP Professional SP3, etc.

Performance Magelis BOX PC range *(1) (2)*

The Performance BOX PC range is equipped with the Intel® Core™ 2 Duo P8400 processor (2.26 GHz) + Chipset Intel® 945GME and RAM DDR3 memory.
It is dedicated to the following environments:
- Harsh industrial environments (with solid state storage disk):
  - HMI BPFD D2701 and HMI BPFD D27F1:
    - 1 PCI + 1 PCI Express® slot/Flash disk/Windows® 7 Ultimate 64-bit, etc.
  - HMI BPFD D5701 and HMI BPFD D57F1:
    - 2 PCI + 3 PCI Express® slots/Flash disk/Windows® 7 Ultimate 64-bit, etc.
- Standard industrial environments (with hard disk):
  - HMI BPHD D2701:
    - 1 PCI + 1 PCI Express® slot/hard disk/Windows® 7 Ultimate 64-bit, etc.
  - HMI BPHD D5701:
    - 2 PCI + 3 PCI Express® slots/hard disk/Windows® 7 Ultimate 64-bit, etc.

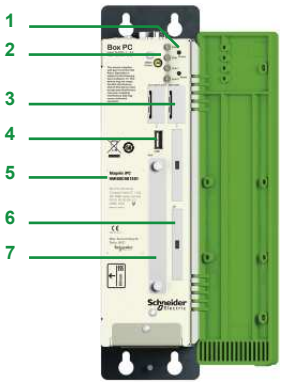
Made-to-order Magelis BOX PC range *(1)*

On Universal and Performance Magelis BOX PC bases, it is possible to customize the CPU by selecting:
- The capacity of the Compact Flash card and the RAM memory
- The number of PCI and PCI Express® slots
- The operating system and dedicated HMI software
- Assembled additional options: PCI RAID card with 2 redundant hard disks, battery-backed power supply interface module, etc.

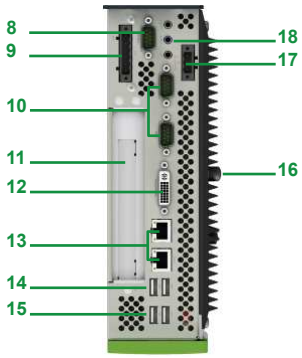
For this HMI PCCB offer, see page 3/29.

(1) Types of PCI slot: half-format PCI 2.2 and half-format PCI Express® 1x.
(2) For description, see pages 3/26 and 3/27.

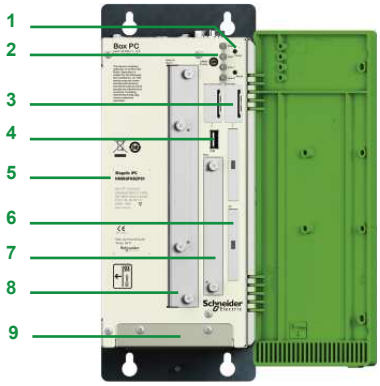
Industrial PCs
Magelis BOX PC
Universal and Performance ranges



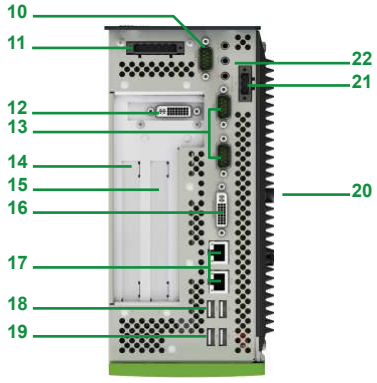
Front panel of Magelis BOX PC, door open
1 PCI slot



Top panel of Magelis BOX PC
1 PCI slot



Front panel of Magelis BOX PC, door open
2 PCI slots



Top panel of Magelis BOX PC
2 PCI slots

Description

Universal Magelis BOX PC CPUs, 1 PCI slot

Front panel, door open

1 2 pushbuttons: 1 for the power supply and 1 for resetting.
2 4 status and power supply indicator lights, also visible with the front panel door closed.
3 Battery.
4 USB 2.0 port (1 A max).
5 Identification (reference, serial number, etc).
6 Compact Flash card (SLC technology) ≥ 4 GB (BOX PC **HMI BUCN D1E01**).
7 "Slide-In Compact" rack:
□ free slot (BOX PC **HMI BUCN D1E01**)
□ with Flash disk (SLC technology SSD) ≥ 32 GB (BOX PC **HMI BUFN D1P●1**)
□ with hard disk ≥ 250 GB (BOX PC **HMI BUHN D1P01**)

Top panel

8 Free slot for additional RS232C/RS422/RS485 serial link interface (**HMI YBIN SL 11**) *(1)*.
9 Free slot for battery-backed power supply interface module *(2)*.
10 2 RS232C ports.
11 Half-format PCI 2.2 slot.
12 DVI port. RGB connection with adapter (**HMI YAD DVI RGB 11**) *(1)*.
13 2 Ethernet 10/100/1000 Mbps ports.
14 2 USB 2.0 ports (0.5 A max).
15 2 USB 2.0 ports (1 A max).
16 Heat sink *(3)*.
17 Connector for the CPU 24 V/6 A ⎓ power supply *(4)*.
18 Micro input, line input/line output.

Universal and Performance Magelis BOX PC CPUs, 2 PCI slots

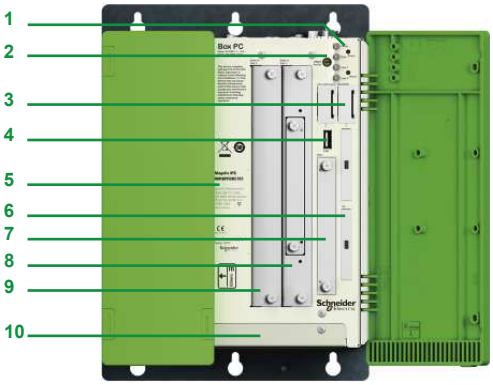
Front panel, door open

1 2 pushbuttons: 1 for the power supply and 1 for resetting.
2 4 status and power supply indicator lights, also visible with the front panel door closed.
3 Battery.
4 USB 2.0 port (1 A max).
5 Identification (reference, serial number, etc).
6 Free slot for Compact Flash card ≥ 4 GB.
7 "Slide-In Compact" rack:
□ with Flash disk (SLC technology SSD) ≥ 32 GB (BOX PC **HMI B●F● D2●●1**)
□ with hard disk ≥ 250 GB (BOX PC **HMI B●H● D2●01)**
8 "Slide-In" rack for the DVD-RW drive supplied. Can be used for an additional storage disk with adapter (**HMI YAD SLIDEIN 11**) *(1)*.
9 Access to the fan filters (BOX PC **HMI BP●D D●7●1**).

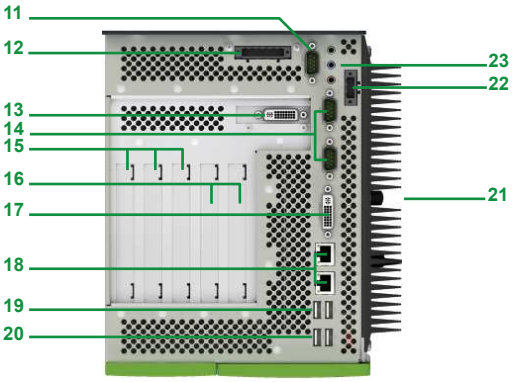
Top panel

10 Free slot for additional RS232C/RS422/RS485 serial link interface (**HMI YBIN SL 11**) *(1)*.
11 Free slot for battery-backed power supply interface module *(2)*.
12 Free slot for additional DVI interface (**HMI YIN DVI RGB 11**) *(1)*.
13 2 RS232C ports.
14 Half-format PCI Express® 1x slot.
15 Half-format PCI 2.2 slot.
16 DVI port. RGB connection with adapter (**HMI YAD DVI RGB 11**) *(1)*.
17 2 Ethernet 10/100/1000 Mbps ports.
18 2 USB 2.0 ports (0.5 A max).
19 2 USB 2.0 ports (1 A max).
20 Heat sink *(3)*.
21 Connector for the CPU 24 V/6 A ⎓ power supply *(4)*.
22 Micro input, line input/line output.

(1) To be ordered separately (see page 3/29).
(2) To be ordered separately in made-to-order configuration (see page 3/30).
(3) Refer to the installation precautions available on our website www.schneider-electric.com.
(4) Consumption excluding additional PCI card. For an ∼ power supply, an external Phaseo power supply must be used (see page 3/29).



Front panel of Magelis BOX PC, door open
5 PCI slots



Top panel of Magelis BOX PC
5 PCI slots

Description (continued)

Performance Magelis BOX PC CPUs, 5 PCI slots

Front panel, door open

1 2 pushbuttons: 1 for the power supply and 1 for resetting.
2 4 status and power supply indicator lights, also visible with the front panel door closed.
3 Battery.
4 USB 2.0 port (1 A max).
5 Identification (reference, serial number, etc).
6 Free slot for Compact Flash card ≥ 4 GB.
7 "Slide-In Compact" rack:
□ with Flash disk (SLC technology SSD) ≥ 32 GB (BOX PC **HMI BPFD D57●1**)
□ with hard disk ≥ 250 GB (BOX PC **HMI BPHD D5701**)
8 "Slide-In" rack with the DVD-RW drive supplied.
9 "Slide-In" rack for additional storage disk with adapter (**HMI YAD SLIDEIN 11**) *(1)*.
10 Access to the fan filters.

Top panel

11 Free slot for additional RS232C/RS422/RS485 serial link interface (**HMI YBIN SL 11**) *(1)*.
12 Free slot for battery-backed power supply interface module *(2)*.
13 Free slot for additional DVI interface (**HMI YIN DVI RGB 11**) *(1)*.
14 2 RS232C ports.
15 3 half-format PCI Express® 1x slots.
16 2 half-format PCI 2.2 slots.
17 DVI port. RGB connection with adapter (**HMI YAD DVI RGB 11**) *(1)*.
18 2 Ethernet 10/100/1000 Mbps ports.
19 2 USB 2.0 ports (0.5 A max).
20 2 USB 2.0 ports (1 A max).
21 Heat sink *(3)*.
22 Connector for the CPU 24 V/6 A ⎓ power supply *(4)*.
23 Micro input, line input/line output.

(1) To be ordered separately (see page 3/29).
(2) To be ordered separately in made-to-order configuration (see page 3/30).
(3) Refer to the installation precautions available on our website www.schneider-electric.com.
(4) Consumption excluding additional PCI card. For an ∿ power supply, an external Phaseo power supply must be used (see page 3/29).

Industrial PCs
Magelis BOX PC
Universal and Performance ranges


PF110300

HMI BU●N D1●●1

Magelis BOX PC
(Intel® ATOM™ N270 processor (1.6 GHz)/RAM DDR2/24 V ⎓ power supply) *(1)*

PCI slot	Operating system	Software	Storage disk	RAM DDR2 memory *(4)*	Reference	Weight kg
For maintenance-free environment						
1 PCI	Windows® Embedded Standard 2009 *(2)*	Vijeo Designer RT Demo *(3)*	Compact Flash ≥ 4 GB	1 GB	**HMI BUCN D1E01**	4.000
	Windows® XP Professional SP3	Vijeo Designer RT Demo *(3)*	Flash disk ≥32 GB	1 GB	**HMI BUFN D1P01**	4.000
		Vijeo Designer RT Demo *(3)* Vijeo Citect Full 500 I/O	Flash disk ≥32 GB	2 GB	**HMI BUFN D1PF1**	4.000
1 PCI + 1 PCI Express®	Windows® XP Professional SP3	Vijeo Designer RT Demo *(3)*	Flash disk ≥32 GB	1 GB	**HMI BUFN D2P01**	5.000
		Vijeo Designer RT Demo *(3)* Vijeo Citect Full 500 I/O	Flash disk ≥32 GB	2 GB	**HMI BUFN D2PF1**	5.000


PF110301

HMI BU●N D2P●1
HMI BP●D D27●1

For standard industrial environment						
1 PCI	Windows® XP Professional SP3	Vijeo Designer RT Demo *(3)*	Hard disk ≥250 GB	1 GB	**HMI BUHN D1P01**	4.000
1 PCI + 1 PCI Express®	Windows® XP Professional SP3	Vijeo Designer RT Demo *(3)*	Hard disk ≥250 GB	1 GB	**HMI BUHN D2P01**	5.000

Performance Magelis BOX PC, 2 or 5 PCI slots
(Intel® Core™ 2 Duo P8400 processor (2.26 GHz)/RAM DDR3/24 V ⎓ power supply) *(1)*

PCI slot	Operating system	Software	Storage disk	RAM DDR3 memory *(4)*	Reference	Weight kg
For standard industrial environment						
1 PCI + 1 PCI Express®	Windows® 7 Ultimate 64-bit	Vijeo Designer RT Demo *(3)*	Hard disk ≥250 GB	2 GB	**HMI BPHD D2701**	6.000
2 PCI + 3 PCI Express®	Windows® 7 Ultimate 64-bit	Vijeo Designer RT Demo *(3)*	Hard disk ≥250 GB	2 GB	**HMI BPHD D5701**	7.000
For harsh industrial environment						
1 PCI + 1 PCI Express®	Windows® 7 Ultimate 64-bit	Vijeo Designer RT Demo *(3)*	Flash disk ≥32 GB	2 GB	**HMI BPFD D2701**	6.000
		Vijeo Designer RT Demo *(3)* Vijeo Citect Full 500 I/O	Flash disk ≥32 GB	4 GB	**HMI BPFD D27F1**	6.000
2 PCI + 3 PCI Express®	Windows® 7 Ultimate 64-bit	Vijeo Designer RT Demo *(3)*	Flash disk ≥32 GB	2 GB	**HMI BPFD D5701**	7.000
		Vijeo Designer RT Demo *(3)* Vijeo Citect Full 500 I/O	Flash disk ≥32 GB	4 GB	**HMI BPFD D57F1**	7.000


PF110302

HMI BP●D D57●1

(1) For an ∿ power supply, an external Phaseo power supply must be used (see page 3/29).
(2) Windows® Embedded Standard 2009 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:
- *.NET Run Time framework*
- *Office Reader*
- *Vijeo Citect Web Client*
- *Vijeo Designer Run Time Demo (3)*

(3) Vijeo Designer RT (Run Time) Demo (21-day trial version). Unlimited licence, to be ordered separately (VJDSNRTMPC) (see page 3/29).
(4) Memory capacity not user-expandable; increased capacity available in made-to-order configuration (see page 3/30).

Industrial PCs
Magelis BOX PC
Separate parts

Separate parts

Designation	Description	Compatible with Magelis BOX PC	Reference	Weight kg
Storage disks, peripheral equipment, kits				
Hard disk	250 GB, blank	All models	**HMI YHDD 0250 11**	–
Flash disk (SLC technology SSD)	32 GB, blank	All models	**HMI YSDD 0032 11**	–
Compact Flash card (SLC technology)	2 GB, blank	All models	**HMI YCF S02 11**	–
	4 GB, blank	All models	**HMI YCF S04 11**	–
	8 GB, blank	All models	**HMI YCF S08 11**	–
DVD-RW drive for "Slide-In" rack	CD-RW and DVD-RW reader/writer	Magelis BOX PC, 2 PCI and 5 PCI slots	**HMI YDR DVDRW 11**	–
"Slide-In" adapter for storage disk	Used to insert a hard disk or an SSD Flash disk in a "Slide-In" rack	Magelis BOX PC, 2 PCI and 5 PCI slots	**HMI YAD SLIDEIN 11**	–
Additional DVI interface	Provides a second DVI interface	Magelis BOX PC, 2 PCI and 5 PCI slots	**HMI YIN DVI RGB 11**	–
DVI/VGA RGB adapter	For connecting an RGB screen to the integrated DVI port	All models	**HMI YAD DVI RGB 11**	–
RAID PCI card with 2 redundant hard disks	PCI card equipped with two 250 GB redundant hard disks	All models	**HMI YRAID PCI 11**	–
Hard disk for RAID PCI card	Replacement hard disk for RAID PCI card HMI YRAID PCI 11	RAID PCI card HMI YRAID PCI 11	**HMI YRAID D0250 11**	–
Additional serial link interface	RS232C/RS422/RS485 serial link	All models	**HMI YBIN SL 11**	–
Backup power supply kit	Provides an uninterruptible power supply. Includes: ■ 1 backup battery ■ 1 x 3 m cordset	Magelis BOX PC configured with battery-backed power supply interface module *(1)*	**HMI YUPS KT 11**	–
Power supply filter for marine certification	Necessary for compliance with marine certification.	Magelis BOX PC HMI BUCN D1E01 and HMI BUFN D●P●1	**HMI YLFI MAR 11**	–
Maintenance kit for BOX PC	Includes: ■ 1 x 3-way removable connector for 24 V ⎓ power supply ■ 15 replacement filters for fan, including: □ 5 for Magelis BOX PC - 1 PCI □ 5 for Magelis BOX PC - 2 PCI □ 5 for Magelis BOX PC - 5 PCI	All models	**HMI YBMKT 11**	–
Software				
Vijeo Designer Run Time licence for 1 workstation	Converts the 21-day trial version of Vijeo Designer Run Time Demo to an unlimited licence.	All models	**VJDSNRTMPC**	–
Intelligent Data Service extension licence for Vijeo Designer Run Time for 1 workstation	Used to track the process variables and all operator actions, and offers visibility of the key process values.	All models	**VJDSNTRCKV60M**	–
External Phaseo power supply				
Phaseo regulated switch mode power supply ABL 8 Rail mounting	Input voltage: 100…120 V/200…500 V ∿ *(2)* Output voltage: 24 V ⎓ Power: 120 W	All models	**ABL 8RPS24050** *(3) (4)*	0.700
Phaseo regulated switch mode power supply ABL 4 Rail mounting	Input voltage: 100…230 V ∿ *(2)* Output voltage: 24 V ⎓ Power: 120 W	All models	**ABL 4RSM24050** *(3) (4)*	0.500

(1) For configured Magelis BOX PC, see page 3/30.
(2) Single-phase connection. Phase-to-phase connection possible on certain American line supplies, consult your Customer Care Centre.
(3) If adding a PCI card, you need to select a Phaseo power supply with a power rating suitable for the extra consumption. Please consult the "Phaseo power supply and transformer" catalogue on our website www.schneider-electric.com.
(4) To order this reference, please consult your Customer Care Centre.

Configured Magelis BOX PC industrial PC

With the "configured *i*PC" service, Schneider Electric offers more than 240,000 options for configuring the Magelis BOX PC industrial PC.

This service, available exclusively from your Customer Care Centre, allows users to configure a certified product suitable for specific automation applications and environments, based on Universal and Performance Magelis BOX PC.

Your Customer Care Centre draws up:
- The complete parts list for the configured Magelis BOX PC
- Its selling price
- The complete reference (root + code which varies according to the configuration)
- A purchase order

Ordering procedure for a configured Magelis BOX PC

1 Please consult your Customer Care Centre.
2 Give the reference root **HMI PCCB** corresponding to a request for a configured Magelis BOX PC. It will be completed with the variable part of the reference, once configuration is complete.
3 Configure your Magelis BOX PC (see table below)
4 Confirm your order.

References

Description		Reference	Weight kg
Configured Magelis BOX PC *(1)*	Reference root to be indicated to your Customer Care Centre. The configuration should be made up from the components below.	**HMI PCCB** *(2)*	–

Description	Available on Magelis BOX PC base		Reference	Weight kg
	Universal	**Performance**		
	Intel® ATOM™ N270 processor (1.6 GHz) RAM DDR2 24 V ⎓ power supply	**Intel® Core™ 2 Duo P8400 processor (2.26 GHz) RAM DDR3 24 V ⎓ power supply**		
RAM	2 GB max. (DDR2)	8 GB max. (DDR3)	*(2)*	–
Peripheral storage devices	Compact Flash card 8 GB max. (SLC technology)			
	Up to 2 Flash disks ≥ 32 GB (SLC technology SSD)			
	Up to 2 hard disks ≥ 250 GB			
Other peripheral device	DVD-RW drive			
Configuration of PCI slots	1 PCI or 1 PCI Express®			
	1 PCI + 1 PCI Express® or 2 PCI			
	2 PCI + 3 PCI Express® or 5 PCI			
Operating systems	Windows® Embedded Standard 2009			
	Windows® Embedded Standard 7 32-bit			
	Windows® XP PRO SP3			
	Windows® 7 Ultimate 32-bit			
	Windows® 7 Ultimate 64-bit			
Software	Vijeo Designer Run Time			
	Vijeo Citect			
Assembled options	RAID PCI card with 2 redundant hard disks			
	Interface module for backup power supply required for the HMI YUPS KT 11 backup power supply kit (see page 3/29)			
	Additional RS232C/RS422/RS485 serial link interface			
	Additional DVI interface (needs a configuration with 2 or 5 PCI slots)			

(1) Please consult your Customer Care Centre.
(2) The reference of configured Magelis BOX PC industrial PCs is made up of a root (HMI PCCB) followed by a variable part generated during configuration.

Industrial PCs
Magelis BOX PC
Equivalent product tables

Old industrial PCs		Replaced by Magelis BOX PCs	
Designation	**Reference**	**Designation**	**References**
Magelis Smart BOX		**Magelis BOX PC (1 PCI slot)**	
Magelis Smart BOX 100…240 V ∼	**MPC SN0 1NAJ 00T**	Universal Magelis BOX PC	**HMI BUCN D1E01 + Phaseo power supply** *(1)*
Magelis Smart BOX 24 V ⎓	**MPC SN0 1NDJ 00T**	Universal Magelis BOX PC	**HMI BUCN D1E01**
Magelis Compact PC BOX (1 PCI slot)		**Magelis BOX PC (1 PCI slot)**	
Magelis Compact PC BOX 100…240 V ∼	**MPC KN0 2NAX 00N**	Universal Magelis BOX PC	**HMI BUHN D1P01 + Phaseo power supply** *(1)*
Magelis Flex PC BOX F (2 PCI slots)		**Magelis BOX PC (2 PCI slots)**	
Magelis Flex PC BOX (Celeron M) 100…240 V ∼	**MPC FN0 2NAX 00N**	Universal Magelis BOX PC	**HMI BUHN D2P01 + Phaseo power supply** *(1)*
Magelis Flex PC BOX (Celeron M) 24 V ⎓	**MPC FN0 2NDX 00N**	Universal Magelis BOX PC	**HMI BUHN D2P01**
Magelis Flex PC BOX (Core Duo) 100…240 V ∼	**MPC FN0 5NAX 00N**	Performance Magelis BOX PC	**HMI BPHD D2701 + Phaseo power supply** *(1)*
Magelis Flex PC BOX (Core Duo) 24 V ⎓	**MPC FN0 5NDX 00N**	Performance Magelis BOX PC	**HMI BPHD D2701**
Magelis Flex PC BOX (Core Duo) 100…240 V ∼	**MPC FN0 5MAX 00N**	Performance Magelis BOX PC	**HMI BPFD D2701 + Phaseo power supply** *(1)*
Magelis Flex PC BOX (Core Duo) 100…240 V ∼ Vijeo Citect Full 500 I/O	**MPC FN0 5MAX 00V**	Performance Magelis BOX PC Vijeo Citect Full 500 I/O	**HMI BPFD D27F1 + Phaseo power supply** *(1)*
Magelis Flex PC BOX H (4 PCI slots)		**Magelis BOX PC (5 PCI slots)**	
Magelis Flex PC BOX (Celeron M) 100…240 V ∼	**MPC HN0 2NAX 00N**	Performance Magelis BOX PC	**HMI BPHD D5701**
Magelis Flex PC BOX (Core Duo) 100…240 V ∼	**MPC HN0 5NAX 00N**	Performance Magelis BOX PC	**HMI BPHD D5701 + Phaseo power supply** *(1)*
Magelis Flex PC BOX (Core Duo) 100…240 V ∼ with backup battery	**MPC HN0 5NBX 00N**	Configured Magelis BOX PC *(2)*	**HMI PCCB 1B5CB26K10N + HMI YUPS KT11 kit + Phaseo power supply** *(1)*
Magelis Flex PC BOX (Core Duo) 24 V ⎓	**MPC HN0 5NDX00N**	Performance Magelis BOX PC	**HMI BPHD D5701**
Magelis Flex PC BOX (Core Duo) 100…240 V ∼	**MPC HN0 5MAX 00N**	Performance Magelis BOX PC	**HMI BPFD D5701 + Phaseo power supply** *(1)*
Magelis Flex PC BOX (Core Duo) 100…240 V ∼ Vijeo Citect Full 500 I/O	**MPC HN0 5MAX 00V**	Performance Magelis BOX PC Vijeo Citect Full 500 I/O	**HMI BPFD D57F1 + Phaseo power supply** *(1)*

(1) ABL 8RPS24050 or ABL 4RSM24050 Phaseo power supply, see page 3/29.
(2) See page 3/30.

Industrial PCs
Magelis *i*Display

Industrial PCs		Magelis *i*Display external flat screens	
Model		**15" touch screen**	**15" touch screen and keypad**
			
Screen	Type	15" XGA active matrix colour TFT LCD	15" SXGA active matrix colour TFT LCD
	Definition	1024 x 768	1280 x 1024
	Number of colours	16,777,216	
	Brightness	≥ 200 cd/m² adjustable	
	Backlighting service life	50,000 hours	
Touch screen		Analog resistive, 35 million cycles	
Keypad		–	70 standard IBM keys 2 x 20 user function keys
I/O ports	On the front panel	1 x USB 2.0 type A	
	Other	1 x VGA video (analog RGB, 15-way male SUB-D) 1 x DVI-D video (analog RGB, 24-way male DVI-D) 1 x USB 2.0 type B 1 x COM1 (RS 232C, 9-way male SUB-D)	
Standards and certifications		UL 508, CSA, IEC 61131-2	UL 1604, UL 508, IEC 61131-2
Power supply		100…240 V ∼ (98...264 V), according to EN 61131-2	100…240 V ∼
Consumption		120 VA max.	200 VA max.
Degree of protection		IP 65 for the front of the screen IP 20 for the sides and back of the screen	
Dimensions	Overall dimensions (W x H x D)	395 x 294 x 60 mm	483 x 365 x 31 mm
	Cut-out (W x H)	383.5 x 282.5 (+1, -0) mm	441.5 x 313.5 (+1, -0) mm
Environment	Operating temperature	0...50°C, according to EN 61131-2 and UL	
	Vibration resistance	Conforming to JIS B 3501 and IEC 61131-2 standards: ■ 5...9 Hz, 3.5 mm fixed amplitude ■ 9...150 Hz: constant acceleration of 1 g (9.8 m/s²) ■ X, Y, Z directions tested 10 times (100 minutes)	
Type		**MPC YT5 0NAN 00N**	**MPC NB5 0NAN 00N**
Pages		3/35	

Magelis iDisplay external flat screens

19” touch screen

SXGA active matrix colour TFT LCD
1280 x 1024
16,777,216
≥ 200 cd/m² adjustable
50,000 hours
Analog resistive, 35 million cycles
–
1 x USB 2.0 type A
1 x VGA video (analog RGB, 15-way male SUB-D) 1 x DVI-D video (analog RGB, 24-way male DVI-D) 1 x USB 2.0 type B 1 x COM1 (RS 232C, 9-way male SUB-D)
UL 508, CSA, IEC 61131-2
100…240 V ∼ (85...265 V), according to EN 61131-2
200 VA max.
IP 65 for the front of the screen IP 20 for the sides and back of the screen
460 x 390 x 65 mm
419.5 x 352.5 (+1, -0) mm
0...50°C, according to EN 61131-2
Conforming to JIS B 3501 and IEC 61131-2 standards: ■ 5...9 Hz, 3.5 mm fixed amplitude ■ 9...150 Hz: constant acceleration of 1 g (9.8 m/s²) ■ X, Y, Z directions tested 10 times (100 minutes)

MPC YT9 0NAN 00N

3/35

Industrial PCs
iDisplay flat screens

MPC YT5 0NAN 00N

MPC NB5 0NAN 00N

Presentation

Magelis iDisplay screens are monitors with industrial flat screens designed for use in conjunction with PCs.

Two screen sizes are available: 15” and 19” to suit all your requirements.

Featuring the latest TFT LCD technology, they offer top class viewing and extended service life. Their touch screen interface enables easy creation of user-friendly and high performance HMI interfaces.

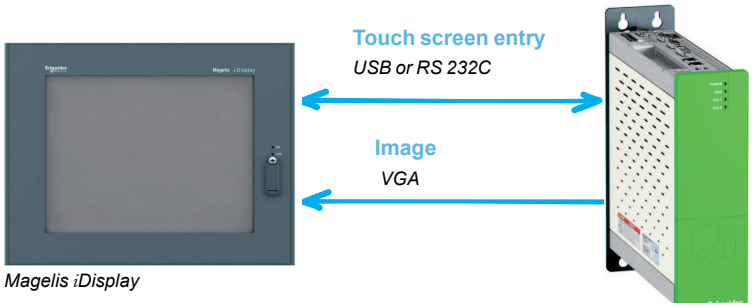
The Magelis iDisplay screen **MPC NB5 0NAN 00N** also has a 70-key (standard IBM) keypad and user function keys (2 x 20 keys).

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

With the same dimensions and screen size as Magelis Smart and Compact iPC, Magelis iDisplay screens can be used to visualize the development of installations with optimum ease and simplicity.

Architecture

Magelis iDisplays are compatible with CPUs in the Magelis BOX PC and Magelis Flex PC BOX ranges.



Magelis iDisplay

Magelis BOX PC

Industrial PCs
iDisplay flat screens

References

Description	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 keypad	**MPC NB5 0NAN 00N**	–
	19", SXGA (1280 x 1024)	Touch	**MPC YT9 0NAN 00N**	–

Separate components

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

Mounting

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

Contents

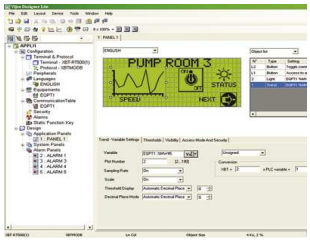
4 - HMI software

Configuration software

4

HMI software

Applications		**Traditional architecture, HMI executed on dedicated terminal PC platform** **Configuration software for operator dialogue applications**



Compatible products	Type	Magelis XBT N/R/RT Small Panels *(1)*
	Maximum number of targets	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	–
Internationalization		–
Development of graphic applications	Native library of graphic objects	Yes
	Curves and alarms	Yes *(2)*
	Scripts	–
Communication between HMI application and PLCs		Via I/O drivers: Schneider Electric or third party protocols (Mitsubishi, Omron, Rockwell Automation, Siemens) *(3)*
Uploading of applications		Yes
Simulation of HMI applications		Yes
Recipe management		–
Report and barcode printing		–
Screen capture		–
Access security		Linked to user profiles
Interface languages		Screens, online help and documentation in electronic format available in 6 languages: English, French, German, Italian, Simplified Chinese and Spanish
OS compatibility		Windows XP Professional, Windows Vista Business (32-bit), Windows 2000 Professional
Software type		**Vijeo Designer Lite**
Page		4/7

(1) All Magelis XBT terminals behave transparently on restoration of power.
(2) Depending on compatible product.
(3) See protocols supported on page 4/6.
(4) See protocols supported on page 4/12.

Traditional architecture, HMI executed on dedicated terminal PC platform

Configuration software for operator dialogue applications

Magelis STO/STU Small Panels Magelis XBT GT Advanced Panels/GK/GH/GTW *(1)* Magelis Industrial PCs
32
Proprietary for Magelis STO/STU and Magelis XBT GT/GK/GH Windows XP embedded for Magelis GTW
Yes, up to 8000 internal and external variables
Yes
Yes, using expression editor or Java programming
Up to 300 variables between 8 terminals, without router PLC Proprietary protocol above TCP/IP
Yes, with the Intelligent Data Service extension
Up to 15 languages supported by 34 western alphabets, 4 Asian alphabets and 2 middle eastern alphabets embedded in the application
Yes
Yes, with log
Java
Via I/O drivers: Schneider Electric or third party protocols (Mitsubishi, Omron, Rockwell Automation, Siemens) *(4)*
Yes
Yes
Yes, up to 32 groups, 1024 ingredients for 256 recipes per group, proprietary or CSV format, complete multilingual support for labels and ingredients
On the fly alarms, log data. Up to 9999 active alarms, record or logs Main barcode types supported: UPC-A, UPC-E, JAN/EAN8, JAN/EAN13, ITF, CODE39, CODE93, CODE128, CODABAR (NW-7)
Yes, for Magelis XBT GT (XBT GT 1105 and higher) and Magelis Industrial PCs. JPEG format
Linked to user profiles
Screens, online help and documentation in electronic format available in 7 languages: English, French, German, Italian, Brazilian Portuguese, Simplified Chinese and Spanish
Windows XP Professional, Windows Vista Business (32-bit), Windows 7 Business (32-bit)

Vijeo Designer

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HMI software
Vijeo Designer Lite configuration software

Vijeo Designer Lite software

Presentation

Vijeo Designer Lite configuration software allows you to create operator dialogue applications for Magelis XBT N/R/RT Small Panels for controlling simple automation systems.

For Magelis STO/STU Small Panels and Magelis GT/GK/GH/GTW Advanced Panels, refer to the Vijeo Designer configuration software on pages 4/8 to 4/10.

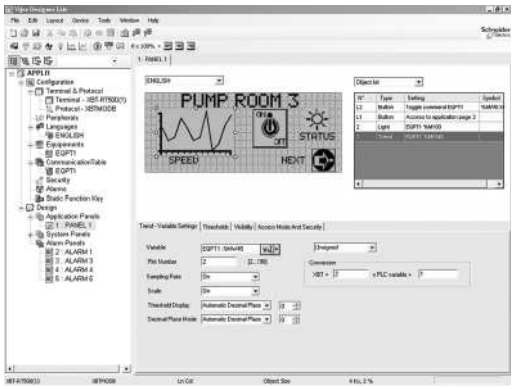
Vijeo Designer Lite has been designed with simplicity in mind and is inspired by the same user-friendly philosophy as Vijeo Designer. The primary aim of Vijeo Designer Lite is to show users who have not had any prior training how to create applications. It does this by adopting an intuitive approach to operation and providing advice in the form of wizards.

Vijeo Designer Lite is used to design page content in WYSIWYG (*What You See Is What You Get*) format: everything created using this software is displayed in exactly the same way as it appears on the dialogue terminal screen.

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

The interface and documentation for Vijeo Designer Lite are available in 6 languages: English, French, German, Italian, Simplified Chinese and Spanish.

Since applications created with Vijeo Designer Lite are independent of the communication protocol used, the same 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.



Example project

Configuration

With Vijeo Designer Lite configuration software, operator dialogue applications can be developed quickly and easily using 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 can be clearly displayed at any time.
- Dialogue view: This displays the contextual information for the selection made in the application browser. This information is arranged on a tab.

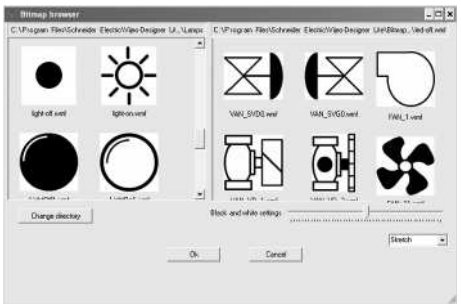
Vijeo Designer Lite applications have different types of pages:
- Application pages, which can be interlinked
- Alarm pages
- Preconfigured system pages

Pages can contain text or bitmaps, as well as all kinds of variables and graphic objects.

Applications can be configured without dialogue boxes. Instead of dialogue boxes, 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

Selection guide: page 4/2
References: page 4/7

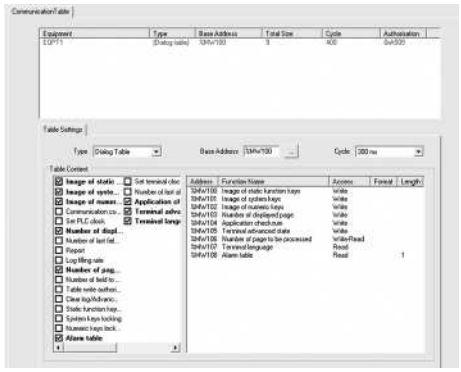
HMI software
Vijeo Designer Lite configuration software



Symbols library

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

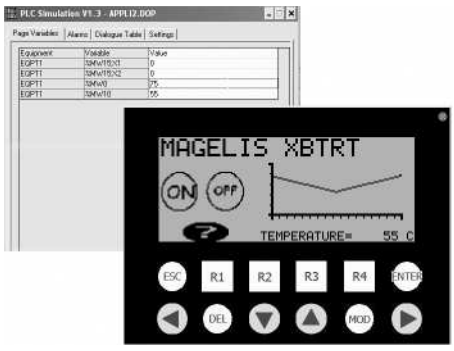
Symbols library
The symbols library makes the process of creating pages more efficient. It contains pictograms which are easily recognizable within industrial contexts as well as drawings of the main components used in automation.
With Vijeo Designer Lite, linking of these these graphic symbols to the function keys of the terminal is instantaneous.



Communication table

Links with PLC variables
Vijeo Designer Lite also enables the user to easily 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 is also used to define:
- Access to data: read/write
- All the alarm conditions



Simulation

Simulator
Vijeo Designer Lite makes it possible to simulate the entire operator dialogue 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
- Display of variables
- Display of alarms

Application printing
You can print all or part of the HMI application using the Vijeo Designer Lite print function. It is possible to send the data to a printer or to print to file.

Selection guide: page 4/2
References: page 4/7

Protocols for communication between the HMI application and the PLCs

Communication between the operator dialogue application and the connected control equipment is established using a communication protocol (driver), which is selected when creating the application in Vijeo Designer Lite.

Schneider Electric protocols

Vijeo Designer Lite supports the following Schneider Electric protocols:
- Modbus RTU Master/Slave
- Unitelway
- Zelio Logic

Third-party protocols

Vijeo Designer Lite supports the following third-party protocols:
- Mitsubishi:
  - Melsec FX protocol (CPU)
- Omron:
  - Sysmac protocols
- Rockwell Automation:
  - Allen Bradley protocols: DF1-Full Duplex, RS DataHighway 485
- Siemens:
  - Simatic PPI protocols

Selection guide:
page 4/2

References:
page 4/7

HMI software
Vijeo Designer Lite configuration software

VJD SUD TMS V13M

References

Licences for the Vijeo Designer Lite configuration software listed below consist of a CD-ROM containing:
- Vijeo Designer Lite V1.3 software
- User documentation in electronic format
- The communication protocols described on page 4/6
- XBT L1001 development software for converting existing XBT applications

Single-station licences

Description	Licence type	Application transfer cable		Reference	Weight kg
		PC side port	Magelis terminal side		
Vijeo Designer Lite configuration software	*Single* (1 station)	–	*– (1)*	**VJD SND TMS V13M**	0.125
		USB	Magelis XBT N/R/RT *(2)*	**VJD SUD TMS V13M**	0.675

(1) References for application transfer cables (PC to Magelis XBT N/R/RT terminal) are listed under "Connection to PCs and printers" on page 1/24.
(2) USB cable for PC **TSX CUSB 485** *connection and XBT adaptor for USB cable* **XBT Z925** *included (see page 1/24).*

4

HMI software
Vijeo Designer configuration software

Vijeo Designer software

Example project

Presentation

The cross-platform Vijeo Designer configuration software can be used to create operator dialogue applications for controlling automation systems for:
- Magelis STO and STU terminals (Vijeo Designer Limited Edition is sufficient)
- Magelis XBT GT and XBT GK terminals
- Magelis XBT GH portable terminals
- Magelis GTW open terminals
- Magelis Smart industrial PCs, Magelis Compact *i*PC and PC BOX

Note: *For semi-graphic terminals Magelis XBT N/R/RT, please refer to the Vijeo Designer Lite development software.* ***Magelis XBT G terminals are no longer supported.***

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.

Capable of supporting video image streaming, the Magelis Vijeo Designer offer provides access to new types of application. Users can view their process instantly or subject to a delay, on the same screen as the HMI dialogue.

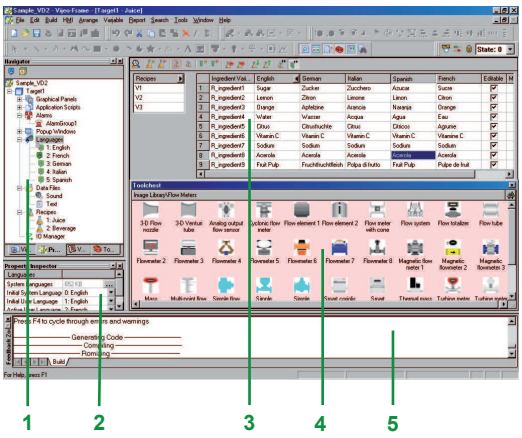
Vijeo Designer uses Magelis Ethernet TCP/IP connectivity and is, therefore, able to support WEB Gate remote access, the sharing of application data between terminals, the transfer of recipes and logs for variables, and much more - all with total security.

Applications can take on an international nature, because Vijeo Designer supports 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, Brazilian Portuguese, Simplified Chinese and Spanish.

Vijeo Designer is the HMI component of SoMachine. Vijeo Designer will run on any PC with Windows XP Professional, Windows Vista or Windows 7. It supports WYSIWYG simulation *(1)* of the developed application (without the target Magelis GT/GK/GTW terminal or Magelis *i*PC), simulation of the PLC variables (I/O, internal bits and words) and ensures that the application runs in total security on the Magelis GT/GK/GTW terminal or Magelis industrial PC.

Configuration

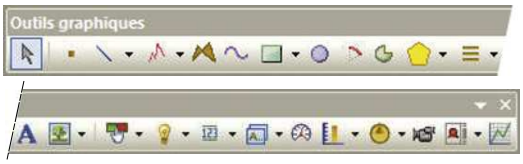
Vijeo Designer configuration software enables operator dialogue projects to be processed quickly and easily thanks to its advanced ergonomics using up to 5 configurable windows:
1. Browser window
2. Object List window
3. Recipes window
4. Library of Animated Graphic Objects and Image Objects window
5. 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 Magelis 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 views for an application
- A full simulation mode for testing the application from the design office
- Bar code reader management via:
  - USB port on multifunction XBT GT terminals, Magelis GT/GK/GTW keypad terminals and Magelis industrial PCs
  - COM1 or COM2 serial port on Magelis GT/GK/GTW *(2)*
- USB keyboard and mouse support for all terminals incorporating a USB port (only one peripheral can be connected at any one time)
- Retrieval of symbol files for PLC variables generated by TwidoSuite, PL7, Concept, ProWORX 32 and Unity Pro software *(3)*
- Report printing
- Barcode printing

(1) What You See Is 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

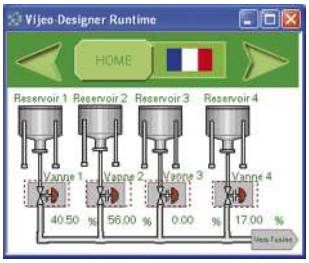


Graphic toolbar

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 views easily based on:

- Simple objects to be configured:
  - points, lines, rectangles, ellipses, arcs
  - bar graphs, meters, 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 animation example

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 color
- Filling
- Movement
- Rotation
- Size
- Visibility
- Display of associated value

Library of animated graphic objects

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 2-D and 3-D “industrial” vector images. 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 data processing 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);
}
```

Java script example

User-customizable resources

To enable applications to be customized in accordance with customer requirements, Vijeo Designer features a new resource concept that makes it possible to define styles (colours, images, character fonts, text lists).
To quickly customize a generic application to meet customer requirements, 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*.

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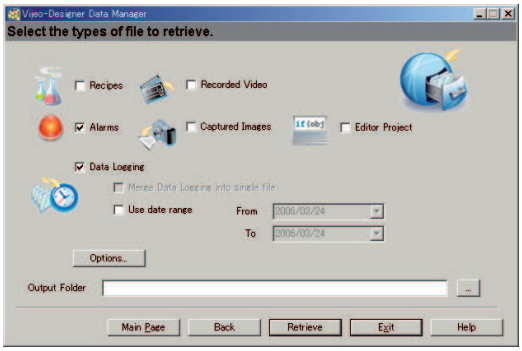
HMI software
Vijeo Designer configuration software



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

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
- Zoom in/out function on trending curves for a detailed analysis
- Alarm management. All variables can be categorized as “Alarms” and can be customized in respect of visualization and acknowledgment. These Boolean and analogue threshold type alarms can be printed on the fly.
- 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 iPC 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 Magelis GT/GK/GTW and Magelis iPC
- Multiport communication for multifunction terminals, 2 serial links and 1 Ethernet network can be active simultaneously
- Action table for associating a particular behavior with an event
- Use of a USB memory stick (up to 4 GB) for application downloads/uploads, data retrieval or recipe exchange
- E-mail on action and event (the e-mail text can contain up to 1000 characters)

Alarm management

WEB Gate remote connection

Vijeo Designer supports a WEB Gate remote connection with any platform which has an Ethernet connection point.

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).
Several connections are possible at the same time, with the number depending on the size of the application.
The high security mode of WEB Gate 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
  - reading of an acoustic animation (sound file)
  - display a recorded video sequence

Report printing

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 following functions:

- WEB Gate
- Animation tables
- Web interface for retrieving data files (recipes, logs, multimedia files)

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 website www.schneider-electric.com

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Integrated diagnostics

Vijeo Designer can be used to access the “Diag buffer” function of Modicon M340/ Premium/Quantum PLCs 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

Intelligent Data Service option

Intelligent Data Service (IDS) is an extension of Vijeo Designer for the target PC (Magelis or standard PC) which supports the implementation of control solutions for one or a number of terminals (up to 8).

This extension offers full process traceability. Both process variables and operator actions are tracked so that the right decisions can be made at the right time *(Industrial Business Intelligence)*.

Powerful

The IDS extension enables data to be collected from multiple terminals via Ethernet without impairing HMI reaction times.

Flexible

The IDS extension supports various storage methods; CSV files can be read directly in MS Excel, saving as free format in an SQL database or secure IDV (*Intelligent Data Vault*) files to ensure compatibility with the requirements of 21 CFR Part 11.

Innovative

In just a few clicks of the mouse, the IDS extension allows you to create dashboards that can be accessed from any WEB browser (Silverlight) as well as clear and well organized reporting documents.

Intelligent Data Service Report Printing option

Intelligent Data Service (IDS) Report Printing is an extension of Intelligent Data Service for the PC (Magelis or Standard PC).
This extension allows you to create new reports “from scratch” and link them to IDS data.

In addition to editing functions, IDS Report Printing allows you to preview the report before printing, print it or save it to file on disk.

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Communication protocols between the HMI application and the PLCs

Communication between the operator dialogue application and the connected control equipment is established using a communication protocol (driver), which is selected when creating the application in Vijeo Designer.

Schneider Electric protocols

Vijeo Designer supports the following Schneider Electric protocols:
- Modbus RTU Master
- Modbus TCP/IP Master
- Modbus Plus *(1)*
- Modbus 32-bit extensions
- ELAU PacDrive (ELAU C00x/LMCx00)
- Unitelway
- UniTE TCP/IP
- USB terminal port for Modicon M340 CPUs
- FIPIO *(2)*, FIPWAY *(2)*

All Schneider Electric drivers provide IEC access to input bits/words and output bits/words: Modbus (RTU and TCP/IP), Modbus Plus (GMU and USB), Uni-Telway, Xway.

Direct I/O access authorizes access to the 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 supports the following third-party protocols:

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), QUTE for Q00JCPU.

Except for Melsec-A Link (SIO) protocol, 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 *(3)*.

Rockwell Automation

Allen-Bradley protocols: DF1-Full Duplex, RS DataHighway 485, Ethernet IP *(4)* (PLC5, SLC500, MicroLogix, ControlLogix), Ethernet IP native *(3)* (ControlLogix), Ethernet IP High Speed access, DeviceNet Slave *(6)*.

Siemens

Simatic protocols: MPI (S7-300/400), MPI Direct, RK512/3964R (S7-300/400), PPI, Siemens Ethernet (ISO-on-TCP/Profinet), MPI pass-through function.

The S7-300/400 MPI Adapter and RK512/3964R - RS485 connection serial link protocols do not work on the RJ45 port *(3)*.

Profibus DP protocol *(5)*.

Migration of XBTL 1000 applications

The **Switch2VijeoDesigner** service offer makes it even easier to migrate XBTL 1000 applications created on XBT F terminals to Vijeo Designer applications for use on XBT GT/GK terminals.
For further information on this service offer, please consult your Customer Care Centre.

(1) Via USB Modbus Plus gateways: **XBT ZGUMP** *for Magelis XBT GT 2●●● and higher,* **TSX CUSBMBP** *for Smart and Compact iPC (see page 1/57).*
(2) Via USB FIPIO gateway **TSX CUSB FIP** *(see page 1/57).*
(3) They are supported on XBT GT (SUB-D connector, XBT GT2 and higher).
(4) Certified ODVA compatibility.
(5) Via Profibus DP Bus expansion card **XBT ZGPDP** *(see page 1/57). Certified by Profibus Foundation.*
(6) Via Device Net Bus expansion card **XBT ZGDVN** *(see page 1/57).*

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HMI software
Vijeo Designer configuration software

VJD SUD TGA V60M

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 for the software
- □ 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 supported communication protocols

Note: *Magelis STO/STU terminals can be programmed using Vijeo Designer Limited Edition. Vijeo Designer V6.0 supports applications created with any version of Vijeo Designer ≥ V4.6.*
If you are updating an earlier application, please consult your Schneider Electric Customer Care Centre.

Single-station Build Time licences

Description	Licence type	Application transfer cable		Reference	Weight kg
		PC side port	Magelis terminal side		
Vijeo Designer configuration software	*Single* (1 station)	–	*– (1)*	**VJD SND TGS V60M**	0.125
		USB	Magelis STO/STU Magelis GT/GK/GH/GTW Magelis industrial PCs *(2)*	**VJD SUD TGA V60M**	0.330

Multi-station Build Time licences

Description	Licence type	Number of stations	Reference	Weight
Vijeo Designer configuration software	*Group*	3	**VJD GND TGS V60M**	0.125
	Team	10	**VJD TND TGS V60M**	0.125
	Facility	Unlimited number of stations on one site	**VJD FND TGS V60M**	0.125

Run Time licences *(3)*

Description	Licence type	Number of stations	Reference	Weight
Vijeo Designer Run Time licence for Magelis GTW & iPC	*Single*	1	**VJDSNRTMPC**	–
Intelligent Data Service licence extension for Vijeo Designer Run Time	*Single*	1	**VJDSNTRCKV60M**	–
Intelligent Data Service Report Printing for IDS	*Single*	1	**VJDSNTRPRV60M**	–
Vijeo Designer Run Time IDS Report Print pack *(4)*	*Single*	1	**VJDSNTRPKV60M**	–

(1) References for application transfer cables (PC to Magelis GT/GK/GH/GTW terminal) are listed under "Application transfer cables - terminal to PC" on page 1/52.
(2) USB cable for PC connection included, for Magelis XBT 2●●● and higher: **XBT ZG935** *(see page 1/52).*
(3) The Run Time licence drives the execution of an application. It is only used for Magelis industrial PCs and Magelis GTW terminals.
(4) Pack of 3 licences: Vijeo Designer Run Time licence for Magelis iPC, Intelligent Data Service licence extension and Intelligent Data Service Report Printing licence extension.

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Contents

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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.

Abbreviation	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

Abbreviation	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	United Kingdom
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 1st June 2010 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

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Product certifications

Certified
Certification pending

	Certifications									
	UL	CSA	ACA	GOST	Hazardous locations (1) Class I, div 2	INERIS	TÜV Rheinland	BG	SIMTARS	AS-Interface
	USA	Canada	Australia	CIS, Russia	USA, Canada	Europe		Germany	Australia	Europe
Modicon OTB										
Modicon STB					FM	Cat. 3 G *(2) (5)*				
Modicon Telefast ABE 7										
ConneXium					*(2)*					
Magelis BOX PC	*(3)*				UL *(3)*	Cat. 3 D *(8)*				
Magelis iPC/GTW	*(3)*	*(2)*		*(2)*	UL	*(2) (5)*				
Magelis XBT GT		*(2)*		*(2)*	CSA/UL *(2)*	Cat. 3 G-D/ 3D *(2) (5)*				
Magelis XBT GK	*(3)*				CSA/UL					
Magelis XBT N/R/RT					CSA/UL	Cat. 3 G-D *(5)*				
Magelis HMI STO/STU	*(2) (3)*			*(2)*	UL *(2) (3)*	*(2)*				
Modicon M340					CSA	IEC Ex ia I *(2) (6)*				*(2)*
Modicon Momentum										
Modicon Premium				*(2)*	CSA			*(2)*	*(2)*	*(2)*
Modicon Quantum				*(2)*	FM *(2)*					
Modicon Quantum Safety				*(2)*	CSA		SIL 2, SIL 3 *(7)*			
Preventa XPSMF							SIL 3 *(7)*			
Modicon TSX Micro								*(2)*		*(2)*
Phaseo	*(3)*									
Twido	*(4)*	*(4)*			CSA/UL *(4)*					*(2)*

(1) ***Hazardous locations*** *: According to UL 1604, ANSI/ISA 12.12.01, CSA 22.2 No. 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) Except for AS-Interface module ***TWD NOI 10M3****, CE only.*
(5) For zones are not covered by this specification, Schneider Electric offers a solution under the CAPP program (Collaborative Automation Partner Program). Consult our Customer Care Centre.
(6) Certified by Test Safe.
(7) According to IEC 61508. Certified by TÜV Rheinland for integration into a safety function of up to SIL 2 or SIL 3.
(8) Certified by FTZÜ.

Merchant navy certifications

Certified
Certification pending

	Shipping classification societies									
	ABS	BV	DNV	GL	Korean Register of Shipping	LR	RINA	RMRS	RRR	PRS
	USA	France	Norway	Germany	Korea	Great Britain	Italy	CIS	CIS	Poland
Modicon OTB										
Modicon STB	*(1) (2)*	*(2)*	*(2)*	*(2)*		*(2)*	*(2)*	*(2)*	*(2)*	
Modicon Telefast ABE 7										
ConneXium										
Magelis BOX PC				Bridge *(2)*						
Magelis iPC/GTW										
Magelis XBT GT	*(2)*	*(2)*	*(2)*	*(2)*		*(2)*	*(2)*	*(2)*	*(2)*	
Magelis XBT GK										
Magelis XBT N/R										
Magelis XBT RT										
Magelis HMI STO/STU		*(2)*								
Modicon M340								*(2)*	*(2)*	
Modicon Momentum										
Modicon Premium										
Modicon Quantum										
Modicon TSX Micro										
Phaseo										
Twido										

(1) Also covers US Navy requirements US Navy **ABS-NRV** part 4.
(2) Depends on product; please visit our website: www.schneider-electric.com.

EC regulations

European Directives

The open nature of the European markets assumes harmonization between the regulations set by the various 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 all possible measures to ensure that his products meet the requirements of each Directive that applies to his equipment.
As a general rule, the manufacturer certifies compliance with the essential requirements of the Directive(s) that apply to his product by applying a CE mark.
The CE mark has been applied to our products where applicable.

Significance of the CE mark

- The 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 allowing its free circulation within European Union countries.
- 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)

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