Human/Machine Interfaces

Catalogue







Human/Machine Interfaces

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- Magelis Advanced Panels
- USB tower lights compatible with HMI terminals

2 - HMI Controllers

- Magelis HMI Controllers
- Magelis XBT GT/GK Advanced Panels with control function
- SoMachine software suite

3 - Industrial PCs

- PC Panels Magelis Smart and Compact iPC
- Magelis Panel PC and BOX PC
- Magelis iDisplay flat screens

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| | |
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| | Advanced Panels: |
| | |
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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

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 GK, XBT GH, XBT GTW, XBT GT and HMI GTO, 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

1

Operator dialogue terminals Magelis[™] Small Panels

| Type of terminal | | | | |
|--------------------|-----------------------------|---|--|--|
| | | Small Panels with touch scre | en | |
| | | | | |
| | | Subyredor - Chapeta | | Sdyniter — Dog Magelis STU Magelis STU |
| Jisplay | Туре | Monochrome STN LCD (200 x 80 pixels), backlit - Green, orange and red, or - White, pink and red | Colour QVGATFT LCD (320 x 240 pixels) | |
| | Capacity | 3.4" (monochrome) | 3.5" (colour) | 5.7" (colour) |
| Data entry | | Via touch screen | | |
| Vemory | Application | 16 MB Flash | | |
| apacity | Expansion | - | | |
| unctions | Maximum number of pages | Limited by internal FLASH EPR | COM memory capacity | |
| | Variables per page | Unlimited | | |
| | Representation of variables | Alphanumeric, bitmap, bargrap | h, 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 clo | ck | |
| | Alarm relay | _ | | |
| | Buzzer | Yes | | |
| Communication | Asynchronous serial link | RS 232C/RS 485 (1) RS 232C using Zelio protocol (2 | RS 232C/RS 485 2) | |
| | Downloadable protocols | Uni-TE, Modbus and for PLC bi | rands: Allen-Bradley, Omron, Mitsu | ıbishi, 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 (10BAS | SE-T/100BASE-TX) |
| Dovelopment coffin | | Viico Designer (on Windows V | Derofossional and Windows 7 Due | inces 32 bit and 64 bit) |
| Operating system | | Magelis | rolessional and willuows / BUS | 1000 02-bit and 04-bit) |
| References | | HMI STO 5●● | HMI STU 655 | HMI STU 855 |
| 2000 | | 1/10 | | |
| aye | | | | |
| | | (1) UNIY HMLSTU 511/512. (2) ONLY HMLSTU 501 | | |

More technical information on www.schneider-electric.com

| 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 4.3417.36 mm | Green, orange or red backlit monochrome LCD, height 4.3417.36 mm | Green, orange or red back LCD (198 x 80 pixels), height 416 mm | lit monochrome matrix | | |
| 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 char | racters (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 | | | |
| 4050 | 4050, bargraph, buttons, LEDs | 50 | | | |
| Alphanumeric | | Alphanumeric, bargraph, b | outtons, LEDs | | |
| - | | | | | |
| Yes | Vec | | | | |
| 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, C | Omron, Mitsubishi, Siemens | | | | |
| RS 232C serial link (5) | | | | | |
| - | | | | | |
| - | | | | | |
| Vijeo Designer Lite (on Windows 2000 Professional, V Magelis | Vindows XP Professional and Windows Vista Business | : 32-bit) | | | |

| XBT N •••• | XBT R ••• | XBT RT 🐽 |
|---------------------|-----------|----------|
| 1/18 | 1/19 | 1/22 |
| (4) Only XBT RT511. | | |

(4) Only XBT R1511.(5) Depending on model.

More technical information on www.schneider-electric.com

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

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.

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

page 1/8 1/6

Presentation (continued)

Operator dialogue terminals Small Panels with touch screen

Small Panels with touch screen Magelis[™] STO, STU



Configuration

Magelis STO/STU terminals can be configured using Vijeo Designer software in a Windows XP Professional or Windows 7 Business (32-bit and 64-bit) 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.

Display of a video sequence



Example of serial link architecture



Example of Ethernet TCP/IP network 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 V6.1.

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

Operator dialogue terminals Small Panels with touch screen Magelis[™] STO 3.4"

1

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 Panels have 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



Description (continued)

Operator dialogue terminals Small Panels with touch screen

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)





Presentation: page 1/6

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

References

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



Magelis STO monochrome touch screen terminals

Magelis STU colour touch screen terminals

Number of ports

1 COM1 (1) 1 ETHERNET (2)

2 USB

Type of screen

3.5" screen

TFT

| 3.4 Screen | | | | | | |
|---------------------------|----------------------------|-----------------------------------|-------------------------|------------------------|-------------|--------------|
| Type of screen | Number of ports | Application memory capacity | Compact Flasi memory | n Embedded Ethernet | Reference | Weight kg |
| STN Green, orange, red | 1 COM1 <i>(1)</i> 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 <i>(1)</i> 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 <i>(1)</i> 2 USB | 16 MB | No | - | HMI STO 501 | 1.000 |



HMI STU 655



| 5.7" screen | | | | | |
|-------------|--|-------|----|---|-------------|
| TFT | 1 COM1 <i>(1)</i> 1 ETHERNET <i>(</i> 2) 2 USB | 16 MB | No | 1 | HMI STU 855 |

Application

memory capacity

16 MB

Compact Flash Embedded

1

Ethernet

memory

No

Reference

HMI STU 655

Weight

kg

1.000

HMI STU 855

| Software | | | |
|------------------------|---|---------------|--------------|
| Configuration software | | | |
| Description | Operating system | Reference | Weight kg |
| Vijeo Designer | Windows XP Professional Windows 7 Business (32-bit and 64-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.

| Presentation: | |
|---------------|--|
| page 1/6 | |

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

| Separate compo | onents (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 500 | HMIZS60 | _ |
| | | HMI STU 655 | HMIZS61 | _ |
| | | HMI STU 855 | HMIZS62 | |
| USB clip | Holds the USB A type connection in place | HMI STO 500 | HMIZSCLP1 | _ |
| | Holds the USB mini-B type connection in place | HMI STO 5●● | HMIZSCLP3 | |

| Replacement p | arts (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.

| 1 | | |
|---|--|---|
| | | 1 |

Description: page 1/8

Presentation: page 1/6

Presentation

Operator dialogue terminals Magelis[™] XBT N, XBT R Small Panels with

Magelis[™] XBT N, XBT R Small Panels with keypad, Magelis[™] XBT RT Small Panels with touch

screen and keypad

Presentation



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

XBT R411



"Entry" customization

F1 F2 F3 F4



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, nonconfigurable, 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)



Presentation (continued)

Operator dialogue terminals Magelis[™] XBT N, XBT R Small Panels with

screen and keypad

Magelis[™] XBT N, XBT R Small Panels with keypad, Magelis[™] XBT RT Small Panels with touch

Configuration



Vijeo Designer Lite

Communication



Connection example with Twido programmable controller

XBT N terminal



Connection example with Zelio Logic smart relay

Magelis terminals can be configured using Vijeo Designer Lite software in a Windows 2000 Professional, XP Professional or Vista Business (32-bit) 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.

XBT N and XBT R/RT terminals communicate with PLCs via an integrated serial link in either point-topoint 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 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.

| Description: | | | | | |
|--------------|--|--|--|--|--|
| page 1/15 | | | | | |

1

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 "touchsensitive" 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 4, ESC, DEL, \mathbf{v} , \mathbf{A} , MOD, ENTER and \mathbf{b} 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



- □ 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

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Operator dialogue terminals Magelis[™] XBT N Small Panels with keypad

Description of XBT N terminals









XBT N200



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)
- Two non-customizable command or contextual link keys 3
- 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

| DEL | O | ٥ | MOD | ←→ | 7 |
|-----|----|----|-----|-------------|-------|
| F1 | F2 | F3 | F4 | ←→ – | 8 |
| | | | | * * | 9 |

- A sheet of labels comprising:
- An "entry" label 7
- 8 A "control" label (F1, F2, F3 and F4)
- 9 Four customizable blank labels
- Two spring clips for fixing the terminal on the panel

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)

| Presentation: | References: |
|---------------|-------------|
| page 1/12 | page 1/18 |
| | |

Schneider

Operator dialogue terminals Magelis[™] XBT R Small Panels with keypad



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)



References:

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Presentation: page 1/12

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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 RT511

F54



XBT RT500



XBT RT511 Presentation: page 1/12

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

1

4 3 2

References:

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References

Operator dialogue terminals Magelis[™] XBT N Small Panels with keypad











XBT ZN01



| Magelis XBT N Sm | nall Panels | | | | |
|--------------------------------|---|------------------------------|---|-----------|--------------|
| Downloadable exchange protocol | Compatible PLCs | Supply voltage | Type of screen | Reference | Weight kg |
| Terminal with 2 lines o | f 20 characters (with alpha | numeric 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 matr | ix 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 Professional, XP Professional and Vista Business (32-bit) | See page 4/7 – |

| Accessories (4) | | | | |
|---|--|-----------------------|-----------|--------------|
| 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 <i>(6)</i> | 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.

Schneider Electric

 (6) 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: page 1/12

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Operator dialogue terminals Magelis[™] XBT R Small Panels with keypad



XBT R400/R410



XBT R411



XBT ZR01



XBT ZR02

Drocontation

| Magelis XBT R Small Panels | | | | | | | | | |
|--------------------------------|---|------------------------------|--|-----------|--------------|--|--|--|--|
| Downloadable exchange protocol | Compatible PLCs | Supply voltage | Type of screen | Reference | Weight kg | | | | |
| Terminals with 4 lines | 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 | _ | | | | | | | |
| a a | | | | | | | | | |

| Sultwale | | |
|---|--|--------------|
| Description | Operating system | Reference |
| Configuration software Vijeo Designer Lite | Windows 2000 Professional, XP Professional and Vista Business (32-bit) | See page 4/7 |

| 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 | From XBT P01•010/P02•010 to XBT R410 | _ | XBT ZRCO | |
| SUBSTITUTION OF XB1 P | 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.

| page 1/12 | page 1/16 | |
|-----------|-----------|--|
| | | |

Description

1

Operator dialogue terminals Equivalent product tables Magelis[™] XBT P/XBT R



| | YPT P | |
|-----------------|-------------|------------------------|
| 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.

XBTZRCO

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 TS | X Micro, Modicon Prem | ium , 8-wa | ay mini-DIN terminal port, | Uni-TE (V1/V2 |), Modbus protocol | | |
| XBTP | RS 485 serial port, | 2.5 m | XBT Z968 | XBT R | RS 485 serial port, | 2.5 m | XBT Z968 |
| | 25-way SUB-D | 5 m | XBT Z9681 | | 25-way SUB-D | 5 m | XBT Z9681 |
| | | 2.5 m, angled | XBT Z9680 | | | 2.5 m, angled | XBT Z9680 |
| Modicon Premium v | with TSX SCY 2160. 25 | -way fema | ale SUB-D connector, Uni | -TE (V1/V2) pro | otocol | | |
| 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 conr | nector, Mc | dbus 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, HE1 | 3 connector (network inte | erface mo | dule, NIM), Modbus proto | looc | | | |
| 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 Momentur | n M1, RJ45 connector (p | ort 1), Mo | dbus 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, AT | TV 31/61/71 drives, ATS | 48 starte | rs, RJ45 connector, Mod | bus 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 S | UB-D connector, Modbus | s protocol | | | |
| XBTP | 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 pr | quivalent 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 applicati | ion 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 | | | | | | | | |
| XBTP | Printer port, 9-way SUB-D | 2.5 m | XBT Z936 | XBT R | Printer port, mini-DIN 8 | 2.5 m | ХВТ Z926 | |

Operator dialogue terminals Equivalent product tables Magelis[™] XBT P/XBT R

| Compa | tibility table - D |)ownlo | adable | e third-party prot | tocols | | | | |
|---------------------------|-----------------------------------|----------------|--------------|--------------------|------------------|-----------------------------------|----------------|--------------|-----------|
| | | | | PLC brand | Compatibility | | | Protocol | name |
| | | | | | XBT P | XBT R | | | |
| | | | | Allen-Bradley | | • | | DF1/DH48 | 35 |
| | | | | GE Fanuc | • | - | | SNPX | |
| | | | | Omron | • | ■ (on RS 232) | | Sysmacw | ау |
| | | | | Siemens | • | • | | PPI | |
| | | | | | • | - | | AS511, 39 | 64R, MPI |
| | | | | | | | | | |
| Equival | ent product ta | ble - Ca | ables f | or connection to | o third-party F | PLCs | | 1 | |
| Omron C | OM1 & CVM1 Svs | mac PI (| ls. | | | | | | |
| Old range 2 | 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 |
| Sysmacwa | y 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 | n-Bradle | y PLCs | | | | | | |
| Old range 2 | 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 protoc | | DO OCTO | 0.5 | VDT 70700 | VDT D | | DO OTAT | 0.5 | VET |
| 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 |
| AP PLC5 | 25-way SUB-D/ 25-way SUB-D | RS 232C | 2.5 m | XBI 29720 | XBT R AP PLC5 | 25-way SUB-D/ 25-way SUB | RS 232C | 2.5 m | XBI Z9720 |
| хвтР AP Micro-logix | 25-way SUB-D/ Micro-logix 1000 | RS 232C | 2.5 m | хы 29731 | AP Micro-logix | 25-way SUB-D/ Micro-logix 1000 | RS 232C | 2.5 M | XB1 Z9731 |
| DH 485 poi | nt-to-point protocol | | | | | | | | |
| XBT P | 25-way SUB-D/ | RS 232C | 2.5 m | XBT Z9732 | XBT R | 25-way SUB-D/ | RS 232C | 2.5 m | XBT Z9732 |
| AP Micro-logix | Micro-logix 1000 | | | | AP Micro-logix | Micro-logix 1000 | | | |
| DH 485 mu | Itidrop protocol | | | | | | | | |
| XBT P | 25-way SUB-D/ | RS 232C | 2.5 m | XBT Z9730 | XBT R | 25-way SUB-D/ | RS 232C | 2.5 m | XBT Z9732 |
| SLC500 | 9-way SUB-D | | | | AP SLC5 with | Micro-logix 1000 | | | |
| with AIC gateway | | | | | AIC gateway | | | | |
| Siemens. | Simatic PLCs | | | | I | | | | |
| Old range | XBT P | | | | XBT R range | | | | |
| Type of | Type of | Serial | Length | Reference | Type of terminal | Type of | Serial | Length | Reference |
| terminal | connector | port | | | | connector | port | | |
| VPI (S7) pr | | DC 405 | 25~ | VDT 70704 | VPT P | | DC 405 | 25- | VDT 70704 |
| XBIP | 25-way SUB-D/ 9-way SUB-D | RS 485 | 2.5 m | XBI 29721 | XBLK | 25-way SUB-D/ 9-way SUB-D | RS 485 | 2.5 m | XB1 Z9721 |
| Equival | ent product ta | ble - Co | onnec | tion to Uni-Telwa | ay serial link | | | | |
| Old range) | XBTP | | | | XBT R range | | | | |
| Type of terminal | Type of connector | Serial port | Length | Reference | Type of terminal | Type of connector | Serial port | Length | Reference |
| Un subscri | Der socket TSX SCA | 62 | 1.0 | VDT 7000 | VDT D | | D0 405 | 1.0 | VDT 7000 |
| VRI h | ∠o-way SUB-D/ 15-way SUB-D | KS 485 | 1.8 M | YRI 7908 | YRIK | ∠ɔ-way SUB-D/ 15-way SUB | RS 485 | 1.8 M | XB1 2908 |
| | | | 25- | VDT 7069 | VPT P | 25 WOV SUB D/ | DC ADE | 2.5 m | VDT 7069 |
| VRIA | 25-way SUB-D/ 8-way mini-DIN | KO 480 | 2.5 m 5 m | XBT Z9681 | ADI K | 25-way SOB-D/ 8-way mini-DIN | KO 480 | ∠.5 m 5 m | XBT Z9681 |
| Equival | ent product ta | ble - Co | onnec | tion to Modbus s | erial link | | | | |
| Type of | | Sorial | Longth | Poforonco | Type of terminel | Type of | Sorial | Longth | Poforonco |
| terminal | connector | port | Length | Kelelence | Type of terminal | connector | port | Length | Reference |
| On subscri | iber socket TSX SCA | 64 | | | | | | | |
| XBT P | 25-way SUB-D/ | RS 485/ | 1.8 m | XBT Z908 | XBT R | 25-way SUB-D/ | RS 485/ | 1.8 m | XBT Z908 |
| - | 15-way SUB-D | RS422 | | | | 15-way SUB-D | RS 422 | | |
| On 8-port s | splitter box LU9 GC3 | D0 (05 | 0.5 | XDT 7000 | VDT D | | D0 405 | 0.5 m | VDT 7000 |
| YRIA | 25-way SUB-D/RJ45 | KS 485 | 2.5 M | YRI 7839 | YRIK | ∠o-way SUB-D/RJ45 | KS 485 | ∠.5 M | YRI 7838 |
| | | | | | I | | | | |

References

Operator dialogue terminals Small Panels with touch screen and keypad Magelis[™] XBT RT

| 1 | | |
|---|--|--|
| | | |
| | | |
| | | |

XBT RT500



P6 P6 P7 P8 P8 P0

XBT RT511

| Downloadable exchange protocol | Compatible PLCs | Supply voltage | Type of screen | Reference | Weight kg |
|--------------------------------|--|------------------------------|---|-----------|--------------|
| Terminal with 10 lines of 3 | 80 characters (with matrix scr | reen) | | | |
| 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 Professional, XP Professional and Vista Business (32-bit) | See page 4/7 | |

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Separate components for Magelis[™] XBT N, XBT R, XBT RT and Magelis[™] STO, STU



XBT ZR01



XBT ZR02

| • • • • • | | - | | |
|--|--|--------------|-----------|--------|
| Description | Details | For use with | Reference | Weight |
| Accessory for flush nounting | 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 KBT P/PM | | - | XBT ZRCO | - |

| Description | Compatibility | Type of connector | Physical link | Protocol | Length m | n 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.

Separate components for Magelis[™] XBT N, XBT R, XBT RT and Magelis[™] STO, STU

| Accessories | | | | |
|--|--|-----------------|----------------|--------------|
| Туре | 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 a | 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 | HMIZURS | _ |
| 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 | _ |

Use a 5 V ---- power supply: ABL 8MEM 05040
 XBT 2945 cable included.
 Adaptor to be used with XBT 2925 cable.

Separate components for Magelis[™] XBT N, XBT R, XBT RT and Magelis[™] STO, STU

| Cables for connecting | ng Magelis termin | als | | | | |
|--|---|-------------------------------------|----------------------------------|-------------------|--------------------|--------------|
| Type of PLC to be connected | Type of connector | Physical link | Protocol | Length | Reference | Weight kg |
| Direct connection of XB Schneider Electric PLCs | F N/R/RT (XBT N200/N | 400/R400/ | RT500/RT511) | and HMI \$ | STO/STU terminal | s to |
| Twido, Modicon Nano, | Mini-DIN | RS 485 | Modbus/Uni-TE | 2.5 m | XBT Z9780 | - |
| Modicon I SX Micro, Modicon Premium | | | | 10 m | XBT Z9782 (1) | _ |
| Modicon M340 | RJ45 | RS485 | Modbus | 2.5 m | XBT Z9980 | |
| | | | | 10 m | XBT Z9982 (1) | _ |
| Direct connection of XB | T N/R (XBT N410/N401 | /R410/R4 [^] | terminals to | Schneid | er Electric PLCs | |
| Twido, Modicon Nano, Modicon TSX Micro | Terminal port, 8-way | RS 485 | Uni-TE ()/1/(2) and | 2.5 m | XBT Z968 | 0.180 |
| Modicon Premium | | | Modbus | 5 m | XBT Z9681 | 0.340 |
| | | | | 2.5 m <i>(</i> 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 XB ² 2nd mini-DIN serial port | ۲ N/R/RT (XBT N401/R and Vijeo Designer Lit | 411/RT51 [,] e 1.3 mini | l) terminals to mum | Schneide | r Electric PLCs vi | a the |
| Zelio Logic | Programming port (specifically for Zelio Logic) | - | Zelio | 3 m | SR2 CBL 08 | _ |
| Direct connection of the | HMI STO 501 terminal | to Zelio L | ogic SR2/SR3 | controlle | rs | |
| 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/R7500, 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.

Separate components for Magelis[™] XBT N, XBT R, XBT RT and Magelis[™] STO, STU

| Direct conr Modicon STB | | iy mayens termin | ais (continu | iea) | | | |
|---|------------------------------------|--|--------------------------------|------------------|-------------|--------------------------|------|
| Modicon STB | nection of XBT | RT500/RT511 and Ma | agelis STO/S | STU terminals | to Modico | on STB I/O (1) | |
| | | HE13 (NIM) | RS 232 | Modbus | 2.5 m | XBT Z9715 | |
| Direct conr starters and | nection of XBT d drives | (XBT NU400/N410/N4 | 01/R410/R41 | 11) terminals to | Schneid | er Electric motor | |
| TeSys U, T ATV 312/32/6 [,] speed drives ATS 48 starte Lexium 32, Pr | I/71 variable r eventa XPSMC | RJ45 | RS 485 | Modbus | 2.5 m | XBT Z938 | 0.2 |
| Direct conr Schneider | nection of XBT Electric motor | (XBT N200/N400/R40 starters and drives (2 | 0/RT500/RT | 511) and Magel | is STO/ST | ΓU terminals to | |
| TeSys U, T ATV 312/32/6 [,] speed drives ATS 48 starte Lexium 32, Pr | I/71 variable r eventa XPSMC | RJ45 | RS 485 | Modbus | 2.5 m | XBT Z9980 | |
| Direct conr | ection of XBT | (XBT N410/N401/R41 | 0/R411) term | ninals to third- | party PLC | s | |
| Allen-Bradley | SLC5 | 9-way male SUB-D | RS 232 | DF1 | 2.5 m | XBT Z9730 | 0.21 |
| | PLC5 | 25-way female SUB-D | RS 232 | DF1 | 2.5 m | XBT Z9720 | 0.21 |
| | Micro-logix | Micro-logix 1000 | RS 232 | DF1 | 2.5 m | XBT Z9731 | 0.2 |
| | Ū | J. | | 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 | 0.2 |
| Siemens | S7 (PG) | 9-way male SUB-D | RS 485 | PPI | 2.5 m | XBT Z9721 | 0.2 |
| Direct conr | nection of the 2 | XBT RT500/RT511 and | I Magelis ST | O/STU termina | I to third- | party PLCs (1) | |
| Allen-Bradley | SLC5 | 9-way male SUB-D | RS 232 | DF1 | 2.5 m | XBT Z9734 | |
| | Micro-logix | Micro-logix 1000 | RS 232 | DF1 | 2.5 m | XBT Z9733 | |
| Mitsubishi | FX | 8-way female mini-DIN | RS 232/ RS 422 converter | Melsec FX | 2.5 m | XBT Z980 + (3) | |
| | | | 50.000 | Sycmooway | 2.5 m | XBT Z9743 | |
| Omron | CPM1, CPM2, CJ1, CS1 | 9-way male SUB-D | RS 232 | Sysmacway | | | |

Separate components for Magelis[™] XBT N, XBT R, XBT RT and Magelis[™] STO, STU

| Cables for connect | cting Magelis termin | als (continued) | | | |
|------------------------|---|------------------------|--------|-----------|--------------|
| Bus and network con | nections for XBT N410/N | 401/R410/R411 terminal | s | | |
| 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 PACC 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 connect | tions for XBT RT511 a | and Magelis STO/STU term | inals | | |
|-------------------------|---|--------------------------|--------|-----------|--------------|
| 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 | |

Selection guide

Operator dialogue terminals

Magelis[™] GTO Optimum Advanced Panels

Applications

Type of terminal

Degree of protection (according to IEC 60529)

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

Optimum Advanced Panels, touch screen

IP 65 (IP 67 with addition of a cover)

| Display | Туре | Colour TFT LCD, backlit 320 x 240 pixels (QVGA) | | Colour TFT LCD, backlit 800 x 480 pixels (WVGA) |
|--------------------|-----------------------------|---|--|---|
| | Capacity | 3.5" | 5.7" | 7.0 Wide |
| Data antes | | | | |
| Data entry | Static function keys | 6 function keys (static or dynamic) | – – | 8 function keys (static or dynamic) |
| | Service keys | _ | _ | - |
| | Alphanumeric keys | _ | - | - |
| | | | | |
| Memory capacity | Applications | 64/96 MB Flash EPROM (1) | | 96 MB Flash EPROM |
| | Expansion | - | By 4 GB SD card (except HMI 0 | GTO2300) |
| Functions | Maximum number of pages | Limited by internal Flash EPROM memory capacity | Limited by capacity of internal for of SD card | Flash EPROM memory |
| | Variables per page | Unlimited (8000 variables max.) | | |
| | Representation of variables | Alphanumeric, bitmap, bargraph, g | auge, tank, tank level indicator, curv | ves, polygon, button, LED |
| | Recipes | 32 groups of 64 recipes comprisi | ing 1024 ingredients max. | |
| | Curves | Yes, with log | | |
| | Alarm logs | Yes | | |
| | Real-time clock | Built-in | | |
| | Discrete I/O | - | | |
| | Multimedia I/O | - | | |
| Communication | Downloadable protocols | Uni-TE <i>(2)</i> , Modbus, Modbus TC Allen-Bradley and Siemens | CP/IP (1) and for PLC brands: Mits | subishi, Omron, |
| | Asynchronous serial link | RS 232C (COM1) and RS 485 (C | COM2) except HMI GTO1310: RS | S 232C/485 (COM1) |
| | USB ports | 1 type A host connector + 1 mini- | B connector | |
| | Buses and networks | Ethernet TCP/IP (10BASE-T/100 | 0BASE-TX) (3), Modbus Plus and | l Fipway via USB gateway |
| | Printer link | RS 232C (COM1) serial link (4) a | and USB port for parallel printer | |
| De ale constanti d | | | | |
| Development softwa | re | Vijeo Designer (on Windows XP | and windows 7) | |
| Operating system | | wayens (300 MHZ KISC CPU) | | |
| Type of terminal | | HMI GTO1300 HMI GTO1310 | HMI GTO2300 HMI GTO2310 | HMI GTO3510 |
| Page | | 1/43 | | |
| i uge | | (1) Depending on model | | |
| | | (1) Dopending on model. | | 1 16 |

(2) Uni-TE version V2 for Twido controller and TSX Micro/Premium platform.
 (3) Except HMI GTO1300 and GTO2300 (Modbus Plus and Fipway via USB gateway only).

(4) Except HMI GTO1310 (USB port for parallel printer only).

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Schneider Belectric

| Display of text message Control and configuration | s, graphic objects and sy on of data | noptic views | | | |
|--|--|---|---|--|---|
| Optimum Advanced Par | els, touch screen | | Optimum Advanced Par | nels, touch screen, "Stainle | ess Steel" version |
| IP 65 (IP 67 with addition | of a cover) | | IP 66K (Front panel with environment | stainless steel frame) for | food & beverage |
| Higher - Higher | Personal Production Pr | | | | |
| Colour TFT LCD, backlit 640 x 480 pixels (VGA) | Colour TFT LCD, backlit 640 x 480 pixels (VGA) | Colour TFT LCD, backlit 800 x 600 pixels (SVGA) | Colour TFT LCD, backlit 320 x 240 pixels (QVGA) | Colour TFT LCD, backlit 640 x 480 pixels (VGA) | Colour TFT LCD, backlit 800 x 600 pixels (SVGA) |
| 7.5" | 10.4" | 12.1" | 5.7" | 10.4" | 12.1" |
| Via touch screen - - - | | | | | |
| 96 MB Flash EPROM By 4 GB SD card | | | | | |
| Limited by capacity of inte | rnal Flash EPROM memory | y or of SD card | | | |
| Unlimited (8000 variables Alphanumeric, bitmap, ba 32 groups of 64 recipes co Yes, with log Yes Built-in – | max.) rgraph, gauge, tank, tank le omprising 1024 ingredients | evel indicator, curves, polyg max. | on, button, LED | | |
| Uni-TE (2), Modbus, Mod | bus TCP/IP (1) and for PLC | brands: Mitsubishi, Omron | , Allen-Bradley and Siemen | IS | |
| RS 232C (COM1) and RS 1 type A host connector + Ethernet TCP/IP (10BASE RS 232C (COM1) serial lin | 485 (COM2) 1 mini-B connector E-T/100BASE-TX), Modbus nk and USB port for parallel | Plus and Fipway via USB | gateway | | |
| Vijeo Designer (on Windo Magelis (333 MHz RISC C | ws XP and Windows 7) CPU) | | | | |
| HMI GTO4310 | HMI GTO5310 | HMI GTO6310 | HMI GTO2315 | HMI GTO5315 | HMI GTO6315 |
| 1/43 | | | | | |

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More technical information on www.schneider-electric.com

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Operator dialogue terminals Standard Advanced Panels

Standard Advanced Panels Magelis[™] GT, GK, GH and GTW

| | Tauch a server Oten dend A due | | |
|-----------------------------|--|---|--|
| | Taxa a sus an Discus dans da da sus | | |
| | Touch screen Standard Advar | nced Panels | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | Sector I |
| | | | |
| | | Contraction of the second second | - and an and a second s |
| Туре | Backlit monochrome (amber or | Backlit monochrome or colour | Backlit colour STN LCD or |
| | red mode) STN LCD (320 x 240 pixels) or TET LCD | STN LCD or backlit colour TET LCD (320 x 240 pixels) or | colour TFT LCD (640 x 480 pixels) |
| | | (640 x 480 pixels) (3) | |
| Capacity | 3.8" (monochrome or colour) | 5.7" (monochrome or colour) | 7.5" (colour) |
| | Via touch screen | | |
| Static function keys | - | | |
| Dynamic function keys | - | | |
| Service keys | - | | |
| Alphanumeric keys | - | | |
| Applications | 32 MB Flash EPROM | 16 MB Flash EPROM (3) | 32 MB Flash EPROM |
| Expansion | - | By means of 128 MB, 256 MB, | 512 MB, 1 GB or 2 GB CF car |
| | | (except XBT GT2110) | |
| Maximum number of pages | Limited by internal Flash | Limited by capacity of internal F | Flash EPROM memory or CF |
| | EPROM memory capacity | card memory | |
| Performante | Alphanumeria bitmon bergrand |) h. gougo tonk tonk lovel indicate | ar ourvoo nolvroon hutton |
| Representation of variables | LED | i, gauge, tank, tank level inuicati | or, curves, polygon, bullon, |
| Recipes | 32 groups of 64 recipes compris | sing 1024 ingredients max. | |
| Curves | Yes, with log | | |
| Alarm logs | Yes | | |
| Real-time clock | Built-in | | |
| Discrete I/O | - | | 1 input (reset) and 3 outputs |
| Multimedia I/O | _ | (3) | 1 audio input (microphone). |
| | | (-) | 1 composite video input |
| | | | (digital or analogue video |
| | | | (loudspeaker) (1) |
| Downloadable protocols | Uni-TE (2) Modbus Modbus T(| CP/IP (1) and for PLC brands: Mi | tsubishi Omron Allen-Bradle |
| | 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 l | JSB gateway, PROFIBUS DP ard |
| | Ethernet TCP/IP (10BASE-T/10 | 0BASE-TX) (1) | |
| Printer link | USB port for parallel printer | RS 232C (COM1) serial link, US | SB port for parallel printer |
| 10 | Vijeo Designer (on Windows VE | Professional and Windows 7 Pr | ofessional 32/64-bit) |
| | Manelis | Magelis | Manelis |
| | (200 MHz RISC CPU) | (133 MHz RISC CPU) <i>(3)</i> | (266 MHz RIS CPU) |
| | XBT GT11/13 | XBT GT21/22/23/24/29 | XBT GT42/43 |
| | | | |
| | 1/59 | | |
| | Type Capacity Static function keys Dynamic function keys Service keys Alphanumeric keys Applications Expansion Maximum number of pages Variables per page Recipes Curves Alarm logs Real-time clock Discrete I/O Multimedia I/O Downloadable protocols Asynchronous serial link USB ports Bus and networks Printer link re | Type Backlit monochrome (amber or red mode) STN LCD (320 x 240 pixels) or TFT LCD (320 x 240 pixels) or TFT LCD Capacity 3.8" (monochrome or colour) Static function keys - Dynamic function keys - Service keys - Alphanumeric keys - Applications 32 MB Flash EPROM Expansion - Maximum number of pages Limited by internal Flash EPROM memory capacity Variables per page Unlimited (8000 variables max. Alphanumeric, bitmap, bargraph LED Recipes 32 groups of 64 recipes comprise Yes, with log Alarm logs Yes Real-time clock Built-in Discrete I/O - Multimedia I/O - Printer link RS 232C/485 (COM1) USB ports 1 Bus and networks - Vieo Designer (on Windows XF Magelis (200 MHz RISC CPU) XBT GT11/13 1/59 (1) Depending on model. (2) Uni-TE Version V2 for Twidos IV f | Type Backlit monochrome (amber or strik LCD or backlit colour STR LCD or backlit colour STR LCD or backlit colour STR LCD (20 x 240 pixels) or (640 x 480 pixels) (3) Capacity 3.8" (monochrome or colour) Static function keys - Opnamic function keys - Service keys - Alphanumeric keys - Applications 32 MB Flash EPROM 16 MB Flash EPROM (3) Expansion 32 MB Flash EPROM 16 MB Flash EPROM (3) Maximum number of pages - - Applications 32 MB Flash EPROM 16 MB Flash EPROM (3) Representation of variables Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicate LED Qurves Yes, with log - Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicate LED - Qurves Yes, with log - Agenchronous serial link RS 232C/485 (COM1) RS 232C/RS 422/485 (COM1) Uses and networks - - - Agent networks - - - Built-In Discrete I/O - - Discrete I/O - - - Bus and networks |

(4) For XBT GT 5430.

CS More technical information on www.schneider-electric.com

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Schneider Electric

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

Touch screen Standard 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 MB, 256 MB, 512 MB, 1 GB or 2 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 Professional and Windows 7 Professional 32/64-bit) Magelis

(266 MHz RIS CPU)

| XBT GT52/53/54 XBT GT63 XBT GT73 | XBT GT52/53/54 | XBT GT63 | XBT GT73 |
|----------------------------------|----------------|----------|----------|
|----------------------------------|----------------|----------|----------|

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More technical information on www.schneider-electric.com

Selection guide (continued)

Operator dialogue terminals Standard Advanced Panels

Standard Advanced Panels Magelis[™] GT, GK, GH and GTW

| Applications | | Control and configuration of data | cts and synoptic views |
|--------------------|-----------------------------|---|---|
| Type of terminal | | Standard Advanced Panels with keypad | 1 |
| | | | |
| Display | Туре | Colour TFT LCD | Colour TFT LCD |
| | Capacity | 5 7" (monochrome or colour) | $(040 \times 400 \text{ pixels})$ |
| | oupuony | | |
| Data entry | | Via keypad and/or touch screen (configura | ble) and/or by industrial pointer |
| | Static function keys | 10 | 12 |
| | Dynamic function kevs | 14 | 18 |
| | Service keys | 8 | |
| | Alphanumeric keys | 12 | |
| Momory canacity | Application | 16 MR Elash EPPOM | 32 MR Elash EDDOM |
| wembry capacity | Expansion | By means of 128 MB 256 MB 512 MB 1 | GB or 2 GB CE card |
| | Expansion | | |
| Functions | Maximum number of pages | Limited by capacity of internal Flash EPRC | DM memory or CF card memory |
| | Variables per page | Unlimited (8000 variables max) | |
| | Representation of variables | Alphanumeric, bitmap, bargraph, gauge, ta | ank, tank level indicator, curves, polygon, button, |
| | Recipes | 32 groups of 64 recipes comprising 1024 in | ngredients 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) a Allen-Bradley and Siemens | nd for PLC brands: Mitsubishi, Omron, |
| | 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, F Ethernet TCP/IP (10BASE-T/100BASE-T) | PROFIBUS DP and Device Net with optional card () |
| | Printer link | RS 232C (COM1) serial link, USB port for | parallel printer |
| Development softwa | Iro | Viieo Designer (on Windows XP Professio | nal and Windows 7 Professional 32/64-hit) |
| Operating system | | Magelis (CPU 266 MHz RISC) | |
| Type of terminal | | XBT GK 21/23 | XBT GK 53 |
| Page | | 1/60 | |
| | | | |

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Schneider
| Display of text messages, graphic objects and synoptic views Control and configuration of data | | | | |
|---|--------------------------------------|--------------------------------------|--|--|
| Portable Standard Advanced Panels | Open touch screen Standard Advance | ced Panels | | |
| | | | Yer and a second | |
| 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) | 10.4" (colour) | 12" (colour) | 15" (colour) | |
| Via touch screen | Via touch screen | | | |
| 11 | - | | | |
| - | - | | | |

| Via touch screen | Via touch screen |
|--|--|
| 11 | - |
| - | - |
| - | - |
| - | - |
| 32 MB Flash EPROM | 2 GB CF system card included with terminal, expandable to 4 GB |
| By means of 128 MB, 256 MB, 512 MB, | 1 GB or 2 GB CF card (3) |
| | |
| Limited by capacity of internal Flash EP | ROM 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 102 | 4 ingredients max. |
| Yes, with log | |
| Yes | |
| Built-in | |
| - | |
| 1 audio output | |
| Uni-TE (2), Modbus, Modbus TCP/IP | Uni-TE (2), Modbus, Modbus TCP/IP (1) and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens |

| XBT GH 2460/ XBT GH 2460B (5) | XBT GTW 5354 | XBT GTW 652 | HMI GTW 7354 HMI GTW 73545 (6) | |
|--|---|----------------|-----------------------------------|--|
| Magelis (266 MHz RISC CPU) | Windows XP Embedded | | | |
| Vijeo Designer (on Windows XP Profe | essional and Windows 7 Professional 32/64 | 1-bit) | | |
| - | RS 232C (COM1) serial link, USB port for parallel printer | | | |
| 1 Ethernet port (10BASE-T/100BASE-TX) | 2 Ethernet ports (4) (10BASE-T/100BA | SE-TX/1 GB) | | |
| - | Modbus Plus with USB gateway | | | |
| 1 | 2+1 frontal | 4+1 frontal | 2+1 frontal | |
| RS 232C/RS 422-485 (COM1) | RS 232C (COM1) | RS 232C (COM1) | RS 232C (COM1) | |
| and for PLC brands: Mitsubishi, Omron, Rockwell Automation and Siemens | | | | |

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|------|--|
|------|--|

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(1) Depending on model.
(2) Uni-TE version V2 for Twido controller and TSX Micro/Premium platform.
(3) Except for HMI GTW•••• with 4 GB SD memory card.
(4) Except on XBT GTW652 with 1 Ethernet TCP/IP port (10BASE-T/100BASE-TX) and 1 Ethernet TCP/IP port (10BASE-T/100BASE-TX/1 GB).
(5) Version without Emergency stop button.
(6) Version with stainless steel front panel.

More technical information on www.schneider-electric.com





Magelis colour touch screen terminals HMI GTO in 5 sizes from 3.5" to 12.1" (standard version)

Overview

The Optimum Advanced Panels (Magelis GTO) touch screen panels offer includes:

- A range of 8 colour touch screen terminals (TFT technology), available in a choice of 5 sizes
- □ 3.5" □ 5.7"
- □ 7": 7 Wide and 7.5" (front identical in size)
- □ 10.4"
- □ 12.1"

■ A range of 3 colour TFT touch screens available in 3 sizes:

- □ 5.7"
- □ 10.4" □ 12.1"

with front featuring a stainless steel frame, dedicated to applications in harsh environments (food & beverage and pharmaceutical).

Operation

Magelis GTO Advanced Panels feature optimized information and communication technologies, which, depending on the model, include:

- High level of communication (embedded Ethernet, multilink, Web server and FTP, e-mail)
- External storage of data (SD memory card and USB memory stick) for storing production data and backing up applications
- Management of peripherals: printers, bar code readers, etc.

These terminals offer an excellent level of technical performance designed principally for use by OEM customers.

Environment

The Magelis GTO optimized range has been designed in accordance with numerous standards, certifications and requirements:

- Standards: EN 61131-2, 61000-6-2 and UL508.
- Certifications:
- □ C€, C-tick, GOST-R, KCC
- □ Atex and UL Hazardous location (pending)
- □ Marine certifications (pending).
- Operating temperature: up to 55°C
- Degree of protection (according to IEC 60529):
- □ IP 65 for standard version products

□ IP 67 for standard version products fitted with a cover for harsh environments (see accessories page 1/62)

□ IP 66K for "Stainless Steel" version products

Resistance to high-pressure cleaning (conforming to DIN 40050-9): up to 10 bar for "Stainless Steel" version products.

| Vigitality of the second | |
|---|-----------------|
| | PUPP CONTROL |

Magelis colour touch screen terminals HMI GTO 005 in 3 sizes from 5.7" to 12.1" ("Stainless Steel" version)

| Description: | References: | Connections: | Substitution: | |
|--------------|-------------|--------------|---------------|--|
| bage 1/38 | page 1/43 | page 1/71 | page 1/75 | |
| 1/34 | | Schneider | | |

General (continued)

Operator dialogue terminals Magelis[™] GTO Optimum Advanced Panels



Configuration

Like all the other Magelis Advanced Panels, Magelis GTO Optimum Advanced Panels can be configured using Vijeo Designer software in a Windows XP and Windows 7 environment.

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

The Magelis GTO range is compatible with Vijeo Designer version V6.1 or later.

See page 4/8.

Display of a video sequence

Communication



Optimum 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

Depending on the model, they can be connected to Ethernet TCP/IP networks using: A Modbus TCP protocol

- An Ethernet TCP/IP protocol
- or a third party protocol

| Description: | References: | Connections: | Substitution: | |
|--------------|-------------|--------------|---------------|--|
| page 1/38 | page 1/43 | page 1/71 | page 1/75 | |
| | | | | |

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Functions

Optimum Advanced Panels offer the following functions:

- Display of animated synoptic views 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 and trending curves with log
- Alarm display, alarm log and management of alarm groups
- Multiwindow management
- Operator-initiated page calls
- Multilingual application management (10 languages at the same time)
- Recipe management
- Data processing via Java script
- Storage of the application and logs on external application memory card in SD format or USB stick
- Management of serial printers, barcode readers

Architectures and communication

The Magelis GTO Optimum range is perfectly integrated in the MachineStruxure™ (1) automation solutions offer, which helps machine manufacturers (OEMs) to quickly design optimized machines (in terms of cost and energy efficiency).

MachineStruxure[™] solutions are based on high performance control platforms and a single software package: SoMachine. SoMachine allows the development, commissioning and programming of machines. SoMachine version 3.1 allows programming of terminals in the Magelis GTO range using Vijeo Designer software.

Optimum Advanced Panels have been designed for PlantStruxure™ (2) and MachineStruxure[™] (1) architectures as well as for Transparent Ready equipment (combination of Web and Ethernet TCP/IP technologies). Therefore, all panels 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 panel from a PC with an Internet browser.

Vijeo Designer also allows Magelis Advanced Panels to browse HTML pages and send e-mails.

Plant *I***truxure**

Vijeo Designer configuration software

> (1) For more information on the "MachineStruxure™" concept, please consult our catalogue "Automation solutions for industrial machines".

(2) For more information on the "PlantStruxure™" concept, please consult our website www.schneider-electric.com/Solutions/Process and Machines Management.

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|-----|---|
| 507 | |

Machine *F***truxure**





Description: page 1/38

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Connections:

Substitution: page 1/75



Panel operating modes

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

Edit mode



Operating mode



(1) With HMI GTO • 1 •.

- (2) Memory card, except HMI GTO1300/1310/2300.

(3) Validated with DataLogic Gryphon bar code reader.
 (4) Validated with Hewlett Packard printer via USB/PIO converter.

| Description: | References: | Connections: | Substitution: | |
|--------------|-------------|--------------|---------------|--|
| page 1/38 | page 1/43 | page 1/71 | page 1/75 | |
| | | | | |

Panels with 3.5" touch screen



Rear HMI GTO1300



Underside HMI GTO1300

Description

Magelis HMI GTO1300 / 1310 Advanced Panels HMI GTO1300 and HMI GTO1310 panels have the following features on the front:

- 1 A touch screen for displaying synoptic views (3.5" colour TFT)
- 2 A multicolour indicator (green, orange and red) showing the panel's operating mode
- 3 Six function keys (F1, F2, F3, F4, F5 and F6)

The HMI GTO1300 panel has the following features on the rear and underside:

- 1 A removable screw terminal block for 24 V --- power supply
- 2 A type A USB host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
- 3 A mini-B USB connector for application transfer
- 4 A 9-way male SUB-D connector for RS 232C serial link to PLCs (COM1)
- 5 An RJ45 connector for RS 485 serial link to PLCs (COM2)

Rear HMI GTO1310



Underside HMI GTO1310

- The HMI GTO1310 panel has the following features on the rear and underside:
- 1 A removable screw terminal block for 24 V ---- power supply
- 2 A type A USB host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
- 3 A mini-B USB connector for application transfer
- 6 An RJ45 connector for RS 232C or RS 485 serial link to PLCs (COM1)
- 7 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX

| Presentation: | References: | Connections: | Substitution: | |
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| 1/38 | | Schneider Electric | | |

Description (continued)

Operator dialogue terminals Magelis[™] GTO Optimum Advanced Panels Panels with 5.7" touch screen, standard and Stainless Steel version



Rear HMI GT02315



Underside HMI GTO2315

All 3 of these panels have the following features on the rear and underside:

- 1 A removable screw terminal block for 24 V ---- power supply
- 2 A type A USB host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
- A mini-B USB connector for application transfer 3
- 4 A 9-way male SUB-D connector for RS 232C serial link to PLCs (COM1)
- 5 An RJ45 connector for RS 485 serial link (COM2)

On HMI GTO2310 and HMI GTO2315 only:

- 6 A slot for SD memory card, with hinged cover
- LED indicating presence of the SD memory card 7
- 8 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX

| Presentation: | References: | Connections: | Substitution: | |
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| | | | | |

Schneider

Panels with 7.0" Wide and 7.5" touch screen



Description

Magelis Advanced Panels HMI GTO3510 / 4310 The HMI GTO3510 panel has the following features on the front:

1 A touch screen for displaying synoptic views (7.0" Wide colour TFT)

- 2 A multicolour indicator (green, orange and red) showing the panel's operating mode
- 3 Eight function keys (F1, F2, F3, F4, F5, F6, F7 and F8)

The HMI GTO4310 panel has the following features on the front:

- 1 A touch screen for displaying synoptic views (7.5" colour TFT)
- 2 A multicolour indicator (green, orange and red) showing the panel's operating mode



Rear



Underside

Both terminals have the following features on the rear and underside:

- 1 A removable screw terminal block for 24 V --- power supply
- 2 A type A USB host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
- A mini-B USB connector for application transfer 3
- A 9-way male SUB-D connector for RS 232C serial link to PLCs (COM1) 4
- 5 An RJ45 connector for RS 485 serial link (COM2)
- 6 A slot for SD memory card, with hinged cover
- 7 LED indicating presence of the SD memory card
- 8 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX with an activity LED

| Presentation: | References: | Connections: | Substitution: | |
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| 1/40 | | Schneider Electric | | |

Description (continued)

Operator dialogue terminals Magelis[™] GTO Optimum Advanced Panels Panels with 10.4" touch screen, standard and Stainless Steel version



Description

Magelis Advanced Panels HMI GTO5310 (standard version) and HMI GTO5315 (Stainless Steel version) The HMI GTO5310 panel has the following features on the front:

- 1 A touch screen for displaying synoptic views (10.4" colour TFT)
- 2 A multicolour indicator (green, orange and red) showing the panel's operating mode



The HMI GTO5315 panel has the following features on the front:

- 1 A touch screen for displaying synoptic views (10.4" colour TFT)
- 2 A multicolour indicator (green, orange and red) showing the panel's operating mode
- 3 A stainless steel frame, for food & beverage environments. Only this product provides IP 66K degree of protection.





- Both terminals have the following features on the rear and underside:
- 1 A removable screw terminal block for the 24 V --- power supply
- A type A USB host connector for connecting peripherals, transferring applications 2 and Modicon M340 terminal port communication
- 3 A mini-B USB connector for application transfer
- 4 A 9-way male SUB-D connector for RS 232C serial link to PLCs (COM1)
- 5 An RJ45 connector for RS 485 serial link (COM2)
- A slot for SD memory card, with hinged cover 6
- 7 LED indicating presence of the SD memory card
- An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX with an 8 activity LED

Underside

| Presentation: | References: | Connections: | Substitution: | |
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| | | | | |

Operator dialogue terminals Magelis[™] GTO Optimum Advanced Panels Panels with 12.1" touch screen, standard and Stainless Steel version



Description

Magelis Advanced Panels HMI GTO6310 (standard version) and HMI GTO6315 (Stainless Steel version)

The HMI GTO6310 panel has the following features on the front:

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

The HMI GTO6315 panel has the following features on the front:

- A touch screen for displaying synoptic views (12.1" colour TFT) 1
- 2 A multicolour indicator (green, orange and red) showing the panel's operating mode
- A stainless steel frame, for food & beverage environments. Only this product 3 provides IP 66K degree of protection.



6 2 5 7 43 8 0 11-ma-1111

Both terminals have the following features on the rear and underside:

- 1 A removable screw terminal block for the 24 V --- power supply
- 2 A type A USB host connector for connecting peripherals, transferring applications and Modicon M340 terminal port communication
- 3 A mini-B USB connector for application transfer
- 4 A 9-way male SUB-D connector for RS 232C serial link to PLCs (COM1)
- 5 An RJ45 connector for RS 485 serial link (COM2)
- A slot for SD memory card, with hinged cover 6
- 7 LED indicating presence of the SD memory card
- 8 An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX with an activity LED

Underside

Rear

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References

Presentation:

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Operator dialogue terminals Magelis[™] GTO Optimum Advanced Panels Panels with 3.5" to 12.1" touch screen

| | Optimum 24 V DC | panels v | with colour | touch sc | reen, sta | andard ver | sion (1) | |
|--|---|--|---|--|---|--|--|---------------------|
| | Data entry method | Number of ports | Application memory capacity | Memory expansion by SD card | Serial link | Embedded Ethernet | Reference | Weight kg |
| 5400 | 3.5" QVGA TFT LCD so | reen, 320 | x 240 pixels | | | | | |
| HMI GTO13•• | Via touch screen + 6 function keys | 2 USB | 64 MB | No | 1 COM 1 1 COM 2 | - | HMI GTO1300 | 0.400 |
| | | 2 USB | 96 MB | No | 1 COM 1 | 1 | HMI GTO1310 | 0.400 |
| 12401 | 5.7" QVGA TFT LCD so | reen, 320 | x 240 pixels | | | | | |
| | Via touch screen | 2 USB | 64 MB | No | 1 COM 1 1 COM 2 | - | HMI GTO2300 | 0.800 |
| HMI G I 023●● | | 2 USB | 96 MB | Yes (2) | 1 COM 1 1 COM 2 | 1 | HMI GTO2310 | 0.800 |
| 403 | 7.0" WVGA (Wide) TFT | LCD scree | en. 800 x 480 ı | oixels | | | | |
| | Via touch screen + 8 function keys | 2 USB | 96 MB | Yes (2) | 1 COM 1 1 COM 2 | 1 | HMI GTO3510 | 1.200 |
| HMI GTO3510 | 7.5" VGA TFT LCD scre | een, 640 x | 480 pixels | | | | | |
| PF112404 | Via touch screen | 2 USB | 96 MB | Yes (2) | 1 COM 1 1 COM 2 | 1 | HMI GTO4310 | 1.200 |
| | 10.4" VGA TFT LCD sc | reen. 640 x | 480 pixels | | | | | |
| HMI GTO4310 | Via touch screen | 2 USB | 96 MB | Yes (2) | 1 COM 1 1 COM 2 | 1 | HMI GTO5310 | 2.000 |
| 2407 | 12.1" SVGA TFT LCD s | creen, 800 | x 600 pixels | | | | | |
| | Via touch screen | 2 USB | 96 MB | Yes (2) | 1 COM 1 1 COM 2 | 1 | HMI GTO6310 | 2.500 |
| | Optimum 24 V DC | terminal | ls with cold | our touch | screen, | Stainless | Steel version | (1) (3) |
| HMI GTO6310 | Data entry method | Number of ports | Application memory capacity | Memory expansion by SD card | Serial link | Embedded Ethernet | Reference | Weight kg |
| | 5.7" QVGA screen, 320 |) x 240 pixe | els, with stain | less steel fr | ame (IP 66 | iK) | | |
| PF11240 | Via touch screen | 2 USB | 96 MB | Yes (2) | 1 COM 1 1 COM 2 | 1 | HMI GTO2315 | 1.200 |
| | 10.4" VGA screen, 640 | x 480 pixe | ls, with stainl | ess steel fra | ame (IP 66 | K) | | |
| HMI GTO2315 | Via touch screen | 2 USB | 96 MB | Yes (2) | 1 COM 1 1 COM 2 | 1 | HMI GTO5315 | 2.500 |
| 1406 | 12 1" SVGA scroop 90 | 0 x 600 piv | als with stair | lass staal f | rame (ID 6 | 6K) | | |
| Hard Andrew Contraction of the second s | Via touch screen | 2 USB | 96 MB | Yes (2) | 1 COM 1 1 COM 2 | 1 | HMI GTO6315 | 3.000 |
| HMI GTO5315 | Terminals supplied with fi for Magelis GTO terminal Memory expansion poss The Stainless Steel version | ixing kit (scre Is is included ible with 4 Gi on includes a | w clips), locking in electronic forr B SD card HMI Z front with stainle | device for US nat with Vijeo ' SD4G , see ac ess steel frame | B connectors Designer co ccessories pa e. Only this ve | s and instruction nfiguration softv age 1/62. ersion provides | a sheet. Setup docum vare (see page 4/13). IP 66K degree of prot | entation ection. |

Schneider Electric

Operator dialogue terminals

Standard Advanced Panels Magelis[™] GT, GK, GH and GTW

Presentation



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

The Magelis Standard 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"

A range of touch screen/open terminals (GTW), sizes 10.4", 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

These terminals are available in one of two function levels:

- Optimum level (without memory expansion and without fieldbus connection): XBT GT 3.8" and XBT GT 5.7" (Blue mode)
- Multifunction level for the rest of the range: XBT GT/GK/GH/GTW (5.7", 7.5", 10.4", 12.1" and 15")

Multifunction Magelis Standard Advanced Panels terminals 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.



Standard Advanced Panels Magelis[™] GT, GK, GH and GTW



Configuration

Magelis Standard Advanced Panels can be configured using Vijeo Designer software in a Windows XP Professional and Windows 7 Professional 32/64-bit 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.

Display of a video sequence



Magelis Standard 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).

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Operator dialogue terminals

Standard Advanced Panels Magelis[™] GT, GK, GH and GTW

Functions

- Magelis Standard 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 Standard 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 Standard Advanced Panels to browse HTML pages and send e-mails.

The flexibility of Windows XP Embedded on touch screen/open Standard Advanced Panels Magelis GTW terminals simultaneously allows:

- □ The running of a Vijeo Designer application
- □ The use of Internet Explorer or Office Readers (.pdf, .doc, .xls, and .ppt documents)
- (······

| page 1/48 page 1/59 page 1/62 page 1/7 | Description: | References: | Accessories: | Connections: |
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Schneider

Magelis[™] GT, GK, GH and GTW

Panel operating modes

The following illustrations show the equipment that can be connected to Magelis Standard 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 •• •/HMI GTW •• • and XBT GH246 ••.

- (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 XBT GT/GK/GTW 7.5" screen min. and HMI GTW.
 (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.

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Magelis[™] XBT GT with 3.8" screen

1





Description Standard Advanced Panels Magelis Optimum XBT GT1105/1135/1335

Front panel

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

- 1 A removable screw terminal block for 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

Standard Advanced Panels Magelis[™] XBT GT with 5.7" screen



| Presentation: | References: | Accessories: | Connections: |
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Description

Operator dialogue terminals Standard Advanced Panels

Magelis[™] XBT GT with 7.5" screen



- 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)
- An RJ45 connector for RS 485 (COM2) with switch for polarization of the link used 3 on Modbus
- An expansion unit interface for fieldbus communication card (Device Net, 4 PROFIBUS DP) (1)
- An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX, with an 5 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)



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 1/70 for details of the required connection accessories.



Presentation: page 1/44

Schneider

Standard Advanced Panels Magelis[™] XBT GT with 10.4" screen

Description

Standard Advanced Panels Magelis Multifunction XBT GT5230, XBT GT53•0 and XBT GT5430



The front panel comprises:

- 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:

- 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 (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 (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 1/70 for details of the required connection accessories.

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Schneider Electric

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Magelis[™] XBT GT with 12.1" or 15" screen

Description

Standard Advanced Panels Magelis Multifunction XBT GT63•0 & XBT GT7340



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

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
- Two USB type A host connectors for connecting 6 peripherals, transferring applications and Modicon M340 terminal port communication
- An RJ45 connector for RS 485 (COM2) with switch 7 for polarization of the link used on Modbus
- A 9-way male SUB-D connector for RS 232C or 8 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 1/70 for details of the required connection accessories.

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| 1/52 | | Schneider Relectric | | |

A touch screen for displaying synoptic views (5.7" monochrome or colour),

14 dynamic keys (Ri) with 3-colour LED (green, orange, red)

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

Standard Advanced Panels Magelis[™] XBT GK with 5.7" screen

configurable using Vijeo Designer

Description

Standard Advanced Panels Magelis Multifunction XBT GK2120 & XBT GK2330 The front panel comprises:

2 A mul mode 3 14 dv





10 static keys (Fi) with 3-colour LED (green, orange, red) and customizable labels 4 5 An industrial pointer " (20)", configurable using Vijeo Designer 12 alphanumeric keys (0...9, +/-, .), which can be pressed several times in 6 succession to access characters (A...Z) 8 service keys: 7 Delete character to left of cursor Move cursor to right or left in an entry field Confirm a selection or entry Access the second of the dual key functions Increment or decrement a numeric field value or activate the next or previous object Exit entry mode Display the configuration menu of the terminal Copy the current screen 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 (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 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 1/70 for details of the required connection accessories.

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Description

Operator dialogue terminals Standard Advanced Panels

Magelis[™] XBT GK with 10.4" screen

Standard Advanced Panels Magelis Multifunction XBT GK5330

3 8 • -Rb 1 87 Rb - 10 R10 RI R12 2 R25 7- 8- 9-4- 5- 6-6 1= 2- 3-

The front panel comprises:

- 1 A touch screen for displaying synoptic views (10.4" colour TFT), configurable using Vijeo Designer
- A multicolour indicator (green, orange and red) showing the terminal's operating 2 mode
- 18 dynamic keys (Ri) with 3-colour LED (green, orange, red) 3
- 4 12 static keys (Fi) with 3-colour LED (green, orange, red) and customizable labels An industrial pointer " ^ ", configurable using Vijeo Designer
- 12 alphanumeric keys (0...9, +/-, .), which can be pressed several times in 6 succession to access characters (A...Z)
- 7 8 service keys:

5

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

The rear panel comprises:

- 1 A removable screw terminal block for 24 V --- power supply
- 2 A slot for Compact Flash memory card, with hinged cover
- 3 A removable I/O connector, 12 spring terminals for loudspeaker connection, one input (reset) and 3 outputs (alarm, buzzer, run)
 - 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
- Two USB type A host connectors for connecting peripherals, transferring 6 applications and Modicon M340 terminal port communication
- 7 An RJ45 connector for RS 485 (COM2) with switch for polarization of the link used on Modbus
- A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs 8 (COM1)

(1) See page 1/70 for details of the required connection accessories.

| Presentation: | References: |
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Accessories:

Connections: page 1/71

Description (continued)

Operator dialogue terminals

Standard Advanced Panels Magelis[™] GTW with 10.4" or 12" screen





Rear panel









Description

Standard Advanced Panel Magelis Multifunction 10.4" HMI GTW 5354 Front panel screen

- The touch screen front panel of terminal HMI GTW 5354 comprises:
- 1 A 10.4" 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
- 3 A USB 2.0 port (1 A max.) with screw-on protective cover

Rear panel

The rear panel of terminal HMI GTW 5354 comprises:

- 4 A battery
- 5 2 pushbuttons: 1 for the power supply and 1 for resetting
- 6 A slot for the Compact Flash memory card (SLC technology) ≥ 2 GB specifically for the operating system
- 7 An SD card reader for user data SD card optional (1)
- 8 4 status and power supply LEDs

Underside

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

- 9 A removable screw terminal block for connecting 24 V --- power supply 2 slots for Compact Flash card, one containing the operating system and integrated software and the other free
- 10 2 USB 2.0 ports
- 11 2 RJ45 connectors for Ethernet link, 10/100 BASE-TX/1 GB
- 12 One 9-way male SUB-D connector marked COM1 for RS 232 serial link

Standard Advanced Panel Magelis Multifunction 12" XBT GTW 652 Front panel screen

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

- 1 A 12" 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 2 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

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

- 5 A removable screw terminal block for connecting 24 V --- power supply
- 6 A slot for the Compact Flash memory card containing the operating system and integrated software
- 7 A 25-way female SUB-D connector marked RAS for product monitoring and diagnostics
- 8 4 USB 2.0 ports
- 9 2 RJ45 connectors for Ethernet 10/100 Mbps and Ethernet 10/100 Base-TX/1 GB link
- **10** A slot for additional PCMCIA type II cards
- 11 A mini-jack connector for loudspeaker
- 12 A 9-way male SUB-D connector marked COM1 for RS 232 serial link

(1) To be ordered separately (see page 3/30).

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|---------------|-------------|
| Presentation: | References: |

Accessories

Operator dialogue terminals

Standard Advanced Panels Magelis[™] GTW with 15" screen Software pre-installed on Magelis XBT GTW/HMI GTW



15" front panels, stainless steel and aluminium

Description

Standard Advanced Panels Magelis Multifunction 15" HMI GTW 7354 and 73545 Front panel screen

- The touch screen front panel of terminal HMI GTW 7354/73545 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 A USB 2.0 port (1 Å max.) with screw-on protective cover (only available for aluminium version). Captive protective cover option also available (1)
- 3 An aluminum alloy front panel with IP 65 membrane
- or
- 4 A stainless steel 304 "Scotch brite[®]" brushed finish front panel enabling an IP 65 degree of protection of the front panel when mounted on a panel or an enclosure door. Mounted on 1.6...10 mm thick support using screw fasteners supplied (2). Cleaning simplified due to absence of USB port on front panel (conforms to food and beverage processing machines standard EN 1672-2). Version fitted with specific seals (standard FDA 21 CFR 177.206)

5 6 7 8 9

Rear panel



Rear panel

The rear panel of HMI GTW 7354 and HMI GTW 73545 terminals comprise:

- 5 A battery
- 6 2 pushbuttons: 1 for the power supply and 1 for resetting
- 7 A slot for the Compact Flash memory card (SLC technology) ≥ 2 GB specifically for the operating system
- 8 An SD card reader for user data SD card optional (1)
- 9 4 status and power supply LEDs

Underside

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

- 12 A removable screw terminal block for connecting 24 V --- power supply 13 2 USB 2.0 ports (1 A max.)
- 14 2 RJ45 connectors for Ethernet link, 10/100 BASE-TX/1 GB
- 15 One 9-way male SUB-D connector marked COM1 for RS 232 serial link

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, supplied with activation code
- Vijeo Citect Web Client dll
- Internet Explorer
- Acrobat Reader
- Word/Excel/PowerPoint viewer
- Framework.Net

(1) To be ordered separately (see page 3/30).

(2) For installation, see the "Product data sheet" on our website www.schneider-electric.com.

| resen | tat | ion: | |
|--------|-----|------|--|
| age 1/ | 44 | | |



Description (continued)

Operator dialogue terminals

Standard Advanced Panels Magelis[™] XBT GH with 5.7" screen Junction box XBT ZGJBOX, cables XBT ZGHL

Description



Overview

Magelis XBT GH2460 1 and XBTGH2460B (without Emergency stop button) are portable graphic display terminals with a 5.7" touch screen. They enable 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 ZGHL $\bullet e$ 2 cable, which is available in various lengths (1).







Standard Advanced Panels Magelis Multifunction XBT GH2460 and XBT GH2460B 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 11 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 (model XBT GH2460 only)

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

(1) To be ordered separately (see page 1/60).

| Presentation: | References: | Accessories: | Connections: | |
|---------------|-------------|--------------|--------------|--|
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Standard Advanced Panels Magelis[™] XBT GH with 5.7" screen Junction box XBT ZGJBOX, cables XBT ZGHL

Description (continued)

1









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
- An RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX
 A 24-way screw terminal block for connecting 24 V --- power supply an
 - 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 2 thumbwheels for configuring the station number on the junction box
- 7 A 32-way connector for connecting the Magelis XBT GH terminal using flexible cable (XBT ZGHL)

Flexible cables XBT ZGHL

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

- 4 cable lengths are available:
- 3 m, cable XBT ZGHL3
- 5 m, cable XBT ZGHL5
- 10 m, cable XBT ZGHL10

- 20 m, cable XBT ZGHL20 with the following limitations applying to the junction box: no RS 232C serial link, an isolation box cannot be used and a 24 V - supply voltage tolerance of approximately 10%.

Presentation: References: page 1/44 page 1/59

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Connections:
page 1/71
```



Operator dialogue terminals Standard Advanced Panels Magelis[™] XBT GT



XBT GT1105/1135



XBT GT21e0/2220/2330



XBT GT4230/43•0



XBT GT53•0



XBT GT63•0



XBT GT7340

| Monochrome to | uch scree | n termina | IS (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" QVG | A screen | | | | | | |
| STN | 1 COM1 | 32 MB | No | No | - | XBT GT1105 | - |
| Amper or red | 1058 | | | | 1 | XBT GT1135 | |
| Optimum, 5.7" QVG | A screen | 40.145 | N1: | N | | VDT OTO440 | 4 000 |
| STN Blue mode | 1 COM1 1 COM2 1 USB | 16 MB | NO | NO | - | XB1 G12110 | 1.000 |
| Multifunction, 5.7" G | QVGA screen | I | | | | | |
| STN Black and white | 1 COM1 1 COM2 1 USB | 16 MB | Yes | No | - 1 | XBT GT2120 XBT GT2130 | 1.000 1.000 |
| Colour touch sc | reen term | inals (1) | | | | | |
| Type of screen | Number of ports | Application memory capacity | Compact Flash memory | Composite video input | Embedded Ethernet | Reference | Weight kg |
| Optimum, 3.8" QVG | A screen | | | | | | |
| TFT | 1 COM1 1 USB | 32 MB | No | No | 1 | XBT GT1335 | 1.000 |
| Multifunction, 5.7" G | VGA screen | 1 | | | | | |
| 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" V | /GA screen | | | | | | |
| TFT | 1 COM1 1 COM2 2 USB | 32 MB | Yes | No | 1 | XBT GT2430 | - |
| Multifunction, 7.5" V | /GA screen | | | | | | |
| STN | 1 COM1 1 COM2 1 USB | 32 MB | Yes | No | 1 | XBT GT4230 | 1.800 |
| TFT | 1 COM1 | 32 MB | Yes | No | 1 | XBT GT4330 | 1.800 |
| | 1 COM2 1 USB | | | Yes | 1 | XBT GT4340 | 1.800 |
| Multifunction, 10.4" | VGA screen | | | | | | |
| STN | 1 COM1 1 COM2 2 USB | 32 MB | Yes | No | 1 | XBT GT5230 | 3.000 |
| TFT | 1 COM1 | 32 MB | Yes | No | 1 | XBT GT5330 | 2.500 |
| | 1 COM2 2 USB | | | Yes | 1 | XBT GT5340 | 2.500 |
| Multifunction, 10.4" | SVGA scree | n | | | | | |
| TFT | 1 COM1 1 COM2 2 USB | 32 MB | Yes | No | 1 | XBT GT5430 | 2.500 |
| Multifunction, 12.1" | SVGA scree | n | | | | | |
| TFT | 1 COM1 | 32 MB | Yes | No | 1 | XBT GT6330 | 3.000 |
| | 1 COM2 2 USB | | | Yes | 1 | XBT GT6340 | 3.000 |
| Multifunction, 15" X | GA screen | | | | | | |
| TFT | 1 COM1 1 COM2 | 32 MB | Yes | Yes | 1 | XBT GT7340 | 5.600 |

2 USB

(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: | Description: | Accessories: | Connections: |
|---------------|--------------|--------------|--------------|
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| | | | |

17 14

Operator dialogue terminals Standard Advanced Panels Magelis[™] XBT GK, XBT GH



XBT GK2120/2330



XBT GK5330



XBT GH2460



XBT ZGJBOX XBT ZGHL.

| Reypau/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" scre | en | | | | | | |
| STN Black and white | 1 COM1 1 COM2 1 USB | 32 MB | Yes | No | - | XBT GK2120 | - |
| Multifunction, 5.7" scre | en | | | | | | |
| TFT Colour mode | 1 COM1 1 COM2 1 USB | 32 MB | Yes | No | 1 | XBT GK2330 | - |
| Multifunction, 10.4" sc | reen | | | | | | |
| TFT Colour mode | 1 COM1 1 COM2 2 USB | 32 MB | Yes | No | 1 | XBT GK5330 | - |

| Portable touch sc | Portable touch screen terminals | | | | | | | |
|--|---------------------------------|-----------------------------------|----------------------------|----------------|--------------------------------|------------------------|--------------|--|
| Type of front panel | Number of ports | Application memory capacity | Compact Flash memory | Video input | Number of Ethernet ports | Reference | Weight kg | |
| Multifunction, 5.7" scr | een | | | | | | | |
| TFT colour mode screen and Emergency stop button | 1 COM1 1 USB | 32 MB | Yes | No | 1 | XBT GH2460 (2) | - | |
| TFT colour mode screen | 1 COM1 1 USB | 32 MB | Yes | No | 1 | XBT GH2460B (2) | _ | |

| Connection componen | its | | | |
|----------------------------|---|--------|--------------------|--------------|
| Description | Usage | Length | Reference | Weight kg |
| Junction box for XBT GH | Specifically for the 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 _r rail | - | XBT ZGJBOX (2) (3) | _ |
| Interface cable for XBT GH | For connecting XBT GH terminal to junction box XBT ZGJBOX | 3 m | XBT ZGHL3 | _ |
| | | 5 m | XBT ZGHL5 | _ |
| | | 10 m | XBT ZGHL10 | - |
| | | 20 m | XBT ZGHL20 (4) | |
| | | | | |

(1) Fixing kit (spring clips), locking device for USB connectors, customizable label sheets and instruction sheet included with terminals.

(2) The XBT GH terminal is connected to junction box XBT ZGJBOX using le cable XBT ZGHL., to be ordered separately

(see table below).

(3) A junction box is required at each XBT GH terminal connection point.

(4) With this cable, the following limitations apply to the junction box:

- no RS 232C serial link

- an isolation box cannot be used - 24 --- supply voltage tolerance of approximately 10%

| Presentation: | Description: |
|---------------|--------------|
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Accessories: page 1/62

Schneider Belectric

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input

Number of

Ethernet

ports

Reference

Application Secondary Video

storage

device

memory

capacity

Magelis[™] GTW with 10.4", 12" or 15" screen



on primary storage device kg Multifunction, 10.4" screen TFT 1 COM1 2 GB SD No 2 HMI GTW5354 4.100 CF card for card ≥ 4 GB 3 USB system and application HMI GTW5354 Multifunction, 12" screen 1 COM1 XBT GTW652 TFT 2 GB CF No 2 3.800 5 USB CF card for card ≥ 1 GB system and application Multifunction, 15" screen TFT 1 COM1 2 GB SD No 2 HMI GTW7354 6.100 3 USB CF card for card ≥ 4 GB system and application 1 COM1 **HMI GTW73545** 6.300 2 GB SD 2 No CF card for 2 USB card≥4 GB system and

Open touch screen terminals (1)

Number

of ports

Type of screen

XBT GTW652



HMI GTW7354

(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).

application

| Presentation: | Description: | Accessories: | Connections: | |
|---------------|--------------|--------------|--------------|--|
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| | | | | |

Weight

References

Operator dialogue terminals Magelis[™] Advanced Panels Separate parts for terminals Magelis GT/GTO/GK/GH/GTW

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| | | I | |
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XBTZGM●●●

XBTZGM25

| Description | Characteristics | Compatible with terminals | Reference | Weight ka |
|-------------------------------|---|-----------------------------------|------------------|--------------|
| Compact Flash memory cards | 128 MB, blank | XBT except XBT GT1●●●/GT2110 | XBT ZGM128 | 0.050 |
| | 256 MB, blank | and XBT GTW | XBT ZGM256 | 0.050 |
| | 512 MB, blank | | MPC YN0 0CFE 00N | 0.050 |
| | 1 GB, blank | | MPC YN0 0CF1 00N | - |
| | 2 GB, blank | XBT except XBT GT1●●● / GT2110 | MPC YN0 0CF2 00N | - |
| | 4 GB, blank | XBT GTW only | MPC YN0 0CF4 00N | - |
| SD memory card | 4 GB, blank | HMI GTO and HMI GTW only | HMI ZSD4G | - |
| Maintenance kits | Includes fixings and seals for panel mounting | MPC ST1 1NeJ 00T (8.4" screen) | MPC YK1 0MNT KIT | - |
| | | MPC ST2 1NeJ20e (12" screen) | MPC YK2 0MNT KIT | _ |
| | | MPC ST5 2NDJ 10 (15" screen) | MPC YK5 0MNT KIT | _ |
| Protective sheets | _ | XBT GT1105 / GT1135 / GT1335 | XBT ZG60 | _ |
| (5 peer-on sneets) | | 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 200 / GH2460 | XBT ZG68 | _ |
| | | XBT GK 5330 | XBT ZG69 | _ |
| | | XBT GT7340 / HMI GTW 7353 | MPC YK5 0SPS KIT | 0.200 |
| | | XBT GTW652 | MPC YK2 0SPS KIT | _ |
| | | HMI GTO1300 / 1310 | HMI ZG60 | - |
| | | HMI GTO2300 / 2310 / 2315 | HMI ZG62 | _ |
| | | HMI GTO3510 | HMI ZG63 | _ |
| | | HMI GTO4310 | HMI ZG64 | _ |
| | | HMI GTO5310 / 5315 | HMI ZG65 | _ |
| | | HMI GTO6310 / 6315 | HMI ZG66 | _ |
| Plastic protective | | XBT GT2••• | XBT ZG70 | - |
| Sold in lots of 5 | | XBT GT53•• | XBT ZG71 | _ |
| Plastic covers for | - | HMI GTO1300 / HMI GTO1310 | HMI ZECOV1 | - |
| (IP 67 protection) | | HMI GTO2300 / HMI GTO2310 | HMI ZECOV2 | _ |
| | | HMI GTO3510 / HMI GTO4310 | HMI ZECOV4 | |
| | | | | |
| | | HMI GTO5310 / HMI GTO5315 | HMI ZECOV5 | - |

Separate components

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Presentation:
page 1/34
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Schneider Gelectric

Operator dialogue terminals Magelis[™] Advanced Panels Replacement parts for terminals Magelis GT/GTO/GK/GH/GTW

| | Separate components | S (continued) | | | |
|---|--|---|---------------------------|------------|--------------|
| | Description | Characteristics | Compatible with terminals | Reference | Weight kg |
| | Spring fixing clips Sold in lots of 12 | Number of spring clips depending on terminal | XBT GT | XBT Z3002 | - |
| | Wall mounting kit | Fixing components for mounting XBT GH terminal on a wall | XBT GH | XBT ZGWMKT | _ |
| | Neck strap | For use with XBT GH hand-held terminal | XBT GH | XBT ZGNSTP | |
| | Cover for shunt Emergency stop on junction box | Enables deactivation of the junction box terminal without activating the Emergency stop (requires installation of external switching system) | XBT GH | XBT ZGHCAP | _ |
| | Description | Description | Length m. | Reference | Weight kg |
| | Mechanical adaptors for substitution of terminals of the Magelis range | From XBT F032●10 to XBT GT2●●0 | - | XBT ZGCO1 | - |
| | the mayens range | From XBT G2110 to XBT GT2••0 | - | XBT ZGCO2 | _ |
| | | From XBT F034●●● to XBT GT53●0 | - | XBT ZGCO3 | |
| | | From XBT G5330 to XBT GT5330 From XBT GT5230 to HMI GTO5310 | - | XBT ZGCO4 | _ |
| 1 | Remote USB port for terminals XBT GT2••0GT7340, XBT GT1••5, XBT GK•••, XBT GTW••• | Enables the USB type A port to be located remotely on the rear of the XBT terminal on a panel or enclosure door (Ø 21 mm fixing device) | 1 | XBT ZGUSB | |
| | Remote USB port for terminals XBT GT200GT7340, XBT GT1005, XBT GK000, XBT GTW000 HMI GTO | Enables the USB mini-B port to be located remotely on the rear of the XBT or HMI GTO terminal on a panel or enclosure door (Ø 21 mm fixing device) | 1 | XBT ZGUSBB | |
| | Remote USB port for HMI GTO panel | Enables the USB mini-B port to be located remotely on the rear of the HMI GTO panel, on a panel or enclosure door (Ø 21 mm fixing device) | 1 | HMI ZSUSBB | |
| | Adaptor for Compact Flash cards | Enables a PC with a PCMCIA card slot to take a Compact Flash card | - | XBT ZGADT | 0.050 |

| Presentation: | Description: | Schemes: | Substitution: | |
|---------------|--------------|-----------|---------------|--|
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| | | | | |

Operator dialogue terminals Magelis[™] Advanced Panels Replacement parts for terminals Magelis GT/GTO/GK/GH/GTW

| | 1101010100 | Togit |
|---|---|--|
| | | kg |
| XBT GH (for junction box) | XBT ZG5H | - |
| XBT 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 | - |
| HMI GTO1300 / 1310 | HMI ZG51 | - |
| HMI GTO2300 / 2310 | HMI ZG52 | - |
| HMI GTO2315 | HMI ZG522 | - |
| HMI GTO3510 / 4310 | HMI ZG54 | - |
| HMI GTO5310 | HMI ZG55 | - |
| HMI GTO5315 | HMI ZG552 | |
| HMI GTO6310 | HMI ZG56 | _ |
| HMI GTO6315 | HMI ZG562 | - |
| VDT OTE220 | VDT 70 10 | 0.100 |
| | XB1 2G43 | 0.100 |
| | XBT ZG45 | 0.200 |
| XBI G153•0 PV ≥ 3 / XBI G154•0 | XBT ZG45B | 0.200 |
| XBT GT63•0 | XBT ZG46 | 0.200 |
| XBT GT7340 | XBT ZG47 | 0.200 |
| XBT GT2••0 / GT4••0 | XBT ZGCLP1 | - |
| XBT GT1••5 / GT5••0 / GT6••0 / GT7••0 | XBT ZGCLP2 | - |
| XBT GK | XBT ZGCLP3 | - |
| HMI GTO (USB type A) | HMI ZGCLP1 | - |
| HMI GTO (USB type mini-B) | HMI ZSCLP3 | - |
| 4 clips and screws (max. tightening torque: 0.5 Nm), supplied with all XBT GT terminals | XBT ZG FIX | 0.100 |
| 4 clips and screws (max. tightening torque: 0.5 Nm), supplied with all HMIGTO | HMI ZGFIX | 0.030 |
| 8 nuts and 4 L-shaped brackets, supplied with all HMIGTOeee5 terminals | HMI ZGFIX2 | 0.030 |
| XBT GT/GK, except XBT GT1 | XBT ZGCNC | 0.030 |
| XBT GT1•••• / GT2••• / GT4••• | XBT ZGPWS1 | 0.030 |
| XB1GK2000 | V67 70 5000 | |
| XBT GT5000 / 0000 / 7000 XBT GK5000 XBT GTW000 | XB1 ZGPWS2 | - |
| HMI GTO (direct connection) | HMI ZGPWS | 0.030 |
| HMI GTO (right angle connection) | HMI ZGPWS2 | 0.030 |
| XBT GT/aco / Seco / Seco / Zeco VPT GYSeco | YRT 7GAUY | |
| AD 1 014000/ JUNE / 0000/ / 000, AD 1 GR3000 | ADI ZGAUA | - |
| XBT GK2●●0 | XBL YGK2 | 0.030 |
| XBT GK5••• | XBL YGK5 | - |
| XBT GH | XBL YGH2 | - |
| HMI GTO1300 / 1310 | HMI ZLYGO1 | - |
| HMI GTO3510 | HMI ZLYGO3 | - |
| | | |
| XBT GH | XBT ZGPEN | - |
| XBT GH | XBT ZGESGD | _ |
| XBT GH | XBT ZGHSTP | - |
| HMI GTO except HMI GTO1300 / 1310 / 2300 | HMI ZGBAT | - |
| 0.1 | | |
| Schemes: Substitution: | | |
| | XBT GH (for junction box) XBT GT1105 / GT1135 / GT1335 XBT GT21e0 / GT2220 / GT2330 XBT GT4230 / GT43e0 XBT GT53e0 XBT GT5230 / GT63e0 XBT GT7340 XBT GT7340 XBT GT63e0 XBT GT53e0 / GT63e0 XBT GT7340 XBT GT7340 XBT GT0530 / GT63e0 XBT GT0530 / A10 HMI GT02301 / 4310 HMI GT06315 HMI GT06315 XBT GT53e0 XBT GT53e0 XBT GT53e0 XBT GT63e0 XBT GT63e0 XBT GT63e0 XBT GT6ae0 XBT GT6ae0 XBT GT6ae0 XBT GT6ae0 XBT GT6ae0 / GT6ee0 / GT7ee0 XBT GT1ee5 / GT5ee0 / GT6ee0 / GT7ee0 XBT GT1ee5 / GT5ee0 / GT6ee0 / GT7ee0 XBT GT1ee7 / GT2eee / GT4ee0 XBT GT1ee7 / GT2eee / GT4ee0 XBT GT1ee7 / GT2eee / GT4ee0 XBT GT740 XBT GT1ee7 / GT2eee / GT4ee0 XBT GT1ee7 / GT2eee / GT4ee0 XBT GT1ee7 / GT2eee / GT4ee0 XBT GT/GK, except XBT GT1eee XBT | XBT GH (for junction box) XBT ZG5H XBT GT1105 / GT1335 / GT1335 XBT ZG51 XBT GT1105 / GT220 / GT2300 XBT ZG54 XBT GT2140 / GT220 / GT2300 XBT ZG54 XBT GT2140 / GT230 / GT63=0 XBT ZG56 XBT GT5340 XBT ZG56 XBT GT230 / GT63=0 XBT ZG57 XBT GK2=0 XBT ZG57 XBT GK2=0 XBT ZG56 XBT GT230 / J310 HMI ZG51 HMI GT0300 / J310 HMI ZG51 HMI GT0300 / J310 HMI ZG55 HMI GT0315 HMI ZG55 HMI GT05310 HMI ZG55 HMI GT06310 HMI ZG56 HMI GT06315 HMI ZG562 XBT GT53a0 XBT ZG45 XBT GT53a0 XBT ZG45 XBT GT53a0 XBT ZG45 XBT GT340 XBT ZG45 XBT GT340 XBT ZG45 XBT GT53a0 XBT ZG45 XBT GT53a0 XBT ZG45 XBT GT340 XBT ZG45 XBT GT340 XBT ZG45 XBT GT3a0 XBT ZG46 XBT GT3a0 |

Operator dialogue terminals Magelis[™] Advanced Panels Connection accessories for terminals Magelis GT/GTO/GK/GH/GTW

| Cables for applicati | on transfer - Teri | minal to PC | | | |
|--|----------------------------|----------------|-------------|------------------|--------------|
| Type of terminal (terminal end connector) | Connector (PC end) | Туре | Length m | Reference (1) | Weight kg |
| XBT GT2000GT7340, XBT GT1005, XBT GK, XBT GH XBT GTW | USB | TTL | 2 | XBT ZG935 | 0.290 |
| HMI GTO | USB | USB | 1.80 | BMX XCAUSBH018 | - |
| Printer connection | cables | | | | |
| Type of printer (2) | Connector (printer end) | Туре | Length m | Reference | Weight kg |
| Serial printer for XBT GT/GK/GTW terminals (except XBT GT1000) and HMI GTO panels (except HMI GTO1310) | SUB-D female 25-way | RS 232C (COM1) | 2.5 | XBT Z915 | 0.200 |
| Serial printer for XBT GT/GK/GTW terminals | USB | RS 232C (COM1) | 1.80 | HMIZURS | _ |

and HMI GTO panels

Adaptors and isolation boxes for XBT terminals and HMI GTO panels

These 3 adaptors are used with the connection cables depending on the application concerned. For example, the XBT Z968 cable is used with the XBT ZG909 adaptor, to connect a Twido controller (via its terminal port) to an XBT GT2.00 terminal (via its COM1 port).

| Description | Type of connector (automation product end) | Physical link (XBT or HMI GTO terminal end) | Length m | Reference | Weight kg |
|--|--|--|-------------|---------------|--------------|
| Adaptor for XBT GT1eee (COM1 port) XBT GT2ee07340 XBT GK (COM2 port) HMI GTO | 25-way SUB-D connector | RJ 45 connector | 0.2 | XBT ZG939 | _ |
| Adaptors for XBT GT2ee07340 XBT GK (COM1 port) XBT GTW (COM1 and | 25-way SUB-D connector | 9-way SUB-D connector, RS 485 on XBT terminal only | 0.2 | XBT ZG909 (3) | _ |
| COM2 ports) HMI GTO (COM1 port) | | 9-way SUB-D connector, RS 232C | 0.2 | XBT ZG919 | |



| | | 102320 | | |
|--|---|-----------------------|------------|--------|
| Description | For use with | Link to isolate | Reference | Weight |
| Serial link isolation units for XBT GT2●●07340 XBT GK | Connection to serial port of XBT terminal Isolated link on 9-way SUB-D connector (4) | RS 232C/RS 485 (COM1) | XBT ZGI232 | |
| HMI GTO | - Box power supply via USB port of terminal. Incorporates a USB port expander. | RS 485 (COM2) | XBT ZGI485 | |

XBTZGI485

(1) Cable included (depending on model) with Vijeo Designer software packages (see page 4/13).

(2) Parallel printer (see page 1/37).
(3) This adaptor cannot be used with Magelis GTO terminals.
(4) Male connector with XBT ZGI232, female connector with XBT ZGI485.

Schneider Electric

| page 1/34 page 1/38 page 1/71 page 1/75 | | Description. | | |
|---|-----------|--------------|-----------|-----------|
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Operator dialogue terminals Magelis[™] Advanced Panels Connection accessories for terminals Magelis GT/GTO/GK/GH/GTW

| Automation product type | Type of connector (automation product end | Protocol | Type of terminal | Link | On port | Length m | Reference | We |
|---|--|------------------------------|---|---------|---------------|-------------|---------------------------------------|----|
| Twido, Nano, Modicon TSX Micro, Modicon Premium | Terminal port, 8-way female mini-DIN | Uni-TE (V1/V2), Modbus | XBT GT1●●● XBT GT2●●07340 XBT GK HMI GTO | RS 485 | COM1 COM2 | 2.5 10 | XBT Z9780 XBT Z9782 | |
| | | | XBT GT2●●07340 XBT GK | RS 485 | COM1 | 2.5 5 | XBT Z968 + (2) XBT Z9681 + (2) | (|
| | | | XBT GT2••07340 XBT GK XBT GH (Junction box) | RS 485 | COM1 | 2.5 | XBT Z9018 | (|
| | | | XBT GTW. XBT GH (Junction box) HMI GTO | RS 232 | COM1 | 2.5 | TSX PCX 1031 | |
| Modicon M340 | R 145 | Modbus | XBT GT1 | RS 485 | COM1 | 2.5 | XBT 79980 | |
| Modicon M238 Modicon M258 | 11040 | Woubus | HMI GTO XBT GT2••07340 XBT GK | 110 400 | COM2 | 10 | XBT Z9982 | |
| | | | XBT GT2••07340 | RS 485 | COM1 | 1.8 | XBT Z938 + (2) | (|
| | | | XBT GK XBT GH (Junction box) | | | 2.5 | XBT Z9008 | |
| | USB Mini-B | Terminal port | XBT GT <i>(4)</i> XBT GK/GTW HMI GTO | USB | USB type A | 1.8 4.5 | BMX XCA USB H018 BMX XCA USB H045 | |
| Modicon Premium | 25-way | Uni-TE | XBT GT1 | RS 485 | COM1 | 2.5 | XBT Z918 + (1) | |
| With 13X 3C1 2100 | SUB-D | (* 17 * 2) | XBT GT2••07340 XBT GK XBT GH (Junction box) | RS 485 | COM1 | 2.5 | XBT Z918 +(2) | (|
| Modicon Quantum | 9-way | Modbus | XBT GT1●●● | RS 232C | COM1 | 2.5 | XBT Z9710 + <i>(1)</i> | |
| | SUB-D | | XBT GT2••07340 | RS 232C | COM1 | 2.5 | XBT Z9710 + <i>(3)</i> | (|
| | | | XBT GK / GTW XBT GH (Junction box) HMI GTO | | | 3.7 | 990 NAA 263 20 | |
| Modicon STB | HE13 (NIM, network | Modbus | XBT GT1 | RS 232C | COM1 | 2.5 | XBT Z988 + (1) XBT Z9715 | |
| | interface module) | | XBT GT2••07340 | RS 232C | COM1 | 2 | STB XCA 4002 | (|
| | | | XBT GK / GTW XBT GH (Junction box) HMI GTO | | | 2.5 | XBT Z988 + <i>(</i> 3 <i>)</i> | (|
| Modicon Momontum M1 | RJ45 | Modbus | XBT GT1●●● | RS 232C | COM1 | 2.5 | XBT Z9711 + (1) | (|
| | Momentum M1) | | XBT GT2••07340 XBT GK XBT GTW XBT GH (Junction box) HMI GTO | RS 232C | COM1 | 2.5 | XBT Z9711 + (3) | |
| TeSys U, T | RJ45 | Modbus | XBT GT1●●● | RS 485 | COM1 | 3 | VW3 A8 306 R30 | |
| starters ATV 312/61/71 | | | XBT GT2●●07340 XBT GK | | COM2 | 2.5 | XBT Z9980 | |
| variable speed drives ATS 48 starters | | | HMI GTO | RS 485 | COM1 | 2.5 | XBT Z9008 | |
| Preventa XPSMC | | | XBT GH (Junction box) | | | | | |

Description: page 1/38 Schemes: page 1/71 Substitution: page 1/75

1



TSX PCX 1031

Presentation:

Schneider Gelectric

Mitsubishi, Melsec PLCs

Description

Driver used

Operator dialogue terminals Magelis[™] Advanced Panels Connection accessories for terminals Magelis GT/GTO/GK/GH/GTW

Type of connector

excluding adaptor)

(fitted to cable,

Physical Length Reference

m

link

(COM1)

Cables and adaptors for connecting Magelis terminals to third-party PLCs

Type of terminal





| Connection cable, A CPU (SIO) | XBT GT2••07340 XBT GK XBT GH (Junction box) | 9-way SUB-D 25-way SUB-D | RS 422 | 5 | XBT ZG9773 | _ |
|--|---|---|----------------------------|-------------|------------------------------|--------------|
| Connection cable, Q Link (SIO) | XBT GT2•07340 XBT GK / GTW XBT GH (Junction box) HMI GTO | 9-way SUB-D 9-way SUB-D | RS 232C | 5 | XBT ZG9772 | _ |
| Connection cable, Q CPU (SIO) | XBT GT2●07340 XBT GK / GTW XBT GH (Junction box) HMI GTO | 9-way SUB-D mini-DIN | RS 232C | 5 | XBT ZG9774 | |
| Connection cable, A Link (SIO) | XBT GT2●07340 XBT GK / GTW XBT GH (Junction box) HMI GTO | 9-way SUB-D 25-way SUB-D | RS 232C | 5 | XBT ZG9731 | _ |
| Connection cable, <i>FX (CPU)</i> | XBT GT2••07340 XBT GK XBT GH (Junction box) | 9-way SUB-D mini-DIN | RS 422 | 5 | XBT ZG9775 | _ |
| | XBT GT1●●● | 25-way SUB-D mini-DIN | RS 422 | 5 | XBT Z980 + (1) | - |
| | HMI GTO | 9-way SUB-D mini-DIN | RS 232/ RS 422 | 5 | HMI Z951 🛦 | - |
| Cable for 2-port adaptor, FX (CPU), A CPU (SIO) QnA CPU (SIO) | XBT GT2••07340 XBT GK XBT GH (Junction box) | 9-way SUB-D Flying leads | RS 422 | 5 | XBT ZG9778 + <i>(4)</i> | |
| Adaptor unit FX (CPU), A CPU (SIO) QnA CPU (SIO) | XBT GT2••07340 XBT GK XBT GH (Junction box) | 2-port unit Screw terminals / 2 x 9-way SUB-D | RS 422 | - | XBT ZG979 | _ |
| Omron. Sysmac PLCs | | | | | | |
| Description Driver used | Type of terminal | Type of connector (fitted to cable, excluding adaptor) | Physical link (COM1) | Length m | Reference | Weight kg |
| Connection cables, Link (SIO) | XBT GT1 | 25-way SUB-D 9-way SUB-D | RS 232C | 2.5 | XBT Z9740 + (1) XBT Z9743 | 0.210 |
| | XBT GT2ee07340 XBT GK/GTW XBT GH (Junction box) | 9-way SUB-D 9-way SUB-D | RS 232C | 5 | XBT ZG9740 | _ |
| | HMI GTO | 9-way SUB-D 25-way SUB-D | RS 232C | 5 | XBT ZG 9731 | - |
| Connecting cables FINS (SIO) | XBT GT1●●● | 25-way SUB-D 9-way SUB-D | RS 232C | 2.5 | XBT Z9740 + (1) XBT Z9743 | 0.210 |
| | XBT GT2••07340 XBT GK/GTW | 9-way SUB-D 9-way SUB-D | RS 232C | 5 | XBT ZG9740 | _ |

XBT GH (Junction box)

HMI GTÓ

(1) Adaptor XBT ZG939 to be used with cables with " + (1)" after the reference (see page 1/65).
 (4) Adaptor XBT ZGCOM1 (9-way female/female SUB-D) to be used with cables with " + (4)" after the reference (XBT ZG9778).

kg

▲ Available: 3rd quarter 2012

| Presentation: | Description: | Schemes: | Substitution: |
|---------------|--------------|-----------|---------------|
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Operator dialogue terminals Magelis[™] Advanced Panels Connection accessories for terminals Magelis GT/GTO/GK/GH/GTW

Cables and adaptors for connecting Magelis terminals to third-party PLCs (continued) **Rockwell Automation, Allen-Bradley PLCs**

| Description Driver used | Type of terminal | Type of connector (fitted to cable, excluding adaptor) | Physical link (COM1) | Length m | Reference | Weight kg |
|--|--|---|-------------------------------------|-------------|------------------------------|--------------|
| Connection cables <i>DF1 Full Duplex</i> | XBT GT1●●● | 25-way SUB-D 9-way SUB-D | RS 232C | 2.5 | XBT Z9730 + (1) XBT Z9733 | 0.210 |
| | | 25-way SUB-D 8-way mini-DIN | RS 232C | 2.5 | XBT Z9731 + (1) | 0.210 |
| | XBT GT2••07340 XBT GK/GTW XBT GH (Junction box) HMI GTO | 9-way SUB-D 25-way SUB-D | RS 232C | 5 | XBT ZG9731 | - |
| Connection cables, DH485 | XBT GT1●●● | 25-way SUB-D 9-way SUB-D | RS 232C | 2.5 | XBT Z9734 | _ |
| | | 25-way SUB-D 8-way mini-DIN | RS 485 | 5 | XBT Z9732 + (1) | - |
| | XBT GT2••07340 XBT GK XBT GH (Junction box) | 25-way SUB-D 8-way mini-DIN | RS 485 | 5 | XBT Z9732 + (2) | _ |
| | HMI GTO | 9-way SUB-D | RS 485 | 5 | XBT Z9732 + (1) | _ |
| Siemens, Simatic F | PLCs | | | | | |
| Description Driver used | Type of terminal | Type of connector (fitted to cable, excluding adaptor) | Physical link | Length m | Reference | Weight kg |
| Connection cable, PPI, S7 200 | XBT GT1●●● | RJ45/9-way SUB-D | RS 485 (COM1) | 2.5 | XBT ZG9721 | - |
| | XBT GT2●●07340 XBT GK HMI GTO | RJ45/9-way SUB-D | RS 485 (COM2) | | | |
| Connection cables, MPI port, S7 300/400 | XBT GT2••07340 XBT GK/GTW XBT GH (Junction box) HMI GTO | 9-way SUB-D 9-way SUB-D | RS 232C (COM1) | 3 | XBT ZG9292 | |
| | XBT GT2••07340 XBT GK | RJ45/flying leads other end | RS 485 (7) (COM2) | 3 | VW3 A8 306 D30 | 0.150 |
| | HMI GTO | RJ45/9-way SUB-D | RS 485 (7) (COM1 or COM2) (8) | 2.5 | XBT ZG9721 | _ |
| Customizable cabl | es | | | | | |
| Description Driver used | Terminal type | Type of connector (fitted to cable, | Physical link | Length m | Reference | Weight kg |

| | Driver used | terminal type | (fitted to cable, excluding adaptor) | link | m | Reference | kg |
|----------------------------------|----------------------------------|---|---|------------------|------------------------|-------------------------------|-------|
| | Universal cable, RS 422 | XBT GT2••07340 XBT GK XBT GH (Junction box) | 9-way SUB-D/flying leads other end | RS 422 (COM1) | 2.5 | XBT ZG9722 | 0.210 |
| Universal adaptor, RS 422/485 | Universal adaptor, RS 422/485 | XBT GT2••07340 XBT GK | 9-way SUB-D/Screw terminal | RS 422 (COM1) | - | XBT ZG949 + <i>(5)</i> | _ |
| | XB1 GH (Junction box) | 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 1/65). (2) Adaptor XBT ZG909 to be used with cables with " + (2) " after the reference (see page 1/65).

(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). (8) COM1 for HMI GTO1310, COM2 for the other terminals.

| Presentation: | |
|---------------|--|
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Schemes page 1/71

Schneider Belectric

XBT ZG9731
Operator dialogue terminals Magelis[™] Advanced Panels Connection accessories for terminals Magelis GT/GTO/GK/GH/GTW

| | | Connectio | on of Mageli | s terminals | via serial links a | nd Eth | nernet network | |
|-----------------|-------------|---------------------------|---|----------------------------------|--|-------------|-----------------------|--------------|
| | | Type of bus/ network | Tap-off units | Connector (tap-off unit side) | Terminal type | Length m | Reference | Weight kg |
| | | Uni-Telway serial link | Subscriber socket | 15-way female SUB-D | XBT GT1●●● (COM1) | 3 | VW3 A8 306 | 0.150 |
| | | | TSX SCA 62 | | XBT GT2••07340 XBT GK (COM2) HMI GTO | _ | | |
| TSX SCA 62 | TSX PACC 01 | | | | XBT GT2••07340 XBT GK (COM1) XBT GH (Junction box) | 1.8 | XBT Z908 + (2) | 0.240 |
| | | | Connection box | 8-way female | XBT GT1 •• (COM1) | 2.5 | XBT Z9780 | 0.180 |
| | | | | | XBT GT2●●07340 XBT GK (COM2) HMI GTO | _ | | |
| | | | | | XBT GT2••07340 XBT GK (COM1) XBT GH (Junction box) | 2.5 | XBT Z9018 | |
| TSX SCA 64 | LU9 GC3 | Modbus serial link | Subscriber | 15-way female SUB-D | XBT GT1 ••• (COM1) | 3 | VW3 A8 306 | 0.150 |
| | | TSXS | TSX SCA 64 | SX SCA 64 | XBT GT2••07340 XBT GK (COM2) HMI GTO | _ | | |
| | | | | | XBT GT2••07340 XBT GK (COM1) XBT GH (Junction box) | 1.8 | XBT Z908 + (2) | 0.240 |
| VW3 A8 306 TF10 | | | 8-port Modbus splitter box | RJ45 | XBT GT1●●● (COM1) | 3 | VW3 A8 306R30 | 0.060 |
| 00000 | | | LU9 GC3 2-port | | | 2.5 | XBT Z9980 | - |
| | | | tap-off junction TWDXCAISO TWDXCAT3RJ | | XBT GT2••07340 XBT GK (COM1) XBT GH (Junction box) | 2.5 | XBT Z9008 | _ |
| | | | T-junction box | With integrated cable, RJ45 | XBT GT1 • • • (COM1) | 1 | VW3 A8 306 TF10 | - |
| TWDXCAISO | | | | fitted | XBT GT2••07340 XBT GK (COM2) HMI GTO | _ | | |
| | | Ethernet | Hubs | RJ45 | XBT GT••30 / ••40 | 2 | 490 NTW 000 02 | _ |
| | | TCP/IP network | 499 NEH/NOH Switches | | XBT GKee30 XBT GTWeee | 5 | 490 NTW 000 05 | |
| | | | 499 NES, | | XBT GH (Junction box) | 12 | 490 NTW 000 12 | |
| | | | 499 NMS, | | HMI GTO | 40 | 490 N I W 000 40 | |
| | | | 499 NOS and 499 NOS | | | 00 | 450 11 1 17 000 80 | - |

(2) Adaptor XBT ZG909 to be used with cables with " + (2) "after the reference (see page 1/65).

| Presentation: | Description: | Schemes: | Substitution: | |
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| | | | | |

Operator dialogue terminals Magelis[™] Advanced Panels Connection accessories for terminals Magelis GT/GTO/GK/GH/GTW

| Connection of Ma | gelis terminals to fieldbus | ses | | |
|---------------------|-----------------------------|----------------------------|-------------|--------------|
| Type of bus/network | Connection components | Type of terminal | Reference | Weight kg |
| FIPWAY, FIPIO | USB gateway | XBT GT / GK (1) HMI GTO | TSX CUSBFIP | - |
| Modbus Plus | USB gateway | XBT GT / GK (1) HMI GTO | XBT ZGUMP | - |
| | | XBT GTW | TSX CUSBMBP | |
| Profibus DP | Card on expansion bus | XBT GT / GK (1) | XBT ZGPDP | - |
| Device Net | Card on expansion bus | XBT GT / GK (1) | XBT ZGDVN | |

| Modular regulated switch mode power supplies (2) | | | | | | | |
|--|-------------------------------|------------------|--------------------|---------------|--------------|--|--|
| Input voltage/ Output voltage | Combination with terminals | Nominal power | Nominal current | Reference | Weight kg | | |
| 100240 / 24 V single-phase wide range line supply 4763 Hz | XBT GT11006340 XBT GK / GH | 30 W | 1.2 A | ABL 8MEM24012 | 0.195 | | |
| | XBT GT7340 / GTW | 60 W | 2.5 A | ABL 7RM24025 | 0.255 | | |



1

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

| Presentation: | Description: | Schemes: | Substitution: | |
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| | | | | - |

Schneider Belectric

Operator dialogue terminals Magelis[™] Advanced Panels Connection system

XBT GT11•5 terminals, HMI GTO1310 terminals and Schneider Electric products



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|----------------------------|---------------------------|---------------------------------|----------------------------|--|
| | | | | |

Operator dialogue terminals Magelis[™] Advanced Panels

Connection system



(1) RS485 not available for HMI GTO (COM1).

(2) • defines the length: - 0, 2.5 m (elbowed connector)

-1,5m

-6, 16 m

-7,20m

-8,25m

1

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Schneider Belectric



| Presentation: | Description: | References: |
|---------------|--------------|--------------|
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| | | |

Operator dialogue terminals Magelis[™] Advanced Panels

Connection system



(1) RS 422 and RS 425 not available on HMI GTO (COM1).

| Application transfer from XBT (| T terminals to PC | | |
|--|---|---------------------------|--|
| XBT GT1100/1130 <u>8-way mini-DIN</u> XBT GT2••0 | USB type A XBT ZG915, 9-way SUB-D XBT ZG925, type A | _ Serial port USB port | |
| XBT GT7340 XBT GT1005 | XBT ZG935, type A TO terminals to PC | | |
| HMI GTO | USB type A XBT ZG935 USB mini-B BMXXCAUSBH018 | – USB port | |

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| 1/74 | | Schneider Electric | | |

Operator dialogue terminals Magelis[™] Advanced Panels Equivalent product table Magelis XBT GT and HMI GTO

| Equivalent product table between XBT GT terminals and HMI GTO terminals | | | | |
|---|---|--------------------|--|--|
| Old range XBT GT | New range HMI GTO Requires Vijeo Designer ≥ V6.1 | Mechanical adaptor | | |
| XBT GT1100 | HMI GTO1300 | - | | |
| XBT GT1130 | HMI GTO1310 | - | | |
| XBT GT1105 | HMI GTO1300 | - | | |
| XBT GT1135 | HMI GTO1310 | - | | |
| XBT GT1335 | HMI GTO1310 | - | | |
| XBT GT2110 | HMI GTO2300 | - | | |
| XBT GT2120 | HMI GTO2310 | - | | |
| XBT GT2130 | HMI GTO2310 | - | | |
| XBT GT2220 | HMI GTO2310 | - | | |
| XBT GT2330 | HMI GTO2310 | - | | |
| XBT GT4230 | HMI GTO4310 | - | | |
| XBT GT4330 | HMI GTO4310 | - | | |
| XBT GT5230 | HMI GTO5310 | XBT ZGC04 | | |
| XBT GT5330 | HMI GTO5310 | - | | |
| XBT GT6330 | HMI GTO6310 | - | | |

Comments: when upgrading from the Magelis XBT range to the Magelis GTO Optimum range, the following parameters must be taken into account: - connection to the Profibus DP and Device Net fieldbusses is not possible,

- a combined RS232/RS422 serial link is not possible with COM1,

- there is no "alarm" output or "loudspeaker" output in the current version of the Optimum range.

| Presentation: | Description: | References: | Connections: | |
|---------------|--------------|---------------------|--------------|--|
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| | | | | |

Schneider

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Signaling Units

Monolithic tower lights Harmony[®] type XVGU Ø 60 Multi-color USB tower lights

HMI (Magelis Advanced Panels (1))

Presentation

The monolithic USB tower lights of the Harmony[®] XVGU range are designed to support HMI (Magelis[™] Advanced Panels (1)). These new tower lights with multi-color LEDs are unique and simple-to-use as the states and patterns are directly set and modified in the HMI application.

The XVGU tower lights provide long distance indication of the operating status or sequences of a machine or installation, both visually by means of illuminated signaling units with 360° visibility, and audibly by means of a buzzer.

■ The tower light comes with a pre-assembled USB cable for simple wiring and easy integration with the Magelis Advanced Panels (1) (2).

■ The tower light settings are selected from the Set screen of the HMI application at the time of integration.

The multi-color LEDs on all the three levels can be set to many possible color combinations (red, orange, green or blue) for sophisticated signaling.
 The 2-tone buzzer volume and alarm type (4 pre-recorded types) can be set easily.

■ The tower lights are easy to order as many customized configurations can be made from a single part number.

■ The range involves Ø 60 mm/2.36 in. products and is therefore ideal for use in many activity sectors (textiles, packaging, baggage handling). It is also ideal for use with metal tools, plastic extrusion machines and assembly lines. This range is only for indoor applications.

XVGU tower lights are supplied:

- with 3 multi-color LEDs and a clear lens,
- with a 2-tone buzzer,
- with pre-assembled USB cable for easy connection (2),
- with USB cable clamp for firm connection,
- fitted with one of the following mounting options:
- □ direct base mounting (IP 42),
- □ aluminium tube mounting and fixing plate (IP 42).

(1) Please refer to "USB tower lights compatible with Magelis Advanced Panels" table on page 1/79.

(2) For extension, use either the Schneider Electric USB cable (BMXXCAUSBH018) or a third-party USB Type A/mini B cable of maximum length 4 m/13.12 ft.

Signaling Units

Monolithic tower lights Harmony[®] type XVGU Ø 60 Multi-color USB tower lights

Presentation (continued)

Advanced Panels (1). Modicon M258 Signal action Transfer project data Modicon M258 Signal action Modicon M258 Modicon M258 Signal action Modicon M258 Signal action Modicon M258 Signal action Modicon M258 Modicon M258 Signal action Magelis Advanced Panel

The following illustrates the integration of XVGU tower lights with the Magelis™

1 The HMI application is created on a computer using the Vijeo designer HMI editor software (V6.1 Service pack 1 or higher). It is then downloaded to the Magelis Advanced Panel (1) via a USB cable for setting situation, color, and buzzer actions.

2 The tower light's pre-assembled USB cable is connected to the Magelis terminal for power supply and signal transmission (2).

3 The LED colors, flashing patterns, and buzzer tones are set and modified in the HMI Set screen.

Illuminated signaling

The light source consists of three multi-color LEDs (red, orange, green or blue) completed with a clear lens to provide an aesthetic look and reliable signaling (clear lenses help to avoid color reflectance in bright environments). When LEDs are not powered, the tower lights appear translucent. The LED colors can be set to many possible combinations of red, orange, green, and blue.

Audible signaling

The tower light is supplied with a 2-tone buzzer audible signaling unit, the volume of which can be adjusted up to 85 dB. This audible unit with 4 pre-recorded alarm types is located in the base of the tower light.

Environment

The XVGU tower lights are CE certified and conform to EN 61000-6-2 and EN 61000-6-4 standards.

Cabling

XVGU tower lights have pre-assembled USB cable with "Type A female" connector to attach to any standard USB mini B cable. A clamp is provided to prevent unintended removal or disconnection of the tower light from the Magelis Advanced Panel.

(1) Please refer to "USB tower lights compatible with Magelis Advanced Panels" table on page 1/79.

. (2) For extension, use either the Schneider Electric USB cable (BMXXCAUSBH018) or a third-party USB Type A/mini B cable of maximum length 4 m/13.12 ft.

Signaling Units Monolithic tower lights

Harmony[®] type XVGU Ø 60 Multi-color USB tower lights



2

Description

XVGU monolithic tower lights comprise an assembly of:

- 1 Three layers of multi-color illuminated signaling units (red, orange, green, or blue) which are set in the HMI application. Each XVGU tower light is equipped with mulit-color LEDs and a clear lens molded from a single piece of clear plastic. The colors are visible only when the LEDs are supplied with power (5 V DC).
- 2 A base unit integrating the buzzer.
- 3 A fixing base for mounting on a horizontal support: 3a a fixing base, comprising a 100 mm/3.94 in. aluminium support tube mounted on a fixing plate,
 - 3b a fixing base fitted with 3 screws for direct mounting.
- 4 A USB cable with "Type A female" connector, the projecting length being 300 mm/11.81 in. for tube mounting and 400 mm/15.75 in. for direct mounting models (1).

| Pre-assembled tower lights == 5 V, Ø 60 mm/2.36 in. | | | | | |
|---|---|----------------------|---------------------------|--------------|-----------------------|
| Description | Light source (included) | Degree of protection | Signaling colors | Reference | Weight |
| With 100 mr | n/3.94 <i>in.</i> alumin | ium tube n | nounting and | fixing plate | |
| With buzzer | Multi-color LED for various states and patterns | IP 42 | Red/Orange/ Green/Blue | XVGU3SHAV | 0.300 kg/ 0.661 lb |

| With direct | base mounting | | | |
|-------------|---|---------------------------|----------|-----------------------|
| With buzzer | Multi-color LED for IP 42 various states and patterns | Red/Orange/ Green/Blue | XVGU3SWV | 0.300 kg/ 0.661 lb |

| Accessories | | | | |
|--|--|-------------------|---------------|------------------------------|
| Description | Utilization | Length | Reference | Weight |
| Connection cable rom PC to the erminal USB Type A/mini B) | Cable for transferring screen data from a PC (USB Type A) to a HMI (USB Type mini B) | 1.8 m/ 5.91 ft | BMXXCAUSBH018 | 0.065 kg/ <i>0.143 lb</i> |

Note: Signaling colors: Red, Orange, Green, and Blue. The colors with any of these combination is set easily in the HMI application.

(1) For extension, use either the Schneider Electric USB cable (BMXXCAUSBH018) or a third-party USB Type A/mini B cable of maximum length 4 m/13.12 ft.





1

2

Signaling Units Monolithic tower lights Harmony[®] type XVGU Ø 60 Multi-color USB tower lights

USB tower lights compatible with Magelis[™] Advanced Panels and HMI Controllers

| | Type of tower light 1 | Type of Advanced Panels or HMI Controllers | Description | Reference 2 (1) |
|-----------------------|-------------------------|---|---|-----------------|
| XVGU3SWV XVGU3SHAV | Monochrome touch screen | Optimum, 3.8" QVGA screen/Orange or red/STN | XBTGT1105 | |
| | XVGU3SHAV | Standard Advanced Panels | Optimum, 3.8" QVGA screen/Orange or red/STN | XBTGT1135 |
| | | | Optimum, 5.7" QVGA screen/Blue mode/STN | XBTGT2110 |
| | | | Multifunction, 5.7" QVGA screen/Black and White/ STN | XBTGT2120 |
| | | | Multifunction, 5.7" QVGA screen/Blue mode/STN | XBTGT2130 |
| | | Color touch screen Standard | Optimum, 3.8" QVGA screen/TFT | XBTGT1335 |
| | | Advanced Panels | Multifunction, 5.7" QVGA screen/STN | XBTGT2220 |
| | | | Multifunction, 5.7" QVGA screen/TFT | XBTGT2330 |
| \bigcirc | | | Multifunction, 5.7" VGA screen/TFT | XBTGT2430 |
| 1 | | | Multifunction, 5.7" QVGA screen/High brightness TFT | XBTGT2930 |
| | | | Multifunction, 7.5" VGA screen/STN | XBTGT4230 |
| | | | Multifunction, 7.5" VGA screen/TFT | XBTGT4330 |
| | | | Multifunction, 7.5" VGA screen/TFT | XBTGT4340 |
| | | | Multifunction, 10.4" VGA screen/STN | XBTGT5230 |
| | | | Multifunction, 10.4" VGA screen/TFT | XBTGT5330 |
| | | | Multifunction, 10.4" VGA screen/TFT | XBTGT5340 |
| | | | Multifunction, 10.4" SVGA screen/TFT | XBTGT5430 |
| | | | Multifunction, 12.1" SVGA screen/TFT | XBTGT6330 |
| | | | Multifunction, 12.1" SVGA screen/TFT | XBTGT6340 |
| | | | Multifunction, 15" XGA screen/TFT | XBTGT7340 |
| | | Keypad/touch screen Standard Advanced Panels | Multifunction, 5.7" screen/Black and white/STN | XBTGK2120 |
| | | | Multifunction, 5.7" screen/Color/TFT | XBTGK2330 |
| | | | Multifunction, 10.4" screen/Color/TFT | XBTGK5330 |
| | | Portable touch screen Standard Advanced Panels | Multifunction, 5.7" screen/Color/TFT | XBTGH2460 |
| | | | Multifunction, 5.7" screen/Color/TFT (without Emergency stop Pushbutton) | XBTGH2460B |
| | | Junction box | Junction Box for XBTGH2 (without Fieldbus) | XBTZGJBOX |
| | | Optimum Advanced Panels | 3.5" QVGA screen/TFT | HMIGTO1300 |
| | | | 3.5" QVGA screen/TFT | HMIGTO1310 |
| | | | 5.7" QVGA screen/TFT | HMIGTO2300 |
| | | | 5.7" QVGA screen/TFT | HMIGTO2310 |
| | | | 5.7" QVGA screen/Stainless steel | HMIGTO2315 |
| | | | 7.0" WVGA screen/TFT | HMIGTO3510 |
| | | | 7.5" VGA screen/TFT | HMIGTO4310 |
| | | | 10.4" VGA screen/TFT | HMIGTO5310 |
| | | | 10.4" VGA screen/Stainless steel | HMIGTO5315 |
| | | | 12.1" SVGA screen/TFT | HMIGTO6310 |
| | | | 12.1" SVGA screen/Stainless steel | HMIGTO6315 |
| | | HMI Controllers | 3.8" screen/Orange or Red/STN | XBTGC1100U |
| | | | 3.8" screen/Orange or Red/STN | XBTGC1100T |
| | | | 5.7" screen/Black and white/STN | XBTGC2120U |
| | | | 5.7" screen/Black and white/STN | XBTGC2120T |
| | | | 5.7" screen/Color/STN | XBTGC2230U |
| | | | 5.7" screen/Color/STN | XBTGC2230T |
| | | | | |

Note: For more information on Magelis Advanced Panels and HMI Controllers, see pages 1/28 and 2/2.

(1) The minimum required Vijeo designer software version is Vjd 6.1 Service pack 1.

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2 - HMI Controllers

HMI Controllers Magelis

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Selection guide

HMI Controllers Magelis[™] XBT GC HMI Controllers Magelis[™] XBT GT, XBT GK Standard Advanced Panels + control function

| Applications | | Display of text messages, grap | phic objects and mimics | |
|------------------|--|--|--|---|
| | | IEC 1131-2 control function | iata | |
| Terminal type | | HMI Controllers | | |
| | | Ngata: Kuri | Segnedar The second se | |
| Display | Туре | 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 ontro | | Via touch coroon | | |
| Data entry | Statio function lucus | via touch screen | | |
| | Dynamic function keys | - | | |
| | Sonvice 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 EPRON | M memory capacity | |
| | Variables per page | Unlimited (8000 variables max.) | | |
| | Programmed logic | 5 languages according to IEC 11 | 31-2 (LD, ST, FBD, SFC, IL) | |
| | Counting/positioning | 4 x 100 kHz fast counter inputs/4 | 1 x 65 kHz pulse train outputs | |
| | Control (PID) Representation of variables | Yes Alphanumeric, bitmap, bargraph indicator | ı, gauge, tank, tank level indicator | , curves, polygon, button, |
| | Recipes | 32 groups of 64 recipes comprisi | ing 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/ Mitsubishi, Omron, Allen-Bradle | IP (1) and for PLC brands: and Siemens |
| | Asynchronous serial link | - | RS 232C/RS 422/485 (COM1) | |
| | USB ports | 1 | | |
| | Buses and networks | - CANOPEN master with optional | module (XBT ZGC CAN) | Ethernet TCD/ID |
| | | - | | (10BASE-T/100 BASE-TX) |
| | Printer link | USB port for parallel printer | | , |
| Design software | | SoMachine with Windows XP Pr see page 2/29 | ofessional and Windows 7 Profes | ssional 32/64-bit, |
| 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 | | |

More technical information on www.schneider-electric.com

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| Display of text messages, graphic objects and mimics Control and configuration of data | | | | |
|--|---|--|--|--|
| IEC 1131-2 control function | | | | |
| Touch screen Standard Advanced Panels + control function | Standard 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) | | | |
| - | 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 or by CF memory card 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 | | | | |
| Yes, with log | | | | |
| Yes | | | | |
| - | | | | |
| - | | | | |
| Uni-TE, Modbus, Modbus TCP/IP (1) and for PLC brands: Mitsubishi, Omron, All | en-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 Ethernet TCP/IP (10BASE-T/100BASE-TX) (1) | r the control function | | | |
| USB port for parallel printer and RS 232C serial link (COM 1) | | | | |
| SoMachine with Windows XP Professional and Windows 7 Professional 32/64-bi see page 2/29) | t, | | | |
| 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 | | | |
| 1/59 and 2/20 | 1/60 and 2/20 | | | |

More technical information on www.schneider-electric.com

HMI Controllers

Magelis[™] XBT GC HMI Controllers Magelis[™] XBT GT/GK Standard Advanced Panels with control



Magelis XBT GC HMI Controllers

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 Standard 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 Standard Advanced Panels + XBT ZC CANM CANopen module (modular range)

This range is made up of the complete Magelis XBT GT or Magelis XBT GK Standard 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 Standard 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 Standard 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.

| 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

Description: page 2/8 References page 2/10

Schneider Electric

Functions

Presentation (continued)

HMI Controllers Magelis[™] XBT GC HMI Controllers Magelis[™] XBT GT/GK Standard Advanced Panels with control



SoMachine

Configuration

Magelis XBT GC HMI Controllers and Magelis XBT GT/GK Standard 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 Professional and Windows 7 Professional 32/64-bit environment.

SoMachine software boasts an advanced user interface with many configurable windows, enabling unique projects to be developed quickly and easily. See page 2/26.

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 Standard 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.

| Functions: | Description: | References: | |
|------------|--------------|-------------|--|
| page 2/6 | page 2/8 | page 2/10 | |
| - | | | |

Schneider Electric

Functions

HMI Controllers Magelis[™] XBT GC HMI Controllers Magelis[™] XBT GT/GK Standard 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 Standard 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 Standard 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 Standard 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.

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HMI Controllers Magelis[™] XBT GC HMI Controllers Magelis[™] XBT GT/GK Standard 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: | Description: | References: | |
|---------------|--------------|-------------|--|
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| | | | |

Schneider

2

HMI Controllers Magelis[™] XBT GC HMI Controllers with 3.8" screen





Description

Magelis XBT GC1100T and XBT GC1100U HMI Controllers 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:

- A removable screw terminal block for 24 V --- power supply 1
- A type A USB master connector for peripheral connection and application transfer 2
- A removable terminal block for 12 digital inputs and 6 digital outputs 3
- An interface for connecting M238 logic controller I/O expansion modules 4
- 5 An interface for connecting the CANopen bus master module (see page 2/19)
 Digital (TM2 D●●) or analog (TM2 A●●) I/O expansion module (to be ordered separately, see pages 2/11 and 2/12)

It is possible to combine a maximum of two I/O expansion modules, depending on the module type (see page 2/13).

| Presentation: | Functions: | References: | |
|---------------|------------|------------------------|--|
| page 2/4 | page 2/6 | page 2/10 | |
| 2/8 | | Schneider Gelectric | |

HMI Controllers Magelis[™] XBT GC HMI Controllers with 5.7" screen



Description

Magelis XBT GC2e20 and XBT GC2e30 HMI Controllers The front panel comprises:

- A touch screen for displaying mimics (5.7" monochrome or colour) 1
- 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
- A type A USB master connector for peripheral connection and application transfer 2 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs 3 (COM1)
- An interface for connecting the M238 logic controller I/O expansion module 4
- An interface for connecting the CANopen bus master module (see page 2/19) 5
- A removable terminal block for 16 digital inputs and 16 digital outputs 6
- 7 Digital (TM2 Dee) or analog (TM2 Aee) I/O expansion module (to be ordered separately, see pages 2/11 and 2/12)
 - It is possible to combine a maximum of three I/O expansion modules, depending on the module type (see page 2/13).

For XBT GC2230 only:

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



| Presentation: | Functions: | References: | |
|---------------|------------|-------------|--|
| page 2/4 | page 2/6 | page 2/10 | |

References

HMI Controllers Magelis[™] XBT GC HMI Controllers



XBT GC1100

2



Separate parts

XBT GC2



XBTZGUSB

| Magelis XBT GC HMI Controllers (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 | 1 USB | 16 MB | No | 12 I/6 O source | - | XBT GC1100T | 0.400 | | |
| amber or red | | | | 12 I/6 O sink | - | XBT GC1100U | 0.400 | | |
| 5.7" screen | | | | | | | | | |
| STN | 1 COM 1 | 16 MB | No | 16 I/16 O source | - | XBT GC2120T | 1.000 | | |
| black and white mode | vhite 1 USB | | | 16 I/16 O sink | - | XBT GC2120U | 1.000 | | |
| 5.7" screen | | | | | | | | | |
| STN | 1 COM 1 | 16 MB | No | 16 I/16 O source | 1 | XBT GC2230T | 1.000 | | |
| colour | 1 USB | | | 16 l/16 O sink | 1 | XBT GC2230U | 1.000 | | |

| Designation | Compatibility | Size | | Reference | kg |
|--|--|---|--------|------------|--------------|
| Protective sheets | XBT GC 1100 | - | | XBT ZG60 | 0.200 |
| (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 lo the rear of the XBT terminal of door (Ø 21 mm fixing device) | ocated remotely on on a panel or cabinet | 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 e | 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 |
| Seals | XBT GC1100 | | | XBT ZG51 | 0.030 |
| | XBT GT21•0 | | | XBT ZG52 | 0.030 |

| Seals | XBT GC1100 | XBT ZG51 | 0.030 | |
|--|---|-------------|-------|--|
| | XBT GT21•0 | XBT ZG52 | 0.030 | |
| USB fastenings | 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 | |
| Dierct I/O connector | XBT GC1000 | XBT ZG DIO1 | _ | |
| | XBT GC2000 | XBT ZG DIO2 | - | |

(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 2/29).

| Presentation: | |
|---------------|--|
| | |
| page 2/4 | |

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HMI Controllers Magelis[™] XBT GC HMI Controllers Digital I/O expansion modules

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 2/13).

| Digital input mo | dules (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 \sim | 8 | 1 | By removable screw terminal block (provided) | 23.5 (B) | TM2 DAI 8DT | 0.081 |

| Digital output n | nodules (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 (lth) 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 |

| Digita | 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.



TM2 DDI 8DT



TM2 DDO 8• T/DRA 8RT



TM2 DDO 32•K



TM2 DDM 24DRF

_____ 65 2

HMI Controllers Magelis[™] XBT GC HMI Controllers Analog I/O expansion modules

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 2/13).

| Analog input r | nodules (1) | | | | | | |
|--------------------------|---|---|---|---|------------------------|--------------|--------------|
| Channel type | Input range | Output range | Resolution | Connected by | Thickness mm (Type) | Reference | Weight kg |
| 2 inputs | 010 V 420 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 | 010 V 020 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 | 010 V 420 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 | t modules (1) | | | | | | |
| 1 output | - | 010 V 420 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 mo | dules (1) | | | | | | |
| 2 inputs and 1 output | 010 V 420 mA | 010 V 420 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 | 010 V 420 mA | 12-bit | Removable screw terminal block (provided) | 23.5 (B) | TM2 ALM 3LT | 0.085 |
| 4 inputs and 1 output | 010 V 420 mA | 010 V 420 mA | 12-bit | Removable screw terminal block (provided) | 23.5 (B) | TM2 AMM 6HT | 0.085 |
| Separate parts | 5 | | | | | | |
| Designation | Description | | | | | Reference | Weight kg |
| Earthing plate | Support equipp cable shielding functional eart | oed with 10 male (via 6.35 mm F hs (FE) | e Faston connecto aston connecto | ctors for connectir rs, not included) a | ig the ind the | TM2 XMT GB | 0.045 |

TWD XMT 5

0.065

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

For plate or panel mounting of analog modules

TM2 AMI 2LT



TM2 ARI 8LRJ



TM2 ARI 8LT

References XBT GC: page 2/10

Mounting kit

Sold in lots of 5

HMI Controllers Magelis[™] XBT GC HMI Controllers I/O expansion modules



XBT GC1 •••

2

| | - | DC - | e out | - | |
|---|---|------|--------------|------|---|
| • | | | | 1 | - |
| | | 1111 | | 1 Na | |
| | 9 | | SIGNER S | | |
| | | 1 | and an other | _ | |

XBT GC1 Combinations of 2 I/O expansion modules with XBT GC1

| Combi | nations of two | expansion m | odules |
|----------|----------------|-------------------------|--------------|
| Type (1) | Туре (1) | Total thickness (mm) | |
| A | А | 35.2 | Permitted |
| A | В | 41.1 | combinations |
| В | В | 47.0 | |
| A | С | 47.3 | |
| В | С | 53.2 | |
| A | D | 56.7 | |
| С | С | 59.4 | |
| В | D | 62.6 | Prohibited |
| С | D | 68.8 | combinations |
| D | D | 78.2 | |

XBT GC2••• **Combinations of two expansion modules**

| * 10 | |
|-------------|--------------------|
| | + |
| | TM2 D•• TM2 A•• |

XBT GC2•••

| Combinations of 2 I/O expansion | Туре (1) | Туре (1) | Total thickness (mm) | |
|------------------------------------|----------|----------|-------------------------|--------------|
| modules with XBT GC2000 | A | А | 35.2 | Permitted |
| | A | В | 41.1 | Combinations |
| | В | В | 47.0 | |
| | A | С | 47.3 | |
| | В | С | 53.2 | |
| | A | D | 56.7 | |
| | С | С | 59.4 | |
| | В | D | 62.6 | Prohibited |
| | С | D | 68.8 | COMDINATIONS |
| | D | D | 78.2 | |

| XBT GC2••• | Combinations of three expansion modules | | | | | | | |
|---|---|----------|----------|-------------------------|------------|--|--|--|
| Combinations of 3 I/O expansion modules with XBT GC2 | Туре (1) | Туре (1) | Туре (1) | Total thickness (mm) | | | | |
| | A | A | A | 52.8 | Permitted | | | |
| | A | A | В | 58.7 | with hook | | | |
| | A | В | В | 64.6 | (2) | | | |
| | В | В | В | 70.5 | | | | |
| | All other combinations | | | - | Prohibited | | | |

(1) For digital (TM2 Doo) and analog (TM2 Aoo) I/O expansion module types, see pages 2/11 and 2/12:

- 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

HMI Controllers

Modicon Telefast[®] pre-wired system for Magelis[™] XBT GC HMI Controllers 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 Controllers Connection sub-bases for digital I/O (integrated or on expansion modules)

| Combina | tions involving modular bases a | nd I/O ex | pansio | n modu | les | | |
|--|---------------------------------|----------------------|-----------------------|--------------|----------------|------------------------------------|---------------------|
| XBT G | | | | | | Digital I/O expansion m | nodules |
| | | Integrated | d digital I/O | | | Inputs | Outputs (source) |
| | | XBT GC [·] | 1100T | XBT GC 2000T | | TM2 DDI 16DK (16 I) | TM2 DDO 16TK (16 O) |
| Integrated in Twido programmable controllers | | 121 | 6 O source | 161 | 16 O source | TM2 DDI 32DK (32 I) | TM2 DDO 32TK (32 O) |
| Connection block types | | Direct I/O 22-way | Direct I/O, 22-way | | , | HE 10, 20-way | |
| Connection to XBT GC programmable HMI Controller | | XBT ZG A | XBT ZG ABE1 | | BE2 | ABF T20E●●0 (HE 10, 20-way) | |
| Passive cor | nnection sub-bases | | | | | | |
| 20-channel | ABE 7B20MPN2 | | (1) | | | | |
| 16-channel | ABE 7E16EPN20 | | | | | | |
| | ABE 7E16SPN2• | | | | | | |
| Output ada | ptor 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 Controllers Connection sub-bases for digital I/O (integrated or on expansion modules)

| | | Constant (| 3 |
|----|--|------------|-----|
| | | | |
| 00 | 10000000000000000000000000000000000000 | 000000000 | 000 |

ABE 7B20MPN20



ABE 7E16EPN20



ABE 7E16SRM20

| Refere | nces | | | | | | |
|------------------|------------------------------|--|---------------|---------------------|------|---------------|--------------|
| For XBT | GC 1100T b | ases | | | | | |
| 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 G | C 2•• bases |
|--------------------------------|-------------|
|--------------------------------|-------------|

| Number of inputs | Input type | Compatibility | LED per chnnl | Fuse | Reference | Weight kg |
|-------------------------|----------------------------|---|---------------------|------|---------------|--------------|
| 6 | 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 |
| 6 | 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 applies for VPT C(

E

| Conne | ction cables f | for XBT G | iC | | | | |
|----------------------|---------------------------------|----------------------|---------------------|--------------------------------|-------------|-------------|--------|
| Type of signal | Compatibility | Connectio | on type | Gauge | Length | Reference | Weight |
| | | XBT GC side | Telefast side | Cross- sect. | (1) | | kg |
|)igital /O | XBT GC 1100T | Direct I/O 22-way | HE 10 26-way | AWG 28 0.08 mm ² | 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/ | HE 10 20-way | HE 10 20-way | AWG 28 0.08 mm ² | 0.5 m | ABF T20E050 | 0.060 |
| | DDI32DK/ DDO16TK/ DDO32TK | | | | 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 Controllers Connection sub-bases for digital I/O (integrated or on expansion modules)

| Reference Separate part | <mark>S (continued)</mark> ts | | | | | | |
|--------------------------------------|----------------------------------|-----------------------------|------------------|--|--------|-------------|--------------|
| Designation | | Туре | | Compatibility | 1 | 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 DDIeDT/DAI8DT/ DDO8eT/DRAeRT | | TWD FTB2T10 | _ |
| | | 11-way | | TM2 DMM8DRT/ AMI••T/ARI8 | HT | TWD FTB2T11 | |
| Designation | Compatibility | Connection ty Twido side | /pe Other end | Gauge/ Cross-sect. | Length | Reference | Weight kg |
| Cables for digital I/O | TM2 DDI16DK/ | HE 10 20-way | Flying leads | AWG 22 0.035 mm ² | 3 m | TWD FCW30K | 0.405 |
| | DDI32DK/ DDO16TK/ DDO32TK | | | | 5 m | TWD FCW50K | 0.670 |
| Rolled ribbon cable | 20 conductors | - | - | AWG 28 0.08 mm ² | 20 m | ABF C20R200 | 1.310 |

Presentation, description, references

HMI Controllers

CANopen bus CANopen master bus module for Magelis[™] HMI Controllers XBT GC



XBT GC + XBT ZGC CAN

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 2/26).

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 Magelis[™] HMI Controllers 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 2/24.

HMI Controllers

CANopen bus CANopen master bus module for Magelis[™] Standard Advanced Panels XBT GT/GK

The XBT ZG CANM CANopen master bus module provides the control function for the Magelis XBT GT (5.7", 10.4", 12.1" or 15") and XBT GK (5.7" or 10.4") ranges of

SoMachine software is used to configure the CANopen machine bus for this module



2



HMI function: Magelis XBT GT/GK Advanced Panels

Control function: XBT ZG CANM CANopen master module

2 1

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
- A 9-way male SUB-D connector for connecting to the CANopen bus 2
- A connector for connecting to the rear of the Magelis XBT GT/GK Standard 3 Advanced Panels
- Positions for fixing screws 4

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

■ 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:

Presentation

(see page 2/26).

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.

Standard Advanced Panels (see page 2/22).

The various services on offer include:

□ Exchange data can be symbolized.

Architecture

HMI Controllers

CANopen bus CANopen master bus module for Magelis[™] Standard Advanced Panels XBT GT/GK

Example architecture



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

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

The CANopen bus is made up of a master station, the Magelis **XBT GT/GK** Standard 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 2/24.

References

(

HMI Controllers Magelis[™] XBT GT Standard Advanced Panels

XBT GT21•0/2220/2330





XBT GT53•0



XBT GT63•0



XBT GT7340

| (BT GK monochrome touch screen terminals compatible with the XBT ZG CAN | ١M |
|---|----|
| 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 QVG | A screen | | | | | | |
| STN blue mode | 1 COM 1 1 COM 2 1 USB | 16 MB | No | No | - | XBT GT2110 | 1.000 |
| 5.7" multifunction | QVGA scree | n | | | | | |
| STN Black and white | 1 COM 1 1 COM 2 1 USB | 16 MB | Yes | No | | XBT GT2120 XBT GT2130 | 1.000 |

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 Q | /GA screei | n | | | | | |
| 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 VG | GA screen | | | | | | |
| TFT | 1 COM 1 1 COM 2 2 USB | 32 MB | Yes | No | 1 | XBT GT2430 | _ |
| 7.5" multifunction VG | A screen | | | | | | |

| 7.5" multifunction | n VGA screen | | | | | | |
|--------------------|-------------------------------|-------|-----|-----|---|------------|-------|
| STN | 1 COM 1 3 1 COM 2 1 USB | 82 MB | Yes | No | 1 | XBT GT4230 | 1.800 |
| TFT | 1 COM 1 3 | 82 MB | Yes | No | 1 | XBT GT4330 | 1.800 |
| | 1 COM 2 1 USB | | | Yes | 1 | XBT GT4340 | 1.800 |

| Multifunction 10.4" V | GA screer | า | | | | | |
|-----------------------|-----------------------------|-------|-----|-----|---|------------|-------|
| STN | 1 COM 1 1 COM 2 2 USB | 32 MB | Yes | No | 1 | XBT GT5230 | 3.000 |
| TFT | 1 COM 1 | 32 MB | Yes | No | 1 | XBT GT5330 | 2.500 |
| | 1 COM 2 2 USB | | | 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" S | VGA scree | en | | | | | |
|-----------------------|-----------------------------|-------|-----|-----|---|------------|-------|
| TFT | 1 COM 1 | 32 MB | Yes | No | 1 | XBT GT6330 | 3.000 |
| | 1 COM 2 2 USB | | | Yes | 1 | XBT GT6340 | 3.000 |
| Multifunction 15" XG | A screen | | | | | | |
| TFT | 1 COM 1 1 COM 2 2 USB | 32 MB | Yes | Yes | 1 | XBT GT7340 | 5.600 |

(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 SoMachine software (see page 2/29). (2) All data relating to Magelis XBT GT Standard Advanced Panels is available on our site www.schneider-electric.com

HMI Controllers

XBT GK keypad/touch screen terminals compatible with the XBT ZG CANM

Magelis[™] XBT GK Standard Advanced Panels

XBT GK2120/2330



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

(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 Standard Advanced Panels is available on our website www.schneider-electric.com.

HMI Controllers CANopen bus

Wiring system



References

2

| | | Standard tap june | ctions and connectors | | | | |
|-------------------|--------------------------------|---|--|-------------|-------------------|-----------------------|--------------|
| | | Designation | Description | ltem no. | Length | Unit reference | Weight kg |
| No. of the Action | | 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 |
| 1.1 | | IP 20 CANopen connectors (9-way | Right angle | 2 | - | TSX CAN KCDF 90T | 0.046 |
| TSX CAN TDM4 | Switch for line termination | 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 | |
| -1- | | | Female | - | - | FTX CN 12F5 | 0.050 |
| VW3 CAN TAP2 | | 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 | _ |
| TSX CAN KCD | TSX CAN KC | D | 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 | _ |
| F90T | F180T | 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 KCD F90TP

TCS CAR013M120
VW3 CAN A71

FTX DP2100

HMI Controllers CANopen bus

Wiring system

| | References (co | ntinued) | | | | |
|---------------------|---|--|--|----------|---------------------|--------------|
| | IP 20 standard cables and preassembled cordsets | | | | | |
| | Designation | Description | ltem no | . Length | Unit reference | Weight kg |
| | CANopen cables | For standard environment (1), CE marking: | 5 | 50 m | TSX CAN CA50 | 4.930 |
| | 2 x AWG 24) | Flame-retardant (IEC 60332-1) | | 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, C¢ marking: Low smoke zero halogen. Flame-retardant (IEC 60332-1). | 5 | 50 m | TSX CAN CD50 | 3.510 |
| | | | | 100 m | TSX CAN CD100 | 7.770 |
| | | Resistance to oils | | 300 m | TSX CAN CD300 | 21.700 |
| | CANopen | For standard environment (1), C€ marking: | - | 0.3 m | TSX CAN CADD03 | 0.091 |
| | preassembled cordsets | Low smoke zero halogen. Flame-retardant (IEC 60332-1) | | 1 m | TSX CAN CADD1 | 0.143 |
| 677B | One 9-way female SUB-D connector at | | | 3 m | TSX CAN CADD3 | 0.295 |
| | each end | | | 5 m | TSX CAN CADD5 | 0.440 |
| | | For standard environment (1), UL certification, | - | 0.3 m | TSX CAN CBDD03 | 0.086 |
| | | label marking C€: flame retardant (IEC 60332-2) | | 1 m | TSX CAN CBDD1 | 0.131 |
| | | | | 3 m | TSX CAN CBDD3 | 0.268 |
| V3 CAN A71 | | | | 5 m | TSX CAN CBDD5 | 0.400 |
| H - | 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 |
| 1 | | | | | VW3 M38 05 R010 (3) | 0.100 |
| 1 | | | | 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 |
| ie 2 | | | | 1.5 m | TLA CD CBA 015 | 0.120 |
| | | | | 3 m | TLA CD CBA 030 | 0.190 |
| 10 2 C A 00 1 V 000 | | | | 5 m | TLA CD CBA 0 | 0.350 |
| 6 | IP 20 connection a | ccessories | | | | |
| | CANopen connector for Altivar 71 (4) | 9-way female SUB-D. Switch for line termination. Cables exit at 180° | or line termination. – – 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 |
| V DP21ac | 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 71H000M3, 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





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.
- I/Os range: Modicon TM2, Modicon TM5 and Modicon TM7 offers

HMI:

- Small Panels Magelis[™] STO/STU
- Advanced Panels Magelis[™] GH/GK/GT
- Optimum Advanced Panels Magelis[™] GTO

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

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. An intuitive and efficient online help is also available, guiding you to get the best answer.

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.

There is as well a way to start a project from standard project taking advantages of a pre-configured program (task, library,)



Project management

SoMachine software suite

Simplify machine programming and commissioning



Configuration



Commissioning



Transparency



a configuration picture.

Project properties

Configuration

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

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

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.

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

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 (Modbus for all devices and CANopen for the I/O's).

From the SoMachine unique environment, the remote devices can be set-up off-line and tuned on-line.

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.

Application Function Blocks

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 Logical encoder |
| Global services | User access and profile Project documentation printing Project comparison (control) Variable sharing based on publish/subscribe mechanism Library version management Energy efficiency machine monitoring |
| Integrated fieldbus configurators | Control network: Modbus Serial Line Modbus TCP Field bus: CANopen CANmotion Connectivity: Profibus-DP Ethernet IP |
| Expert and solutions libraries | PLCopen function blocks for Motion control Example: MC_MoveAbsolute, MC_CamIn, ServoDrive, Packaging function blocks Example: Analog film tension control, rotary knife, lateral film position control, Conveying function blocks Example: tracking, turntable, conveyor, Hoisting functions Hoisting function blocks: anti-sway, anti-crab, hoisting position synchronisation, Application template for industrial crane Pumping application Pumping function blocks Application template for booster Energy Efficiency library |

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, Altivar IMC), 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

LI

- □ Spanish
- Simplified Chinese. System Requirements:
- D Processor: Pentium 4 1,8 GHz or higher, Pentium M 1.0 GHz or equivalent
- RAM Memory: 2 GByte; recommended: 3 GByte
- □ Hard Disk: 3.5 GB, recommended: 5 GB
- □ OS: Windows XP Professional, Windows 7 Professional 32/64 bytes
- Drive: DVD reader
- □ Display: 1024 × 768 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 complementary documentation in pdf version

SoMachine software for generic controllers

| Supported controllers | IVDA | Reference | | | |
|--|--|-----------------|-----------------------------|--|--|
| | | DVD (1) | Licence (2) I number & type | | |
| M238 | Optimized HW XBT GC MSD CHNSFNV3 Optimized HW M238 + Trial licence Optimized CAlvace M228 (20 dave) | MSD CHNSFNV31 | MSD CHNLMUA /1 (Single) | | |
| ■ M258 | | + Trial licence | MSD CHNLMTA /10 (Team) | | |
| XBT GC XBT GT/GK with control function Altivar IMC | Optimized CANOPEN N236 Optimized CANOPEN XBT GC/GT/GK Optimized CANOPEN Altivar IMC Performance HW M258 Performance CANOPEN M258 Performance CANopen M258 | (30 uays) | MSD CHNLMFA /100 (Facility) | | |

| SoMachine solution extension for Solution controllers (3) | | | |
|---|--------------------------------|-----------|------------------|
| Added | Added TVDA | Added | Reference (4) |
| controllers | | libraries | DVDs and Licence |
| M238S | Optimized CANopen Altivar Hois | | MSD CHLLMUV3 |
| M258S | IMC | Conveying | MSD CHI L MTV3 |

| I MC058S | Performance CAMmotion | Dackaging | |
|--|----------------------------|-----------|------------|
| ■ XBT GC with CANopen | LMC058 | Fackaying | MSD CHLLMF |
| module type S | Hoisting Optimized CANopen | | |
| XBT GT/GK with control | M238 | | |
| function type S | Conveying Performance | | |
| Altivar IMC with control | CANmotion LMC058 | | |
| function type S | | | |

e/number & type 31S0 / 1 (Single) V31S0 / 10 (Team) FV31S0 /100 (Facility)

SoMachine software compatibility and hardware control platforms

| Product type | Version | |
|--|---------|--|
| Logic controller Modicon M238 | ≥ V1.0 | |
| HMI controller XBT GC | | |
| Logic controller Modicon M238S | ≥V2.0 | |
| Logic controller Modicon M258 | | |
| Logic controller Modicon M258S | | |
| Motion controller Modicon LMC058 | ≥V3.0 | |
| Motion controller Modicon LMC058S | ≥V2.0 | |
| HMI controller XBT GT/GK with control function type S, XBT GC with CANopen module type S | | |
| Altivar IMC integrated controller card | ≥V3.1 | |
| Altivar IMC integrated controller card with control function type S | ≥V2.0 | |
| TM5 CANopen Interface | ≥V3.0 | |
| TM7 CANopen Interface block | | |
| Altivar IMC integrated controller card (with patch) | | |
| | | |

(1) The DVD is mandatory and delivered with a trial licence.

(2) One of the 3 type of Licences is mandatory.(3) For this offer, please contact Schneider electric.

(4) Each reference for SoMachine solution software contains: one generic trail DVD, one solution extension V3.1 DVD and one licence