

Human/Machine Interfaces

Magelis™ XBTGC HMI controllers

Magelis™ XBTGT and XBTGK Advanced panels
with control function

Catalog

October 2013



Schneider
 **Electric**

How to find the “Automation and Control” products

> Catalogs

Complete product ranges



Modicon Premium automation platform
Catalogue May 2012

Control and signalling units Ø 22
Harmony™ XBS Plastic
Catalogue January 2013

Human/Machine interfaces
Optimum Advanced Panels, Magelis™ GTO
Catalogue April 2012

Control and signalling units Ø 22
Harmony™ XBS Plastic
Catalogue January 2013

Modicon Quantum automation platform
Catalogue September 2012

Motion centric machine automation with PacDrive 3
Catalogue 2013

Variable speed drives Altivar 12
For 3-phase asynchronous motors from 0.16 to 4 kW/0.25 to 5HP
Catalogue January 2013

Schneider Electric

PDF 

> Essential guides

Selection of the top selling products



The essential guide Automation 2013

The essential guide TeSys Power control and Protection 2013

The essential guide Magelis Human Machine Interfaces 2013

The essential guide AS-Interface Cabling system 2013

The essential guide Preventa Machine safety 2013

The essential guide Harmony Control and Signalling units 2013

The essential guide Interfaces and I/Os 2013

The essential guide Power supplies and transformers 2013

The essential guide Automation and Control 2013

Schneider Electric

PDF 

General contents

General presentation and selection guide	1
Magelis™ XBTGC HMI controllers	2
Magelis™ XBT GT/GK Advanced panels with control function	3
Wiring system for XBT GC/GT/GK	4
How to find products, index	5

Magelis™ XBTGC HMI controllers, Magelis™ XBT GT/GK Standard Advanced panels with control

Selection guide *page 1/2*

1

General presentation

■ Presentation

- Magelis XBTGC HMI controllers *page 1/4*
- Magelis XBT GT/GK Standard Advanced panels with XBTZCCANM CANopen module *page 1/4*

Operation *page 1/5*

Configuration *page 1/5*

Communication *page 1/5*

■ Functions

- Magelis XBTGC HMI controllers and Magelis XBT GT/GK Standard Advanced panels *page 1/6*
- Magelis XBTGC HMI controllers *page 1/6*
- Operating modes for the terminals *page 1/7*

HMI controllers

Magelis™ SCU Small HMI controllers,
Magelis™ XBTGC HMI controllers,
Magelis™ XBTGT, XBTGK Standard Advanced panels + control function

Applications		Display of text messages, graphic objects and mimics, control and configuration of data IEC 1131-2 control function			
Terminal type		Small HMI controllers		HMI controllers	
For control of simple machine		For control of simple process		Touch screen Standard Advanced panels + control function	
					
Display	Type	color TFT LCD		color TFT LCD (320 x 240 pixels)	Backlit monochrome or color STN LCD or color TFT LCD (320 x 240 pixels to 1024 x 708 pixels) (1)
	Capacity	3.5" (65 k colors)	5.7" (65 k colors)	3.5" (65 k colors)	5.7" (65 k colors)
Data entry	Via touch screen			Via touch screen	Via keypad and/or touch screen (configurable) and/or by industrial pointer
	Static function keys	–			10 or 12 (1)
	Dynamic function keys	–			14 or 18 (1)
	Service keys	–			8
	Alphanumeric keys	–			12
Memory capacity	Application	128 MB Flash EPROM		16 MB Flash EPROM	16 MB Flash EPROM or 32 MB Flash EPROM (1)
	Expansion	–		–	By 128 MB to 4 GB CF card (1)
Functions	Maximum number of pages and maximum number of instructions	Limited by internal Flash EPROM memory capacity		Limited by internal Flash EPROM memory capacity	Limited by internal Flash EPROM memory capacity or CF card memory capacity
	Variables per page	Unlimited (8000 variables max.)		Unlimited (8000 variables max.)	
	Programmed logic	5 languages according to IEC 1131-2 (LD, ST, FBD, SFC, IL)		5 languages according to IEC 1131-2 (LD, ST, FBD, SFC, IL)	
	Counting/positioning	2 x 100 kHz high speed counter inputs/2 x 50 kHz pulse train outputs		4 x 100 kHz high speed counter inputs/4 x 65 kHz pulse train outputs	–
	Control (PID)	Yes		Yes	
	Representation of variables	Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, light		Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, light	
	Recipes	32 groups of 64 recipes comprising 1024 ingredients max.		32 groups of 64 recipes comprising 1024 ingredients max.	
	Curves	Yes, with log		Yes, with log	
	Alarm logs	Yes		Yes	
	Real-time clock	Built-in		Built-in	
I/O	Integrated	<input type="checkbox"/> 14 x 24 V --- digital inputs <input type="checkbox"/> 2 high speed counter (HSC) inputs <input type="checkbox"/> 8 digital relay outputs <input type="checkbox"/> 2 pulse train source transistor outputs	<input type="checkbox"/> 6 x 24 V --- digital inputs <input type="checkbox"/> 2 high speed counter (HSC) inputs <input type="checkbox"/> 6 digital relay outputs <input type="checkbox"/> 2 pulse train source transistor outputs <input type="checkbox"/> 2 x 13-bit analog inputs (Voltage/current) <input type="checkbox"/> 2 x 16-bit analogue temperature inputs (TC/PT100-1000) <input type="checkbox"/> 2 x 12-bit analog outputs (Voltage/current)	<input type="checkbox"/> 12 x 24 V --- digital inputs <input type="checkbox"/> 6 sink or source transistor outputs (1)	<input type="checkbox"/> 16 x 24 V --- digital inputs <input type="checkbox"/> 16 sink or source transistor outputs (1)
	I/O modular expansion	–		2 Modicon TM2 I/O modules max.	3 Modicon TM2 I/O modules max.
Communication	Downloadable protocols	Uni-TE, Modbus, Modbus TCP/IP (1) and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens		Uni-TE, Modbus, Modbus TCP/IP (1) and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens	
	Asynchronous serial link	RS 232C/RS 485 (COM1)		RS 232C/RS 422/485 (COM1)	RS 232C/RS 422/485 (COM1) and RS 485 (COM2)
	USB ports	1 Host type A + 1 Device type mini-B		1	1 or 2 (1)
	Buses and networks	1 CANopen master		1 CANopen master with optional module (XBTZGC CAN)	1 CANopen master with external module (XBTZG CANM) which is mandatory for the control function
	Ethernet TCP/IP (10BASE-T/100 BASE-TX)			–	Ethernet TCP/IP (10BASE-T/100BASE-TX) (1)
	Printer link	USB port for parallel printer		USB port for parallel printer	USB port for parallel printer and RS 232C (COM1) serial link
Design software		SoMachine on Windows XP Professional and Windows 7 Professional 32/64-bit (please refer to our website www.schneider-electric.com).		SoMachine on Windows XP Professional and Windows 7 Professional 32/64-bit (please refer to our website www.schneider-electric.com).	
Operating system		Magelis (333 MHz RISC CPU)		Magelis (131 MHz RISC CPU)	Magelis (131 MHz RISC or 266 MHz RISC CPU) (1)
Terminal type	HMISCU6A5	HMISCU8A5	HMISCU6B5	HMISCU8B5	XBTGC1100T XBTGC1100U
Pages	For more information, refer to Magelis SCU catalog on our website www.schneider-electric.com .				2/4

(1) Depending on model.

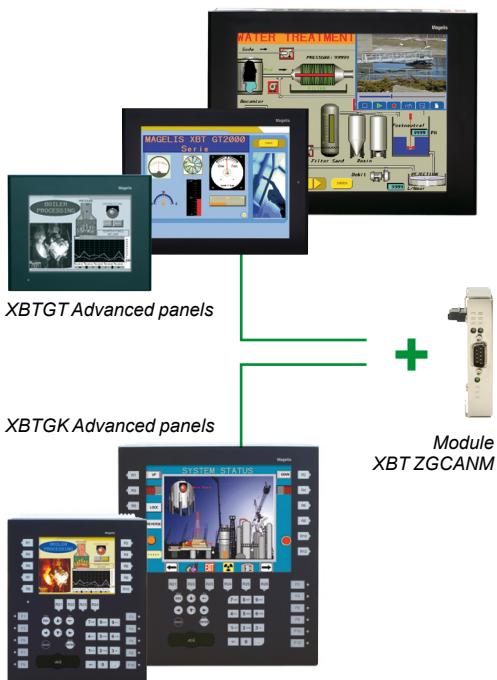
Display of text messages, graphic objects and mimics, control and configuration of data IEC 1131-2 control function		HMI controllers		Touch screen Standard Advanced panels + control function	Standard Advanced panels with keypad + control function
					
Backlit monochrome (amber or red mode) STN LCD (320 x 240 pixels)	Backlit monochrome STN LCD (320 x 240 pixels)	5.7" (monochrome)	5.7" (monochrome or color) 7.5", 10.4", 12.1" or 15" (color) (1)	Backlit monochrome or color STN LCD or color TFT LCD (320 x 240 pixels to 1024 x 708 pixels) (1)	Monochrome STN LCD or color TFT LCD (320 x 240 pixels or 640 x 480 pixels) (1)
Via touch screen	Via touch screen	–	–	Via keypad and/or touch screen (configurable) and/or by industrial pointer	10 or 12 (1)
–	–	–	–	–	14 or 18 (1)
–	–	–	–	–	8
–	–	–	–	–	12
16 MB Flash EPROM	16 MB Flash EPROM or 32 MB Flash EPROM (1)	–	–	16 MB Flash EPROM or 32 MB Flash EPROM (1)	By 128 MB to 4 GB CF card (1)
Limited by internal Flash EPROM memory capacity	Limited by internal Flash EPROM memory capacity	–	–	Limited by internal Flash EPROM memory capacity or CF card memory capacity	
Unlimited (8000 variables max.)	Unlimited (8000 variables max.)	–	–	–	
5 languages according to IEC 1131-2 (LD, ST, FBD, SFC, IL)	5 languages according to IEC 1131-2 (LD, ST, FBD, SFC, IL)	–	–	–	
4 x 100 kHz high speed counter inputs/4 x 65 kHz pulse train outputs	4 x 100 kHz high speed counter inputs/4 x 65 kHz pulse train outputs	–	–	–	
Yes	Yes	–	–	–	
Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, light	Alphanumeric, bitmap, bargraph, gauge, tank, tank level indicator, curves, polygon, button, light	–	–	–	
32 groups of 64 recipes comprising 1024 ingredients max.	32 groups of 64 recipes comprising 1024 ingredients max.	–	–	–	
Yes, with log	Yes, with log	–	–	–	
Yes	Yes	–	–	–	
Built-in	Built-in	–	–	–	
<input type="checkbox"/> 12 x 24 V --- digital inputs <input type="checkbox"/> 6 sink or source transistor outputs (1)	<input type="checkbox"/> 16 x 24 V --- digital inputs <input type="checkbox"/> 16 sink or source transistor outputs (1)	–	–	–	
2 Modicon TM2 I/O modules max.	3 Modicon TM2 I/O modules max.	–	–	–	
Uni-TE, Modbus, Modbus TCP/IP (1) and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens	Uni-TE, Modbus, Modbus TCP/IP (1) and for PLC brands: Mitsubishi, Omron, Allen-Bradley and Siemens	–	–	–	
RS 232C/RS 422/485 (COM1)	RS 232C/RS 422/485 (COM1)	RS 232C/RS 422/485 (COM1)	RS 232C/RS 422/485 (COM1) and RS 485 (COM2)	–	
1	1	1	1 or 2 (1)	–	
1 CANopen master with optional module (XBTZGC CAN)	1 CANopen master with optional module (XBTZGC CAN)	1 CANopen master with external module (XBTZG CANM)	1 CANopen master with external module (XBTZG CANM) which is mandatory for the control function	–	
–	Ethernet TCP/IP (10BASE-T/100BASE-TX) (1)	Ethernet TCP/IP (10BASE-T/100BASE-TX) (1)	Ethernet TCP/IP (10BASE-T/100BASE-TX) (1)	–	
USB port for parallel printer	USB port for parallel printer	USB port for parallel printer	USB port for parallel printer and RS 232C (COM1) serial link	–	
SoMachine on Windows XP Professional and Windows 7 Professional 32/64-bit (please refer to our website www.schneider-electric.com).	SoMachine on Windows XP Professional and Windows 7 Professional 32/64-bit (please refer to our website www.schneider-electric.com).	–	–	–	
Magelis (333 MHz RISC CPU)	Magelis (131 MHz RISC CPU)	Magelis (131 MHz RISC or 266 MHz RISC CPU) (1)	Magelis (131 MHz RISC or 266 MHz RISC CPU) (1)	Magelis (266 MHz RISC CPU)	Magelis (266 MHz RISC CPU)
XBTGC1100T XBTGC1100U	XBTGC2120T XBTGC2120U	XBTGC2330T XBTGC2330U	XBTG2•4•5•6•7•3 + XBTZG CANM	XBTG2•5•3 + XBTZG CANM	–
2/4	2/4 and 3/8	2/4 and 3/8	2/4 and 3/8	2/5 and 3/8	2/5 and 3/8

General presentation

1



Magelis XBTGC HMI controllers



HMI function: Magelis XBT GT/GK Advanced panels
+ control function: CANopen XBTZCCANM master module

HMI controllers

Magelis™ XBTGC HMI controllers,
Magelis™ XBTGT, XBTGK Standard Advanced
panels with control

Presentation

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

The Magelis HMI controllers 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 comprises three ranges:

- The compact range: Magelis XBTGC HMI controllers
- The modular range: Magelis XBT GT/GK Standard Advanced panels with XBTZC CANM CANopen module

Magelis XBTGC HMI controllers (compact range)

The compact design of Magelis XBTGC HMI controllers optimises setup (see page 2/2).

This range comprises 6 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 color screen, 16 integrated inputs/16 integrated outputs (sink or source)
- A wide choice of communication interfaces: USB port, serial link, Ethernet and CANopen

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 with XBTZCCANM CANopen module (modular range)

This range is made up of the complete Magelis XBTGT or Magelis XBTGK Standard Advanced panels offers combined with a Control part using the XBTZG CANM CANopen module. During operation, this module controls the I/O and the peripherals distributed via the CANopen bus (see page 3/2).

The combination with Magelis XBTGT or Magelis XBTGK Standard Advanced panels gives a wide choice of screen sizes and types of data entry, depending on the model:

- 17 XBTGT touch screen terminals:
 - 5.7" monochrome or color screens
 - 7.5", 10.4", 12.1" and 15" color screens
- 3 XBTGK terminals with keypad and/or touch screen:
 - 5.7" monochrome or color screens
 - 10.4" color screens

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

HMI controllers

Magelis™ XBTGC HMI controllers,
Magelis™ XBTGT, XBTGK Standard Advanced
panels with control



SoMachine



Vijeo Designer
(included in SoMachine)

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.

The XBTGC 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 Modicon M238 logic controller.

Configuration

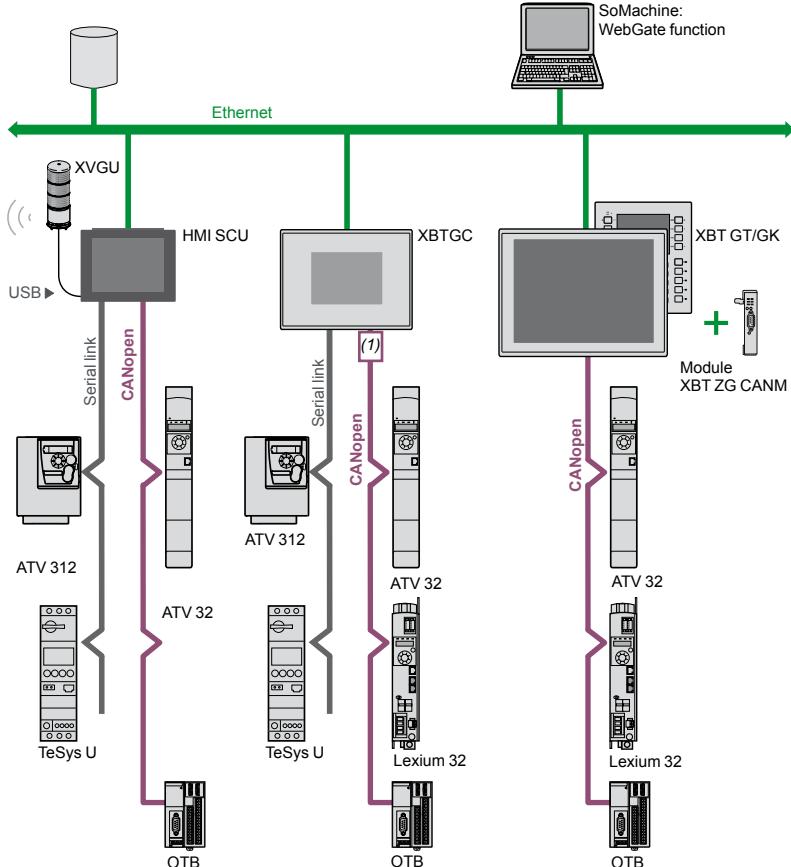
Magelis XBTGC HMI controllers and Magelis XBT GT/GK Standard Advanced panels are configured using Schneider Electric's unique machine automation software, SoMachine.

This software, combining both HMI and control functions, is based on Vijeo Designer software (2) running on Windows XP Professional or Windows 7 Professional 32/64-bit.

SoMachine software (2) boasts an advanced user interface with many configurable windows, enabling unique projects to be developed quickly and easily.

Communication

Examples of communication architectures



Depending on the model, Magelis SCU Small HMI controllers, Magelis XBTGC 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.

(1) With XBTZGCCAN CANopen master module.

(2) For more information on SoMachine software and Vijeo Designer software, please refer to our website www.schneider-electric.com.

HMI controllers

Magelis™ XBTGC HMI controllers,
Magelis™ XBTGT, XBTGK Standard Advanced
panels with control

Functions

Magelis HMI controllers and Magelis Standard Advanced panels are part of Schneider Electric's Flexible Machine Control concept, a key element in MachineStruxure™.

Magelis XBTGC HMI controllers and Magelis XBT GT/GK Standard Advanced panels

Magelis XBTGC 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, color changes, filling, movement, rotation, size, visibility and value display)
- Control, modification of numeric and alphanumeric values
- Display of current time and date
- Real-time curves and trend 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 simultaneously)
- Recipe management
- Data processing via Java script
- Application support and USB key external memory logs
- Management of serial printers, barcode readers

Magelis XBTGC HMI controllers and Magelis XBTGT and XBTGK 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.

Eventually, Magelis XBT GT/GK will enable a smartphone or a PC tablet to be remotely connected to the HMI application.

Magelis XBTGC HMI controllers and Magelis XBTGT/XBTGK Standard Advanced panels offer the following HMI functions:

- Execution of programmed logic sequences with the five IEC 1131-2 languages (LD, ST, FBD, SFC, IL)
- Management of equipment on the CANopen fieldbus

Magelis XBTGC HMI controllers

In addition to the aforementioned functions, Magelis XBTGC HMI controllers enable management of:

- Integrated digital I/O
- integrated analog I/O
- 4 high speed counter (HSC) inputs, 100 kHz 1 channel or 50 kHz 2 channel
- 4 pulse train fast outputs, PTO/PWM 65 kHz

(1) Depending on model.

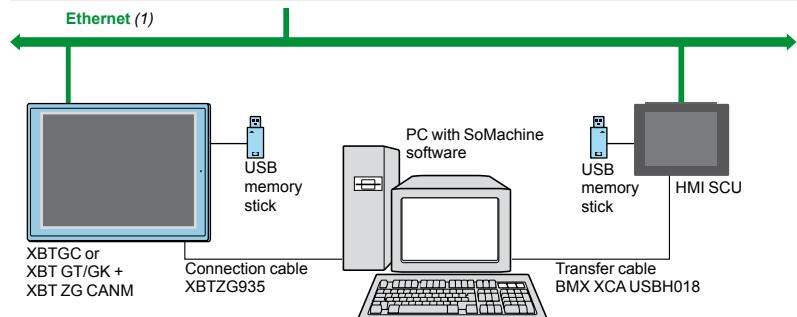
HMI controllers

Magelis™ XBTGC HMI controllers,
Magelis™ XBTGT, XBTGK Standard Advanced
panels with control

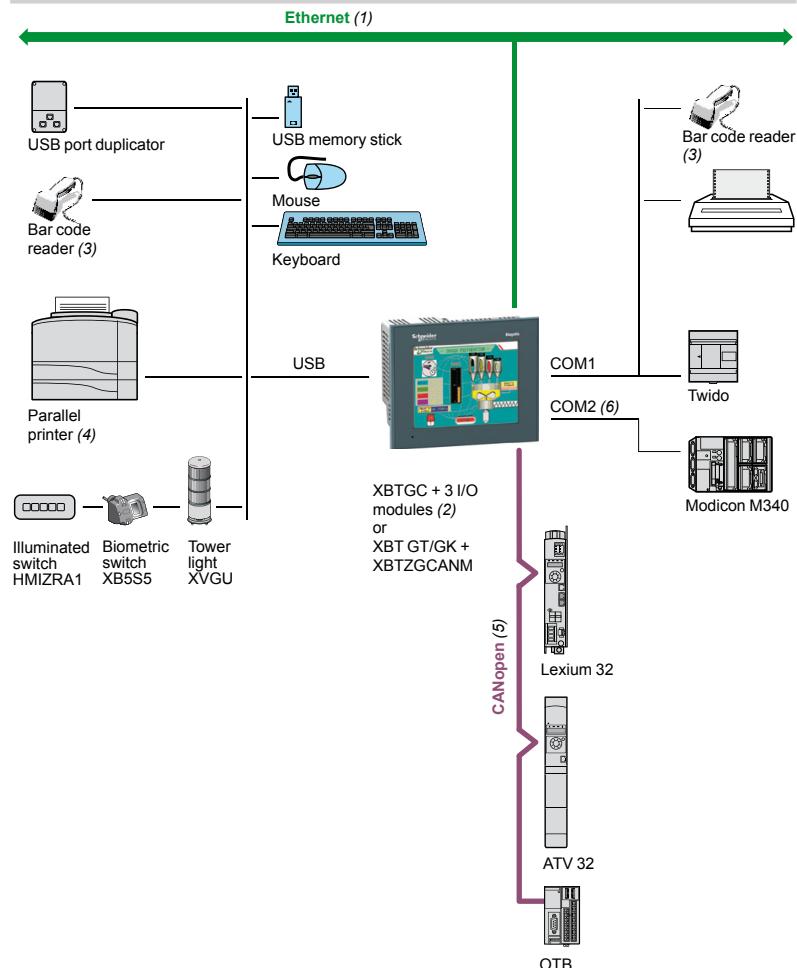
Operating modes for the terminals

The following illustrations show the equipment that can be connected to Magelis SCU and XBTGC controllers as well as to Magelis XBT GT/GK Advanced panels according to their two operating modes.

Edit mode



Run mode



(1) With HMISCU●●●, XBTGC2230T/U, XBTGT●●30, XBTGT●●40, XBTGK●●30.

(2) With XBTGC●●●T/U, maximum of 2/3 I/O modules depending on model.

(3) Should be a Gryphon barcode reader made by DataLogic except for HMI SCU.

(4) Should be a Hewlett Packard printer via a USB/PIO converter.

(5) Requires:

- for XBTGC: XBTZGCCAN CANopen master module

- for XBT GT/GK: XBTZGCANM CANopen master module.

(6) With XBT GT/GK.

Magelis™ XBTGC HMI controllers

■ Description	
□ Magelis XBTGC1100T and XBTGC1100U.....	page 2/2
□ Magelis XBTGC2120● and XBTGC2330●.....	page 2/3
■ References	
□ Magelis XBTGC	page 2/4
□ Separate parts	page 2/4
□ Replacement parts	page 2/4
■ Combinations	
□ Digital I/O expansion modules	page 2/5
□ Analog I/O expansion modules.....	page 2/6
□ I/O expansion modules	page 2/7

Modicon Telefast cabling system for Magelis™ XBTGC HMI controllers

■ Presentation.....	page 2/8
■ Combinations involving modular bases and I/O expansion modules	page 2/9
■ References	
□ For XBTGC1100T bases.....	page 2/10
□ For expansion modules or XBTGC 2●● bases	page 2/10
□ Connection cables for XBTGC	page 2/10
□ Accessories	page 2/10
□ Separate parts	page 2/11

CANopen master bus module for Magelis™ XBTGC HMI controllers

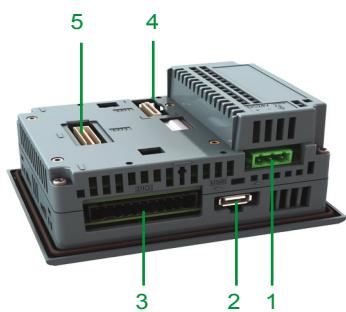
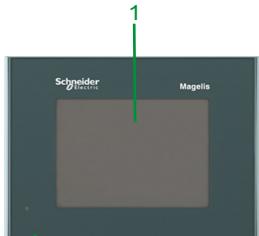
■ Presentation.....	page 2/12
■ Description.....	page 2/12
■ Reference.....	page 2/12
■ Architecture	page 2/13

Description

HMI controllers

Magelis™ XBTGC HMI controllers with
3.8" screen

2



Description

Magelis XBTGC1100T and XBTGC1100U 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

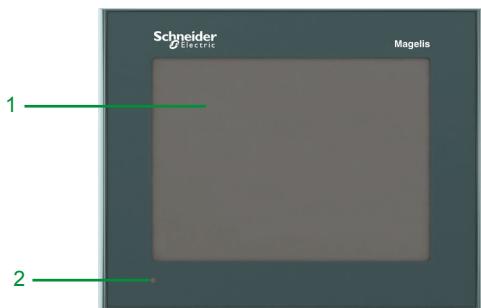
The rear panel comprises:

- 1 A removable screw terminal block for 24 V --- power supply
- 2 A type A USB master connector for peripheral connection and application transfer
- 3 A removable terminal block for 12 digital inputs and 6 digital outputs
- 4 An interface for connecting M238 logic controller I/O expansion modules
- 5 An interface for connecting the CANopen bus master module (see page 3/7)
- 6 Digital (TM2D●●) or analog (TM2A●●) I/O expansion module
(To be ordered separately, see pages 2/5 and 2/6).
It is possible to combine a maximum of two I/O expansion modules, depending on the module type (see page 2/7)

HMI controllers

Magelis™ XBTGC HMI controllers with
5.7" screen

2

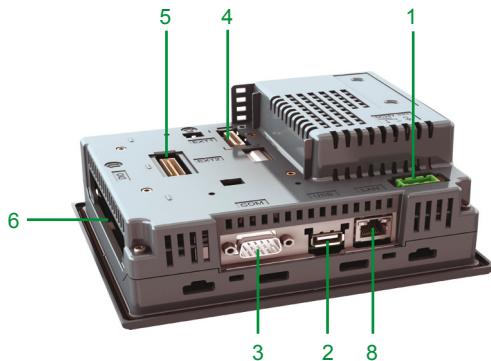


Description

Magelis XBTGC2120• and XBTGC2330• HMI controllers

The front panel comprises:

- 1 A touch screen for displaying mimics (5.7" monochrome or color)
- 2 A multicolor indicator (green, orange and red) showing the terminal's operating mode

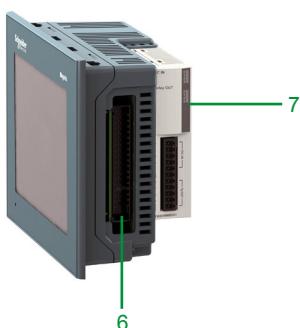


The rear panel comprises:

- 1 A removable screw terminal block for 24 V --- power supply
- 2 A type A USB master connector for peripheral connection and application transfer
- 3 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)
- 4 An interface for connecting the M238 logic controller I/O expansion module
- 5 An interface for connecting the CANopen bus master module (see page 3/7)
- 6 A removable terminal block for 16 digital inputs and 16 digital outputs
- 7 Digital (TM2D••) or analog (TM2A••) I/O expansion module
(To be ordered separately, see pages 2/5 and 2/6).
It is possible to combine a maximum of three I/O expansion modules, depending on the module type (see page 2/7)

For XBTGC2330 only:

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





XBTGC1100•



XBTGC2••••



XBTZGUSB

Magelis XBTGC 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/lb
3.8" screen							
STN amber or red	1 USB	16 MB	No	12 I/6 O source	-	XBTGC1100T	0.400/ 0.882
				12 I/6 O sink	-	XBTGC1100U	0.400/ 0.882
5.7" screen							
STN black and white mode	1 COM 1	16 MB	No	16 I/16 O source	-	XBTGC2120T	1.000/ 2.205
				16 I/16 O sink	-	XBTGC2120U	1.000/ 2.205
5.7" screen							
TFT 65 k colors	1 COM 1	16 MB	No	16 I/16 O source	1	XBTGC2330T	1.000/ 2.205
				16 I/16 O sink	1	XBTGC2330U	1.000/ 2.205

Separate parts

Description	Compatibility	Size	Reference	Weight kg/lb
Protective sheets (5 peel-off sheets)	XBTGC1100	–	XBTZG60	0.200/ 0.441
	XBTGC2••0	–	XBTZG62	0.200/ 0.441
Designation				
Remote USB port location for type A XBT terminal	Enables the USB port to be located remotely on the rear of the XBT terminal on a panel or cabinet door (Ø 21 mm fixing device)	1/3.281	XBTZGUSB	–
Remote USB port location for mini type B XBT terminal		–	XBTZGUSBB	–
XBTGC connection to CANopen master fieldbus	Connection via card on bus extension	–	XBTZGCCAN	–
Cable for transferring application to PC	USB TTL connector	2/6.561	XBTZG935	–

Replacement parts

Description	Used for	Reference	Weight kg/lb
Seals	XBTGC1100	XBTZG51	0.030/ 0.066
	XBTGT21•0	XBTZG52	0.030/ 0.066
USB fastenings	XBTGC1100	XBTZGCLP2	–
	XBTGC 2••0	XBTZGCLP4	–
Mounting kit	4 clips and screws (max. tightening torque: 0.5 Nm), included with all XBTGC terminals	XBTZGFIX	0.100/ 0.220
Spring clip for expansion modules on XBTGC	XBTGC2••0 terminals	XBTZGCHOK	0.030/ 0.066
Power supply connector	XBTGC1•••/GC2•••	XBTZGPWS1	0.030/ 0.066
Direct I/O connector	XBTGC1000	XBTZGDIO1	–
	XBTGC2000	XBTZGDIO2	–

(1) Mounting kit (screw clips), locking device for USB connectors, spring clip for expansion modules (except XBTGC 1100) and instruction sheet included with terminals. The setup documentation for XBTGC terminals is supplied in electronic format with the SoMachine software (please refer to our website www.schneider-electric.com).

Digital I/O expansion modules

Digital I/O expansion modules are mounted on the rear of XBTGC controller bases. The maximum permitted number of digital and/or analog I/O modules depends on the type of XBTGC terminal and the thickness of the modules (see combination rule on page 2/7).



TM2DDI8DT

Digital input modules (1)

Input voltage	No. of channels	No. of common points	Connection	Thickness mm/in. (Type)	Reference	Weight kg/lb
24 V \square sink/source	8	1	By removable screw terminal block (included)	23.5/0.925 (B)	TM2DDI8DT	0.085/0.187
	16	1	By removable screw terminal block (included)	23.5/0.925 (B)	TM2DDI16DT	0.100/0.220
			By HE 10 connector	23.5/0.925 (B)	TM2DDI16DK (2)	0.065/0.143
	32	2	By HE 10 connector	29.7/1.169 (C)	TM2DDI32DK (2)	0.100/0.220
120 V \sim	8	1	By removable screw terminal block (included)	23.5/0.925 (B)	TM2DAI8DT	0.081/0.179



TM2DDO8●T/DRA8RT

Digital output modules (1)

Input voltage	No. of channels	No. of common points	Connection	Thickness mm/in. (Type)	Reference	Weight kg/lb	
Transistors 24 V \square	8, sink 0.3 A	1	By removable screw terminal block (included)	23.5/0.925 (B)	TM2DDO8UT	0.085/0.187	
	8, sink 0.5 A	1	By removable screw terminal block (included)	23.5/0.925 (B)	TM2DDO8TT	0.085/0.187	
Transistors 24 V \square	16, sink 0.1 A	1	By HE 10 connector	17.6/0.693 (A)	TM2DDO16UK	0.070/0.154	
	16, source 0.4 A	1	By HE 10 connector	17.6/0.692 (A)	TM2DDO16TK (2)	0.070/0.154	
	32, sink 0.1 A	2	By HE 10 connector	29.7/1.169 (C)	TM2DDO32UK	0.105/0.231	
	32, source 0.4 A	2	By HE 10 connector	29.7/1.169 (C)	TM2DDO32TK (2)	0.105/0.231	
	2 A relays (lth) 230 V \sim /30 V \square	8 (NO contact)	2	By removable screw terminal block (included)	23.5/0.925 (B)	TM2DRA8RT	0.110/0.243
		16 (NO contact)	2	By removable screw terminal block (included)	23.5/0.925 (B)	TM2DRA16RT	0.145/0.320



TM2DDO32●K

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/in. (Type)	Reference	Weight kg/lb
8	4 I, 24 V \square sink/source	4 relay O (NO contact) 2 A (lth)	Inputs: 1 common Outputs: 1 common	By removable screw terminal block (included)	23.5/0.925 (B)	TM2DMM8DRT	0.095/0.209
24	16 I, 24 V \square sink/source	8 relay O (NO contact) 2 A (lth)	Inputs: 1 common Outputs: 2 common	By non removable spring terminal block	39.1/1.539 (D)	TM2DMM24DRF	0.140/0.309



TM2DDM24DRF

(1) Please refer to the "Modicon M238 logic controller" catalog.

(2) Module supports use of the Modicon Telefast ABE 7 pre-wired system.



TM2AMI2LT



TM2AVI8LRJ



TM2ARI8LT

Analog I/O expansion modules

Analog I/O expansion modules are mounted on the rear of XBTGC controller bases. The maximum number of digital and/or analog I/O modules depends on the type of XBTGC terminal and the thickness of the modules (see combination rule on page 2/7).

Analog input modules (1)

Channel type	Input range	Output range	Resolution	Connected by	Thickness mm/in. (Type)	Reference	Weight kg/lb
2 inputs	0...10 V 4...20 mA	–	12-bit	Removable screw terminal block (included)	23.5/0.925 (B)	TM2AMI2HT	0.085/ 0.187
	Thermocouple – J, K, T	–	12-bit	Removable screw terminal block (included)	23.5/0.925 (B)	TM2AMI2LT	0.085/ 0.187
4 inputs	0...10 V 0...20 mA 2, 3 or 4-wire Pt100/1000 Ni100/1000 temperature probe	–	12-bit	Removable screw terminal block (included)	23.5/0.925 (B)	TM2AMI4LT	0.085/ 0.187
8 inputs	0...10 V 4...20 mA	–	10-bit	Removable screw terminal block (included)	23.5/0.925 (B)	TM2AMI8HT	0.085/ 0.187
	2 or 3-wire Pt100/1000 temperature probe	–	12-bit	RJ11 connector	23.5/0.925 (B)	TM2ARI8LRJ	–
				Removable screw terminal block (included)	23.5/0.925 (B)	TM2ARI8LT	–
	PTC/NTC	–	10-bit in NTC Detection of 2 thresholds in PTC	Removable screw terminal block (included)	23.5/0.925 (B)	TM2ARI8HT	0.085/ 0.187

Analog output modules (1)

1 output	–	0...10 V 4...20 mA	12-bit	Removable screw terminal block (included)	23.5/0.925 (B)	TM2AMO1HT	0.085/ 0.187
2 outputs	–	± 10 V	11-bit + sign	Removable screw terminal block (included)	23.5/0.925 (B)	TM2AVO2HT	0.085/ 0.187

Analog I/O modules (1)

2 inputs and 1 output	0...10 V 4...20 mA	0...10 V 4...20 mA	12-bit	Removable screw terminal block (included)	23.5/0.925 (B)	TM2AMM3HT	0.085/ 0.187
	Thermocouple J, K, T 2 or 3-wire Pt100 temperature probe	0...10 V 4...20 mA	12-bit	Removable screw terminal block (included)	23.5/0.925 (B)	TM2ALM3LT	0.085/ 0.187
4 inputs and 1 output	0...10 V 4...20 mA	0...10 V 4...20 mA	12-bit	Removable screw terminal block (included)	23.5/0.925 (B)	TM2AMM6HT	0.085/ 0.187

Separate parts

Designation	Description	Reference	Weight kg/lb
Earthing plate	Support equipped with 10 male Faston connectors for connecting the cable shielding (via 6.35 mm Faston connectors, not included) and the functional earths (FE)	TM2XMTGB	0.045/ 0.099
Mounting kit <small>Sold in lots of 5</small>	For plate or panel mounting of analog modules	TWDXMT5	0.065/ 0.143

(1) Characteristics: please refer to the "Modicon M238 logic controller" catalog.

Combinations (continued)

HMI controllers

Magelis™ XBTGC HMI controllers
I/O expansion modules

2



XBTGC1xxx Combinations of two expansion modules				
Type (1)	Type (1)	Total thickness (mm/in.)		
A	A	35.2/1.385	Permitted combinations	
A	B	41.1/1.618		
B	B	47.0/1.850		
A	C	47.3/1.862		
B	C	53.2/2.094		
A	D	56.7/2.232		
C	C	59.4/2.339		
B	D	62.6/2.465		
XBTGC2xxx Combinations of two expansion modules				
Type (1)	Type (1)	Total thickness (mm/in.)		
A	A	35.2/1.385	Permitted combinations	
A	B	41.1/1.618		
B	B	47.0/1.850		
A	C	47.3/1.862		
B	C	53.2/2.094		
A	D	56.7/2.232		
C	C	59.4/2.339		
B	D	62.6/2.465		
XBTGC2xxx Combinations of three expansion modules				
Type (1)	Type (1)	Type (1)	Total thickness (mm/in.)	
A	A	A	52.8/2.079	Permitted combinations with hook (2)
A	A	B	58.7/2.311	
A	B	B	64.6/2.543	
B	B	B	70.5/2.776	
All other combinations			—	Prohibited combinations

(1) For digital (TM2Dxx) and analog (TM2Axx) I/O expansion module types, see pages 2/5 and 2/6:

- Type A: thickness 17.6 mm
- Type B: thickness 23.5 mm
- Type C: thickness 29.7 mm
- Type D: thickness 39.1 mm

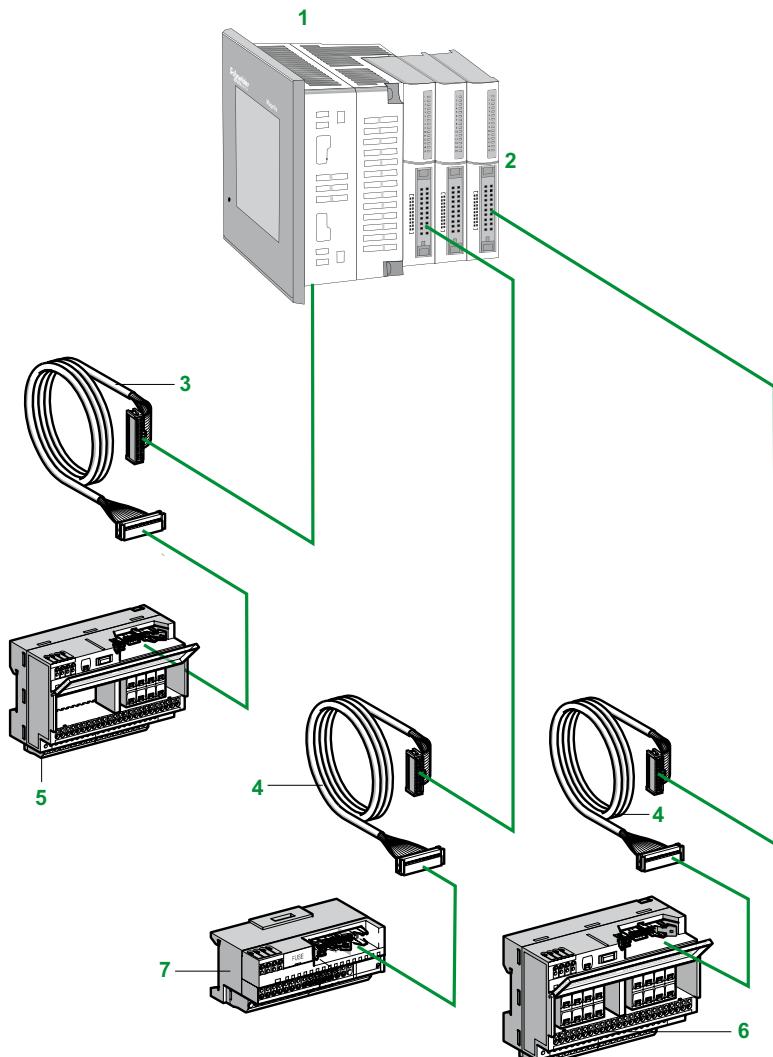
(2) Hook included with product.

HMI controllers

Modicon Telefast® pre-wired system
for Magelis™ XBTGC HMI controllers
Connection sub-bases for digital I/O (integrated or on
expansion modules)

2

Presentation



1 XBTGC 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 **XBTGC1100T/U**: **XBTZGABE1** preassembled cordset with a 26-way HE 10 connector and a 22-way Direct I/O-XBTGC connector at each end

- For **XBTGC2•••T/U**: **XBTZGABE2** preassembled cordset with two 20-way HE10 connectors and a 38-way Direct I/O-XBTGC connector

4 **ABFT20E••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 **XBTGC1100T**: **ABE7B20MPN2•** or **ABE7B20MRM20** 20-channel sub-base for the bases

- For **XBTGC2•••T**: **ABE7E16EPN20** or **ABE7E16SPN2•** 16-channel sub-base

6 **ABE7E16SPN22** or **ABE7E16SRM20** 16-channel sub-base for digital outputs integrated or on expansion modules

7 **ABE7E16EPN20** or **ABE7E16SPN20** 16-channel sub-base for digital inputs or outputs integrated or on expansion modules

Modicon Telefast® pre-wired system
for Magelis™ XBTGC HMI controllersConnection sub-bases for digital I/O (integrated or on
expansion modules)**Combinations involving modular bases and I/O expansion modules**

	XBTGC				Digital I/O expansion modules	
	Integrated digital I/O			Inputs	Outputs (source)	
	XBTGC1100T	XBTGC2●●●T	16 I 16 O source			
Integrated in Twido programmable controllers	12 I	6 O source	16 I 16 O source	TM2DDI16DK (16 I) TM2DDI32DK (32 I)	TM2DDO16TK (16 O) TM2DDO32TK (32 O)	
Connection block types	Direct I/O, 22-way		Direct I/O, 38-way	HE 10, 20-way		
Connection to XBTGC programmable HMI controller	XBTZGABE1		XBTZGABE2	ABFT20E●●0 (HE 10, 20-way)		
Passive connection sub-bases						
20-channel	ABE7B20MPN2●	(1)				
16-channel	ABE7E16EPN20					
	ABE7E16SPN2●					
Output adaptor sub-bases						
20-channel	ABE7B20MRM20	(2)				
16-channel	ABE7E16SRM20					


 Compatible


 Incompatible

Note: Telefast cables and modules are not compatible with XBTGC 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



ABE7B20MPN20



ABE7E16EPN20



ABE7E16SRM20

HMI controllers

Modicon Telefast® pre-wired system
for Magelis™ XBTGC HMI controllers
Connection sub-bases for digital I/O (integrated or on
expansion modules)

References

For XBTGC 1100T bases

Number of I/O	No./type of inputs	No./type of outputs	Compatibility	LED per chnnl	Fuse	Reference	Weight kg/lb
20	12, sink 24 V ...	6, sink 24 V ...	XBTGC1100T	No	No	ABE7B20MPN20	0.430/ 0.948
						ABE7B20MPN22	0.430/ 0.948
	12, sink 24 V ...	2, source 24 V ..., 2 A and 4, relay	XBTGC1100T	No	No	ABE7B20MRM20	0.430/ 0.948

For expansion modules or XBTGC 200 bases

Number of inputs	Input type	Compatibility	LED per chnnl	Fuse	Reference	Weight kg/lb	
16	Sink 24V ...	TM2 DDI16DK/ DDI32K and XBTGC200T	No	No	ABE7E16EPN20	0.430/ 0.948	
Number of outputs	Output type	Compatibility	LED per chnnl	Fuse	Reference	Weight kg/lb	
16	Source 24 V ...	TM2 DDO16TK/ DDO32TK and XBTGC200T	No	No	ABE7E16SPN20	0.450/ 0.992	
	Relay 24 V ..., 250 V~, 3 A		Yes	Yes	ABE7E16SPN22	0.450/ 0.992	
				No	No	ABE7E16SRM20	0.430/ 0.948

Connection cables for XBTGC

Type of signal	Compatibility	Connection type	Gauge	Length (1) m/ft	Reference	Weight kg/lb
		XBTGC side	Cross- sect.			
		Telefast side				
Digital I/O	XBTGC1100T	Direct I/O 22-way	HE 10 26-way	AWG 28 0.08 mm ²	2.0/6.562 XBTZGABE1	0.180/ 0.397
	XBTGC200T	Direct I/O 38-way	2 x HE 10 20-way		2.0/6.562 XBTZGABE2	0.180/ 0.397
	TM2 DDI16DK/ DDI32K/ DDO16TK/ DDO32TK	HE 10 20-way	HE 10 20-way	AWG 28 0.08 mm ²	0.5/1.640 ABFT20E050 1.0/3.281 ABFT20E100	0.060/ 0.132 0.080/ 0.176
					2.0/6.562 ABFT20E200	0.140/ 0.308

Accessories

Designation	Number of shunted terminals	Characteristics	Order in multiples of	Unit reference	Weight kg/lb
Optional snap-on terminal blocks	20	–	5	ABE7BV20	0.060/ 0.132
	12+8	–	5	ABE7BV20TB	0.060/ 0.132
Quick-blow fuses 5 x 20, 250 V, UL	–	0.125 A	10	ABE7FU012	0.010/ 0.022
		0.315 A	10	ABE7FU030	0.010/ 0.022
		1 A	10	ABE7FU100	0.010/ 0.022
		2 A	10	ABE7FU200	0.010/ 0.022

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

References (continued)**Separate parts**

Designation	Type	Compatibility	Reference	Weight kg/lb			
Connectors Sold in lots of 5	HE10 female 26-way	TWD LMDA20DTK/ LMDA40DTK	TWDFCN2K26	—			
	HE 10 female 20-way	TM2 DDI16DK/ DDI32DK/ DDO16TK/ DDO32TK	TWDFCN2K20	—			
Screw terminals Sold in lots of 5	10-way	TM2 DDI●DT/DAI8DT/ DDO8●T/DRA●RT	TWDFTB2T10	—			
	11-way	TM2 DMM8DRT/ AMI●T/ARI8HT	TWDFTB2T11	—			
Designation	Compatibility	Connection type	Gauge/ Cross-sect.	Length m/ft	Reference	Weight kg/lb	
Cables for digital I/O	TM2 DDI16DK/ DDI32DK/ DDO16TK/ DDO32TK	HE 10 20-way	Flying leads	AWG 22 0.035 mm ²	3.0/9.842	TWDFCW30K	0.405/ 0.892
					5.0/16.404	TWDFCW50K	0.670/ 1.477
Rolled ribbon cable	20 conductors	—	—	AWG 28 0.08 mm ²	20.0/65.617	ABFC20R200	1.310/ 2.888



XBTGC + XBTZGCCAN

Presentation

The **XBTZGCCAN** module provides the CANopen bus master function for Magelis XBTGC HMI controllers.

SoMachine software is used to configure the CANopen machine bus for the Magelis XBTGC HMI controllers (please refer to our website www.schneider-electric.com).

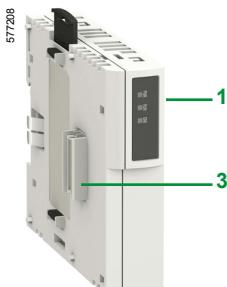
The various services on offer include:

- 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.



XBTZGCCAN

Description

The **XBTZGCCAN** 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 **XBTGC** HMI controller



Reference

Description	Reference	Weight kg/lb
CANopen bus master module for Magelis XBTGC HMI controller Conformity class M10	XBTZGCCAN	0.100/ 0.220

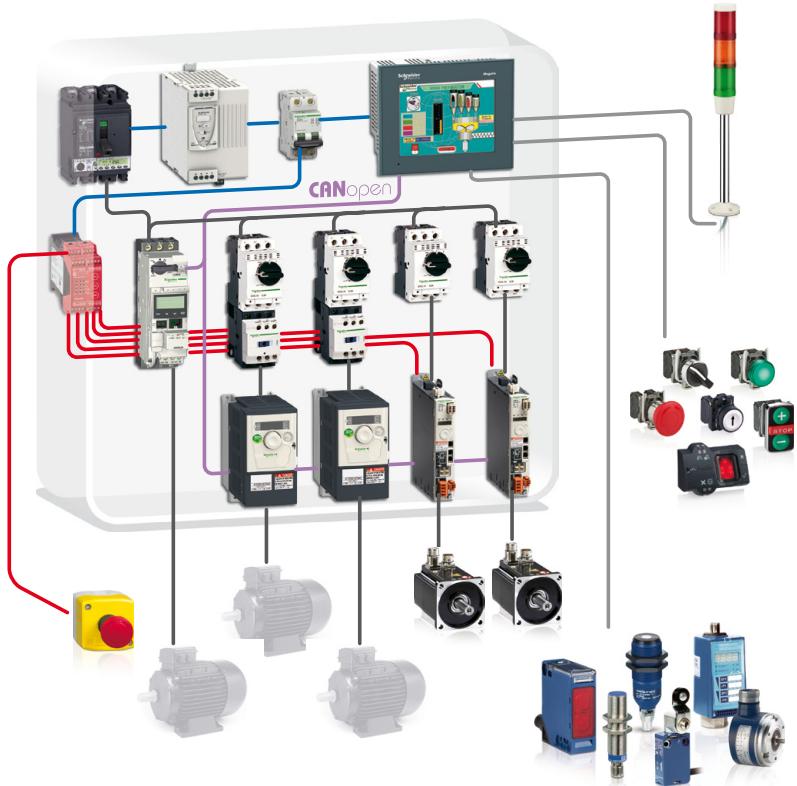
HMI controllers

CANopen bus

CANopen master bus module for Magelis™

XBTGC HMI controllers

Example architecture



2

The above configuration shows an example architecture based on the Magelis XBTGC HMI controller.

The XBTZGCCAN expansion module provides the CANopen bus master function for the XBTGC HMI controller.

The CANopen bus is made up of a master station, the Magelis XBTGC 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 4/2.

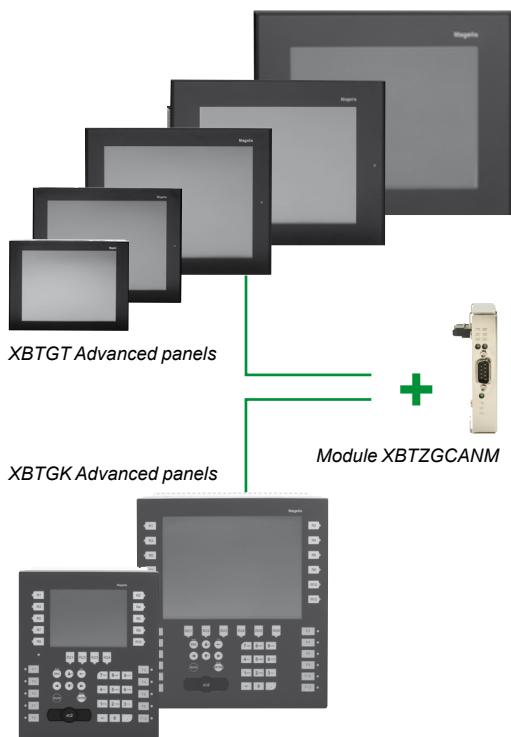
CANopen bus module for Magelis™ XBT GT/GK Advanced panels

■ Presentation	page 3/2
■ Description	page 3/2
■ Reference	page 3/2
■ Architecture	page 3/3
■ References	
□ XBTGT monochrome touch screen terminals	page 3/4
□ XBTGT color touch screen terminals	page 3/4
□ XBTGK keypad/touch screen terminals	page 3/5

HMI controllers

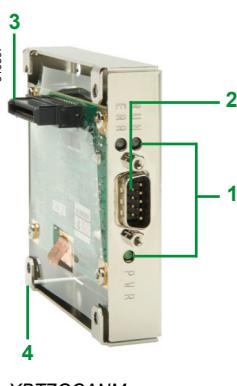
CANopen bus

CANopen master bus module for Magelis™ Standard Advanced panels XBT GT/GK



HMI function: Magelis XBT GT/GK Advanced panels

+
Control function: XBTZGCANM CANopen master module



Presentation

The **XBTZGCANM** CANopen master bus module provides the control function for the Magelis **XBTGT** (5.7", 10.4", 12.1" or 15") and **XBTGK** (5.7" or 10.4") ranges of Standard Advanced panels (see page 3/10).

SoMachine software is used to configure the CANopen machine bus for this module (please refer to our website www.schneider-electric.com.).

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.

Description

The **XBTZGCANM** CANopen master bus module features:

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

Reference

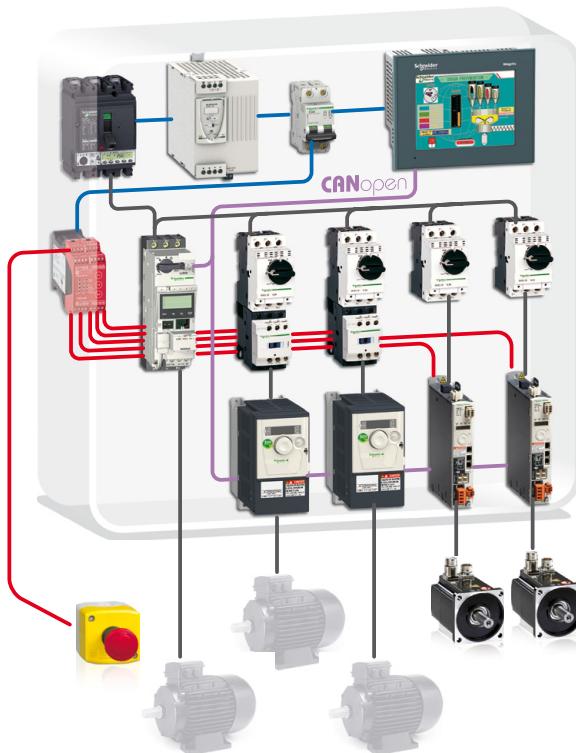
Description	Reference	Weight kg/lb
CANopen bus master module for Magelis XBT GT/GK Standard Advanced panels Conformity class M10	XBTZGCANM	0.100/ 0.220

HMI controllers

CANopen bus

CANopen master bus module for Magelis™ Standard Advanced panels XBT GT/GK

Example architecture



3

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

The **XBTZGCANM** 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 4/2.



XBTGT monochrome touch screen terminals compatible with the XBTZGCANM 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/lb
5.7" multifunction QVGA screen							
STN Black and white	1 COM 1 1 COM 2 1 USB	16 MB	Yes	No	–	XBTGT2120	1.000/ 2.205
					1	XBTGT2130	1.000/ 2.205

XBTGT color touch screen terminals compatible with the XBTZGCANM CANopen master module (1) (2)

Screen type	No. of ports	Application memory capacity	Compact Flash memory	Composite video input	Embedded Ethernet	Reference	Weight kg/lb
5.7" multifunction QVGA screen							
STN	1 COM 1 1 COM 2 1 USB	16 MB	Yes	No	–	XBTGT2220	1.000/ 2.205
TFT	1 COM 1 1 COM 2 1 USB	16 MB	Yes	No	1	XBTGT2330	1.000/ 2.205
High Brightness TFT	1 COM 1 1 COM 2 1 USB	16 MB	Yes	No	1	XBTGT2930	1.000/ 2.205

5.7" multifunction VGA screen

TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	XBTGT2430	–
-----	-----------------------------	-------	-----	----	---	-----------	---

7.5" multifunction VGA screen

STN	1 COM 1 1 COM 2 1 USB	32 MB	Yes	No	1	XBTGT4230	1.800/ 3.968
TFT	1 COM 1 1 COM 2 1 USB	32 MB	Yes	No	1	XBTGT4330	1.800/ 3.968
				Yes	1	XBTGT4340	1.800/ 3.968

Multifunction 10.4" VGA screen

TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	XBTGT5330	2.500/ 5.512
				Yes	1	XBTGT5340	2.500/ 5.512

Multifunction 10.4" SVGA screen

TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	XBTGT5430	2.500/ 5.512
-----	-----------------------------	-------	-----	----	---	-----------	-----------------

Multifunction 12.1" SVGA screen

TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	XBTGT6330	3.000/ 6.614
				Yes	1	XBTGT6340	3.000/ 6.614

Multifunction 15" XGA screen

TFT	1 COM 1 1 COM 2 2 USB	32 MB	Yes	Yes	1	XBTGT7340	5.600/ 12.346
-----	-----------------------------	-------	-----	-----	---	-----------	------------------

(1) Terminals supplied with mounting kit (screw clips), locking device for USB connectors and instruction sheet. The setup documentation for XBTGT terminals is supplied in electronic format with SoMachine software, please refer to our website www.schneider-electric.com.

(2) All data relating to Magelis XBTGT Standard Advanced panels is available on our website www.schneider-electric.com.



XBTGK2120 / 2330



XBTGK5330

XBTGK keypad/touch screen terminals compatible with the XBTZGCANM CANopen master module (1) (2)

Screen type	No. of ports	Application memory capacity	Compact Flash memory	Video input	No. of Ethernet ports	Reference	Weight kg/lb
5.7" multifunction screen							
STN Black and white	1 COM 1 1 COM 2 1 USB	32 MB	Yes	No	-	XBTGK2120	-
5.7" multifunction screen							
TFT color mode	1 COM 1 1 COM 2 1 USB	32 MB	Yes	No	1	XBTGK2330	-
10.4" multifunction screen							
TFT color mode	1 COM 1 1 COM 2 2 USB	32 MB	Yes	No	1	XBTGK5330	-

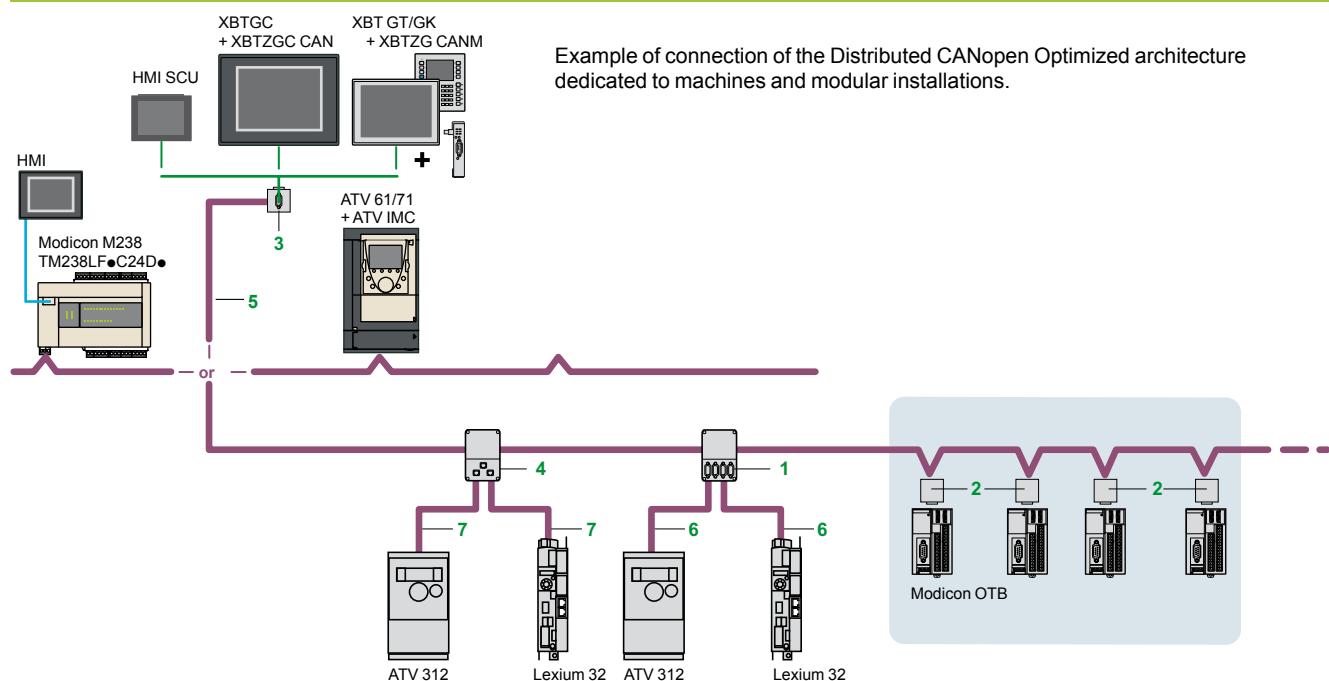
(1) Terminals supplied with mounting kit (spring clips), locking device for USB connectors, customizable label sheets and instruction sheet.

(2) All data relating Magelis XBTGK Standard Advanced panels is available on our website www.schneider-electric.com.

Bus CANopen module wiring system

■ Optimized CANopen architecture	page 4/2
■ References	
□ Standard tap junctions and connectors.....	page 4/2
□ IP 20 standard cables and preassembled cordsets.....	page 4/3
□ IP 20 connection accessories	page 4/3

Optimized CANopen architecture



4

References

Standard tap junctions and connectors						
Designation	Description	Item no.	Length m/ft	Unit reference	Weight kg/lb	
IP 20 CANopen tap junction	4 SUB-D ports. Screw terminal block for connecting the trunk cables Line termination	1	–	TSXCANTDM4	0.196/ 0.432	
IP 20 CANopen connectors (9-way female SUB-D) Switch for line termination	Right angle Straight (1)	2	–	TSXCANKCDF90T	0.046/ 0.101	
	Right angle with 9-way SUB-D for connecting a PC or diagnostic tool	3	–	TSXCANKCDF180T	0.049/ 0.108	
M12 IP 67 connectors	Male Female	–	–	FTXCN12M5	0.050/ 0.110	
		–	–	FTXCN12F5	0.050/ 0.110	
IP 20 CANopen tap junction for Altivar and Lexium 32	2 RJ45 ports	4	–	VW3CANTAP2	0.250/ 0.551	
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	–	0.6/1.968	TCSCTN026M16M	–	
	Equipped with: - 2 RJ45 connectors for daisy chain connection of the CANopen bus - 1 preassembled cordset with RJ45 connector for connecting the drive	–	0.3/0.984	TCSCTN023F13M03	–	
CANopen line terminators	For RJ45 connector Sold in lots of 2	–	–	TCSCAR013M120	–	
	For screw terminal block connector Sold in lots of 2	–	–	TCSCAR01NM120	–	

(1) To connect to the Altivar IMC card.

References (continued)

IP 20 standard cables and preassembled cordsets

Designation	Description	Item no.	Length m/ft	Unit reference	Weight kg/lb
CANopen cables (2 x AWG 22 2 x AWG 24)	For standard environment (1), CE marking: Low smoke zero halogen Flame-retardant (IEC 60332-1)	5	50/164.042	TSXCANCA50	4.930/ 10.869
			100/328.083	TSXCANCA100	8.800/ 19.401
			300/984.249	TSXCANCA300	24.560/ 54.146
	For standard environment (1), UL certification, CE marking: Flame-retardant (IEC 60332-2)	5	50/164.042	TSXCANCB50	3.580/ 7.893
			100/328.083	TSXCANCB100	7.840/ 17.284
			300/984.249	TSXCANCB300	21.870/ 48.216
	For harsh environment (2) or mobile installation, CE marking: Low smoke zero halogen. Flame-retardant (IEC 60332-1). Resistance to oils	5	50/164.042	TSXCANCD50	3.510/ 7.738
			100/328.083	TSXCANCD100	7.770/ 17.130
			300/984.249	TSXCANCD300	21.700/ 47.840
CANopen preassembled cordsets One 9-way female SUB-D connector at each end	For standard environment (1), CE marking: Low smoke zero halogen. Flame-retardant (IEC 60332-1)	-	0.3/0.984	TSXCANCADD03	0.091/ 0.201
			1/3.281	TSXCANCADD1	0.143/ 0.315
			3/9.842	TSXCANCADD3	0.295/ 0.650
			5/16.404	TSXCANCADD5	0.440/ 0.970
	For standard environment (1), UL certification, label marking CE: flame retardant (IEC 60332-2)	-	0.3/0.984	TSXCANCBD03	0.086/ 0.190
			1/3.281	TSXCANCBD1	0.131/ 0.289
			3/9.842	TSXCANCBD3	0.268/ 0.591
			5/16.404	TSXCANCBD5	0.400/ 0.882
CANopen preassembled cordsets	Cordsets with one 9-way female SUB-D connector and one RJ45 connector	6	0.5/1.640	TCSCCN4F3M05T	0.100/ 0.220
			1/3.281	TCSCCN4F3M1T	0.100/ 0.220
				VW3M3805R010 (3)	0.100/ 0.220
			3/9.842	VW3M3805R010 (3)	0.300/ 0.661
				TCSCCN4F3M3T	0.160/ 0.353
	Cordsets with two 9-way SUB-D connectors, one male and one female	-	0.5/1.640	TLACDCBA005	0.100/ 0.220
			1.5/4.921	TLACDCBA015	0.120/ 0.265
			3/9.842	TLACDCBA030	0.190/ 0.419
			5/16.404	TLACDCBA0	0.350/ 0.772
IP 20 connection accessories					
CANopen connector for Altivar 71 (4)	9-way female SUB-D. Switch for line termination. Cables exit at 180°	-	-	VW3CANKCDF180T	0.100/ 0.220
Adaptor for Altivar 71	SUB-D to RJ45 CANopen adaptor drive	-	-	VW3CANA71	0.100/ 0.220
CANopen preassembled cordsets	1 RJ45 connector at each end	7	0.3/0.984	VW3CANCARR03	0.100/ 0.220
			1/3.281	VW3CANCARR1	0.100/ 0.220
CANopen bus adaptor for Lexium 17D	Hardware interface for link conforming to the CANopen standard + 1 connector for connecting a PC terminal	-	-	AM02CA001V000	0.110/ 0.243
Y-connector	CANopen/Modbus	-	-	TCSCTN011M11F	0.100/ 0.220

(1) Standard environment: no particular environmental constraints, operating temperature between + 5°C and + 60°C, and in fixed installations.

(2) Harsh environment: resistance to hydrocarbons, industrial oils, detergents, solder splashes, relative humidity up to 100%, saline atmosphere, significant temperature variations, operating temperature between - 10°C and + 70°C, or in mobile installations.

(3) Cordset equipped with a line terminator.

(4) For ATV 71H●●●M3, ATV 71HD11M3X, HD15M3X, ATV 71H075N4... HD18N4 drives, this connector can be replaced by the **TSXCANKCDF180T** connector.



VW3CANA71



AM02CA001V000



FTXDP21●●

■ How to find products?	
□ Search, visualize, and download	page 5/2
□ Access product references with adapted tools.....	page 5/4
□ Compare, select, and compile	page 5/6
□ Check the product status, design your equipment	page 5/7
■ Product reference index.....	page 5/8

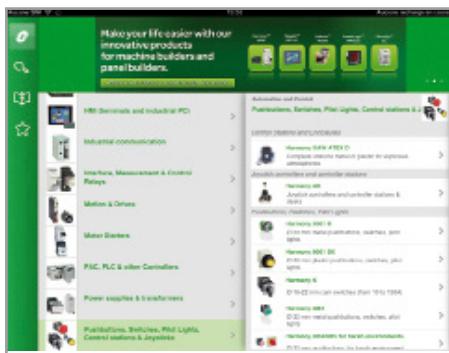
Search, visualize, and download

Use your tablet or your PC to quickly access detailed and comprehensive information on our products

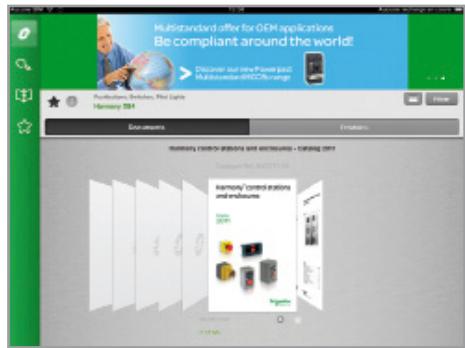
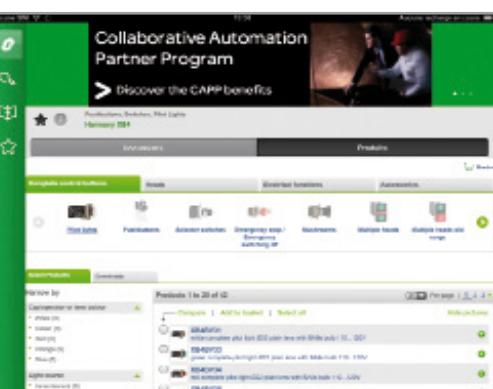


Tablets

Application name: "Automation Library by Schneider Electric"



Product ranges
displayed by function



Dynamic catalogs
(hyperlinks, video, ...)



Product selector: dynamic filters to
get easily your part number



Personal computer

Path: www.schneider-electric.com > **Products and Services** > Automation and control > Product offer

Product ranges
displayed by function




Dynamic catalogs
(hyperlinks, video, ...)

Product selector: dynamic filters to
get easily your part number

Access product references with adapted tools



Path: www.schneider-electric.com > **Products and Services** > Automation and control > ... > Product offer

The screenshot shows the Schneider Electric website with a navigation bar at the top. The main content area displays a product image and its name: "Harmony XDA - Ø 22 mm metal pushbutton, switch, pilot light". Below the image is a detailed product description. On the left, there is a sidebar with links like "Product Information", "Product Configurator", "Product Selector", "Documents & Downloads", "Additional Links", and "Support". A callout arrow points from the "Product Information" link in the sidebar to the "Product Information" section in the main content area.

Graphic product configurator
Select the right product with just a few clicks

Dynamic product selector
Visualize product characteristics and dimensions

The screenshot shows the Schneider Electric "Graphic product configurator" interface. It features a central 3D model of a component, likely a pushbutton, with various configuration parameters displayed around it. The interface includes a sidebar with "Product Information", "Product Configurator", "Product Selector", "Documents & Downloads", "Additional Links", and "Support". A large green downward-pointing arrow is positioned below the interface.

The screenshot shows the Schneider Electric "Dynamic product selector" interface. It displays a list of products with their names and some descriptive text. A large green downward-pointing arrow is positioned below the interface.

The screenshot shows two side-by-side interfaces. On the left is a "Product data sheet" for a "Harmony XDA - Ø 22 mm metal pushbutton, switch, pilot light" with a PDF icon below it. On the right is a "Technical characteristics" page for the same product, showing detailed dimensions and other technical specifications. A large green downward-pointing arrow is positioned between the two interfaces.

Product data sheet
with technical characteristics and dimensions

Dimensions

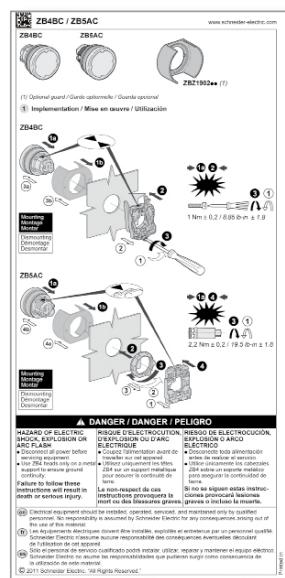
Technical characteristics

Documents and downloads

Visualize and download catalogs, technical publications, certificates, etc.



Essential guides



Technical publications

Certificates



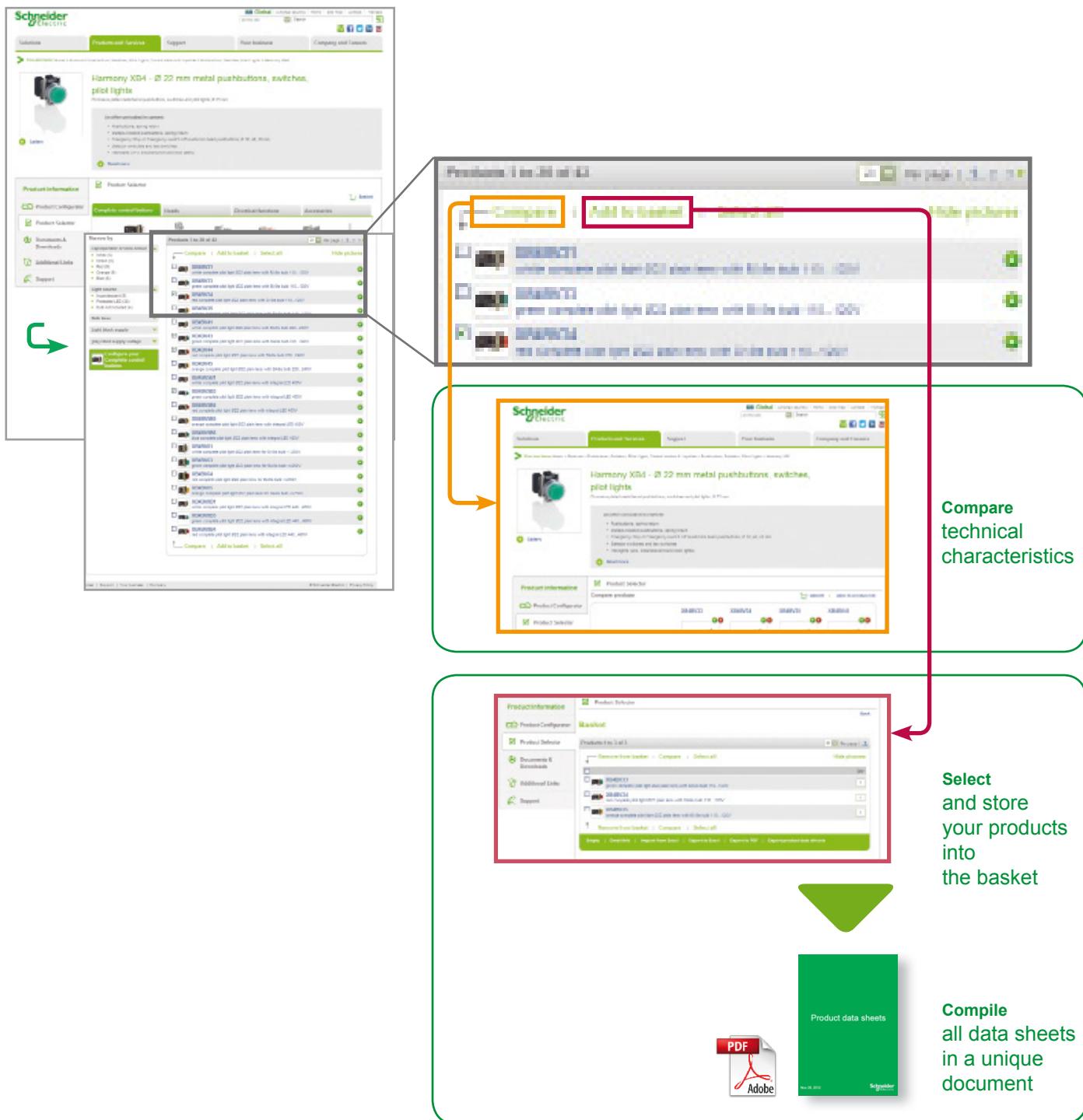
Dynamic catalogs



Compare, select, and compile



Path: www.schneider-electric.com > **Products and Services** > Automation and control > ... > Harmony XB4*

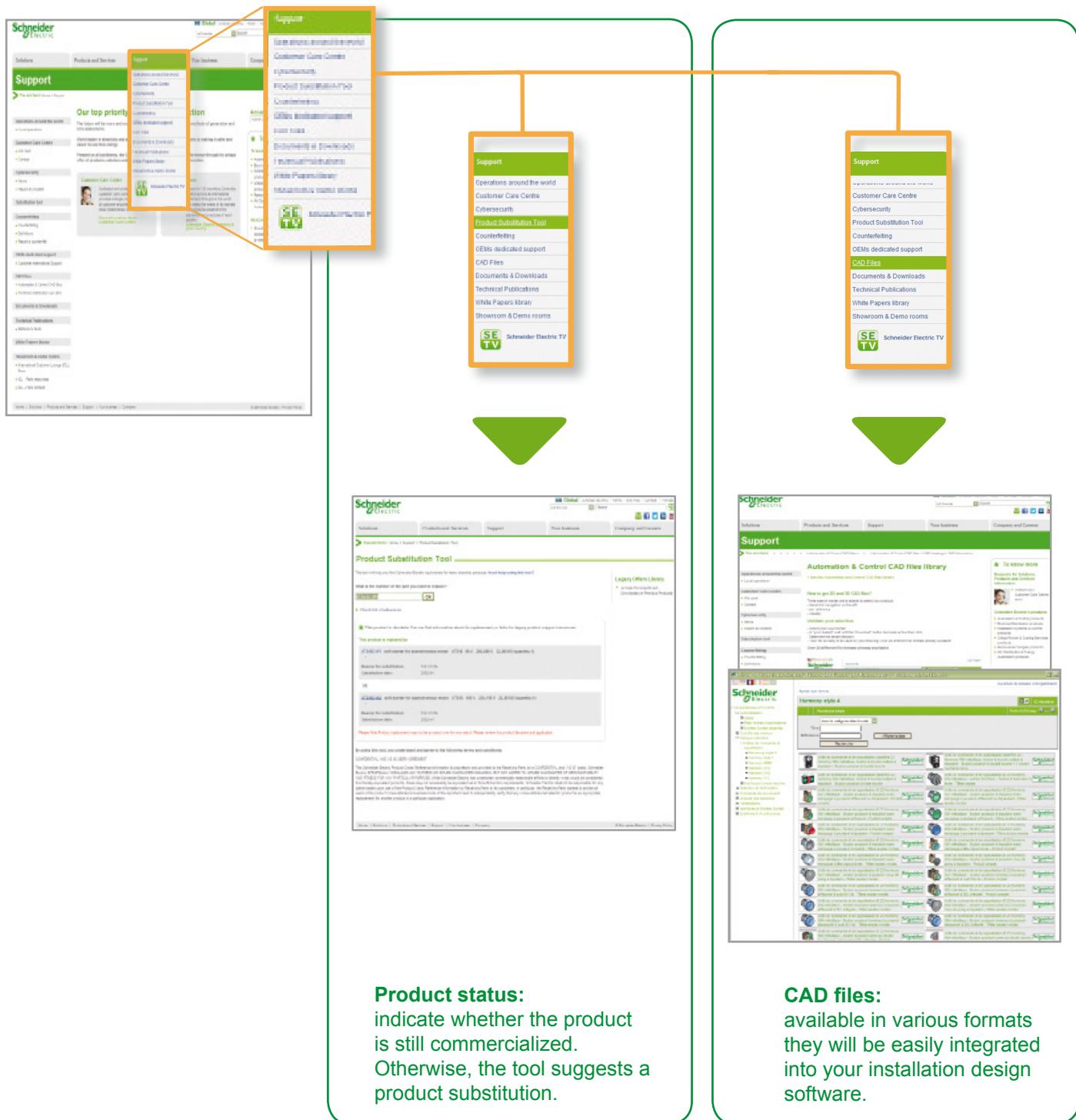


* Example of research on a product

Check the product status, design your equipment



Path: www.schneider-electric.com > **Support** > Product Substitution Tool
Path: www.schneider-electric.com > **Support** > CAD files



Please note that references to products and services are just examples.

A
ABE7B20MPN20
ABE7B20MPN22
ABE7B20MRM20
ABE7BV20
ABE7BV20TB
ABE7E16EPN20
ABE7E16SPN20
ABE7E16SPN22
ABE7E16SRM20
ABE7FU012
ABE7FU030
ABE7FU100
ABE7FU200
ABFC20R200
ABFT20E050
ABFT20E100
ABFT20E200
AM02CA001V000
F
FTXCN12F5
FTXCN12M5
T
TCSCAR01NM120
TCSCAR013M120
TCSCCN4F3M1T
TCSCCN4F3M3T
TCSCCN4F3M05T
TCSCTN011M11F
TCSCTN023F13M03
TCSCTN026M16M
TLACDCBA0
TLACDCBA005
TLACDCBA015
TLACDCBA030
TM2ALM3LT
TM2AMI2HT
TM2AMI2LT
TM2AMI4LT
TM2AMI8HT
TM2AMM3HT
TM2AMM6HT
TM2AMO1HT
TM2ARI8HT
TM2ARI8LRJ
TM2ARI8LT
TM2AVO2HT
TM2DAI8DT
TM2DDI8DT
TM2DDI16DK
TM2DDI16DT
TM2DDI32DK
TM2DDO8TT
TM2DDO8UT
V
VW3CANA71
VW3CANCARR1
VW3CANCARR03
VW3CANKCDF180T
VW3CANTDM4
TWDFCN2K20
TWDFCN2K26
TWDFCW30K
TWDFCW50K
TWDFTB2T10
TWDFTB2T11
TWDXMT5
X
XBTGC1100T
XBTGC1100U
XBTGC2120T
XBTGC2120U
XBTGC2330T
XBTGC2330U
XBTGK2120
XBTGK2330

TM2DDO16TK	2/5	XBTGK5330	3/5
TM2DDO16UK	2/5	XBTGT2120	3/4
TM2DDO32TK	2/5	XBTGT2130	3/4
TM2DDO32UK	2/5	XBTGT2220	3/4
TM2DMM8DRT	2/5	XBTGT2330	3/4
TM2DMM24DRF	2/5	XBTGT2430	3/4
TM2DRA8RT	2/5	XBTGT2930	3/4
TM2DRA16RT	2/5	XBTGT4230	3/4
TM2XMTGB	2/6	XBTGT4330	3/4
TSXCANCA50	4/3	XBTGT4340	3/4
TSXCANCA100	4/3	XBTGT5330	3/4
TSXCANCA300	4/3	XBTGT5340	3/4
TSXCANCADD1	4/3	XBTGT5430	3/4
TSXCANCADD03	4/3	XBTGT6330	3/4
TSXCANCADD3	4/3	XBTGT6340	3/4
TSXCANCADD5	4/3	XBTGT7340	3/4
TSXCANCB50	4/3	XBTZG51	2/4
TSXCANCB100	4/3	XBTZG52	2/4
TSXCANCB300	4/3	XBTZG60	2/4
TSXCANCBDD1	4/3	XBTZG62	2/4
TSXCANCBDD03	4/3	XBTZG935	2/4
TSXCANCBDD3	4/3	XBTZGABE1	2/10
TSXCANCBDD5	4/3	XBTZGABE2	2/10
TSXCANCD50	4/3	XBTZGCCAN	2/4
TSXCANCD100	4/3	XBTZGCHOK	2/4
TSXCANCD300	4/3	XBTZGCLP2	2/4
TSXCANKCDF90T	4/2	XBTZGCLP4	2/4
TSXCANKCDF90TP	4/2	XBTZGDIO1	2/4
TSXCANKCDF180T	4/2	XBTZGDIO2	2/4
TSXCANTDM4	4/2	XBTZGFIX	2/4
TWDFCN2K20	2/11	XBTZGPWS1	2/4
TWDFCN2K26	2/11	XBTZGUSB	2/4
TWDFCW30K	2/11	XBTZGUSBB	2/4
V			
VW3CANA71	4/3		
VW3CANCARR1	4/3		
VW3CANCARR03	4/3		
VW3CANKCDF180T	4/3		
VW3CANTDM4	4/2		
VW3M3805R010	4/3		
VW3M3805R010	4/3		
X			
XBTGC1100T	2/4		
XBTGC1100U	2/4		
XBTGC2120T	2/4		
XBTGC2120U	2/4		
XBTGC2330T	2/4		
XBTGC2330U	2/4		
XBTGK2120	3/5		
XBTGK2330	3/5		

Schneider Electric Industries SAS

Head Office
35, rue Joseph Monier
F-92500 Rueil-Malmaison
France

www.schneider-electric.com

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Design: Schneider Electric
Photos: Schneider Electric
Printed by:

DIA5ED2130615EN