

HMI controllers

Magelis XBTGC HMI controllers with 5.7" screen

2

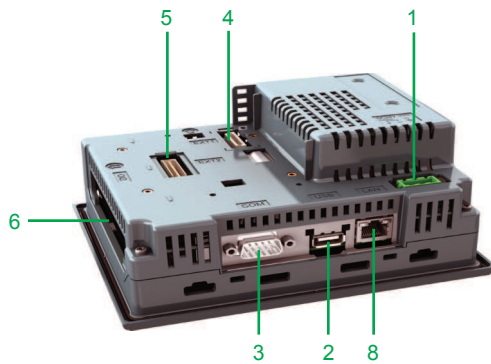


Description

Magelis XBTGC2330 HMI controllers

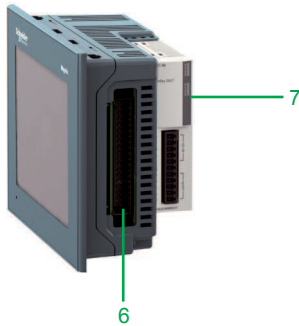
The front panel comprises:

- 1 A touch screen for displaying mimics (5.7" 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 $\overline{\text{---}}$ power supply
- 2 A type A USB master connector for peripheral connection and application transfer
- 3 A 9-way male SUB-D connector for RS 232C or RS 422/485 serial link to PLCs (COM1)
- 4 An interface for connecting the M238 logic controller I/O expansion module
- 5 An interface for connecting the CANopen bus master module (see page 2/13)
- 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).
- 8 An RJ45 connector for Ethernet TCP/IP 10BASE-T/100BASE-TX link.





XBTGC2●●●●

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
5.7" screen							
TFT 65 k colors	1 COM 1	16 MB	No	16 I/16 O source	1	XBTGC2330T	1.000/ 2.205
	1 USB			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)	XBTGC2●●0	–	XBTZG62	0.200/ 0.441
Designation	Description	Length m/ft	Reference	Weight kg/lb
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	–



XBTZGUSB

Replacement parts

Description	Used for	Reference	Weight kg/lb
Seals	XBTGC23●●	XBTZG52	0.030/ 0.066
USB fastenings	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	XBTGC2●●●	XBTZGPWS1	0.030/ 0.066
Direct I/O connector	XBTGC2000	XBTZGDIO2	–

(1) 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).

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Digital I/O expansion modules

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TM2DDI8DT



TM2DDO8T/DRA8RT



TM2DDO32K



TM2DDM24DRF

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).

Digital input modules (1)

Input voltage	No. of channels	No. of common points	Connection	Thickness mm/in. (Type)	Reference	Weight kg/lb
24 V $\overline{\text{---}}$ 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

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 $\overline{\text{---}}$	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 $\overline{\text{---}}$	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 $\overline{\text{---}}$	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

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 $\overline{\text{---}}$ 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 $\overline{\text{---}}$ 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

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

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

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Magelis XBTGC HMI controllers

Analog I/O expansion modules

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).



TM2AMI2LT



TM2ARI8LRJ

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

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

HMI controllers

Magelis XBTGC HMI controllers

Analog I/O expansion modules

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TM2AR18LT

Analog I/O expansion modules (continued)

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

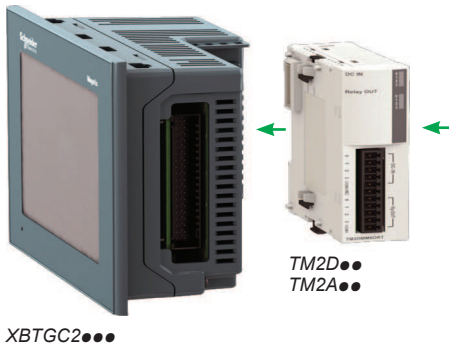
Designation	Description	Reference	Weight kg/lb
Earthing plate	Support equipped with 10 male Faston connectors for connecting the cable shielding (via 6.35 mm Faston connectors, not included) and the functional earths (FE)	TM2XMTGB	0.045/ 0.099
Mounting kit Sold in lots of 5	For plate or panel mounting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

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

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Magelis XBTGC HMI controllers

I/O expansion modules



XBTGC2●●● Combinations of two expansion modules

Combinations of 2 I/O expansion modules with XBTGC2●●●	Type (1)		Total thickness (mm/in.)	
	Type (1)	Type (1)		
Permitted combinations	A	A	35.2/1.385	
	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	
Prohibited combinations	B	D	62.6/2.465	
	C	D	68.8/2.709	
	D	D	78.2/3.079	

XBTGC2●●● Combinations of three expansion modules

Combinations of 3 I/O expansion modules with XBTGC2●●●	Type (1)			Total thickness (mm/in.)	
	Type (1)	Type (1)	Type (1)		
Permitted combinations with hook (2)	A	A	A	52.8/2.079	
	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 (TM2D●●) and analog (TM2A●●) I/O expansion module types, see pages 2/5 and 2/6:
 - Type A: thickness 17.6 mm/0.692 in.
 - Type B: thickness 23.5 mm/0.925 in.
 - Type C: thickness 29.7 mm/1.169 in.
 - Type D: thickness 39.1 mm/1.539 in.
 (2) Hook included with product.

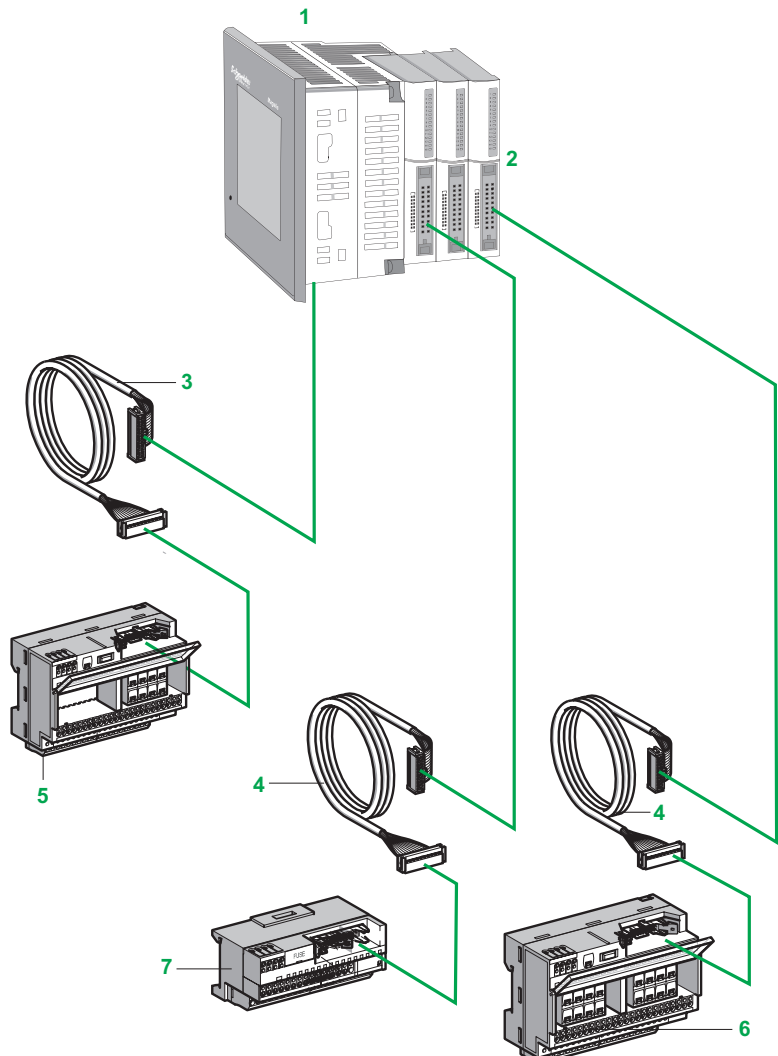
HMI controllers

Modicon Telefast® pre-wired system

for Magelis XBTGC HMI controllers

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

Presentation



- 1 XBTGC equipped with 38-way direct I/O connectors. The modularity options offered have 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/6.56 ft. AWG 28/0.08 mm² cordsets, depending on the model:
 - 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 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

HMI controllers

Modicon Telefast pre-wired system

for Magelis XBTGC HMI controllers

Connection 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)
Integrated in Twido programmable controllers	XBTGC2●●●T		TM2DDI16DK (16 I)	TM2DDO16TK (16 O)
	16 I	16 O source	TM2DDI32DK (32 I)	TM2DDO32TK (32 O)
Connection block types	Direct I/O, 38-way		HE 10, 20-way	
Connection to XBTGC programmable HMI controller	XBTZGABE2		ABFT20E●●0 (HE 10, 20-way)	

Passive connection sub-bases

20-channel	ABE7B20MPN2●				
16-channel	ABE7E16EPN20				
	ABE7E16SPN2●				

Output adaptor sub-bases

20-channel	ABE7B20MRM20				
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

HMI controllers

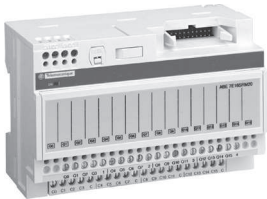
Modicon Telefast pre-wired system

for Magelis XBTGC HMI controllers

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



ABE7E16EPN20



ABE7E16SRM20

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References

For expansion modules or XBTGC 2●● bases

Number of inputs	Input type	Compatibility	LED per chnnl	Fuse	Reference	Weight kg/lb
16	Sink 24 V $\overline{\text{---}}$	TM2 DDI16DK/ DDI32K and XBTGC2●●T	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 $\overline{\text{---}}$	TM2 DDO16TK/ DDO32TK and XBTGC2●●T	No	No	ABE7E16SPN20	0.450/ 0.992
			Yes	Yes	ABE7E16SPN22	0.450/ 0.992
	Relay 24 V $\overline{\text{---}}$, 250 V \sim , 3 A		No	No	ABE7E16SRM20	0.430/ 0.948

Connection cables for XBTGC

Type of signal	Compatibility	Connection type	Gauge Cross-sect.	Length (1) m/ft	Reference	Weight kg/lb	
		XBTGC side Telefast side					
Digital I/O	XBTGC2●●0T	Direct I/O 38-way	2 x HE 10 20-way	2.0/6.562	XBTZGABE2	0.180/ 0.397	
		TM2 DDI16DK/ DDI32DK/ DDO16TK/ DDO32TK	HE 10 20-way	HE 10 20-way	AWG 28 0.08 mm ²	0.5/1.640 1.0/3.281 2.0/6.562	ABFT20E050 ABFT20E100 ABFT20E200

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.

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 (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	Twido side	Other end	AWG 22 0.035 mm ²	3.0/9.842	TWDFCW30K	0.405/ 0.892
		HE 10 20-way	Flying leads		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