



Marine & Offshore

Certificate number: 14167/C0 BV

File number: AP 3278

Product code: 4483H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

SCHNEIDER ELECTRIC FRANCE
CARROS - FRANCE

for the type of product

DISPLAY MONITORS / VIDEO SCREENS / TERMINALS

Telemecanique Magelis compact display units
XBT-N200, XBT-N400, XBT-N401, XBT-NU400 and XBT-N410
XBT-R400, XBT-R411 and XBT-R410

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 06 Jun 2023

For Bureau Veritas Marine & Offshore,

At BV KOBE, on 06 Jun 2018,
Shinichi Takemoto



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=mvyiz2w4yo>

BV Mod. Ad.E 530 June 2017

This certificate consists of 6 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

- 1- Operator dialogue terminals **Magelis XBT N & R series** which are compact display units, with function and service keys,
 2- **GP4000 Series** is Human Machine Interface which are used for monitoring and controlling systems in marine applications, and;
 3- **Magelis HMIGTO Series** which is a Human Machine Interface used for monitoring and controlling systems in marine applications.

1.1 Approval Range:

1.1.1 Magelis XBT N & R series:

Type	Display Type	Display Capacity	Supply Voltage (DC)
XBT-N200	Green back-lit LCD alpha.	2 lines of 20 Caracteres	5V via PLC Terminal Port
XBT-N400	Green back-lit LCD (122x32 pixels)	From 1 line of 5 Char. to 4 lines of 20 Char.	5V via PLC Terminal Port
XBT-N401	Green, Orange or red back-lit LCD (122x32 pixels)	From 1 line of 5 Char. to 4 lines of 20 Char.	24V External
XBT-NU400	Green back-lit LCD (122x32 pixels)	From 1 line of 5 Char. to 4 lines of 20 Char.	24V External
XBT-N410	Green back-lit LCD (122x32 pixels)	From 1 line of 5 Char. to 4 lines of 20 Char.	24V External
XBT-R400	Green back-lit LCD (122x32 pixels)	From 1 line of 5 Char. to 4 lines of 20 Char.	5V via PLC Terminal Port
XBT-R410	Green back-lit LCD (122x32 pixels)	From 1 line of 5 Char. to 4 lines of 20 Char.	24V External
XBT-R411	Green, Orange or red back-lit LCD (122x32 pixels)	From 1 line of 5 Char. to 4 lines of 20 Char.	24V External

1.1.2. GP4000 Series:

1.1.2.a Models:

Model reference for Pro-face brand	Description
PFXGP4601TAD	12.1" SVGA TFT color LCD, analog touch panel, DC type, with/without coating on PCBA.
PFXGP4601TMD	12.1" SVGA TFT color LCD, matrix touch panel, DC type, with/without coating on PCBA.
PFXGP4603TAD	12.1" SVGA TFT color LCD, analog touch panel, DC type, isolated RS-485, with/without coating on PCBA.
PFXGP4501TADW	10.4" VGA TFT color LCD, analog touch panel, DC type, small memory, with/without coating on PCBA.
PFXGP4501TAD	10.4" VGA TFT color LCD, analog touch panel, DC type, with/without coating on PCBA.
PFXGP4501TMD	10.4" VGA TFT color LCD, matrix touch panel, DC type, with/without coating on PCBA.
PFXGP4503TAD	10.4" VGA TFT color LCD, analog touch panel, DC type, isolated RS-485, with/without coating on PCBA.
PFXGP4401TAD	7.5" VGA TFT color LCD, analog touch panel, DC type, with / without coating on PCBA.
PFXGP4401WADW	7.0" WVGA Wide TFT color LCD, analog touch panel, DC type, small memory, with/without coating on PCBA.
PFXGP4301TAD	5.7" QVGA TFT color LCD, analog touch panel, DC type, with/without coating on PCBA.
PFXGP4303TAD	5.7" QVGA TFT color LCD, analog touch panel, DC type, isolated RS-485, with/without coating on PCBA.
PFXGP4301TADW	5.7" QVGA TFT color LCD, analog touch panel, DC type, small memory, with/without coating on PCBA.
PFXGP4201TAD	3.5" QVGA TFT color LCD, analog touch panel, DC type, with/without coating on PCBA.
PFXGP4203TAD	3.5" QVGA TFT color LCD, analog touch panel, DC type, isolated RS-485, with/without coating on PCBA.
PFXGP4201TADW	3.5" QVGA TFT color LCD, analog touch panel, DC type, small memory, with / without coating on PCBA.

1.1.2.b Software versions:

Model reference for Pro-face brand	Software Name	Version information
PFXGP4601TAD	Firmware Set	1.0.6
PFXGP4601TMD	Firmware Set	1.0.6
PFXGP4603TAD	Firmware Set	1.0.6
PFXGP4501TADW	Firmware Set	1.0.6
PFXGP4501TAD	Firmware Set	1.0.6
PFXGP4501TMD	Firmware Set	1.0.6
PFXGP4503TAD	Firmware Set	1.0.6
PFXGP4401TAD	Firmware Set	1.0.6
PFXGP4401WADW	Firmware Set	1.0.6
PFXGP4301TAD	Firmware Set	1.0.6

PFXGP4303TAD	Firmware Set	1.0.6
PFXGP4301TADW	Firmware Set	1.0.6
PFXGP4201TAD	Firmware Set	1.0.6
PFXGP4203TAD	Firmware Set	1.0.6
PFXGP4201TADW	Firmware Set	1.0.6

1.1.2.c Electrical Specification:

	GP-4200 Series	GP-4300 Series	GP-4400 Series
Rated Input Voltage	24 V DC	24 V DC	24 V DC
Input Voltage Limits DC	19.2...28.8 V DC	19.2...28.8 V DC	19.2...28.8 V DC
	GP-4500 Series DC Model	GP-4600 Series DC Model	
Rated Input Voltage	24 V DC	24 V DC	
Input Voltage Limits DC	19.2...28.8 V DC	19.2...28.8 V DC	

1.1.2.d Memory specification:

	GP-4201T/GP-4203T GP-4301T/GP-4303T	GP-4201TW GP-4301TW
Application Memory *	FLASH EPROM 16 MB (including a logic program area)	FLASH EPROM 8 MB (including a logic program area)
Data Backup	SRAM 320 KB (Rechargeable lithium battery for backup memory)	SRAM 128 KB (Rechargeable lithium battery for backup memory)

	GP-4401T	GP-4401WW
Application Memory *	FLASH EPROM 32 MB (including a logic program area)	FLASH EPROM 16 MB (including a logic program area)
Data Backup	SRAM 320 KB (Replaceable lithium battery for backup memory)	SRAM 128 KB (Rechargeable lithium battery for backup memory)

	GP-4501T/GP-4503T	GP-4501TW
Application Memory *	FLASH EPROM 32 MB (including a logic program area)	FLASH EPROM 16 MB (including a logic program area)
Data Backup	SRAM 320 KB (Replaceable lithium battery for backup memory)	SRAM 128 KB (Rechargeable lithium battery for backup memory)

	GP-4600 Series
Application Memory *	FLASH EPROM 32 MB (including a logic program area)
Data Backup	SRAM 320 KB (Replaceable lithium battery for backup memory)

* Capacity available for user application.

1.1.3 Magelis HMIGTO Series:

1.1.3.a Models:

Model Reference*	Description
HMIGTO6310	12.1" SVGA TFT color LCD, analog touch panel, DC type.
HMIGTO5310	10.4" VGA TFT color LCD, analog touch panel, DC type.
HMIGTO4310	7.5" VGA TFT color LCD, analog touch panel, DC type.
HMIGTO3510	7.0" WVGA Wide TFT color LCD, analog touch panel, DC type, small memory.
HMIGTO2310	5.7" QVGA TFT color LCD, analog touch panel, DC type.
HMIGTO2300	5.7" QVGA TFT color LCD, analog touch panel, DC type, small memory.
HMIGTO1310	3.5" QVGA TFT color LCD, analog touch panel, DC type.
HMIGTO1300	3.5" QVGA TFT color LCD, analog touch panel, DC type, small memory.

Nota: * All Model References may be followed by a "C" where coated and by any additional letter for cosmetic purposes.

1.1.3.b Main Characteristics:

- Rated Input Voltage: 24 VDC (19.2 to 28.8).
- Protection Index: IP 65/20 (Front/Back).
- Operating System: Magelis (333 MHz RISC CPU).
- Firmware Version: 1.0.x for all models.
- Memory: None or 64/96 MB Flash EPROM (depending on model).
- Memory Expansion: 4GB SD Card (depending on model).

2. DOCUMENTS AND DRAWINGS:**2.1 Magelis XBT N & R series:**

- Telemecanique: Terminals features, documents ref. 36365-EN_Ver1.2.fm/2, ref. 36365-FR_Ver2.0.fm/2 and ref.36368-FR_Ver1.0.fm/2.
- Schneider Electric: Product description, documents ref. 045049-JPL, dated 05 July 2004 and ref. 055035-JPL dated November 9, 2005. Drawings ref. 6800600A5305 dated 03/12/03 and ref. 6805900A5302, dated 15/01/2004.

2.2 GP4000 Series:

- Pro-face GP4000 Series Hardware Manual - (New version).
- Documents Numbers:
11DD-3PT00499, 11DD-3PT00500, 11DD-3PT00497, 11DD-3PT00494, 11DD-3PT00495, 11DD-3PT00467, 11DD-3PT00468, 11DD-3PT00474, 11DD-3PT00475, 11DD-3PT00476, 11DD-3PT00483, 11DD-3PT00485, 11DD-3PT00484.
- Schematics Numbers:
10DD-3PE00599B, 10DD-3PE00588B, 10DD-3PE00594C, 10DD-3PE00597A, 10DD-3PE00595A, 10DD-3PE00600B, 10DD-3PE00601B, 10DD-3PE00602B.

2.3 Magelis HMIGTO Series:

- **Schneider Electric:**
Human/Machine Interfaces - Optimum Advanced Panels, MagelisÔ GTO dated April 2012
Magelis GTO - Quick Reference Guide dated 06/2012
Application Information, Doc. No. NSH-00000-FO01 Edition 01
Test Specifications, Doc. No. NSH-11032-TS dated 2012/01/19
Agreement for Certification dated 2012-08-21.

- Pro-face:

- Flame Retardance dated 27 Oct, 2011
- Software Version Information dated Nov. 28, 2011.
- Drawings Numbers:
11DD-3PT00499, 11DD-3PT00500, 11DD-3PT00497, 11DD-3PT00494, 11DD-3PT00495, 11DD-3PT00467, 11DD-3PT00468, 11DD-3PT00474, 11DD-3PT00475, 11DD-3PT00476, 11DD-3PT00483, 11DD-3PT00485, 11DD-3PT00484.
- Electronic Schematics Numbers:
10DD-3PE00599B, 10DD-3PE00588B, 10DD-3PE00594C, 10DD-3PE00597A, 10DD-3PE00595A, 10DD-3PE00600B, 10DD-3PE00601B, 10DD-3PE00602B.

3. TEST REPORTS:**2.1 Magelis XBT N & R series:****Schneider Electric:**

- Approval Tests Program, ref. 045041-JPL dated 28 June 2004
- Plan de qualification COMETE, ref. 1560936 C1 A K2 02 dated 31/10/2002
- Test Report ref. 02-2329, dated 24/07/2002: ESD
- Test Report ref. 02-3322, dated 29/11/2002: Fonctionnement aux extrêmes de tension
- Test Report ref. 02-3324, dated 29/11/2002: Tenue aux coupures brèves et longues
- Test Report ref. 03-0623, dated 16/06/2003: Cycles climatiques dans l'air
- Test Report ref. 03-0776, dated 14/04/2003: Essais diélectriques à fréquence industrielle
- Test Report ref. 03-0777, dated 14/04/2003: Résistance d'isolement
- Test Report ref. VIBR030044, dated 10 Avril 2003: Vibrations
- Test Report ref. CI02159, dated 19 Mai 2003: Radiated EM Immunity
- Test Report ref. CI02160, dated 19 Mai 2003: Conducted RF Immunity
- Test Report ref. CI02161, dated 19 Mai 2003: Burst

Test Report ref. CI02162, dated 19 Mai 2003: Surge
 Test Report ref. CI02166, dated 31 Mar 2003: Conducted LF Immunity
 Test Report ref. CI02172, dated 14 Fev 2003: Radiated Emission
 Test Report ref. CI02173, dated 17 Fev 2003: Conducted Emission
 Approval Tests Program, ref. 055034-JPL dated 3 Novembre 2005
 Functional Qualification Plan, ref. 1468606 C4 A K2 02 dated 13/04/2004
 Test Report ref. 04-2140, dated 26/11/2004: Power Supply short and long cuts resistance test
 Test Report ref. 04-2139, dated 24/11/2004: Slow voltage variation resistance test
 Test Report ref. 04-2169, dated 24/11/2004: Open air climatic cycles and at extreme temperatures
 Test Report ref. VIBR040088A, dated October 27th, 2004: Mechanical Testing Report
 Test Report ref. 04-2174, dated 22/11/2004: Industrial frequency dielectric test
 Test Report ref. 04-2144, dated 22/11/2004: Electrostatic discharge resistance
 Test Report ref. CEM20050118-01, dated 31 Mars 2005: Rapport d'Essais de CEM
 Test Report ref. 04-2146, dated 12/12/2004: Fast transient Bursts resistance
 Test Report ref. 0502M01Q dated 03/01/05: Environmental Test Qualification Report
 Test Report ref. 05-0347, dated 04/02/2005: Etanchéité à la pénétration des corps liquides (IP Test)
 Test Report ref. 04-2171, dated 15/02/2005: Heating

AEMC Lab:

Test Report ref. R0410272C1-C, dated 21 Mars 2005: Rapport d'Essais CEM
 Test Report ref. R0501008C2, dated 14 Mars 2005: Rapport d'Essais CEM.

3.2 GP4000 Series:

Type Test Report for Graphic Operator Interface GP4000 Series - Document No.: NSH-11032-TR, issued on 06.03.2012 including Appendix 1 - EMC Test Report (EMC Test of Graphic Panel) doc. No. 23-265 as well as Appendixes 2 to 5.

3.3 Magelis HMIGTO Series:

Type Test Report for Graphic Operator Interface GP4000 Series - Document No.: NSH-11032-TR, issued on 06.03.2012 including Appendix 1 - EMC Test Report (EMC Test of Graphic Panel) doc. No. 23-265 as well as Appendixes 2 to 5.

4. APPLICATION / LIMITATION:

4.1 Mutual Requirements:

- 4.1.a - BUREAU VERITAS Rules for the Classification of Steel Ships, Manufacturer's requirements.
- 4.1.b - Approval valid for steel ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.
- 4.1.c - The equipment fulfils the EMC requirements for installation on the Bridge and Deck Zone.
- 4.1.d - BUREAU VERITAS Environmental Category, **EC Code: 31C**.

4.2 Specific Requirements:

4.2.1 Magelis XBT N & R series:

- Degree of Protection: Front IP 65, Rear IP 20.

4.2.2 GP4000 Series:

- BUREAU VERITAS Rules for the Classification of Offshore Units.
- Approval valid for offshore units intended to be granted with the additional class notations **AUTO**.
- Each application and configuration is to be submitted to the Society's examination prior to fitting on board.

4.2.3 Magelis HMIGTO Series:

- BUREAU VERITAS Rules for the Classification of Offshore Units.
- Approval valid for offshore units intended to be granted with the additional class notations **AUTO**.
- To be flush mounted.
- On-board Tests are to be performed in accordance with requirements for Category II Equipment.
- Only Hardware and Firmware successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.
- The Magelis HMIGTO are not intended for the presentation of navigation-related information on the bridge of a ship.
- The minimum safe distance at which the equipment may be mounted from a standard or a steering magnetic compass is not to be less than 5 m.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **Schneider Electric / Schneider Automation S.A.S., 06516 Carros - France** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **Schneider Electric / Schneider Automation S.A.S., 06516 Carros - France** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **Schneider Electric / Schneider Automation S.A.S., 06516 Carros - France** has declared to Bureau Veritas the following production site(s):

Schneider Electric / Schneider Automation S.A.S.
8ème rue
ZI de Carros
06516 Carros France

ProFace Electronic Co., Ltd
N° 20 Hangjang Road
214028 Wuxi
China

6. MARKING OF PRODUCT:

- Trade name
- Date of manufacture and serial number
- Equipment type number or model identification under which it was type-tested.

7. OTHERS:

7.1 - It is **Schneider Electric / Schneider Automation S.A.S., 06516 Carros - France** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This Certificate supersedes the following Type Approval Certificates issued by the Society:

- Certificate n° 14167/B0 BV, issue on 09/07/2012.
- Certificate n° 26819/A0 BV, issue on 05/06/2017.
- Certificate n° 31668/A0 BV, issue on 17/10/2017.

***** END OF CERTIFICATE *****