



MARINE DIVISION

Certificate number: 26819/A0 BV

File number: AP 4263

Product code: 4483H

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

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Digital Electronics Corporation

Osaka - JAPAN

for the type of product

DISPLAY MONITORS / VIDEO SCREENS / TERMINALS

Graphic Operator Interface GP4000 Series.

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

This certificate is issued to attest that BUREAU VERITAS 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: 05 Jun 2017

For BUREAU VERITAS,

At BV KOBE, on 05 Jun 2012,

Yasuo Hiramatsu



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. 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 Division 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 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 SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

GP4000 Series is Human Machine Interface used for monitoring and controlling systems in marine applications.

1.1 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

Note: All models may be followed by any letter or number that indicates PCBA coating or software combinations

1.2 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

1.3 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	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	19.2...28.8 V DC	19.2...28.8 V DC

1.4 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 (Replaceable 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 (Replaceable 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.

2. DOCUMENTS AND DRAWINGS:

Pro-face GP4000 Series Hardware Manual - (New version).

Documents Nos:

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 Nos:

10DD-3PE00599B, 10DD-3PE00588B, 10DD-3PE00594C, 10DD-3PE00597A, 10DD-3PE00595A, 10DD-3PE00600B, 10DD-3PE00601B, 10DD-3PE00602B.

3. TEST REPORTS:

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 - BUREAU VERITAS Rules for the Classification of Steel Ships and Offshore Units.
4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.
4.3 - Approval valid for offshore units intended to be granted with the additional class notations AUTO.
4.4 - Bureau Veritas Environmental Category, **EC Code: 31**.
4.5 - The equipment fulfils the EMC requirements for installation on the Bridge and Deck zone.
4.6 - Each application and configuration is to be submitted to the Society's examination prior to fitting on board.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The **Graphic Operator Interface GP4000** are to be manufactured, examined and tested by **Digital Electronic Corporation**, in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.
5.2 - Production sites are to be recognized by Bureau Veritas as per NR320 for HBV products. To this end **Digital Electronic Corporation** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.
5.3 - **Digital Electronic Corporation** has declared to Bureau Veritas that the type of product described in this certificate are manufactured at the following production site:

Wuxi Pro-face Electronics Co., Ltd.
No. 20 Hanjiang Road, National Hi-Tech Industrial
Development Zone, Wuxi, Jiangsu, 214028
P.R.C

6. MARKING OF PRODUCT:

- Manufacturer's name and Trademark.
- Type and model number.
- Date of manufacture and serial number.
- Equipment type or model identification under which it was type-tested.

7. OTHERS:

This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time, and that:

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will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

*** END OF CERTIFICATE ***