



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-12799

This is to certify that the
Peripheral Equipment

with type designation(s)
GP4100 Series, GP4000M Series

Manufactured by
DIGITAL ELECTRONICS CORPORATION
Osaka, Japan

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application
Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
GP4100 Series	C	B	A	A/B**	B (panel front only)*
GP4000M Series	B	B	A	A/B**	B (Panel front only)*


* IP 65 Tested

** EMC Class B with power supply filtering arranged.

Høvik, 2012-06-22
for Det Norske Veritas AS



This Certificate is valid until
2015-06-30


Odd Magne Nesvåg
Head of Section

DNV local office:
Kobe


Nils Jarem
Surveyor



This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Certificate No.: A-12799
File No.: 899.60
Job Id.: 262.1-009048-2

Product description

Pro-Face Graphic Operator Interfaces as listed below:

GP4100 Series:

Product name	Model No.	Display Type	Serial (COM1)	USB	Input Voltage
GP4105G	GP4105G1D	3.4" STN Monochrome LCD	RS-232C	Type-A x 1 Mini-B x 1	DC 24V
GP4105W	GP4105W1D				
GP4106G	GP4106G1D				
GP4106W	GP4106W1D				
GP4107G	GP4107G1D				
GP4107W	GP4107W1D				

GP4000M Series:

Product name	Model No.	Display Type	Serial (COM1)	USB	LAN	Input Voltage
GP-4201TM	PFXGM4201 TAD	3.5" TFT Color LCD	RS-232C/ 422/485	Type-A x 1 Mini-B x 1	10/100	DC 24V
GP-4301TM	PFXGM4301 TAD	5.7" TFT Color LCD				

Place of manufacture

DIGITAL Electronics Corporation
2-6-1 Ayumino
Izumi
Osaka 594-1157
JAPAN

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

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

To cover EMC class B requirements for GP4100 and GP4000M series, installation requirements according to Certification Note, doc. No.:10DD-4GD00017, must be followed.

Type Approval documentation

GP4100 Series

Schematic Circuit Diagram, drawing no. 08DD-3PE00522B-1, dated 2009-10-15
Schematic Circuit Diagram, drawing no. 08DD-3PE00523B-1, dated 2009-07-21
External Dimensions GP4105G1D, drawing no. 08DD-3PT00398-1, dated 2009-10-15
External Dimensions GP4106G1D, drawing no. 08DD-3PT00399-1, dated 2009-10-15
External Dimensions GP4107G1D, drawing no. 08DD-3PT00381-1, dated 2009-04-15
GP-4100 Series Installation Guide, 2009
GP-4100 Series Hardware Manual, 2009
EMC Test Report no. 10C00025RPT01, dated 2010-07-30
Environmental Test Report no. 10C00026RPT02, dated 2010-07-15
Sine Vibration Test Report no. HBR-RL-10.123, dated 2010-07-14
Cosmos Test Report no. CJ09-090361S for IP65F, dated 2009-11-18
Initial type approval survey report, Wuxi Pro-face Electronix Ltd
Initial type approval survey report, Digital Electronics Corporation

GP4000M Series

- IP test report for PFXGM4201TAD, doc. No.: CJ11-104232S2, dated 2011-08-17
- IP test report for PFXGM4301TAD, doc. No.: CJ11-104232S, dated 2011-08-17



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- ENV Validation test report, doc. No.: 0908M01V, dated 2009-08-11
- ENV Validation test report, doc. No.: 1004M01V, dated 2010-04-28
- SITIIAS test report, doc. No.: A10-035-WT, dated 2010-10-18
- SITIIAS test report, doc. No.: A09-065-WT, dated 2010-02-12
- Catalog, GP4000 series, doc No.: WC/IP1110-GP4000ALL-01aE12
- GP-4201TM/4301TM hardware manual doc. No.: GP42_43TM-MM01-ENG-PDFb, dated 2011-09
- Certification note, doc. No.: 10DD-4GD00017 dated 2012-05-11

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.

Marking of product

Products will be marked as

Pro-face

Digital Electronics Corp. Japan

In addition, model number and rating as listed under the product description shall be included.

Certificate Retention Survey

The scope of the retention/renewal survey is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the survey are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE