DNV·GL

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
HG Series Operator Interface

Issued to
IDEC Corporation
Osaka City Osaka Pref., Japan

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes :

Temperature	B
Humidity	B
Vibration	A
EMC	A
Enclosure	Required protection according to DNVGL Rules shall be provided upon installation onboard

This Certificate is valid until **2020-12-31**.

Issued at **Busan** on **2016-01-01**

DNV GL local station: **Kobe**

Approval Engineer: **Kwang Whan Cho**

for **DNV GL**

Digitally Signed By: Choi, Baeg Soon

Location: DNVGL Busan

Signing Date: 2/18/2016

Baeg Soon Choi
Head of Section

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.

Product description
HG Main Units

Type No.	Display	Interface	Bezel color
HG2G-5FT22TF-W	5.7" VGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD	Light Gray
HG2G-5FT22TF-B	5.7" VGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD	Dark Gray
HG2G-5FT22TF-S	5.7" VGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD	Silver
HG3G-8JT22TF-W	8.4" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out	Light Gray
HG3G-8JT22TF-B	8.4" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out	Dark Gray
HG3G-8JT22MF-W	8.4" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out, Audio in, Video in	Light Gray
HG3G-8JT22MF-B	8.4" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out, Audio in, Video in	Dark Gray
HG3G-AJT22TF-W	10.4" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out	Light Gray
HG3G-AJT22TF-B	10.4" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out	Dark Gray
HG3G-AJT22MF-W	10.4" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out, Audio in, Video in	Light Gray
HG3G-AJT22MF-B	10.4" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out, Audio in, Video in	Dark Gray
HG4G-CJT22TF-B	12.1" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out	Dark Gray
HG4G-CJT22MF-B	12.1" SVGA TFT Color	Serialx2, Ethernet, USB Host, USB Device, SD, Audio out, Audio in, Video in	Dark Gray

Option

Type No.	Description
HG9Z-2D5PN05	Protective Sheet for 5.7"
HG9Z-3D8PN02	Protective Sheet for 8.4"
HG9Z-3DA2PN02	Protective Sheet for 10.4"
HG9Z-4DCPN02	Protective Sheet for 12.1"
HG9Z-2E2PN03	Protective Cover for 5.7"
HG9Z-XMS2	SD Memory Card (2GB)
SLD-K02PN10	Mounting Clip for 5.7"
HG9Z-4K2PN4	Mounting Clip for 8.4", 10.4", 12.1"
HG9Z-XJ3PN05	Expansion Module Clamp
HG9Z-XJ4PN05	Expansion Module Clamp
HG9Z-XJ5PN05	Expansion Module Clamp
HG9Z-PMT10LPN02	L-shaped Terminal Block Connector for I/O Module (10-pole)
HG9Z-PMT11LPN02	L-shaped Terminal Block Connector for I/O Module (11-pole)
HG9Z-XU1PN05	USB Cable Lock Pin
HG9Z-XT09	Host Communication Plug
HG9Z-XT09V	Host Communication Plug
HG9Z-XR1	Replacement Battery
HG9Z-2A1	Panel Cutout Adapter 1 for 5.7"
HG9Z-2A2	Panel Cutout Adapter 2 for 5.7"

Application/Limitation
- The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNVGL, 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 DNVGL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

- A ferrite core of type ZCAT3035-1330 made by TDK or equivalent shall be mounted on a power supply cable, earth cable, and communication cable each.

Type Approval documentation
- Type Test Report (Doc. No.: NSH-10108-TR dated 2011.04.27), including Appendix I EMC test Report (Work No.: 23-030)
- Test Report (Report No.:FLI12-11-059, Rev.1)
- Operator Interface HG2G-5F/3G/4G series, Doc No.: B-1345.

Tests carried out
- Applicable tests according to DNVGL-CG-0339 (Nov. 2015)

Marking of product
- IDEC Corporation
- Model name
- Serial number
- Supply voltage: 24VDC

Periodical assessment

The scope of the retention/renewal survey is to verify that the conditions stipulated for the Type Approval Certificate are complied with and that no alterations are made to the design and/or the material of product.
The main elements of the survey are:
- Ensure that type approved documentation is available
- Inspection on 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 referenced system, software, components 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.