

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Programmable Electronic System**with type designation(s)
Diamar Automation Components

Issued to

SEDNI, S.A.
Alicante, Spainis found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****This Type Approval covers hardware only.****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.****Location classes:****Temperature D****Humidity B****Vibration A/B: See approval conditions on page 2****EMC A/B: See approval conditions on page 2****Enclosure Required protection according to relevant rules
shall be provided upon installation onboard**Issued at **Høvik** on **2020-01-23**This Certificate is valid until **2024-09-07**.for **DNV GL**DNV GL local station: **Area NB/CMC Iberia**Approval Engineer: **Nicolay Horn**

Marta Alonso Pontes
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

This Type Approval covers the following Diamar® modules:

AIM18	18 channels analog input module
DIM36	36 channels digital input module
DIOM24	24 channels digital input/output module
S-LIM	Small Local Interface Module
M-LIM	Medium Local Interface Module
TIM28	Thermocouple Input Module
PMM	Power Management Module
K-LIM	Marine PC

Approval conditions

The Type Approval covers hardware listed under Product description.

Vibration class:

Provided installation is made flat to the modules supporting surface, the modules AIM18, DIM36, DIOM24, M-LIM, S-LIM, TIM28 and PMM comply with vibration class "B".

EMC class:

Modules AIM18, DIM36 and DIOM24 comply with EMC class "B".

Modules S-LIM, M-LIM, TIM28 and K-LIM comply with EMC class "B" when RFI Power Line Filters FA-3V or equivalent is installed on input power lines; without filter the modules are compliant with EMC class "A" only.

Module PMM complies with EMC class "A" only.

For installation on bridge, equipment to be installed not less than 5 m away from magnetic compass. Ref. IEC 60945:2002 section 4.5.3.

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- Functional description
- System block diagram
- User interface description
- Power supply arrangement (may be part of the System block diagram)
- List of control and monitored points
- Description of functions covered by software
- Test program for application software at manufacturer

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After certification the clause for software control will be put into force.

Software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV GL for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Periodical assessment

The scope of the periodical assessment 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 assessment 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

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE