

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Control and Monitoring System**

with type designation(s)

Alarm Annunciator Unit, Engine Controllers & Shutdown system; M1000C, M1000D, M2000B, M2000C, M0500, M0600

Issued to

**Littelfuse Selco A/S
ROSKILDE, Denmark**

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:**

Temperature	B
Humidity	B
Vibration	A
EMC	B
Enclosure	Required protection according to the Rules to be performed before installation on board

This Certificate is valid until **2016-12-31**.Issued at **Høvik** on **2015-03-17**for **DNV GL**DNV GL local station: **Copenhagen**Approval Engineer: **Nils Jarem**

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Odd Magne Nesvåg
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.

Certificate No: **A-14210**
File No: **867.60**
Job Id: **262.1-004227-4**

Product description

Alarm Annunciator	M1000D, M1000C (SMD components)
Engine Controller	M2000C (SMD components)
Engine Controller	M2000B
Tacho Detector	M0500
Shutdown unit	M0600

Application/Limitation

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

- Reference to this Type Approval Certificate
- System block diagram
- Power supply arrangement (may be part of the System block diagram)
- List of controlled and monitored points
- Test program for testing at the manufacturer

The Type Approval covers hardware listed under Product description

Product certificate

Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. After the certification the clause for application software control will be put into force.

Type Approval documentation

Drawing M1010 sheet 1-2, Documentation for M2000 dated 11.07.88, Data sheet M1095-94, M2195-31, M2095-83, description incl. wiring diagram and specifications for M0600, Data sheet M1000 SERIES D-REVISION Rev: 1-A-082614
Test Reports R 860811-01 E, Delta K251196-3 rev.2 / E501822-1, DANAK-195381, dated 09.01.2001. Delta test report no. DANAK-198611, dated 20 December 2006; DANAK-19/14491, dated 2014-09-18. DNV GL Copenhagen-Type approval assessment report A-13085, A-13086 and A-13089 dated-2014-11-26.

Tests carried out

Applicable tests according to Standard for Certification 2.4, April 2006

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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE