DNV·GL

Certificate No:
TAA00001S8

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electrical Indicators

with type designation(s)
MIC-2, MIC-2 MKII, MIC-2 MKII DIN, MIC-2 MKII FCT, MIC-2 MKII DIN FCT

Issued to
DEIF A/S
Skive Midtjylland, Denmark

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

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	**see in product description**

Issued at **Hamburg** on **2018-04-19**
This Certificate is valid until **2020-09-21**.
DNV GL local station: **Aalborg**

Approval Engineer: **Uwe Supke**

for **DNV GL**

Arne Schaarmann
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.

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Product description

Multi Instrument:
Power supply : 100-415 V AC 50/60 Hz or 100-300 V DC
Voltage measurement:
Nominal voltage : L - N 400 V AC; L - L 690 V AC
Measuring range: 0...1.2* Nominal voltage
Current measurement:
Nominal current: 5 A AC
Measuring range: 0 to 1.2* Nominal current
Measuring transducer signal input: 100 mV
Frequency measurement:
Nominal frequency: 50/60 Hz
Measuring range: 45-65 Hz
Accuracy for voltage, current and frequency: 0.2% of range
Digital input: 20-250 V AC/DC; 2 mA
Digital output: 0-250 V AC/DC; 100 mA; 25 Hz
Relay output: 250 V AC, 30 V DC; 3 A
Degree of protection : IP 52 (front), IP 30 (rear)
Communication: RS485,
Software version: 3.6X

Application/Limitation

Installation instruction of the manufacturer to be followed.

Type Approval documentation

Tests carried out

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

Marking of product

The products to be marked with:

- Manufacturer name
- Model name
- Serial number
- Power supply ratings

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