TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA00000K3
Revision No:
3

This is to certify:

that the Electrical Indicators

with type designation(s)
SIQ3... and SIR3...

issued to
NORIS Automation GmbH
Nürnberg, Bayern, **Germany**

is found to comply with
DNV 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.

Location classes:

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**C (front)**

Issued at **Hamburg** on **2026-04-10**

This Certificate is valid until **2031-04-09**.
DNV local unit: **Augsburg**

Approval Engineer: **Heinz Scheffler**

for **DNV**

Digitally signed by: Dariusz Lesniewski
Location: DNV SE, Germany

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

Analogue indicators with moving-coil element with following type key:

SIa-3-bbb-ccc-dddd-eee

a=R: round housing
a=Q: square housing

3: Scale angle 240°

bbb=072: square body 72x72mm
bbb=096: square body 96x96mm
bbb=144: square body 144x144mm
bbb=060: round body with 60mm diameter
bbb=080: round body with 80mm diameter
bbb=100: round body with 100mm diameter
bbb=130: round body with 130mm diameter

ccc=I1: Current, 0..20mA DC
ccc=I2: Current, 4..20mA DC
ccc=I4: Current, -20..0..+20mA DC
ccc=I0: Current DC, special adjustment
ccc=U1: Voltage, 0..10V DC
ccc=U2: Voltage, 2..10V DC
ccc=U4: Voltage, -10V..0..+10V DC
ccc=U0: Voltage DC, special adjustment
ccc=UG0: Voltage DC, special adjustment for GE1214
ccc=W0: Voltage AC, special voltage adjustment

dddd=1234: scale design
dddd=V567: customer specific device

eee=optional MED type (covered by separate MED certificate).

Degree of protection:
Front housing: IP 66, IP67 and IP68 (1m, 24h)
Rear housing: IP 30.

Scale illumination to be connected via dimmer module / PWM controller.

Approval Conditions

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 classification of ships Pt.4 Ch.9 Control and monitoring systems. Other chapters of the rules may also apply.

Product certificate
If specified in the applicable rule chapters the 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.

Type Approval documentation

Hidden
Test reports: BV ECL-ENV-TR-16-010-V01.00, BV ECL-ENV-TR-16-005-V.01.00, BV ECL-EMC-TR-16-007-V01.00, and related test protocols; TÜV Rheinland 21225502-002, EB/TR 1403240-B; EMC Test Report BV ECL 20-102, vers.01, dated 2020-09-04
Documents: Datasheet DB-SIR3/SIQ3-EN, V01.05, dated 2019-02-25; Instruction Manual NAN-KD-0022-en, V01.03, dated 2020-06-17;

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

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, 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, 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, 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