DNV·GL

Certificate No:
TAA00002DK

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Miscellaneous Transmitter

with type designation(s)
Isolators "ISpac" Series 92xx

Issued to
R. Stahl Schaltgeräte GmbH
Waldenburg, Germany

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.

Temperature	**B**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**Required protection according to the Rules shall be provided upon installation on board.**

Issued at **Hamburg** on **2019-06-25**

This Certificate is valid until **2021-02-21**.
DNV GL local station: **Augsburg**

Approval Engineer: **Heinz Scheffler**

Digitally Signed By: Rinkel, Marco
for **DNV GL**
Location: Hamburg, on behalf of

Joannis Papanuskas
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

Switching Repeater (9270/11-16-14s and 9270/11-16-14k)

- Input for NAMUR proximity sensor or switch
- Relay signal output (N/O contact)
- Line fault detection (LFD)
- Option of phase reversal
- 3-way electrical isolation
- Power supply and error message possible via the DIN rail connector

Switching Repeater (9270/11-17-15s and 9270/11-17-15k)

- Input for NAMUR proximity sensor or switch
- Two relay signal outputs (N/O contact, output 2 can be used as an error message output)
- Line fault detection (LFD)
- Option of phase reversal
- 3-way electrical isolation
- Power supply and error message possible via the DIN rail connector

Switching Repeater (9270/21-17-14s and 9270/21-17-14k)

- 2-channel, Input for NAMUR proximity sensor or switch
- Relay signal output (N/O contact)
- Line fault detection (LFD)
- Option of phase reversal
- 3-way electrical isolation
- Power supply and error message possible via the DIN rail connector

Switching Repeater (9270/11-19-15s and 9270/11-19-15k)

- Input for NAMUR proximity sensor or switch
- Two Transistor output (passive, output 2 can be used as an error message output)
- Line fault detection (LFD)
- Option of phase reversal
- 3-way electrical isolation

Switching Repeater (9270/21-14-14s and 9270/21-14-14k)

- 2-channel, Input for NAMUR proximity sensor or switch
- One Transistor output (passive output 2 can be used as an error message output)
- Line fault detection (LFD)
- Option of phase reversal
- 3-way electrical isolation
- Installation in Zone 2 permissible
- Power supply and error message possible via the DIN rail connector

Temperature Transmitter (9282/11-51-16s and 9282/11-51-16k)

- Input for resistance thermometers and resistance-type sensors
- Output 0 ... 20 mA or 4 ... 20 mA
- Configuration with the software
- Electrical 3-way isolation
- Installation in zone 2 permissible
- Power supply via DIN rail connector possible

Temperature Transmitter (9282/12-51-16s and 9282/12-51-16k)

- Output 0 ... 20 mA or 4 ... 20 mA
- Configuration with the software
- Electrical 3-way isolation
- Installation in zone 2 permissible
- Power supply via DIN rail connector possible

Isolating Repeater (9265/16-11-10s and 9265/16-11-10k)

- Single-channel
- HART-compatible
- Input 0/4 mA ... 20 mA
- Output 0/4 mA ... 20 m
- Electrical 3-way isolation

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Type Approval documentation

Test Reports and Documents: Doc. No. 9200 0 000 002 0 / Version 00

Tests carried out

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

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, 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