

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Peripheral Equipment**

with type designation(s)
Isolators/converters/repeaters type 931N-abbb

Issued to

Rockwell Automation - WI
Milwaukee, WI, USA

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 D

Humidity B

Vibration B

EMC B

**Enclosure Required protection according to relevant rules
shall be provided upon installation on board**

Issued at **Høvik** on **2019-01-21**

This Certificate is valid until **2024-01-20**.

for **DNV GL**

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ståle Sneen**

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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.



Job Id: **262.1-030059-1**
Certificate No: **TAA000026H**

Product description

Isolators, converters and repeaters as listed below:

Type	Article No	Name
FIX-SUP – Fixed input converters, supplied	931N-C121	Analog signal converter
FIX-SUP – Fixed input converters, supplied	931N-C122	Isolated repeater/splitter
PAS-ISO – Passive isolator, input loop powered	931N-C141	Loop-powered isolator
PAS-ISO – Passive isolator, input loop powered	931N-C144	Loop-powered isolator
PAS-ISO – Passive isolator, output loop powered	931N-C161	2-wire transmitter isolator
PAS-ISO – Passive isolator, output loop powered	931N-C164	2-wire transmitter isolator
FIX-SUP – Fixed input converters, supplied	931N-A221	Isolated converter
FIX-SUP – Fixed input converters, supplied	931N-A222	Isolated converter/splitter
BIPOL-SUP – Bipolar isolators, supplied	931N-X221	Isolated converter
BIPOL-SUP – Bipolar isolators, supplied	931N-X422	Isolated converter/splitter
TEMP-SUP – Temperature converters, supplied	931N-T221	Temperature converter / Isolated TC SUP
TEMP-LOOP – Temperature converter, output loop powered	931N-R161	Temperature converter / non-isolated Pt100 LOOP
TEMP-SUP – Temperature converters, supplied	931N-R221	Temperature converter / Isolated Pt100 SUP
TEMP-LOOP – Temperature converter, output loop powered	931N-N161	Temperature converter / isolated TEMP-LOOP
UNI-SUP – Universal input converter, supplied	931N-U221	Isolated universal converter
Flexible supply	931A-FM	Power connector unit

Place of manufacture

PR electronics A/S
Lerbakken 10
DK-8410 Rønne
Denmark

Approval conditions

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.

Application/Limitation

Ex installations to be approved in each case according to the Rules and Ex-Certification/Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Ex-certification is not covered by this certificate and the following paragraph, which is for information only, is based on information received from the manufacturer, but not verified by DNV GL.

Information on Ex-Certification received from manufacturer – Not verified by DNV GL		
Equipment	Marking	Certificate No.
Transmitters, Isolators and Converters Rockwell 931N-... Series	 II 3 G Ex nA IIC T4 Gc	DEKRA 18ATEX0083 X issue No. 0
	Ex nA IIC T4	IECEx DEK 18.0049X issue No. 0

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 model name, manufacturer name and 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