

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electrical Measuring and Protection Relay

with type designation(s)
Safety Relay Module, type SNV

Issued to

Wieland Electric GmbH
Bamberg, Germany

is found to comply with
DNV GL rules for classification – Ships

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	A (IP20 and IP40 tested)

This Certificate is valid until **2021-12-04**.

Issued at **Hamburg** on **2016-12-05**

DNV GL local station: **Augsburg**

Approval Engineer: **Klaus-Peter Schröder**



Digitally Signed By: Rinkel, Marco
for **DNV GL**
Signing Date: 2016-12-07
Location: Hamburg - for Duy Nam Le

Duy Nam Le
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.

Product description

Safety Relay Module

Types: SNV 4074SL; SNV 4074SL-A; SNV 4074SL-C; SNV 4274SL; SNV 4274SL-A; SNV 4274SL-C
SNV 4076SL; SNV 4076SL-A; SNV 4076SL; SNV 4076SL-C; SNV 4276SL; SNV 4276SL-A; SNV 4276SL-C
SNV 4074ST; SNV 4074ST-A; SNV 4074ST-C; SNV 4274ST; SNV 4274ST-A; SNV 4274ST-C
SNV 4076ST; SNV 4076ST-A; SNV 4076ST-C; SNV 4276ST; SNV 4276ST-A; SNV 4276ST-C

SNV 4x7xSx-x

SNA	Safety basic device Emergency Stop delay time
Series	4 = 4000
Function	0 = -- (non) 2 = trigger of time function
Reset	7 = automatic and manual reset
SI-outputs	4 = number of safe output contacts 6 = number of safe output contacts
Housing	S = width 45mm
Addition	L = drop out delay T = on delay
Terminals	= Screw terminals (-A) = Screw terminals, pluggable (-C) = Push-in terminals, pluggable

Rated Power: 24V DC | 115-230V AC
2,8 W | 3,2 W / 6,3 VA

Enabling path:

SNV4x74SL: 2 normally closed; 2 normally closed with off delay
2 normally opened; 2 normally opened with off delay
SNV4x74ST: 2 normally closed; 2 normally closed with on delay
2 normally opened; 2 normally opened with on delay
SNV4x76SL: 3 normally opened; 3 normally opened with off delay
1 normally closed

Time ranges: 3s, 30s, 300s

Construction level: A-09

Software version: 15.42

Place of manufacture

Wieland Electric GmbH
Brennerstraße 10-14
96052 Bamberg
Germany

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 RU SHIP Pt.4 Ch.9 Sec. 1.

Type Approval documentation

Lab test plan SNV 4074SL; SNV 4076SL (01.03.2016)

Test report wieland UB014167 (10.06.2016)

Test report wieland UB014528 (12.10.2016)

Test report TESEQ D/16/4453/bo1 (22.08.2016)

Operating instruction BA000529 - 09/2013 (Rev. E) SNV 4074ST / -A / -C

Job Id: **262.1-024213-1**
Certificate No: **TAA00000UE**

Operating instruction BA000528 - 09/2013 (Rev. E) SNV 4274SL / -A / -C
Operating instruction BA000527 - 09/2013 (Rev. H) SNV 4074SL / -A / -C, SNV 4076SL / -A / -C
Data sheet 0860.0 safety_de_05-15
TÜV Rheinland EC Type-Examination Certificate no. 01/205/5112/11 (25.11.2011)
TÜV Rheinland report 968/EZ 332.05/15 (13.02.2015)
TÜV Rheinland report 968/EZ 332.04/15 (05.06.2015)
TÜV Rheinland report 968/EZ 332.03/13 (25.04.2013)
TÜV Rheinland report 968/EZ 332.02/11 (25.11.2011)
TÜV Rheinland report 968/EZ 332.01/09 (15.04.2009)
TÜV Rheinland report 968/EZ 332.00/08 (08.12.2008)
List of Layout drawings SNV 4074SL (-A) (-C) (07.07.2016)
List of Layout drawings SNV 4074St (-A) (-C) (07.07.2016)
List of Layout drawings SNV 4076SL (-A) (-C) (07.07.2016)
List of Layout drawings SNV 4274SL (-A) (-C) (07.07.2016)
UL certification E 41613 6265X+(z)(f1)
Bauzustände Safety-Produkte version 1.59 (18.10.2016)
Type Approval Assessment Report dated 2016-04-13/2016-10-21

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2015.
Additional tests according EN ISO 13849-1:2008+AC:2009, EN 62061:2005, IEC 61508 Parts 1-7:2010, EN 50156-1:2004, EN 60204-1:2006+A, EN 50178:1997.

Marking of product

The products to be marked with:

- manufacturer name
- device name / order number
- Construction level
- Production date.

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