DNV·GL

Certificate No:
TAE0000196

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Contactor Relay

with type designation(s)
PLC-Interface Relay

Issued to
Phoenix Contact GmbH & Co. KG
Blomberg, 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.

Temperature	**C**
Humidity	**B**
Vibration	**B**
EMC	**B**
Enclosure	**Required protection according to DNVGL Rules shall be provided upon installation on board**

This Certificate is valid until **2021-07-13**.

Issued at **Hamburg** on **2016-07-14**

for **DNV GL**

DNV GL local station: **Magdeburg**

Approval Engineer: **Heinz Scheffler**

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

PLC-INTERFACE Electromechanical Relay

PLC I II III/ IV V/ VI /VII

I Component:
R = equipped with electromechanical relay
B = base terminal block without relay

II Connection method:
PT = Push In Technology

III Nominal input voltage:

5DC	=	5VDC	120UC	=	120VAC/110VDC
12DC	=	12VDC	125DC	=	125VDC
24DC	=	24VDC	220DC	=	220VDC
48DC	=	48VDC	230UC	=	230VAC/220VDC
60DC	=	60VDC	24UC	=	24VAC/DC
			72UC	=	72VDC
			110UC	=	110VDC

IV Contact configuration:
1 = normally open
2 = normally closed
21 = SPDT
21-21 = DPDT

V Contact Type:

Blank	=	standard	HC	=	high current
AU	=	gold plated	IC	=	inrush current

VI Function:
Blank = universal PLC-series
ACT = PLC actuator series for output functions
SEN = PLC sensor series for input functions
RW = railway application

VII Special function
SO46 = resistant against interference voltages and leakage currents

PLC-INTERFACE Solid State Relay

PLC I II III/ IV V/ VI

I Component:
O = equipped with solid state relay

II Connection method:
PT = Push In Technology

III Nominal input voltage:

5DC	=	5VDC	120UC	=	120VAC/DC
24DC	=	24VDC	120AC	=	120VAC
48DC	=	48VDC	125DC	=	125VDC
60DC	=	60VDC	220DC	=	220VDC
110DC	=	110VDC	230UC	=	230VAC/DC
12DC	=	12VDC	230AC	=	230VAC

IV Output voltage range:

24DC	=	3...33VDC
48DC	=	3...48VDC
230AC	=	24...253VAC
300DC	=	12...300VDC

V Continuous output current:

100	=	100 mA input solid state relay
1	=	0,75A power solid state relay
2	=	3 A power solid state relay

VI Function:

Blank	=	universal PLC series
ACT	=	PLC actuator series for output functions
SEN	=	PLC sensor series for input functions

Application/Limitation
Derating curve is to be observerd, see Installation notes under Type Approval documentation.

Type Approval documentation
Test report : E 20031, S 20031, E081686E, U103729E1, U114171D1.

Documents: Installation notes MNR 9000635, MNR 9004804.
Interface Technology and Switching Devices No. 7, Chapter Relay Modules.

Tests carried out
Applicable tests according to Class Guidline DNVGL-CG-0339, Edition November 2015.

Marking of product

- Manufacturer's name: PHOENIX CONTACT
- Model name: Device type as mention under Product description
- Serial number: 12-digit 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 at least every second year and at renewal of this certificate.
END OF CERTIFICATE