

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric protection and measuring relay

with type designation(s)
EMR6-R

Issued to

Eaton Industries GmbH
Bonn, 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	B
EMC	A
Enclosure	A

Issued at **Hamburg** on **2018-02-07**

This Certificate is valid until **2023-02-06**.

DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Jens Dietrich**

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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.



Product description

Insulation monitoring relays for IT AC-, DC- and AC/DC Systems

EMR6-R250-A-1, EMR6-R400-A2: AC, DC and AC/DC systems - insulation monitoring relay,
Supply voltage: 24..240V AC/DC (15...400Hz).

EMR6-R400-A1: AC systems - insulation monitoring relay,
Supply voltage: 24..240V AC/DC (15...400Hz).

EMR-RC690: Voltage expansion module for use with EMR6-R400-A2.

Mains system voltage:

EMR6-R250-A-1: 0...250V AC (15...400Hz), 0...300V DC

EMR6-R400-A-1: 0...400V AC (50/60Hz)

EMR6-R400-A-2: 0...400V AC; 0..690V AC (15...400Hz) with EMR6-RC690;
0...600V DC, 0..1000V DC with EMR6-RC690.

Insulation resistance response range 1..100 kOhm , 2..200 kOhm
Degree of Protection: IP 50 (Unit) / IP 20 (Terminals).

Application/Limitation

Insulation monitoring relays for IT AC-, DC and AC/DC Systems.

Tests carried out

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

Marking of product

The products to be marked with:

Manufacturer name, type designation, serial number, power supply ratings.

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 this certificate.

END OF CERTIFICATE