DNV·GL

Certificate No:
TAA00001N0

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electrical Measuring and Protection Relay

with type designation(s)
EMR6-I

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, IP50 (housing), IP20 (terminals)**

Issued at **Hamburg** on **2018-02-28**
This Certificate is valid until **2023-02-27**.
DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Jens Dietrich**

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

Current monitoring Relays with the following type designations:

EMR6-I1-A-1:
Single phase AC or DC current measuring inputs:
B1: 0.003…0.03 A,
B2: 0.01…0.1 A,
B3: 0.1…1 A;
Delay time: 0.1…30s (adjustable).
Supply voltage: 24-240V AC, 50/60Hz or 24-240V DC.

EMR6-I15-A-1:
Single phase AC current measuring inputs:
B1: 0.3…1.5 A,
B2: 1…5 A,
B3: 3…15 A;
Delay time: 0.1…30s (adjustable)
Supply voltage: 220-240V AC, 50/60Hz.

EMR6-I15-B-1:
Single phase AC current measuring inputs:
B1: 0.3…1.5 A,
B2: 1…5 A,
B3: 3…15 A;
Delay time: 0.1…30s (adjustable).
Supply voltage: 220-240V AC, 50/60Hz.

EMR6-IM1-A-1:
Single phase AC or DC current measuring inputs:
B1: 0.003…0.03 A,
B2: 0.01…0.1 A,
B3: 0.1…1 A;
Delay time: 0.1…30s (adjustable).
Supply voltage: 24-240V AC, 50/60Hz or 24-240V DC.

EMR6-IM15-A-1:
Single phase AC or DC current measuring inputs:
B1: 0.3…1.5 A,
B2: 1…5 A,
B3: 3…15 A;
Delay time: 0.1…30s (adjustable).
Supply voltage: 24-240V AC, 50/60Hz or 24-240V DC.

EMR6-IF1-A-1:
Single phase AC or DC current measuring inputs:
B1: 0.003…0.03 A,
B2: 0.01…0.1 A,
B3: 0.1…1 A;
Delay time: 0.1…30s (adjustable).
Supply voltage: 24-240V AC, 50/60Hz or 24-240V DC.

EMR6-IF15-A-1:
Single phase AC or DC current measuring inputs:
B1: 0.3…1.5 A,
B2: 1…5 A,
B3: 3…15 A;

Delay time: 0.1…30s (adjustable).
Supply voltage: 24-240V AC, 50/60Hz or 24-240V DC.

Relay output contact rating: 250VAC, AC-15: 3A / 230VAC; DC-13: 2A / 24VDC
Mounting: DIN rail (IEC/EN 60715)
Indication LEDs: green (supply), yellow (output relay energized), red (failure).

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 Ships Pt.4 Ch.9 or Pt.4 Ch.8 respectively.

Tests carried out

Applicable tests according to DNV GL CG-0339, November 2016

Marking of product

Maker, type designation, 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 this certificate.

END OF CERTIFICATE