

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Indicator

with type designation(s)
EMR6-N

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	A
EMC	B
Enclosure	A, IP50 (housing) / IP20 (terminals)

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

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

for **DNV GL**

DNV GL local station: **Essen**

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

Compact 22.5mm width Liquid Monitoring Relays for DIN-RAIL mounting:

EMR6-N100-N-1:

Supply Voltage 110...130V AC / 220...240V AC, 50/60Hz
Adjustable sensitivity range 5...100 kOhm;
Relay output contact rating 300V AC; 3A @ 230V AC; DC12: 4A, DC13: 2A @ 24V DC;
Duty factor: 100%, 3 LEDs for the indication of operational status.

EMR6-N1000-N-1:

Supply Voltage 110...130V AC / 220...240V AC, 50/60Hz;
Adjustable sensitivity range 5...100 kOhm;
Relay output contact rating 300V AC; 3A @ 230V AC; DC12: 4A, DC13: 2A @ 24V DC;
Duty factor: 100%, 3 LEDs for the indication of operational status.

EMR6-N1000-A-1:

Supply Voltage 24...240 V AC, 50/60Hz; 24...240V DC;
Adjustable sensitivity range 0.1...1000 kOhm;
Relay output contact rating 300V AC; 3A @ 230V AC; DC12: 4A, DC13: 2A @ 24V DC;
Duty factor: 100%, 3 LEDs for the indication of operational status.

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 Control and Monitoring Systems.

Tests carried out

Applicable tests according to Class Guidance DNVGL-CG-0339, November 2015.

Marking of product

Model name, manufacturer name, serial number.

Periodical assessment

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