



CERTIFICATE NUMBER 24-2516247-EUMR-DE  
EFFECTIVE DATE 12-APRIL-2024  
EXPIRATION DATE 11-APRIL-2029  
ABS TECHNICAL OFFICE Houston ESD - Electrical

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## CERTIFICATE OF

# European Union Recognized Organization (EU RO) Mutual Recognition Design Evaluation (in accordance with Article 10.1 of EU Regulation 391/2009)

This is to certify to the Manufacturer named below, that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognized Organization Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

## **BASLER ELECTRIC COMPANY**

who maintains a plant at

**12570 STATE ROUTE 143, HIGHLAND, IL, UNITED STATES, 62249**

**Product Protection Relay**

**Model BE1-FLEX**

This certificate, by itself does not reflect that the product is Type Approved. The scope and limitations of this evaluation are detailed on the pages attached to this certificate.

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- American Bureau of Shipping (ABS);
- Bureau Veritas (BV);

NOTE: This certificate evidences compliance with one or more of the ABS Rules and the EU Regulations 391/2009. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product or manufacturing process without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules and Conditions of the request for EU Product Type Approval and Agreement.  
ABS258 EU MR (1212)-A4 Rev 4



- China Classification Society (CCS);
- Croatian Register of Shipping (CRS);
- DNV GL;
- Indian Register of Shipping (IRS);
- Korean Register (KR);
- Lloyd's Register Group Ltd. (LR);
- Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);
- Polish Register of Shipping (PRS);
- RINA Services S.p.A. (RINA);
- Russian Maritime Register of Shipping (RS).

The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 - recital (25)).

This EU RO Mutual Recognition Design Evaluation Certificate remains valid until 11-April-2029 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

American Bureau of Shipping

*Soheni Haque*

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Soheni Haque, Sr. Managing Principal Engineer

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**Product:** Protection Relay

**Model:** BE1-FLEX

**Intended Service:** ABS classed vessels and offshore installations in accordance with the listed ABS Rules and International standards

**Description:**

The BE1-FLEX Protection, Automation, and Control System is designed to be configurable for nearly any power system application. The BE1-FLEX can cover a wide application spectrum as it can be configured for any combination of functions available. Application including but not limited to feeder, motor, generator, transformer, intertie, capacitor bank, and busbar monitoring and protection.

**Ratings:**

Control Power Options:

1. 48/125 Vdc, 120 Vac nominal: 35 to 150 Vdc, 55 to 135 Vac
  2. 250 Vdc, 240 Vac nominal: 90 to 300 Vdc, 90 to 270 Vac
  3. 24 Vdc nominal: 17 to 32 Vdc, down to 8 Vdc momentarily
- Frequency (Options 1 and 2): 40 to 70 Hz  
Burden (Options 1, 2 and 3): 15 W nominal, 20 W maximum with 23 outputs energized

Voltage Inputs: 50 to 300V Line to Neutral (Nominal), 600V Line to Line (Continuous)

AC Current Inputs: 1A/5A CT 20A (Continuous) SEF 4A (Continuous)

Analog to Digital Converter: 24-bit type 32 kHz base sampling rate

Output Contacts: 30 A, 250 Vdc for 0.2 seconds per IEEE Std C37.90-2005

Contact Sensing Inputs: 24Vdc, 48 Vac/Vdc, 125 Vac/Vdc, 250 Vac/Vdc (Nominal)

IRIG interface: -10 to +10 Vdc input voltage range

Communication: USB, RS-485, Ethernet (RJ-45 for copper, LC for fiber)

Operating Temperature: -40°C to 70°C (-40°F to 158°F), Display is impaired below -20°C (-4°F)

Enclosure: IP54 from front interface when semi-flush mount installed into IP54 or greater enclosure

**Restrictions:**

1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
2. Installation and operation is to be in accordance with Manufacturer's Instruction.
3. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
4. Performance tested to meet IEC 60255-127, IEC 60255-151, and IEC-60255-181.
5. Each particular application/configuration and external connection is to be specifically approved in conjunction with the relevant system, area classification, and environmental conditions.

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### **Supporting Documentation:**

Drawing No. BE1-FLEX IACS E10 External Power Supply Failure, External Power Supply Failure, Pages: 5

Drawing No. BE1-FLEX IACS E10 High Voltage, High Voltage, Pages: 10

Drawing No. BE1-FLEX IACS E10 Power Supply Variations, Power Supply Variations, Pages: 17

Drawing No. BE1-FLEX IACS E10 Vibration, Vibration, Pages: 30

Drawing No. BE1-FLEX1 IACS E10 Cold & Dry Heat Tests, Cold & Dry Heat Tests, Pages: 39

Drawing No. BE1-FLEX1 IACS E10 Damp Heat Test, Damp Heat Test, Pages: 39

Drawing No. BE1-FLEX1 IACS E10 Performance Test, Performance Test, Pages: 2

Drawing No. BE1-FLEX2 IACS E10 Cold & Dry Heat Tests, Cold & Dry Heat Tests, Pages: 36

Drawing No. BE1-FLEX2 IACS E10 Damp Heat Test, Damp Heat Test, Pages: 36

Drawing No. BE1-FLEX2 IACS E10 Performance Test, Performance Test, Pages: 3

Drawing No. BE1-FLEX IACS E10 Performance Test - IEC60255-127 SteadyState, Pages: 17

Drawing No. BE1-FLEX IACS E10 Performance Test - IEC60255-151 SteadyState, Pages: 13

Drawing No. BE1-FLEX IACS E10 Performance Test - IEC60255-181 SteadyState, Pages: 20

### **Rules & Standards**

#### **ABS Rules:**

2024 Rules for Conditions of Classification, Part 1, 1-1-4/7.7, 1-1-A3 & A4, which covers the following:

2024 Marine Vessel Rules: 4-8-2/9.11, 9.13, 9.17, 9.19 and 4-9-9/ Table 1

2024 Rules for Conditions of Classification, Part 1 - Offshore Units and Structures: 1-1-4/9.7, 1-1-A2 & A3, which covers the following:

2024 Mobile Offshore Units Rules: 4-3-2/9.3, 9.7, 9.13, 9.15

#### **Technical Requirement:**

EU RO Mutual Recognition Technical Requirements for Electrical/Electronic Relays, Version 0.6, 2023

#### **Standards:**

IACS UR E10, Rev. 8, 2022

IEC 60255-26, 2023

IEC 60255-127, 2010

IEC 60255-151, 2009

IEC 60255-181, 2019

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