



Certificate number: 32449/C0 BV

File number: ACE10/808/1

Product code: 2652H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

ABB AG STOTZ-KONTAKT

Heidelberg - GERMANY

for the type of product

OVER-LOAD RELAYS OR RELEASES

Electronic Overload Relay

EF... series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships
IEC 60947-4-1:2018

EC Code: 31

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 20 Mar 2031

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 20 Mar 2026,

Dirk Hoepfner

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

EF... series are electronic overload relays for mounting on contactor or standalone mounting with current transformer.

1.1 - Main characteristics: at Ta=40°C

Rated operational voltage Ue: 690V AC (for type EF19, EF45)
 1000V AC (for type EF65, EF96, EF146, EF205, EF370, EF460, EF750)
 Trip class: 10E, 20E or 30E
 Rated frequency: 50/60Hz
 Degree of protection: IP20

1.2 - Variants:

Type	Order code	Setting range [A]	Mounting with contactor
EF19-0.32	1SAX121001R1101	0.10 - 0.32	AF09, AF12, AF16, AF26, AF30, AF38
EF19-1.0	1SAX121001R1102	0.30 - 1.00	
EF19-2.7	1SAX121001R1103	0.80 - 2.70	
EF19-6.3	1SAX121001R1104	1.90 - 6.30	
EF19-18.9	1SAX121001R1105	5.70 - 18.9	
EF45-30	1SAX221001R1101	9.00 - 30.0	
EF45-45	1SAX221001R1102	15.0 - 45.0	
EF65-56	1SAX331001R1102	20 - 56	AF40, AF52, AF65
EF65-70	1SAX331001R1101	25 - 70	AF40, AF52, AF65
EF96-100	1SAX341001R1101	36 - 100	AF80, AF96
EF146-150	1SAX351001R1101	54 - 150	AF116, AF140, AF146
EF205-210	1SAX531001R1101	63 - 210	A145, A185, AF145, AF180, AF185, AF205
EF370-380	1SAX611001R1101	115 - 380	A210, A260, A300, AF210, AF260, AF265, AF300, AF305, AF370
EF460-500	1SAX821001R1101	150 - 500	AF400, AF460
EF750-800	1SAX611001R1101	250 - 800	AF580, AF750

2. DOCUMENTS AND DRAWINGS:

- 1SAX100403 Rev. a, 1SAX200403 Rev. a dated 27.Apr 09; 1SAX501312 Rev. a, 1SAX601312 Rev. a dated 19.08.11;
 - 1SAX300405 Rev. a, 1SAX300406 Rev. a, 1SAX300407 Rev. a dated 29.Nov 11;
 - 2CDC107023M6801c; 2CDC107024M6801c; 2CDC107026M6801b; 2CDC107027M6801a;
 - 2CDC107028M6801b; 2CDC107032C0201; 2CDC107036M6801b; 2CDC107037M6801b; 2CDC107038C0201;
 - 2CDC107040C0201

For B0 version:

- 2CDC107041D0201 Rev. B dated 06.2017

For C0 version:

- Data sheets: 2CDC107025D0201_Rev. E dated 02.2021; 2CDC107041D0201_Rev. C dated 05.2020;
 2CDC107042D0201 Rev D dated 06.2017; 2CDC107045D0201 Rev. E dated 07.2020
 - CB's: CN58855; CN58856; CN58857; CN58858; CN58860 all dated Jan.11,2023

3. TEST REPORTS:

- paconsult: 12-4421 Rev. 1 dated 25 July 2012; 09-2475A dated 03 July 2009
 - EMV Rhein-Neckar: 3893-381a dated 26.03.2010
 - Guangdong Testing Institute of Product Quality Supervision: CN26061, CN26062, CN26063 dated 2013-02-19
 GQI-POW-2012012, GQI-POW-2012013, GQI-POW-2012014 dated 2013-01-11
 - Shanghai Testing & Inspection Institute for Electrical Equipment: CN12283-M1, CN6710-M2 dated 2010-10-09;
 CN23576 dated 2012-06-06; CN23577 dated 2012-05-29; C009-CB2008CQC-015889-M1 dated 2010-08-16;
 C009-CB2008CQC-016898-M1 dated 2010-08-17; C009-CB2011CQC-038549, C009-CB2011CQC-038550 dated 2012-4-16
 For B0 version:
 - EMV Rhein-Neckar: 3808-314 dated 21.11.2015
 - Shanghai Testing & Inspection Institute for Electrical Equipment: 00901-CB2017CQC-075060 dated 2017-03-27

4. APPLICATION / LIMITATION:

4.1 - Bureau Veritas Rules for the Classification of Steel Ships.

4.2 - Bureau Veritas Environmental Category, **EC Code: 31**

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **ABB AG STOTZ-KONTAKT** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **ABB AG STOTZ-KONTAKT** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **ABB AG STOTZ-KONTAKT** has declared to Bureau Veritas the following production site:

**ABB Xinhui Low Voltage Switchgear Co. Ltd.
Jinguzhou Industrial Development Zone
Xinhui District, Jiangmen,
Guangdong 529100
CHINA**

6. MARKING OF PRODUCT:

- According to IEC 60947 specifications, as relevant.

7. OTHERS:

7.1 - It is the responsibility of **ABB AG STOTZ-KONTAKT** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 32449/B0 BV issued on 25 Aug 2020 by the Society.

*** END OF CERTIFICATE ***