



**TYPE APPROVAL CERTIFICATE
N. ELE376813CS**

This is to certify that the product below is found to be in compliance with the applicable requirements of the RINA type approval system.

<i>Description</i>	Electronic overload relay
<i>Type</i>	EF19, EF45, EF65, EF96, EF146, EF205, EF370, EF460, EF750
<i>Applicant</i>	ABB Stotz-Kontakt GmbH Eppelheimer Strasse 82 69123 Heidelberg Germany
<i>Manufacturer</i>	ABB Stotz-Kontakt GmbH Eppelheimer Strasse 82 69123 Heidelberg Germany
<i>Testing Standards</i>	Rules for the classification of ships. Part C - Machinery, Systems and Fire protection. - Ch.3, Sect. 6, Table 1 and Ch.2, Sect. 10

Issued in Genova on February 21, 2014

This certificate is valid until February 21, 2019

Valerio Bonanni

RINA Services S.p.A

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Description:

Electronic overload relay EF Series according to the following models:

3 poles, 50/60 Hz;
Rated values @ Ta= 40°C

Type Designation	Current range (A)	Rated operational Voltage Ue	Rated impulse withstand U imp	Rated insulation Voltage Ui
EF 19 - 0.32	0.10 - 0.32	690 Vac	6 kV	690 Vac
EF 19.0 -1.0	0.30 - 1.00	690 Vac	6 kV	690 Vac
EF 19 - 2.7	0.80 - 2.7	690 Vac	6 kV	690 Vac
EF 19 - 6.3	1.90 - 6.30	690 Vac	6 kV	690 Vac
EF 19 - 18.9	5.70 - 18.9	690 Vac	6 kV	690 Vac
EF 45 -30	9.00 - 30.0	690 Vac	6 kV	690 Vac
EF 45 - 45	15.0 - 45.0	690 Vac	6 kV	690 Vac
EF 65-70	25 - 70	1000 Vac	8 kV	1000 Vac
EF 96-100	36 -100	1000 Vac	8 kV	1000 Vac
EF 146 -150	54 - 150	1000 Vac	8 kV	1000 Vac
EF 205 -210	63 -210	1000 Vac	8 kV	1000 Vac
EF 370 - 380	115 - 380	1000 Vac	8 kV	1000 Vac
EF 460 - 500	150 - 500	1000 Vac	8 kV	1000 Vac
EF 750 -800	250 - 800	1000 Vac	8 kV	1000 Vac

Overload protection : Trip class 10E , 20E, 30E selectable
Temperature compensation from -25 ... + 70°C
Pollution degree : 3

Remark:

Items with Uimp= 6kV: max rated voltage is 600Vac when used in IT Systems; rated voltage is 400/690 Vac with earthed Systems.

Test reports / Certificate

CQC CB Test Certificates:

CN12283-M1 (2010-10-09), CN6710-M2 (2010-10-09), CN26062 (2013-02-19), CN26061 (2013-02-19), CN26063 (2013-02-19), CN23577 (2012-05-29), CN23576 (2012-06-06),

CQC Test report 00901-CB2013CQC-053781 (2013/11/28)

EMV Rhein-Neckar GmbH test report n. 3808-302 (25/04/2013)

ABB Environmental tests: Annex Q2009012

ABB EC Declaration of Conformity : doc. n. 1SAD938506-0180 (12/09/2013)

Reference specification

ABB Data Sheets - Electronic overload relay EF19 and EF45 : doc. n. 2CDC107025D0201

ABB Data Sheets - Electronic overload relay EF65 and EF96 and EF146 : doc. n. 2CDC107041D0201

ABB Data Sheets - Electronic overload relay EF205 and EF370: doc. n. 2CDC107042D0201

ABB Data Sheets - Electronic overload relay EF460 and EF750: doc. n. 2CDC107045D0201

Genova, February 21, 2014

RINA Services S.p.A.
Via Corsica, 12 - 16128 Genova