



**TYPE APPROVAL CERTIFICATE
N. ELE337310CS/001**

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>	Circuit breaker
<i>Type</i>	EMAX DC circuit breakers equipped with electronic relay type PR122 / DC and type PR123 / DC: E2B / E 1600, E2N/E 1600, E3N/E 1600, E3N/ E 2000, E3N/E 2500, E3H / E 1600, E3H/ E 2000, E3H/ E 2500
<i>Applicant</i>	ABB S.p.A. _ ABB SACE Division Via Baioni, 35 24123 Bergamo ITALY
<i>Manufacturer</i>	ABB S.p.A _ ABB SACE Division Via Enrico Fermi, 14 03100 Frosinone ITALY
<i>Testing Standards</i>	IEC 60947-2: 2006

Issued in **Genova** on **March 08, 2011**. This certificate is valid until **March 07, 2016**

RINA

Valerio Bonanni



TYPE APPROVAL CERTIFICATE N. ELE337310CS/001

Emax DC Circuit Breakers equipped with electronic relay type PR123/DC and PR122/DC

EMAX DC Circuit breakers in the following models:

- Rated current (In): 1600 A; Utilization Category: B.
- Rated short-circuit capacity (*) :

E2N/E 1600 - 3 poles

Ue (Vdc)	Ics (kA)	Icu (kA)	Icw (kA)
500	50	50	50
750	25	25	25

E2B/E 1600 - 3 poles

Ue (Vdc)	Ics (kA)	Icu (kA)	Icw (kA)
500	35	35	35
750	25	25	25

E2N/E 1600 & E2B/E 1600 - 4 poles

Ue (Vdc)	Ics (kA)	Icu (kA)	Icw (kA)
1000	25	25	25

- Rated current (In): 1600 A, 2000 A, 2500 A.; - Utilization Category: B.
- Rated short-circuit capacity (*) :

E3H/E 1600, 2000, 2500 - 3 poles

Ue (V)	Ics (kA)	Icu (kA)	Icw (kA)
500	65	85	65
750	40	40	40

E3N/E 1600, 2000, 2500 - 3 poles

Ue (V)	Ics (kA)	Icu (kA)	Icw (kA)
500	60	60	60
750	40	40	40

E3H/E 1600, 2000, 2500 & E3N/E 1600, 2000, 2500 - 4 poles

Ue (V)	Ics (kA)	Icu (kA)	Icw (kA)
1000	40	40	40

The above listed circuit breakers may be equipped with electronic relay type PR123/DC and PR122/DC.

- (*)
- (Ics) Rated service short circuit breaking capacity
 - (Icu) Rated ultimate short circuit breaking capacity
 - (Icw) Rated short-time withstand current

Genova, February 08, 2011

2/3

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



TYPE APPROVAL CERTIFICATE N. ELE337310CS/001

Emax DC Circuit Breakers equipped with electronic relay type PR123/DC and PR122/DC

Documents:

- LOVAG Certificates: IT 09.036 (03.04.2009); IT 08.110 (05.12.2008); IT 08.109 (05.012.2008); IT 09.094 (25.11.2009)
- ABB Test Reports LBRP 8566/00 Rev. 0 (08.10.2009); LBRP 8776/00 Rev. 0 (08.06.2009); LBRP 8129/00 Rev.0 (17.05.2010)
- CESI Test Report n° : A8031253 issued on 14.10.2008
- LOVAG Certificates n° : IT 09.107 (30.11.2009); IT 09.058 (10.06.2009); IT 09.079 (22.10.2009); IT 09.040 (18.02.2009)
- ABB Test Reports: LBRP 8082/00 Rev.0 (19.10.2009); LBRP 8398/00 Rev.0 (09.03.2010); LBRP 8567/00 Rev. 0 (14.05.2009); 21714 issued on 19.05.2009; Statement LB-DT / LA / AG 010 -11 D (02/03/2011).
- CESI Test Report n° A8031254 issued on 14.10.2008.
- INTERTEK Test Report n° 2005036UDI-002b issued on July 2009.

Genova, February 08, 2011

3/3

RINA S.p.A.
Via Corsica, 12 – 16128 Genova