

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	ABB SpA
Address	via Pescaria, 5, Bergamo, Italy, 24123, Italy
Place of Production	ABB S.p.A. - ABB SACE Division Via E. Fermi 40, Frosinone, 03100, Italy
Type	Circuit Breakers (Env Tested)
Description	Low voltage air circuit breakers. Equipped with electronic releases Ekip Dip, Ekip Touch, Ekip Hi-Touch, software version 03.20.
Trade Name	Emax E1.2N/E9, Emax E2.2S/E9, Emax E2.2H/E9, Emax E4.2S/E9, Emax E4.2H/ E9, Emax E6.2H/E9, Emax E6.2X/E9.
Application	Marine, offshore and industrial use in environmental categories ENV1, ENV2 and ENV3 as detailed in the Lloyd's Register Type Approval System - Test Specification Number 1, December 2021.
Specified Standard	IEC 60947-1:2007+A1:2010+A2:2014, IEC 60947-2:2016.
Ratings	See Appendix.

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This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR22168893DA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Appendix

Ratings

SACE Emax 2/E9			E1.2	E2.2		E4.2		E6.2	
Performance levels			N/E9	S/E9	H/E9	S/E9	H/E9	H/E9	X/E9
Rated uninterrupted current I _u @ 40 °C		[A]	1250	1250	1250	3200	3200	5000	5000
		[A]		2000	2000	4000	4000	6300	6300
		[A]		2500	2500				
Neutral pole current-carrying capacity for 4-pole CBs		[%I _u]	100	100	100	100	100	50	50
Rated service voltage U _e		[V]	800	900	900	900	900	900	900
Rated ultimate short-circuit breaking capacity I _{cu}	800V	[kA]	35	50	65	65	90	90	100
	900V	[kA]		50	65	65	75	75	90
Rated service short-circuit breaking capacity I _{cs}		[%I _{cu}]	100	100	100	100	100	100	100
Rated short-time withstand current I _{cw}	(1s) 800V	[kA]	35	50	65	65	75	75	90
	(3s) 800V	[kA]	30	50	65	65	75*	75	90
	(1s) 900V	[kA]		50	65	65	75	75	90
	(3s) 900V	[kA]		50	65	65	75*	75	90
Rated short-circuit making capacity (peak value) I _{cm}	800V	[kA]	73.5	105	143	143	200	200	220
	900V	[kA]		105	143	143	165	165	198
Utilization category (according to IEC 60947-2)			B	B	B	B	B	B	B

* E4.2H 3200A: 66 I_{cw} (3s)