

Type Approval Certificate

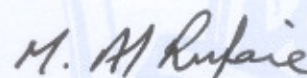
This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	ABB Sace S.p.A. Via Baioni, 35 24123 Bergamo Italy
PLACE OF PRODUCTION	Via Enrico Fermi 14 03100 Frosinone Italy
DESCRIPTION	3 pole moulded case circuit breakers
TYPE	Tmax T6 equipped with thermomagnetic and electronic release PR221DS – PR221DS/PD – PR223DS/EF – PR222MP
APPLICATION	Marine, offshore and industrial use for protection, isolation and switching of electrical circuits. For use in environmental categories ENV1, ENV2 and ENV3 as detailed in LR Test Specification No. 1: 2002.
SPECIFIED STANDARD	IEC 60947-1 IEC 60947-2
RATINGS	Frequency 50/60 Hz

Type	Rated Current (A)	Rated Voltage (V)	S/C Making Capacity Icm (kA)	Ultimate S/C Breaking Capacity Icu (kA)	Service S/C Breaking Capacity Ics (kA)	Electronic Release
T6 S-H-L	630 / 800 / 1000	440 / 690	63 / 40	30 / 20	30 / 15	PR223DS/EF – PR222MP – PR221/222

Certificate No.	07/00018
Issue Date	25 March 2007
Expiry Date	24 March 2012
Sheet	1 of 2



M.H.A. Rufaie
London Design Support Services
Lloyd's Register EMEA

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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 No. 07/00018 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	07/00018
Issue Date	25 March 2007
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Sheet	2 of 2

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DESIGN APPRAISAL DOCUMENT

Date	Quote this reference on all future communications
25 March 2007	LDSS/PAS/TA/W01036901/MHR/O- 80180

LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.
Issued to: ABB SACE S.P.A.
for: 3 POLE MOULDED CASE CIRCUIT BREAKERS
**Type: TMAX T6 EQUIPPED WITH THERMOMAGNETIC AND ELECTRONIC RELEASE
TYPE APPROVAL CERTIFICATE No. 07/00018**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Request form	12.09.2005
LR Milan email	01.03.2007
ABB doc. No. 1SDL000190R001	Undated
ABB circuit breakers (T6 S-H-L) details	Undated
Tmax T6 catalogue (1SDC210012D0201)	04.2005

Drawings

No. RA3710	03.11.2004
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TEST REPORTS

LOVAG No. IT 06.018	13.07.2006
LOVAG No. IT 06.034	13.07.2006
LOVAG No. IT 06.033	13.07.2006

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.



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Part 2
Circuit Breakers (ENV Tested) (Part 2)

Producer/ Licence No.	Type	Standard	Rating					Short Circuit	Category/ Additional Tests	Remarks	Cert. No.
			Normal Current Amperes	A.C. 50/60/400Hz		D.C.					
				Voltage	Power Factor	Voltage	Time Constant Seconds				
ABB Sace S.p.A., Via Baioni, 35, 24123 Bergamo, Italy.	3 pole moulded case circuit breakers Type Tmax T6 S-H-L equipped with thermomagnetic and electronic release PR221DS – PR221DS/PD – PR223DS/EF – PR222MP	IEC 60947-1 IEC 60947-2	630 / 800 / 1000	440 / 690				(kA) <u>I_{cm}</u> <u>I_{cu}</u> <u>I_{cs}</u> 63/40 30/20 30/15	ENV1 ENV2 ENV3 (2002)	Expires: 24 March 2012 Electronic Release PR223DS/EF – PR222MP – PR221/222	07/00018

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25 MAR 2007