

## Type Approval Certificate Extension

This is to certify that Certificate No. 02/00005 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	ABB Sace S.p.A.
<b>PLACE OF PRODUCTION</b>	ABB Sace S.p.A. Via Enrico Fermi 14 03100 Frosinone Italy
<b>DESCRIPTION</b>	3 and 4 poles moulded case circuit breakers, fixed or plug-in.
<b>TYPE</b>	Tmax range
<b>APPLICATION</b>	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: 1996.
<b>SPECIFIED STANDARD</b>	IEC 60947-1 IEC 60947-2

*"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 attached Design Appraisal Document No.02/00005(E1) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

**All other details remain as the previous Certificate No. 02/00005 to which this extension should be attached.**

<b>Certificate No.</b>	02/00005(E1)
<b>Issue Date</b>	31 July 2007
<b>Expiry Date</b>	12 March 2012
<b>Sheet</b>	1 of 1



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## DESIGN APPRAISAL DOCUMENT

Date 31 July 2007	Quote this reference on all future communications LDSS/PAS/TA/W01389628/MHR/O-83803
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### LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.

Issued to: **ABB SACE S.P.A.**

for: **3 AND 4 POLES MOULDED CASE CIRCUIT BREAKERS, FIXED OR PLUG-IN**

Type: **Tmax RANGE**

TYPE APPROVAL CERTIFICATE No. **02/00005(E1)**

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.

#### ADDITIONAL APPROVAL DOCUMENTATION

Request form	26.02.2007
Tmax catalogue (No. 1SDC210004D0204)	11.2005

#### TEST REPORTS

IQNet Certificate No. IT-29340	06.07.2005
IQNet Certificate No. IT-29263	06.07.2005

Also all the documentation listed on Design Appraisal Documents associated with Type Approval Certificate No. 02/00005

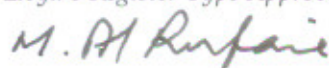
#### Supplementary Type Approval Terms and Conditions

*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 Enrico Fermi 14, 03100 Frosinone, Italy.	3 and 4 poles moulded case circuit breakers, fixed or plug-in	IEC 60947-1 IEC 60947-2						ENV 1 ENV 2 ENV 3 (1996)	Expiry: 12 March 2012	02/00005 (E1)	
	Type: Tmax range T1C		160 R25-R160	440 690			(A) (B) 30 15/11.25 5.9 4/3				
	T1N		160 R32-R160	440 690			46.2 22/11 9.2 6/3				
	T2H		160 R25-R160	440 690			121 55/55 13.6 8/8				
	T2L		160 R25-R160	440 690			165 75/56.25 17 10/7.5				
	T2N		160 R25-R160	440 690			63 30/30 9.2 6/6				
	T2S		160 R25-R160	440 690			94.5 45/45 11.9 7/7				
	T3N		250 R63-R250	440 690			52.5 25/18.75 7.7 5/3.75				
	T3S		250 R63-R250	440 690			84 40/20 13.6 8/4				

31 JUL 2007  
 MHW