


Type Approval Certificate

This is to certify that the undernoted products 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 Bergamo 24123 Italy
PLACE OF PRODUCTION	Via Enrico Fermi 14 Frosinone 03100 Italy
DESCRIPTION	Moulded case circuit breakers with electronic releases
TYPE	Tmax T7 S/H/L/V <i>All units fitted with, PR231/P, PR232/P, PR331/P and PR332/P microprocessor based overcurrent release providing protection against overload, short circuit and earth faults.</i>
APPLICATION	Suitable for use in environmental categories ENV1, ENV2 and ENV 3 as defined in LR Test Specification No.1 2002.
SPECIFIED STANDARDS	IEC 60947-1:2007 IEC 60947-2:2006 Utilisation category B
ADDITIONAL TESTS	Cold Temperature Test - -25°C for 16 hours
Certificate No.	10/00023
Issue Date	26 March 2010
Expiry Date	25 March 2015
Sheet	1 of 2



A.B. Gunn
London Design Support Services
Lloyd's Register EMEA

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71 Fenchurch Street, London EC3M 4BS


RATING

Type	Normal Current In (A)	Voltage 50/60Hz (V)	Power Factor	Peak Making Icm (kA)	Ultimate S/C Breaking Capacity Icu (kA)	Service S/C Breaking Capacity Ics(%Icu)	Withstand Current for 1 sec (kA)
Tmax T7S	800/1000 /1250/1600	230	0.2	187	85	100	20
		400	0.25	105	50	100	20
		440	0.25	105	50	100	20
		500	0.25	84	40	100	20
		690	0.25	63	30	100	20
Tmax T7H	800/1000 /1250/1600	230	0.2	220	100	100	20
		400	0.2	154	70	100	20
		440	0.2	143	65	100	20
		500	0.25	105	50	100	20
		690	0.25	88.2	42	75	20
Tmax T7L	800/1000 /1250/1600	230	0.2	440	200	100	20
		400	0.2	264	120	100	20
		440	0.2	220	100	100	20
		500	0.2	187	85	75	20
		690	0.25	105	50	75	20
Tmax T7V	800/1000 /1250	230	0.2	440	200	100	15
		400	0.2	330	150	100	15
		440	0.2	286	130	100	15
		500	0.2	220	100	100	15
		690	0.2	132	60	75	15

"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. 10/00023 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No. 10/00023
 Issue Date 26 March 2010
 Expiry Date 25 March 2015
 Sheet 2 of 2


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DESIGN APPRAISAL DOCUMENT

Date 26 March 2010	Quote this reference on all future communications LDSS/ETS/TAE/WO2085437/ABG/O-103170
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LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.

Issued to: ABB SACE S.P.A

For: MOULDED CASE CIRCUIT BREAKERS WITH ELECTRONIC RELEASES

Type: TMAX T7 S/H/L/V

TYPE APPROVAL CERTIFICATE No. 10/00023

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	11.12.2008
LR Email	07.08.2009
ABB Email	22.09.2009
LR Email	07.10.2009
LR Email	20.10.2009
LR Email	14.01.2010
LR Email	04.02.2010
LR Email	16.03.2010
LR Milan Email	26.03.2010

DATASHEETS

Ratings T7 Spreadsheet	Undated
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TEST REPORTS

SINAL Laboratory Accreditation Number 0062 Revision 2	07.02.2008
LOVAG Certificate of Conformity Certificate Number IT 07.001	26.01.2007
LOVAG Certificate of Conformity Certificate Number IT 07.002	26.01.2007
LOVAG Certificate of Conformity Certificate Number IT 07.003	19.02.2007
LOVAG Certificate of Conformity Certificate Number IT 07.005	22.02.2007
LOVAG Certificate of Conformity Certificate Number IT 07.006	26.02.2007
LOVAG Certificate of Conformity Certificate Number IT 07.007	28.02.2007
LOVAG Certificate of Conformity Certificate Number IT 07.008	28.02.2007
LOVAG Certificate of Conformity Certificate Number IT 07.009	01.03.2007
LOVAG Certificate of Conformity Certificate Number IT 07.010	06.03.2007
LOVAG Certificate of Conformity Certificate Number IT 07.011	05.03.2007
LOVAG Certificate of Conformity Certificate Number IT 07.012	05.03.2007
LOVAG Certificate of Conformity Certificate Number IT 07.013	02.03.2007
LOVAG Certificate of Conformity Certificate Number IT 07.014	12.03.2007
LOVAG Certificate of Conformity Certificate Number IT 07.040	05.06.2007
LOVAG Certificate of Conformity Certificate Number IT 07.062	16.07.2007
LOVAG Certificate of Conformity Certificate Number IT 07.075	01.10.2007
LOVAG Certificate of Conformity Certificate Number IT 07.076	05.10.2007
LOVAG Certificate of Conformity Certificate Number IT 07.077	01.10.2007

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LOVAG Certificate of Conformity Certificate Number IT 07.078	05.10.2007
LOVAG Certificate of Conformity Certificate Number IT 08.009	14.04.2008
LOVAG Certificate of Conformity Certificate Number IT 08.010	14.04.2008
LOVAG Certificate of Conformity Certificate Number IT 08.018	16.04.2008
LOVAG Certificate of Conformity Certificate Number IT 08.019	14.04.2008
LOVAG Certificate of Conformity Certificate Number IT 08.020	16.04.2008
LOVAG Certificate of Conformity Certificate Number IT 08.051	28.04.2008
LOVAG Certificate of Conformity Certificate Number IT 08.052	24.04.2008
LOVAG Certificate of Conformity Certificate Number IT 08.053	04.06.2008
LOVAG Certificate of Conformity Certificate Number IT 08.054	17.06.2008
LOVAG Certificate of Conformity Certificate Number IT 08.074	20.10.2008
LOVAG Certificate of Conformity Certificate Number IT 08.075	20.10.2008
LOVAG Certificate of Conformity Certificate Number IT 08.078	09.10.2008
LOVAG Certificate of Conformity Certificate Number IT 08.079	18.09.2008
LOVAG Test Report Number 06.074	26.01.2007
LOVAG Test Report Number 06.075	26.01.2007
LOVAG Test Report Number 06.089	19.02.2007
LOVAG Test Report Number 06.090	22.02.2007
LOVAG Test Report Number 06.091	26.02.2007
LOVAG Test Report Number 06.092	28.02.2007
LOVAG Test Report Number 06.071	28.02.2007
LOVAG Test Report Number 06.115	01.03.2007
LOVAG Test Report Number 06.111	06.03.2007
LOVAG Test Report Number 06.107	05.03.2007
LOVAG Test Report Number 06.108	05.03.2007
LOVAG Test Report Number 06.109	02.03.2007
LOVAG Test Report Number 06.119	12.03.2007
LOVAG Test Report Number 07.016	05.06.2007
LOVAG Test Report Number 07.002	16.07.2007
LOVAG Test Report Number 07.005	01.10.2007
LOVAG Test Report Number 07.015	05.10.2007
LOVAG Test Report Number 07.075	01.10.2007
LOVAG Test Report Number 07.076	05.10.2007
LOVAG Test Report Number 07.053	14.04.2008
LOVAG Test Report Number 07.054	14.04.2008
LOVAG Test Report Number 08.005	16.04.2008
LOVAG Test Report Number 07.051	14.04.2008
LOVAG Test Report Number 08.010	16.04.2008
LOVAG Test Report Number 08.007	28.04.2008
LOVAG Test Report Number 07.073	24.04.2008
LOVAG Test Report Number 07.052	04.06.2008
LOVAG Test Report Number 07.074	17.06.2008
LOVAG Test Report Number 07.088A	01.09.2008
LOVAG Test Report Number 07.087	06.10.2008
LOVAG Test Report Number 07.090A	09.10.2008
LOVAG Test Report Number 07.090B	09.10.2008
LOVAG Test Report Number 07.090C	09.10.2008

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DESIGN APPRAISAL DOCUMENT

Date	26 March 2010	Quote this reference on all future communications	LDSS/ETS/TAE/WO2085437/ABG/O-103170
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LOVAG Test Report Number 07.090C	09.10.2008
LOVAG Test Report Number 07.089	18.09.2008
ABB Test Report Number LBRP 7303/00	09.01.2008
ABB Test Report Number LBRP 7876/01	20.12.2007
ABB Test Report Number LBRP 8013/00 Rev 1	09.03.2010
ABB Test Report Number LBRP 8488/01 Rev 0	26.02.2010
ABB Test Report Number LBRP 9599/00 Rev 0	21.01.2010
ABB Test Report Number LBRP 9599/00 Rev 1	26.02.2010
Intertek Test Report Number E133S2207G5_25a	28.06.2007
Intertek Test Report Number E133S2207G5_25aR	28.06.2007
Intertek Test Report Number E133S2207G5_25b	28.06.2007
Intertek Test Report Number E133S2207G5_25bR	28.06.2007
Intertek Test Report Number 706688	06.02.2009
CESI Test Report Number A7027438	26.02.2008
RINA ISO 9001:2000 Certificate Number 8402/03/S	21.07.2008
LR Laboratory Visit Report Number MLN0802243	22.01.2010
Production Facility Inspection Report NAP 0910046	10.07.2009

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the products referred to herein 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 products 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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London Design Support Services
Lloyd's Register EMEA

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

Producer/ Licence No.	Type	Standard	Rating				Short Circuit Icu(kA) Ics(%Icu)	Category/ Additional Tests	Remarks	Cert. No.
			A.C. 50/60/400Hz		D.C.					
			Normal Current Amperes	Voltage	Power Factor	Voltage				
ABB Sace S.p.A Via Baioni 35 Bergamo 24123 Italy	Moulded case circuit breakers with electronic releases Type: Tmax T7 S	IEC 60947-1 IEC 60947-2 Utilisation category B	800/1000/ 1250/1600	230	0.2		85	ENV1 ENV2 ENV3 (2002)	Expires: 25 March 2015	10/00023
				400	0.25		100			
				440	0.25		100			
	Tmax T7 S		800/1000/ 1250/1600	500	0.25		40	Low temperature test -25°C, 16 hours	All units fitted with, PR231/P, PR232/P, PR331/P and PR332/P microprocessor based overcurrent release providing protection against overload, short.circuit and earth faults	
				690	0.2		100			
				230	0.2		100			
	Tmax T7 H		800/1000/ 1250/1600	400	0.2		70			
				440	0.2		100			
				500	0.25		100			
	Tmax T7 L		800/1000/ 1250/1600	690	0.25		65			
				500	0.2		50			
				440	0.2		75			
				200	0.2		200			
				120	0.2		120			
				400	0.2		100			
			440	0.2		100				
			500	0.2		85				
			690	0.25		50				
			230	0.2		75				
			400	0.2		200				
			440	0.2		150				
			500	0.2		130				
			690	0.2		100				
				0.2		60				

Al.
6.4.2010.