



Lloyd's  
Register

## Type Approval Certificate Extension

This is to certify that Certificate No. 10/10011(E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	LSIS Co., Ltd.
PLACE OF PRODUCTION	95, Beakbong-ro, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Korea, 361-720
DESCRIPTION	Metasol Molded Case Circuit Breaker, 3 pole
TYPE	ABN53c, ABN63c, ABN103c, ABS33c, ABS53c, ABS63c, ABH33c, ABS103c, ABP53c, ABH53c, ABP103c, ABH103c, ABN203c, ABS203c, ABP203c, ABH203c
APPLICATION	Marine, offshore and industrial applications for use in environmental categories ENV3 as defined in LR Type Approval System Test Specification No. 1-2002 where the Test Specification is satisfactory for the intended operation.
STANDARD	IEC 60947-2 (2006)

Certificate No.	15/40071(E2)
Issue Date	20 May 2015
Expiry Date	20 May 2020
Sheet	1 of 3



G.H. LEE

Busan Technical Support Office  
Lloyd's Register Asia

Lloyd's Register Asia  
119, Daegyo-ro, Jung-gu, Busan

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**RATINGS**

Type	Current rating at 45°C (A)	Rated voltage (V)	Breaking current (r.m.s.) (kA) Icu=Ics	Making current (Peak asymmetrical) (kA)	Over current release	Standard
ABN53c	15 - 50	415/460 220/240/250	14 30	28 63	Thermal magnetic release	IEC60947-2 (2006) Utilisation category: A
ABN63c	15 - 60	415/460 220/240/250	14 30	28 63		
ABN103c	15 - 100	415/460 220/240/250	18 35	36 73.5		
ABS33c	15 - 30 (3 - 10)	415/460 220/240/250	14 (10) 30 (25)	28 (17) 63 (52.5)		
ABS53c	15 - 50	415/460 220/240/250	18 35	36 73.5		
ABS63c	15 - 60	415/460 220/240/250	18 35	36 73.5		
ABH33c	15 - 30	415/460 220/240/250	18 35	36 73.5		
ABS103c	15 - 125	415/460 220/240/250	37 85	77.7 187		
ABP53c	15-50	415/460 220/240/250	42 85	88.2 187		
ABH53c	15 - 50	415/460 220/240/250	50 100	105 220		
ABP103c	15-125	415/460 220/240/250	42 85	88.2 187		
ABH103c	15 - 125	415/460 220/240/250	50 100	105 220		
ABN203c	100-250	415/460 220/240/250	26 65	54.6 143		

**Certificate No.** 15/40071(E2)

**Issue Date** 20 May 2015

**Expiry Date** 20 May 2020

**Sheet** 2 of 3



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#### Ratings Cont'd

Type	Current rating at 45°C (A)	Rated voltage (V)	Breaking current (r.m.s.) (kA) Icu=Ics	Making current (Peak asymmetrical) (kA)	Over current release	Standard
ABS203c	100-250	415/460 220/240/250	37 85	77.7 187	Thermal magnetic release	IEC60947-2 (2006) Utilisation category: A
ABP203c	100-250	415/460 220/240/250	42 85	88.2 187		
ABH203c	100-250	415/460 220/240/250	50 100	105 220		

*"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 Asia of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. 15/40071(E2) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No.10/10011(E1) to which this extension should be attached.

Certificate No. 15/40071(E2)  
Issue Date 20 May 2015  
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Sheet 3 of 3

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## Lloyd's Register Asia

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### DESIGN APPRAISAL DOCUMENT

Date 20 May 2015	Quote this reference on all future communications BTS/ECE/E151077
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## LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.

Issued to: LSIS CO., LTD.

for: METASOL MOLDED CASE CIRCUIT BREAKER, 3 POLE  
TYPE APPROVAL CERTIFICATE No. 15/40071(E2)

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

LR form (2502)		06 February 2015
Declaration of identity		06 February 2015
14-1 General description of product	-	-
14-2 Design Drawing	-	-
14-3 Performance Specification ( Catalogue )	-	-
CB Test Certificate	NL-17236	30 November 2009
CB Test Certificate	NL-17244/A1	14 December 2009
CB Test Certificate	NL-17241/A1	7 January 2010
Description of changes since previous LR certificate	R&D 623-018	25 April 2011

### TEST REPORTS

14-4-1. Technical file for 100AF	TRF No. IECEN60947_2A	-
14-4-2. Technical file for 125AF	TRF No. IECEN60947_2A	-
14-4-3. Technical file for 250AF	TRF No. IECEN60947_2A	-
Test Report (for ABE 103c)	R49-0911	1 June 2009
Test Report (for ABH 103c)	R49-0912	1 June 2009
Test Report (for ABH 203c)	R49-0913	1 June 2009
Test Report (for ABE 103c)	R49-2019	9 November 2009
Test Report (for ABH 103c)	R49-2020	9 November 2009
Test Report (for ABH 203c)	R49-2021	9 November 2009
CB Test Report	Report Reference No. 2109959.50	13 May 2008
CB Test Report	Report Reference No. 2109959.51	13 May 2008
CB Test Report	Report Reference No. 2109959.52	13 May 2008
CB Test Report	Report Reference No. 2116563.50	27 June 2008
CB Test Report	Report Reference No. 2116563.51	27 June 2008
CB Test Report	Report Reference No. 2116563.52	27 June 2008
CB Test Report	Report Reference No. 2116563.53	27 June 2008
CB Test Report	Report Reference No. 2116563.54	27 June 2008
CB Test Report	Report Reference No. 2116563.55	27 June 2008

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### DESIGN APPRAISAL DOCUMENT

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#### 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 Asia 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)

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					
LSIS Co., Ltd. 95, Beakbong-ro, Heungdeok-gu, Cheongju-si, Chungcheongbuk- do, Korea, 361-720	Metasol Moulded Case Circuit Breaker (3 Pole)	IEC60947-2 (2006)	Rated Current at 45°C (A) 15-50  15-60  15-100  15-30 (3-10)  15-50  15-60  15-30  15-125  15-50  15-50  15-125	(V) 415/460 220/240/250  415/460 220/240/250  415/460 220/240/250  415/460 220/240/250  415/460 220/240/250  415/460 220/240/250  415/460 220/240/250			(kA)  (A) (B) Icu/Ics Icm 14/14 28 28 30/30 63 63  14/14 28 30/30 63  18/18 36 35/35 73.5  14/14 28 (10/10) (17) 30/30 63 (25/25) (52.5)  18/18 36 35/35 73.5  18/18 36 35/35 73.5  18/18 36 35/35 73.5  37/37 77.7 85/85 187  42/42 88.2 85/85 187  50/50 105 100/100 220  42/42 88.2 85/85 187	ENV3 (2002)	Expires: 20 May 2020	15/40071(E2)	
	ABN53c										
	ABN63c										
	ABN103c										
	ABS33c										
	ABS53c										
	ABS63c										
	ABH33c										
	ABS103c										
	ABP53c										
	ABH53c										
	ABP103c										

Part 2

Circuit Breakers (ENV Tested)

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					
	ABH103c		15-125	415/460 220/240/250				50/50 100/100	105 220		
	ABN203c		100-250	415/460 220/240/250				26/26 65/65	54.6 143		
	ABS203c		100-250	415/460 220/240/250				37/37 85/85	77.7 187		
	ABP203c		100-250	415/460 220/240/250				42/42 85/85	88.2 187		
	ABH203c		100-250	415/460 220/240/250				50/50 100/100	105 220		

20-May-2015

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