



TYPE APPROVAL CERTIFICATE
No. ELE428210PU/002

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	MOULDED CASE CIRCUIT BREAKER
<i>Type</i>	METASOL
	ABS103C
	ABP53C/ABP103C
	ABH53C/ABH103C
<i>Applicant</i>	LSIS CO., LTD.
	1 SONGJEONG-DONG, HEUNGDEOK-GU
	361-720 CHEONGJU-CITY, CHUNGBUK
	KOREA, REPUBLIC OF
<i>Manufacturer</i>	LSIS CO., LTD.
<i>Place of manufacture</i>	1 SONGJEONG-DONG, HEUNGDEOK-GU
	361-720 CHEONGJU-CITY, CHUNGBUK
	KOREA, REPUBLIC OF
<i>Reference standards</i>	IEC 60947-2

Issued in **BUSAN** on **January 24, 2011. *This Certificate is valid until* **January 23, 2016****



RINA

Dominic Suk

This certificate consists of this page and 1 enclosure

This certificate annuls and replaces existing certificate No. ELE066909PU/002 issued on 03/07/2009



METASOL

Product Description

- Moulded case circuit breaker type METASOL applicable to the marine environment with following rating :

Type	Rated Freq. [Hz]	Rated Current at 45 °C In[A]	Rated Oper. Volt. Ue[V]	Service Short-circuit Breaking Capacity Ics[kA]	Ultimate Short-circuit Breaking Capacity Icu[kA]	Rated Short-circuit Making Capacity Icm[kA]	Util. Category
ABS103c	50/60	15~125	690 480/500 415/460 220/240	Ics = Icu	8 26 37 85	13.6 54.6 77.7 187	A
ABP53c	50/60	15~50	690 480/500 415/460 220/240	Ics = Icu	10 30 42 85	17 63 88.2 187	A
ABH53c	50/60	15~50	690 480/500 415/460 220/240	Ics = Icu	10 35 50 100	17 73.5 105 220	A
ABP103c	50/60	15~125	690 480/500 415/460 220/240	Ics = Icu	10 30 42 85	17 63 88.2 187	A
ABH103c	50/60	15~125	690 480/500 415/460 220/240	Ics = Icu	10 35 50 100	17 73.5 105 220	A

*Note) 220/240 = 220V, 240V, 250V

Reference Documents

- Performance Test : KEMA Test Certificate No. NL-17241/A1 dated 07/01/2010, KEMA Test Report No. 2109959.51 dated 13/05/2008
- Environmental Test (including Vibration & Inclination Test) : PT&T Report No. R49-0912 dated 01/06/2009

Note/Remark

- The product is subject to the compliance with RINA Rules and Standards mentioned on the certificates
- Type Approval certifies that a representative sample of the product has been found to meet the applicable design criteria
- Any modification or change shall not be valid until approval is granted by RINA as a result of due assessment.
- Circuit Breakers with nominal current greater than 100A are subject to Final Inspection/Final Test of the Society.

BUSAN 23 January, 2011

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