



TYPE APPROVAL CERTIFICATE

No. ELE164722PU/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>	MOTOR STARTERS - CONTROLLERS
<i>Type</i>	MMS MMS-32S MMS-32H MMS-32HI MMS-63S MMS-63H MMS-63HI MMS-100S MMS-100H MMS-100HI
<i>Applicant</i>	LS ELECTRIC CO., LTD. - CHEONG JU PLANT 95, BAEKBONG-RO, HEUNGDEOK-GU, 28439 CHEONGJU-SI, REPUBLIC OF KOREA
<i>Manufacturer</i>	LS ELECTRIC CO., LTD. - CHEONG JU PLANT
<i>Place of manufacture</i>	95, BAEKBONG-RO, HEUNGDEOK-GU, 28439 CHEONGJU-SI, REPUBLIC OF KOREA
<i>Reference standards</i>	IEC 60947-2; IEC 60947-4-1

Issued in **BUSAN** on **January 4, 2023**. This Certificate is valid until **January 3, 2028**



RINA Services S.p.A.
Young-Kwang Kim

This certificate consists of this page and 1 enclosure

MMS

Product Description

- Circuit Breaker used as Motor Starter type MMS 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. Cate- gory
MMS-32S	50/60	0.16~40	600/690	100	100	220	A
				3	3	4.26	
				2	2	2.82	
			500/525	100	100	220	
				38	50	105	
				11	15	30	
				8	10	17	
				5	6	9.18	
				4	5	7.65	
				3	4	5.88	
			440/460	100	100	220	
				38	50	105	
				11	15	30	
				8	10	17	
				6	8	13.6	
				4	6	9.18	
			400/415	3	5	7.65	
				100	100	220	
				38	50	105	
				15	20	40	
230/240	11	15	30				
	8	10	17				
	100	100	220				
	38	50	105				
	30	40	84				
	22	30	63				
	15	20	40				



MMS-32H MMS-32HI	50/60	0.16~40	600/690	100	100	220	A		
				8	8	13.6			
				6	6	9.18			
				4	4	5.88			
				3	3	4.26			
			500/525	100	100	220			
38	50	105							
32	42	88							
8	10	17							
6	8	13.6							
440/460	100	100	220	38	50	105			
							15	25	52.5
							11	15	30
							100	100	220
							38	50	105
30	40	84							
230/240	100	100	220						
MMS-63S	50/60	10~63	600/690	3	4	5.88	A		
				8	10	17			
				5	6	9.18			
				12	15	30			
				8	10	17			
400/415	100	100	220	38	50	105			
				19	25	52.5			
				100	100	220			
230/240	100	100	220						
				38	50	105			



MMS-63H MMS-63HI	50/60	10~63	600/690	5	6	9.18	A
				5	5	7.65	
				3	3	4.26	
			500/525	38	50	105	
				32	42	88.2	
				9	12	24	
				8	10	17	
				5	6	9.18	
			440/460	38	50	105	
				27	35	73.5	
				19	25	52.5	
			400/415	100	100	220	
50	50	105					
27	35	73.5					
230/240	100	100	220				
	50	75	165				
MMS-100S	50/60	17~100	600/690	8	10	17	A
				5	6	9.18	
				4	5	7.65	
			500/525	19	25	52.5	
				11	15	30	
				9	12	24	
			440/460	6	8	13.6	
				30	40	84	
400/415	38	50	105				
230/240	100	100	220				
MMS-100H MMS-100HI	50/60	17~100	600/690	9	12	24	A
				8	10	17	
				6	8	13.6	
				6	6	9.18	
			500/525	27	35	73.5	
				19	25	52.5	
				15	20	40	
				11	15	30	
				9	12	24	
			440/460	38	50	105	
				100	100	220	
			400/415	50	100	220	
50	75	165					
230/240	100	100		220			





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No. ELE164722PU/002

Enclosure – Page 4 of 4

*Note : S – standard type, H – high capacity type, HI – instantaneous type

Reference Documents

- Performance Test : KEMA Test Certificate No. NL-7836 dated 09/06/2004, KEMA Test Report No. 2038108.51~56 dated 26/05/2004
- Environmental Test (including Vibration & Inclination Test) : PT&T Report No. R47-1575~8 dated 08/10/2007
- Renewal Inspection: PT&T Test Report No. R422-1845 dated 15/12/2022, R422-1844 dated 15/12/2022
- Asbestos-free Declaration: LSIS letter dated 11/10/2022

OEM Manufacturing factory for MMS type (only fabrication)

Company name : DAU Industry Co., Ltd.

Address : 468, Osangajwa-ro, Oksan-myeon, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Korea.

SBCR's ISO 9001 Quality Management System Certificate Ref. No. QMS-1615 dated 06/07/2021

LS ELECTRIC's official letter no. LOW 623-230105 dated 5/01/2023

Note/Remark

- RINA annual audit to the Manufacture's production site is required in case of products for which testing of each unit or batch is not required to be attended by the surveyor.
- The product is always subject to the compliance with RINA Rules and other Standards mentioned on certificate
- 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

Renewal/Revision

- 10/10/2007: initial certification. Certificate No. ELE108007PU
- 04/01/2013: renewed. New certificate No. ELE188112PU revokes previous certificate
- 30/04/2018: renewed. New certificate No. ELE165017PU/002 revokes previous certificate
- 23/04/2020: issued to reflect the change of company name LSIS to LS Electric
- 04/01/2023: renewed. New certificate No. ELE164722PU/002 revokes previous certificate

BUSAN January 04, 2023



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