



## *Confirmation of Type Approval*

This is to certify that, pursuant to the Rules of American Bureau of Shipping (ABS), on 25/OCT/2007 the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) and a valid Product Design Assessment (PDA) for the below listed product, entitling the product to type approval. The validity of the Manufacturing Assessment is dependent on satisfactory audits as required by the Rules. The Product Design Assessment is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

For Date of ABS Rules used for evaluation; Please refer to the ABS Rules below.

This Confirmation of Product Type Approval is valid as of the date shown above for the below listed product.

ABS makes no representations regarding type approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that the Client has full responsibility for continued compliance with the evaluation standard, whether the standard is an ABS Rule or a non-ABS Rule. As specified in the ABS Rules, Unit Certification may be required in addition to Product Type Approval. Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

**LS Industrial Systems Co., Ltd.**

**Model Name(s): 1. MMS-32S, MMS-32H, MMS-32HI 2. MMS-63S, MMS-63H, MMS-63HI 3. MMS-100S, MMS-100H, MMS-100HI**

**Presented to:**

LS Industrial Systems Co., Ltd.  
1, Songjung-Dong,  
Hungduk-Gu,  
Cheongju City,  
Chungbuk, 361-720  
Korea, Republic of

**Intended Service:**

Low-voltage switchgear and controller: consists of circuit breaker and motor starter for general use

**Description:**

MMSs are suitable for switching and protecting of three-phase induction motors up to 45 kW at 400VAC and electrical loads rated currents of up to 100A. Each MMS has two (2) major functions of overload protection and short-circuit protection.

**Ratings:**

A. MMS 32AF: -Applicable Type; S, H, HI -Frame size; 32 AF -Number of poles; 3 -Rated operational voltage (Ue); Up to 690V -Rated frequency; 50/60Hz -Rated insulation voltage (Ui); AC 690V -Rated impulse withstand voltage (Uimp); 6kV -Utilization category; A -Method of operation; Manual -Temperature compensation (jÉ); -5~ +40 -Rated current (Ie); 0.1~ 32A (16 steps) -Rated ultimate short-circuit breaking capacity; i) 32S 32A: 220V-30kA, 415V-15kA, 460V-6kA, 525V-5kA, 690V-3kA ii) 32H/HI 32A: 220V-100kA, 415V-50kA, 460V-20kA, 525V-10kA, 690V-4kA - Rated service short-circuit breaking capacity; i) 32S 32A: 220V-22kA, 415V-11kA, 460V-4kA, 525V-4kA, 690V-3kA ii) 32H/HI 32A: 220V-100kA, 415V-38kA, 460V-15kA, 525V-8kA, 690V-4kA -Type of tripping device; Thermal and magnetic -Instantaneous releases; Magnetic B. MMS 63AF: -Applicable Type; S, H, HI -Frame size; 63 AF -Number of poles; 3 -Rated operational voltage (Ue); Up to 690V -Rated frequency; 50/60Hz -Rated insulation voltage (Ui); AC 690V -Rated impulse withstand voltage (Uimp); 8kV -Utilization category; A -Method of operation; Manual -Temperature compensation (jÉ); -5~ +40 -Rated current (Ie);