

LR Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the LR Type Approval System.

This certificate is issued to:

PRODUCER

Hyundai Heavy Industries Co., Ltd

PLACE OF PRODUCTION

Electro Electric Systems
1, Cheonha-Dong, Dong-Ku, Ulsan
Republic of Korea

DESCRIPTION

Low Voltage Air Circuit Breakers

TYPE

HiAN08, HiAN16, HiAN20, HiAN25, HiAN32

APPLICATION

Protection and switching of generator and distribution circuits

DESIGN CODE STANDARD

IEC 60947-2; 2001-11
CISPR11, IEC61000-4 - 2, 3, 4, 5

RATINGS

Alternating Current

Type	Current rating at 45°C (A)	Rated voltage (V)	Breaking current (r.m.s.) I _{cu} =I _{cs} (kA)	Making current (peak asymmetric) I _{cm} (kA)	Power factor	Overcurrent release
HiAN08	800	500	70	154	0.19	Electronic Over-current Protection
HiAN16	1600	500	70	154	0.19	
HiAN20	2000	500	70	154	0.17	
HiAN25	2500	500	85	187	0.20	
HiAN32	3200	500	85	187	0.20	

Certificate No.

03/10035

Issue Date

6/6/2003

Expiry Date

5/6/2008

Sheet

1 of 2



Y. Hara

Yokohama Plan Approval Services

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

The Design Appraisal Document No. 03/10035 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	03/10035
Issue Date	6/6/2003
Expiry Date	5/6/2008
Sheet	2 of 2



Y. Hara
Yokohama Plan Approval Services

Part 1

Subject: Electrical Equipment (Not Environmentally Tested)

Product: Circuit Breakers (Part 1B)

Producer/Licence No.	Description of Product						Cert. No.
	Type	Details of Approval				Application	
		Current Rating at 45°C(A)	Rated voltage (V)	Breaking capacity Icu=Ics (kA)	Making capacity Icm (kA)	Power factor	
Hyundai Heavy Industries Co., Ltd Electro Electric Systems 1, Cheonha-Dong, Dong-Ku, Ulsan Republic of Korea	Low Voltage Air Circuit Breakers						Expires: 5 June 2008
	Type:						Design code & Standards : IEC 60947-2; 2001-11 CISPR11, IEC61000-4 - 2, 3, 4, 5
	HiAN08	800	500	70	154	0.19	
	HiAN16	1600	500	70	154	0.19	Overcurrent release : Electronic Over-current Protection
	HiAN20	2000	500	70	154	0.17	
	HiAN25	2500	500	85	187	0.20	
	HiAN32	3200	500	85	187	0.20	

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DESIGN APPRAISAL DOCUMENT

Date	6 June 2003	Quote this reference on all future communications
		YPA/T/YHA/26667 (E03-21)

LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 1996
Issued to: **HYUNDAI HEAVY INDUSTRIES CO., LTD**
for: **LOW VOLTAGE AIR CIRCUIT BREAKERS - TYPE;**
H1AN08, H1AN16, H1AN20, H1AN25, H1AN32
TYPE APPROVAL CERTIFICATE No. 03/10035

The undernoted documents have been reviewed for compliance with the requirements of Lloyd's Register's Type Approval System, 1996 and this Design Appraisal Document is a supplement to the Certificate.

APPROVAL DOCUMENTATION

Request Form
Manufacturer's Specification
15 July 2002

TEST REPORTS

CESI Test Report No. MP-A2/017341	19 November 2002	
CESI Test Report No. MP-A2/017343	20 November 2002	
CESI Test Report No. MP-A2/032343	28 October 2002	
CESI Test Report No. MP-A2/032267	28 October 2002	
CESI Test Report No. MP-A2/032161	25 October 2002	
KTI Electromagnetic Compatibility Test Report No. KT102EV11001		23 November 2002

Supplementary Type Approval Terms and Conditions

LR 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.

LR Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules of Lloyd's Register of Shipping are complied with.

This LR Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations of Lloyd's Register of Shipping.

Lloyd's Register of Shipping reserves the right to cancel or withdraw this LR Type Approval Certificate in accordance with the LR Type Approval System Procedure.



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