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## CERTIFICATE OF CONFORMITY

08/EK9/1/22871805-1001-0003, Rev.1

**TO:**  
**IEC 61822:2009 (UNE-EN 61822:2011)**  
**AENA PPT/002-15/13**  
**ICAO Doc 9157 Part 5, 2<sup>nd</sup> Edition**  
**FAA 150/5345-10H**

**Products:**

IGBT Sine Wave Constant Current Regulator (2.5 kVA to 30 kVA)

**Manufactured by:**

Airsafe Airport Equipment Co., Ltd

**Applications:**

CCR-I

**We hereby certify:**

That we conducted an inspection, review and documental study of the characteristics of the above mentioned equipment based on the reports of tests carried by the laboratories:

**SQI - Shanghai Institute of Quality Inspection and Technical Research,**

as Certified National Certification Body who carried out testing according to the IECEE CB Scheme for the Scope as listed in the relevant part of the IECEE Web Site at [www.iecee.org](http://www.iecee.org).

On the base of all the foregoing, and in view of the results obtained on the test of the IGBT sine wave constant current regulator Model CCR-I-2-300-380A, CCR-I-2-300-380A, CCR-I-2-050-380A and CCR-I-025-380A; we confirm that: the IGBT sine wave constant current regulator, model **CCR-I** above referenced, manufactured by Airsafe Airport Equipment Co.Ltd., designed for airfield indicator applications,

**FULFIL SATISFACTORILY**

the demands and requirements of the above mentioned standards and of technical provisions of AENA referred in the present document, and specifically the specification of the IEC 61822:



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Test	CCR-I / IEC 61822	Result
	Type Test	It fulfils
Visual inspection	7.1	Satisfactory
Safety		
Verification of protection by enclosures	7.2.1	Satisfactory
Verification of clearances and creepage distances	7.2.2	
Power frequency	7.3.1	Satisfactory
BIL test for power transformer	7.3.2	Satisfactory
Enclosure temperature	7.4	Satisfactory
Open circuit	7.5.1	Satisfactory
Over current	7.5.2	Satisfactory
Operation	7.6	Satisfactory
Regulation (resistive load)	7.7.1.1	Satisfactory
Regulation (reactive load)	7.7.1.2	Satisfactory
Efficiency	7.7.2	Satisfactory
Power factor	7.7.3	Satisfactory
Output current surge limitation	7.7.4	Satisfactory
Dynamic response	7.7.5	Satisfactory
Power supply interruptions and voltage dips	7.7.6	Satisfactory
Mechanical option	7.7.7	Satisfactory
EMC		
Emission tests	7.7.8.1	Satisfactory
Output waveform	7.7.8.2	
Immunity tests	7.7.8.3	
Lightning arrestors	7.7.9	Satisfactory
Low temperature	7.8.1	Satisfactory
High temperature	7.8.2	Satisfactory



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As well as the requirements of both standard, the additional accessories required by AENA detailed below:

Test	CCR-I / IEC 61822	Result
	Type Test	It fulfils
Supervision / control system: Functions	5.3.9.1	Satisfactory
Wiring diagram	5.5.3	Satisfactory
Instruction manual	5.5.7	Satisfactory
Earth fault detection	5.7.1	Satisfactory
Load indicator	5.7.2	Satisfactory
Lamp fault detection	5.7.3	Satisfactory

This certification remains valid for 5 years if no significant changes are made to the products.

And for the record for the appropriate purposes we issue and sign this Certification in Barcelona, on October 31 of 2024.

Location	Date	Name	Signature
Barcelona (Spain)	October 31 <sup>th</sup> , 2024	Laura Arcas (Technical Inspector)	
<i>Registration code.</i> <b>08/X29/1/10552361-1001-1 Revision 0, date March 24, 2021</b>			
<i>Registration code.</i> <b>08/EK9/1/22871805-1001-0003 Revision 0, date October 07, 2024</b>			
<i>Registration code.</i> <b>08/EK9/1/22871805-1001-0003 Revision 1, date October 31, 2024</b>			



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## ANNEXES :

- *Certificate of Acceptance SQI*, reference TL259, date 2018/04/11, by IECEE (1 page)
- *Datasheet of IGBT Sine wave constant current regulator*, reference CCR-I, by AIRSAFE (4 pages)
- *Test Report Constant Current Regulator*, Type CCR-I-2-300-380A 30kVA, report number W02104150008E, date 2021/02/04, , by SQI (13 pages)
- *Test Report IGBT Constant Current Regulator*, Type CCR-I-2-300-380A 30kVA, report number W02394230036E, date 2024/01/08, , by SQI (115 pages)
- *Test Report Constant Current Regulator*, Type CCR-I-2-300-380A 30kVA, report number W02494230021E, date 2024/04/02, , by SQI (12 pages)
- *Test Report IGBT Constant Current Regulator*, Type CCR-I-2-025-380A 2.5kVA, report number W02394230233E, date 2024/04/07, , by SQI (36 pages)
- *Test Report Constant Current Regulator*, Type CCR-I-2-050-380A 5kVA, report number W02494230022E, date 2024/04/02, by SQI (8 pages)