

TEST REPORT

Model	E-248
Manufacture by	AQUA
Test Category	Factory test

DIRECTIONS

Product: Cascade Swimming Pool Isolation Transformer **Place of Testing:** Aqua Quality Control Center

ELECTRICAL VERIFICATION

Parameter	Requirement	Result
Input Voltage	220–240 V AC	Pass
Frequency	50/60 Hz	Pass
Output Voltage	12/14/16 V AC	Pass
Power	480 W	Pass
IP Rating	IP64	Pass
Insulation Class	Class II	Pass
Dielectric Strength	No Breakdown	Pass
Insulation Resistance	>100 MΩ	Pass
Temperature Rise	Within IEC limits	Pass
Output Stability	Stable	Pass
CE Marking	Verified	Pass

TEST RESULTS

Sl. No.	Test Item	Test Method / Standard	Acceptance Criteria	Result
1	Visual Inspection	Factory Inspection	No physical damage, correct assembly, proper finish	Pass
2	Nameplate Verification	Approved Drawing	Correct model, voltage, frequency, power, IP rating	Pass
3	Dimensional Inspection	Approved Drawing	Within manufacturing tolerance	Pass
4	Input Voltage Verification	IEC 61558-1	220–240 V AC, 50/60 Hz	Pass
5	Output Voltage Test	IEC 61558-1	12/14/16 V AC within $\pm 5\%$	Pass
6	Output Current Test	IEC 61558-1	Rated current achieved	Pass
7	Rated Power Verification	IEC 61558-1	Rated output confirmed	Pass
8	No-Load Voltage Test	IEC 61558-1	Within specified tolerance	Pass
9	Load Test	IEC 61558-1	Stable output under rated load	Pass
10	Temperature Rise Test	IEC 61558-1	Within permissible limit	Pass
11	Dielectric Withstand (Hi-Pot) Test	IEC 61558-1	No breakdown or flashover	Pass
12	Insulation Resistance Test	IEC 61558-1	Greater than specified minimum	Pass
13	Leakage Current Test	IEC 61558-1	Within safety limit	Pass
14	Earth Continuity Test (if applicable)	IEC 61558-1	Within specified limit	Pass
15	Winding Resistance Test	Factory Procedure	Within design tolerance	Pass
16	Polarity & Terminal Identification	Factory Inspection	Correct terminal marking	Pass
17	Short Circuit / Overload Protection	IEC 61558-1	Protection verified	Pass
18	Mechanical Strength Test	IEC 61558-1	No deformation or damage	Pass
19	Cable Pull Test	IEC 61558-1	Cable entry secure	Pass
20	Terminal Tightness Check	Factory Inspection	All terminals tightened	Pass

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Sl. No.	Test Item	Test Method / Standard	Acceptance Criteria	Result
21	Functional Operation Test	Factory Procedure	Normal operation on all taps	Pass
22	Ingress Protection (IP64) Test	IEC 60529	Dust-tight against harmful ingress and splash water protection (IP64)	Pass
23	Marking & Label Verification	IEC 61558-1	Labels durable and legible	Pass
24	Final Quality Inspection	Factory Procedure	Ready for dispatch	Pass

APPLICABLE STANDARDS

- IEC 61558-1 – Safety of Power Transformers
- IEC 60529 – Degrees of Protection (IP Code)
- CE Requirements

Conclusion: The Cascade Swimming Pool Isolation Transformer model E-245 successfully met the manufacturer's published performance characteristics during factory testing and passed all applicable performance checks.

Result: **PASS.**

Authorized Signature and Company Stamp

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