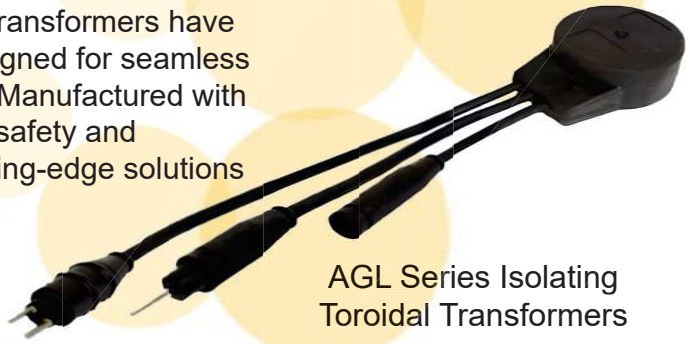
ALS Toroidal AGL Series Isolating Transformers

AGL transformers for series circuits are vital for the reliable operation of airfield ground lighting systems, including FAA obstruction lighting and FAA LED lighting, ensuring consistent power transmission for runways and taxiways. Engineered to meet international standards, they offer exceptional durability and performance in al weather conditions. With excellent insulation and thermal management, these transformers have a long lifespan and require minimal maintenance. Designed for seamless integration, they simplify upgrades and replacements. Manufactured with eco-friendly materials, our AGL transformers prioritize safety and sustainability. Committed to innovation, we deliver cutting-edge solutions that enhance airfield safety and efficiency globally.



AGL Series Isolating Toroidal Transformers

Mechanical

- Core: Toroidal Shape of high-grade, grain-oriented silicon steel for long, stable life, ideal for applications in FAA obstruction lighting and FAA LED lighting systems.
- Encapsulant: TPR rubber (also known as TPV, TPE) Much higher dielectric strength and lower water absorption than older materials, such as epoxy, neoprene or polychloroprene, Minimal, swelling in the presence of hydrocarbons, unlike neoprene, polychloroprene, etc.
- Encapsulation Process: Injection molding for maximum consistency of encapsulation, yielding exceptionally low leakage currents. A far superior process to compression or transfer molding or pouring.
- Winding: Highly conductive super enameled copper wire on polyester film insulated core, primary and secondary windings wounds on the half-half portion of the core with adequate distance between them for maximum safety in FAA lighting applications.
- Connector Pins and Sockets: Copper/Brass, tin/nickel plated for corrosion resistance and excellent electrical power transmission, essential for reliable operation in FAA obstruction lighting and FAA LED lighting systems.
- Primary Cables: Cable is AWG #8 (or 8.3 mm²) TPR for maximum reliability, 0.6 meter (24”) with FAA Style 2 and FAA Style 9 connectors.
- Secondary Cables: Cable is AWG12/14 (or 2.5 mm²), 1.2 meters (48”) with FAA L823 (standard) Style 8 or Style 7 connector.
- Material Compatibility: Transformer body, cables and connectors are all molded of TPR for perfect bonding, ensuring long-lasting performance in FAA lighting systems.
- Water Proof: Transformers are designed and manufactured to operate submerged in water indefinitely, making them ideal for various environmental conditions, including those encountered in airfield ground lighting applications.

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Electrical

Insulation Level:

- Primary 5000V RMS; Secondary 600V RMS

Insulation Resistance:

- Minimum 7500 Megohms/ 2500 Megohms (tested hot with 15/ 5 KV DC).
- Typical 50,000 Megohms.
- This is much higher than that required by FAA standards, ensuring safety in FAA obstruction lighting and FAA LED lighting applications.

Open Circuit Voltage:

- Less than three times the full load RMS value in all cases, generally much lower, when tested with sine waves.
- Efficiencies: 10-25W – min. 70%, 45—500W – min. 80% to 95% depending on the power rating.
- Power Factor: > 0.96 for all.
- Ratio: Flat response load curves for constant lamp brilliancy and long life, critical for consistent performance in FAA lighting systems.

Testing:

- All units (100%) are High Voltage tested and their ratio confirmed.
- All ratio testing done with the appropriate frequency, 50 Hz or 60 Hz, for precision; no “conversion factor” used.

Environmental

Operating Temperature Range: -55º C to +65º C, ensuring reliable performance in diverse conditions, including FAA obstruction lighting and FAA LED lighting applications.

Contaminant Resistance: Suitable for areas contaminated with most oils, aircraft fuels, soil acids and alkalis and de – icing fluids; resistant to UV exposure and ozone, making it ideal for harsh environments often encountered in airfield settings.

Approvals/Conformances/Certification: Accepted in most countries, Formal approvals with FAA and ICAO. Also complies with IEC (a specification being prepared by TC 97) & IS-12290-1987, ensuring adherence to international standards for safety in FAA lighting systems.

Installation Options: All types, including above ground, in concrete or other non-metallic pits, in metal cans or direct buried, providing versatility for various installation requirements in airfield ground lighting.

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Electrical Characteristics

FAA Type	Wattage	Primary Amps	Power Factor	Min Efficiency %	Secondary Full Load Amperes	Secondary Short Circuited Amperes	Load Ohms	Secondary Maximum Open Circuit Voltage – RMS	Catalogue No. with Earthing and Low Inductance
L-831-16	10/15	6.6A	0.95	70	6.53 - 6.67	6.6 - 7.1	0.34	8.0	BE015661.E.L
L-831-17	20/25	6.6A	0.95	70	6.53 - 6.67	6.6 - 7.1	0.57	8.0	BE0256622.E.L.
L-831-1	30/45	6.6A	0.95	80	6.53 - 6.67	6.6 - 7.1	1.15	25.0	BE045665.E.L.
L-831-3	65	6.6A	0.95	80	6.53 - 6.67	6.6 - 7.1	1.60	30.0	BE0656617.E.L.
L-831-4	100	6.6A	0.95	85	6.53 - 6.67	6.6 - 7.1	2.44	30.0	BE100667.E.L.
L-831-18	150	6.6A	0.95	85	6.53 - 6.67	6.6 - 7.1	3.58	70.0	BE150669.E.L.
L-831-6	200	6.6A	0.95	90	6.53 - 6.67	6.6 - 7.1	4.82	100.0	BE2006612.E.L.
L-831-10	300	6.6A	0.95	90	6.53 - 6.67	6.6 - 7.1	8.25	135.0	BE3006614.E.L.
L-831-31-14	500	6.6A	0.95	90	6.53 - 6.67	6.6 - 7.1	12.0	230.0	BE5006620.E.L.

- 12A and 20A and non-earthed types available on request.

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Non Electrical Visual Aids & Safety



Cable, Lamps, Spares, Test Equipment



LED Lighting, CCR's, Signs, Transformers, Tools



AGL Training Courses

Classified copy no. under documentation control

Restricted document not to be disclosed outside the company

REV.	ISSUE	DATE	DESCRIPTION	DRN.	ENGG.	PROD.	Q.A.

ALL DIMENSION ARE IN MM | DO NOT SCALE DRAWING | IF IN DOUBT ASK

Dimension of IT'S

WATTAGE	D mm	L mm	H mm	WEIGHT Kg.
15W/45W	105	132	55	1.75
65W/100W	122	158	63	2.90
150W/200W	145	187	67	4.20
300W	145	187	67	4.50

TITLE:

ALS ISOLATING TRANSFORMER

SCALE

PART NO.: **BE/IT/04**

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Airfield Lighting Systems UK Ltd
www.airfieldlightingsystems.com