AGL TRANSFORMERS FOR SERIES CIRCUITS

Mechanical

Core: Toroidal Shape of high-grade, grain-oriented silicon steel for long, stable life.

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 & secondary windings wounds on the half-half portion of the core with adequate distance between them for maximum safety.

Connector Pins and Sockets: Copper/Brass, tin/nickel plated for corrosion resistance and excellent electrical power transmission.

Primary Cables: Cable is AWG #8 (or 8.3 mm^2) 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 mm^2), 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.

Water Proof: Transformers are designed and manufactured to operate submerged in water indefinitely

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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.
- Much higher than that required by FAA.

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.

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.

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.
Approvals/Conformances/Certification: Accepted in most countries, Formal approvals with FAA, Indian Air force, Airports Authority of India, etc. Also complies with ICAO and with IEC (a specification being prepared by TC 97) & IS-12290-1987.
Installation Options: All types, including above ground, in concrete or other non-metallic pits, in metal cans or direct buried.

Electrical Characteristics

Type	Wattage (Watts)	Primary Amps.	Min. Power Factor	Min. Efficiency (Percent)	Secondary Full Load Amperes	Secondary Short Circuited Amperes	Load Ohms	Secondary Maximum Open Circuit Voltage – RMS	Bildal Catalogue No. Without Earthing
L-831-1	30/45	6.6	0.95	80	6.53 – 6.67	6.6 – 7.1	1.15	25	BE045665
L-831-2	30/45	20.0	0.95	80	6.53 – 6.67	6.6 – 7.1	1.15	25	BE045204
L-831-3	65	6.6	0.95	80	6.53 – 6.67	6.6 – 7.1	1.60	30	BE0656621
L-831-4	100	6.6	0.95	85	6.53 – 6.67	6.6 – 7.1	2.44	70	BE100667
L-831-5	100	20.0	0.95	85	6.53 – 6.67	6.6 – 7.1	2.44	70	BE100668
L-831-6	200	6.6	0.95	90	6.53 – 6.67	6.6 – 7.1	4.82	100	BE2006612
L-831-7	200	20.0	0.95	90	6.53 – 6.67	6.6 – 7.1	4.82	100	BE2002013
L-831-10	300	6.6	0.95	90	6.53 – 6.67	6.6 – 7.1	8.25	135	BE3006614
L-831-11	300	20.0	0.95	90	6.53 – 6.67	6.6 – 7.1	8.25	135	BE3002015
L-831-16	10/15	6.6	0.95	70	6.53 – 6.67	6.6 – 7.1	0.34	8.0	BE015661
L-831-17	20/25	6.6	0.95	70	6.53 – 6.67	6.6 – 7.1	0.57	8.0	BE0256622
L-831-18	150	6.6	0.95	85	6.53 – 6.67	6.6 – 7.1	3.58	70	BE150669
L-831-19	150	20.0	0.95	85	6.53 – 6.67	6.6 – 7.1	3.58	70	BE1502010
305A/143	45	8.3	0.95	85	6.53 – 6.67	6.6 – 6.95	1.15	13.6	BE045833
305A/142	65	8.3	0.95	85	6.53 – 6.67	6.6 – 6.95	1.60	19.6	BE065836
305A/141	200	8.3	0.95	90	6.53 – 6.67	6.6 – 6.95	4.82	60.8	BE2008311
	15	20	0.95	70	6.53 – 6.67	6.6 – 7.1	0.34	8.0	BE015202

NOTE:

With Earthing

'BILDAL' can also supply transformers with Earthing on Secondary Side, if Earthing is required. Please order using Suffix 'E' with 'BILDAL' Catalogue No. like BE04665.E.

With Low Leakage Inductance (For Electronic Lamp Control System)

For ordering low leakage Inductance Transformer, must suffix 'L' with Bildal Catalogue No. like BE 45665.L.

With Earthing & Low Leakage Inductnce

For ordering transformers with earthing & low Leakage inductance, Please suffix ‘E’ & ‘L’ after Bildal Catalogue No. like BE 45665.E.L.

Quality Control

‘BILDAL’ has complete in house facility to test incoming materials which go in the manufacture of the Isolating Transformers. In process quality control is supervised by highly qualified and experienced engineering staff. Each and every Isolating Transformer leaving the factory is thoroughly tested for routine and type tests.

Performance

Thousands of ‘Bildal’ make Isolating Transformers are satisfactorily working in the field for years.