

Series Circuit Toroidal Isolating Transformers



Series circuit airfield lighting toroidal isolating transformers

Features

Isolation transformers are used to supply the current in the AGL circuit and to provide a separation point between the primary and secondary circuits.

This series of toroidal transformer has a special design offering very low leakage inductance on top of the common features, which support single lamp control and more advanced control and monitoring requirements. This series of transformers are the most energy efficient transformer in the market due to toroidal core and low leakage design. Transformers are certified by FAA and approved by IEC. They also comply with ICAO Annex 14 and several other national standards.

The transformers can be supplied with or without earthing. The earthing is connected to the end of the secondary winding in the side of the larger socket. This means that the thicker pin is grounded to the secondary side.

Compliant to Latest International Standards

- ▶ ICAO Aerodromes - Annex 14
- ▶ FAA AC150/5345-47 L-830 / L-831, 60 Hz / 50 Hz
- ▶ EN61823

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Primary Leads

- The transformers have two primary leads with the standard length of 0.6 m and a cross section of 6 mm²
- One of the leads is with a FAA L-823, Style 2 Plug
- The other lead is with a FAA L-823, Style 9 Receptacle

Secondary Leads

- The transformers have one secondary lead with the standard length of 1.2 m and a cross section of 2.5 mm²
- The secondary cable is rated to 600 V
- The secondary lead is with a FAA Style 8 Receptacle

Pins and Sockets

All contact parts are tin-plated brass and in addition, the sockets are supplied with a copper beryllium sleeve-type spring to ensure an adequate contact pressure

Testing

In addition to stringent physical and electrical tests and inspections at all stages of manufacture, every transformer, with its primary and secondary leads, is immersed in water while hot and allowed to cool and soak for 12 hours.

Range

A full range of transformers is available from 10 watts to 500 watts rated at 6.6A/6.6A. Other current capacities are available upon request.

In addition to the standard 6.6/6.6 A series isolation transformers, customized transformers with special ratings, based on different project specifications, e.g. 6.6/2.2 A, 2.2/2.2 A, along with other ratings case by case can be supplied.

Transformers can also be manufactured with different cable lengths and with different connectors, e.g. FAA Style 7 connectors for the secondary side.

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Electrical Information

Type with Earthing	Type without Earthing	FAA Type	Rated Power [W]	Rated Current [A]	Power Range [W]	Load [Ω]	Efficiency [%]	Power Factor
KR621	KR621.1	L-830-16 L-831-16	10/15	6.6/6.6	10-15	0.34*	> 70	> 0.97
KR625	KR625.1	L-830-17 L-831-17	20/25	6.6/6.6	20-25	0.57*	> 70	> 0.97
KR631	KR631.1	L-830-1 L-831-1	30/45	6.6/6.6	25-60	0.57- 1.38	> 85	> 0.97
KR636	KR636.1	L-830-3 L-831-3	65	6.6/6.6	50-85	1.15- 1.95	> 85	> 0.97
KR641	KR641.1	L-830-4 L-831-4	100	6.6/6.6	80-125	1.84- 2.87	> 85	> 0.97
KR646	KR646.1	L-830-18 L-831-18	150	6.6/6.6	120-178	2.75- 4.13	> 90	> 0.97
KR651	KR651.1	L-830-6 L-831-6	200	6.6/6.6	160-230	3.67- 5.28	> 90	> 0.97
KR661	KR661.1	L-830-10 L-831-10	300	6.6/6.6	220-338	5.05- 8.25	> 90	> 0.97
KR681	KR681.1	L-830-14 L-831-14	500	6.6/6.6	400-523	12.00*	> 90	> 0.97

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Dimensions & Weights

Type		D [mm]	L [mm]	H [mm]	Weight [kg]
KR621	KR621.1	89	115	45	1.03
KR625	KR625.1	89	115	45	1.03
KR631	KR631.1	105	128	57	1.6
KR636	KR636.1	120	145	54	1.9
KR641	KR641.1	130	155	59	2.4
KR646	KR646.1	146	192	60	3.10
KR651	KR651.1	146	192	65	3.30
KR661	KR661.1	146	192	77	4.00
KR681	KR681.1	146	192	96	5.33

Accessories

Transformer mounting bracket

The main failure of an AGL circuit over time, will more than likely be water ingress through any cable joints. Although we can use many different joints that all help prevent ingress, it is commonly known that water will eventually breakdown the barrier.

Not only does the bracket allow for the transformers to be kept out of standing water it also assists in the identification from other transformers that may be collocated. All this helps to reduce the time spent fault finding, the ingress of water, and safety where multiple circuits are fed from one pit.



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