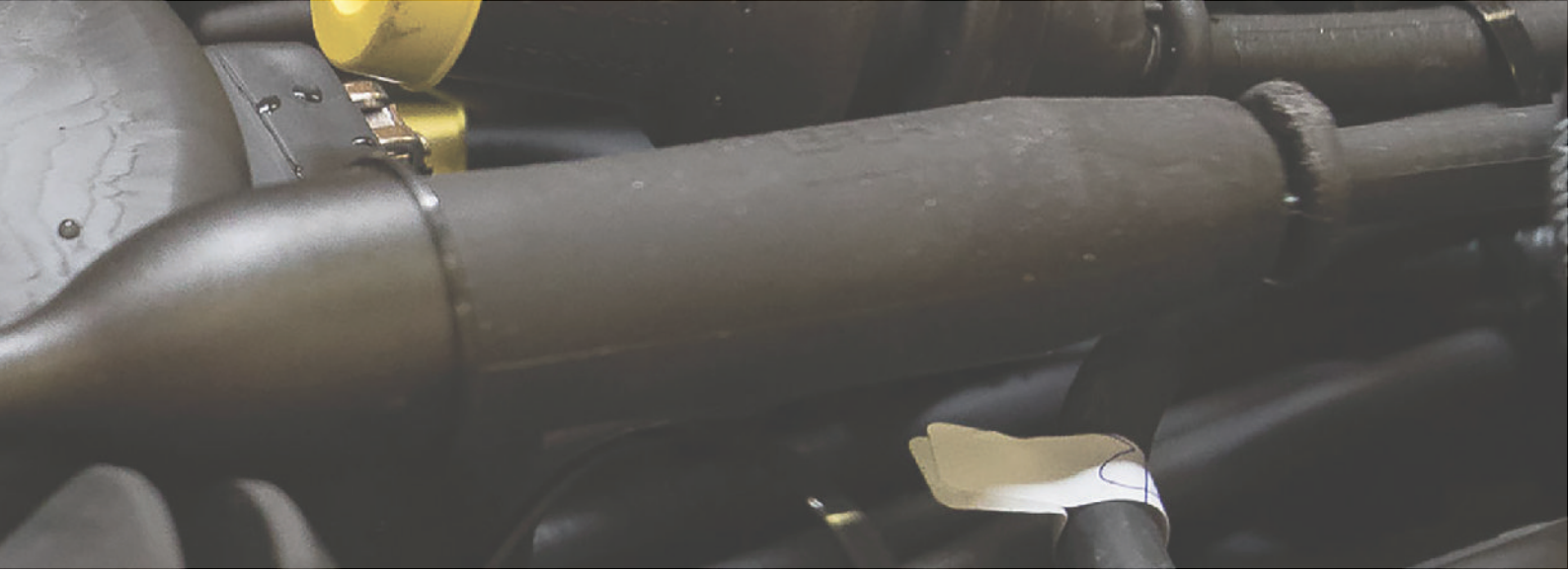
KR600 - Low-leakage transformers to series circuit

FAA AC 5345-47, L-830 / L-831, 60 Hz / 50 Hz
EN 61823

KR600 is used to supply the current in the AGL series circuit and to provide a separation point between the primary and secondary circuits. Thermoplastic elastomer(TPE) encapsulated KR600 series transformers are designed in toroidal shape, which provides superior electrical performance. Toroidal is symmetric “donut” shape which ensure lowest leakage inductance on top of the common features, which support single lamp control and more advanced control and monitoring requirements. KR600 is the most energy efficient transformer in the market. Transformers are certified by FAA and approved by IEC. They also comply with ICAO Annex 14 and several other national standards (MAK, CAAC)

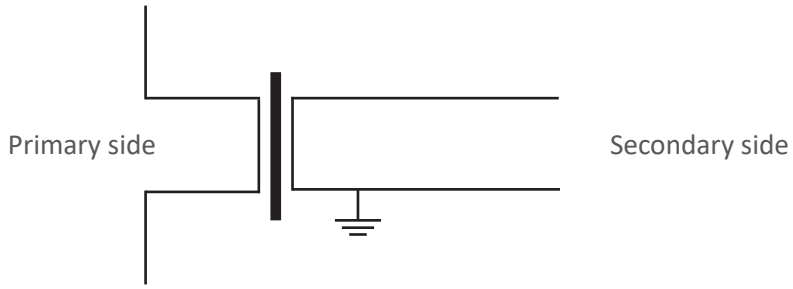
Electrical characteristics

- Rated power 10 - 500 W
- Rated current 6.6 A/6.6 A , other currents upon request
- Rated Voltage 5000V/600V
- Power factor > 0,97
- L (leak) 20µH - 130 µH
- L (magn) 13.0mH - 64 mH



KR600 with or without earthing (grounding)

EFLA supplies transformers 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.



Electrical information

EFLA Type with Earthing	EFLA 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		500	6.6/6.6	400-523	12.00*	> 90	> 0.97

* According to FAA AC 150/5345-47

Leakage inductances

EFLA Type with Earthing	EFLA Type without Earthing	Power [W]	Short Circuited voltage [V]	L (magn) [mH]	L (leak) [mH]
KR621	KR621.1	10/15	< 6.7	13.0	< 0.02
KR625	KR625.1	20/25	< 6.7	13.0	< 0.02
KR631	KR631.1	30/45	< 6.7	16.0	< 0.03
KR636	KR636.1	65	< 6.7	19.0	< 0.04
KR641	KR641.1	100	< 6.7	14.0	< 0.04
KR646	KR646.1	150	< 6.7	24.0	< 0.06
KR651	KR651.1	200	< 6.7	25.0	< 0.06
KR661	KR661.1	300	< 6.7	35.0	< 0.1
KR681	KR681.1	500	< 6.7	64.0	< 0.13

Customized transformers

On the top of our standard 6.6/6.6 A series isolation transformers, EFLA also delivers customized transformers with e.g. special ratings based on different project specifications, e.g. 6.6/2.2 A, 2.2/2.2 A, and other ratings case by case.

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

Dimensions

	EFLA 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	100	125	55	1.6
KR636	KR636.1	126	168	56	1.9
KR641	KR641.1	147	193	54	3.0
KR646	KR646.1	147	193	60	3.12
KR651	KR651.1	147	193	64	3.37
KR661	KR661.1	147	193	73	4.17
KR681	KR681.1	147	193	95	5.33

Materials and connections

- Thermoplastic elastomer (TPE) is a modern material with excellent electrical and mechanical properties and good chemical resistance to the chemicals typically used at airfields. TPE also has very good resistance to weathering, its insulation withstanding UV-radiation and ozone exposure. The material is also resistant to temperature effects (up to 135 °C, 275 °F).
- Tin-plated copper or brass for the contact parts, while the socket is supplied with a copper beryllium sleeve-type spring, ensuring adequate contact pressure.
- Primary leads 6 mm² with the standard length of 0.6 m with a FAA L-823, Style 2 Plug & Style 9 Receptacle
- Secondary leads 2.5 mm² with the standard length of 1,2m with a FAA Style 8 Receptacle

Accessories for transformers

Transformer hanger - TS1

STAINLESS STEEL AISI316 hanger to place transformers in good order and away from water and dirt in underground pit holes. There are two ways to install hanger; either by screwing it on the wall or hanging it on rail.