



JETDiV

A new power supplies generation
for UAVs of different applications

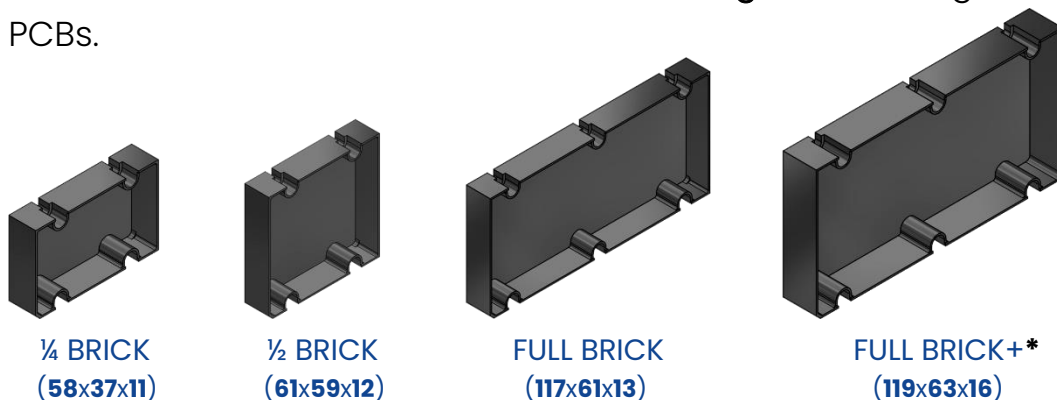
Unmanned aerial vehicle (UAV) technologies are currently in high demand and are attracting the attention of a large community of practitioners and scientists in almost all technical fields of human activity. This is mainly due to mankind's emergence from water to land (in the past) and the rapid development of the airspace above the surface of the earth and near space.

Factors that greatly contribute to this direction of technological progress are the development of new areas of microelectronics – the emergence of gallium-nitride semiconductor structures, graphene structures, the high thermal conductivity of new materials and, most importantly, the unusually rapid development of artificial intelligence (AI).

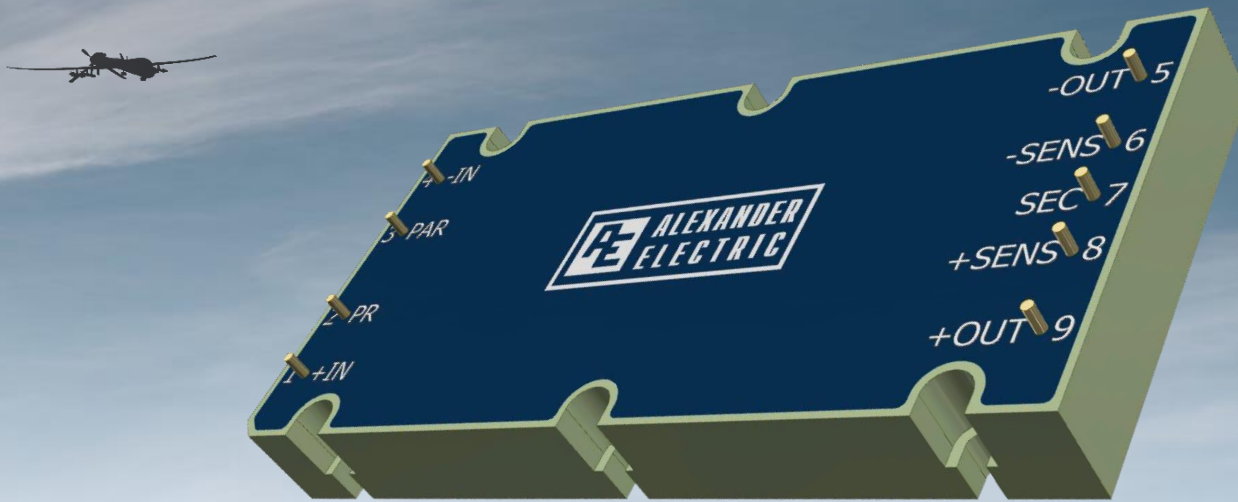
UAVs have already made significant progress toward *microminiaturization*. According to various sources in the military field, terms such as swarm attack have emerged. Onboard power systems for UAVs with miniaturization of radio electronics have become even more complex and generally contain:

- An onboard power generator (electric machine generator, solar panels, earth or sea surface power delivery devices)
- Power backup devices (various types of batteries, such as lithium batteries) and power converters from the primary power bus to a wide variety of consumers (various space position sensors, temperature sensors, gyroscopes, doppler altimeters, GPS receivers and transmitters, aircraft control devices, targeting devices, launching devices, landing control devices and a large number of microprocessor technology)

Due to custom development of power supply modules meeting requirements of all above-mentioned power consumers in UAVs, **ALEXANDER ELECTRIC** has made a **unified** power units series called **JETDiV**, which comes in ultra-low profile **shock- and vibro-resistance cases** with **reinforced mounting holes**, designed for use on hardware PCBs.



*A unit up to 2kW is being developed for this case size



- High voltage input mains: AC150, AC270, DC 300-800 V
- Output voltage variants from 5 VDC to 400 VDC
- Brick form-factors with open-slot mounting holes
- Wide case operating temperature range -60°C ... +110°C

Our products also have single-phase and three-phase voltage inputs with typical for the UAV. The end user has the possibility to transform the module into single-channel or dual-channel (galvanic isolated) version. You can find more details on our website www.aeps-group.com

Currently we have started placing datasheets for this type of products!

The table below shows basic parameters of this series.

Type of the unit	Maximum power when ordering, W	Dimensions, mm without flanges	Maximum output current, A	Power density, W/in ³	Number of outputs	Input DC 400 (300-800 V), surge 850 V	Input AC 150 (DC 82-200 V), surge 230 V	Input AC 270 (DC 155-400 V), surge 450 V	Isolation input-output, kV	Trimming	Parallel operation	MIL-STD-461 CE
JETDiV75	75	V1: 58x37x11 1/4 BRICK	15	53	1	•	•	•	=1.5	•		•
JETDiV150	150	V2: 61x59x12 1/2 BRICK	15	57	1	•	•	•	=1.5	•	•	•
JETDiV300	300	V3: 117x61x13 FULL BRICK	15	53	1	•	•	•	=1.5	•	•	•
JETDiV600	600	V4: 119x63x16 FULL BRICK+	15	82	1	•	•	•	=1.5	•	•	•



ALEXANDER ELECTRIC s.r.o.

AEPS-group located in the Czech Republic is an European developer and manufacturer of high-tech planar AC/DC and DC/DC power supply units, converters and custom systems of power from 10 to 10 000 Watts for reliable use in demanding applications and extreme harsh environment operating conditions.

aeps@aeps-group.cz

