

# Dynell<sup>®</sup>

The power league.

## DSF 045 – 180

Solid-State  
Ground Power Unit



Ground Support

[dynell.at](http://dynell.at)

# Solid-State GPU

Dynell is your competent partner for aviation ground support equipment. As a system integrator, efficiency, performance and reliability build the foundation of our products. A team of experts with a comprehensive industry knowledge and an innovative mindset is driven by market needs to generate ground-breaking ideas – we set the pace.

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## Solid-State GPU, DSF 045 – 180

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### Input

|                    |   |
|--------------------|---|
| Frequency          | 50 / 60 Hz $\pm$ 5 %  |
| Voltage            | 3 $\times$ 400 V $\pm$ 10 %, 3 $\times$ 480 V $\pm$ 10 %, other voltage levels on request |
| Power Factor       | 0,99 through PFC (power factor correction)  |
| Current distortion | < 4 %   |
| Inrush current     | None (< I nominal)  |

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### Output

|                           |   |
|---------------------------|---|
| Power                     | 45–180 kVA  |
| Voltage                   | 3 $\times$ 200 / 115 V  |
| Frequency                 | 400 Hz  |
| Efficiency                | > 94 %  |
| Load power factor         | 0,6 lagging / inductive to 0,95 leading / capacitive                      |
| Static voltage regulation | < 0,5 %   |
| Crest factor              | 1,414 $\pm$ 3 %   |
| Phase angle symmetry      | 120° $\pm$ 1° for balanced load<br>120° $\pm$ 2° for 30 % unbalanced load |
| Total harmonic content    | < 2 %   |

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### Protection

|                  |  |
|------------------|--|
| Protection class | IP55 Standard  |
| Input / Output   | Short circuit protection<br>Over and under voltage protection<br>Overload protection |
| General          | No break power transfer<br>Over-temperature protection                               |

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|                 |   |
|-----------------|---|
| <b>Overload</b> | 125 % for 10 min, 150 % for 1 min, 200 % for 30 sec., 300 % for 10 sec., 400 % for 1 sec. |
|-----------------|---|

**Ambient conditions**

|                       |   |
|-----------------------|---|
| Operating temperature | -30° C – +52° C (other temperatures on request) |
| Relative humidity     | Up to 95 %                                      |
| Noise level           | < 65 dB (A) at 1 m                              |

**Products**

|                     |  |
|---------------------|--|
| Mean-time to repair | < 10 min   |
| Materials           | Aluminium and PMMA for highest corrosion resistance - fully recyclable |
| Access              | Easy access for maintenance and repair                                 |

**Options**

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Remote control and monitoring         | 90 % interlock                        |
| TCP/IP modbus connection              | BMS integration                       |
| Military interlock                    | Neutral voltage supervision           |
| User management integrated in the HMI | Broken neutral supervision            |
| Leakage current supervision           | Protective isolation (DFS 400 - 4 kV) |

**Versions**

- Floor-mounted
- Bridge-mounted
- Mobile

**Connection Systems**

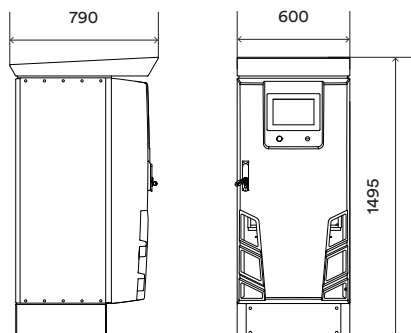
|                |                         |                |
|----------------|-------------------------|----------------|
| Cable Coil     | Floor-mounted           | Bridge-mounted |
| Pit Systems    | Hatch Pit               | Pop-up Pit     |
| Cable Carriers | for up to three outputs |                |

**Standards**

ISO 6858:2017 / EN2282 / BS 2G 219 / EN1915-1&2 / DFS 400 / MIL-STD-704F /  
SAE ARP 5015 / EN61000-6-4 / EN12312-20

**Weight**

DSF 090 ~ 250 kg



**Based on a balanced mix of knowledge, experience and innovation, we design, build, distribute and maintain aviation ground support and charging equipment. Our ground-breaking ideas generate the greatest possible customer value for future markets around the globe.**

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