

Dynell[®]

The power league.

Ground Support

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DSF 090 + DCF 090

Coil Systems

Combination of solid-state
ground power unit and cable coil



Coil Systems

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.

Solid-State GPU, DSF 090

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) |

Output

| | |
|---------------------------|----------------------------------------------------------------------|
| Power | 90 kVA |
| Voltage | 3 \times 200 / 115 V |
| Frequency | 400 Hz |
| Efficiency | > 94 % |
| Load power factor | 0,6 lagging to 0,95 leading |
| Static voltage regulation | < 0,5 % |
| Crest factor | 1,414 \pm 3 % |
| Phase angle symmetry | 120° \pm 1° for balanced load 120° \pm 2° for unbalanced load |
| Total harmonic content | < 2 % |

Protection

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

Overload

125 % for 10 min, 150 % for 1 min, 200 % for 30 sec., 300 % for 10 sec., 400 % for 1 sec.

Cable Coil, DCF 090

Cable Coil

| | |
|----------------------|----------------------------|
| Usable cable length | Up to 28 m |
| Coiling speed | Variable, Standard 0,4 m/s |
| 400 Hz cable entries | Top/ Back/ Bottom |
| Protection | IP55 (control panel) |

Variable Frequency Drive (VFD)

| | |
|--------------|---------------------------------------------------------------------------------------------|
| Voltage | 3 \times 400 V \pm 10 %, 3 \times 480 V \pm 10 % other voltage levels on request |
| Frequency | 50 / 60 Hz |
| Engine power | 350 W |

Cables

| | | |
|------------------|-----------------------------------------------------------------------------|----------------------------------|
| Spiral cable | Unique spiral cable to transfer the power from the fixed to the moving part | |
| 400 Hz cable | Flexible jet cable with up to 24 control wires, symmetrical construction | |
| 400 Hz connector | Push buttons | Start, Stop, Cable In, Cable Out |
| | Indications | 28 V, Pilot, Power |

Versions

| | |
|-------------------------|--------------------------|
| Floor-mounted (DCF 090) | Bridge-mounted (DCB 090) |
|-------------------------|--------------------------|

DSF 090 + DCF 090

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

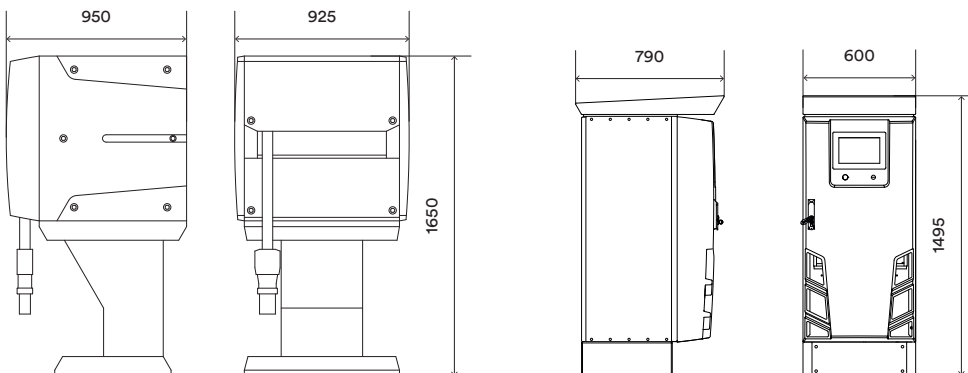
| | |
|---------------------|-----------------------------------------------------------------------------------------|
| Mean-time to repair | < 10 min |
| Materials | Stainless steel, PMMA and aluminium for highest corrosion resistance - fully recyclable |
| Mounting | Combined fitted to the PBB with mounting brackets |

Options

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

Standards

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



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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