

205 to 500 watts per cell

DOUGLAS SAFEGUARD[®] DSU

THE DOUGLAS SAFEGUARD UPS

product line of valve regulated, lead-acid batteries are designed to provide you with the most reliable power for high-rate uninterruptible power supply (UPS) requirements. Cutting-edge Valve-Regulated Technology minimizes the amount of gas generated, which allows for this product line to be used in cabinets and on racks. The DSU product was designed for a reduced footprint, provide maximum power and reduced maintenance costs.



DESIGN FEATURES:

- **Terminals.** All models of the Douglas DSU are supplied with brass insert receptacles allowing for easy installation and maximum conductivity.
- **Plates.** Positive and negative plate grids are made of lead-calcium-tin alloy allowing for consistent float voltages. The addition of tin in the grid alloy assures durability even in extensive cycle service.
- **AGM Separators.** High-performance low-resistance microporous glass fibers help facilitate gas diffusion and optimize acid absorption. Separator is designed for low internal resistance and high power density.
- **Safety Valve.** Every cell has its own safety valve that is designed to operate between 2 and 3 psi in the event of abusive operating conditions.
- **Container and cover.** All of the DSU product line are made of durable thick-walled polypropylene which imparts great resistance to shock and vibration. **Standard DSU container and cover** are flame retardant. (UL94-V0 / L.O.I. > 28%) Meets and exceeds UL 1778.
- **Electrolyte.** High purity sulfuric acid absorbed in the separator has 1.300 specific gravity. Sealed, non-spillable, easy to install and maintain.
- **Storage.** Special grid alloys assure a low self-discharge rate allowing the DSU product line to be stored for up to Six (6) months at 77°F/25°C before a freshening charge is required.
- **Long Service Life.** Design life of 10 years @ 77°F/25°C. (Full Float) or 5 years of dependable service life in cyclic UPS Applications, at 200 - 1000 charge/discharge cycles depending on depth of discharge.
- **Wide Operating Temperature Range.** Batteries may be discharged over a temperature range of -4°F (20°C) to 122°F (50°C)
- **Leak-Proof Design.** No special handling precautions or shipping containers are required due to the leak-proof design and are approved for shipping as non-hazardous, non-spillable per IATA Special Provision A67 and 49 CFR 171-189.



DOUGLAS SAFEGUARD[®]
DSU


DOUGLAS BATTERY
Connect with a leader

Performance Specifications

Discharge Rates in Watts/Cell @ 77°F (25°C) to 1.75 End VPC

| TYPE | Back-up Time in Minutes | | | | | | |
|-----------|-------------------------|-----|-----|-----|-----|-----|-----|
| | 5 | 10 | 15 | 20 | 30 | 40 | 60 |
| DSU12-205 | 364 | 247 | 190 | 155 | 114 | 83 | 66 |
| DSU12-300 | 499 | 342 | 265 | 222 | 168 | 123 | 98 |
| DSU12-350 | 568 | 400 | 313 | 259 | 195 | 144 | 115 |
| DSU12-400 | 642 | 457 | 356 | 294 | 220 | 162 | 129 |
| DSU12-500 | 769 | 590 | 474 | 394 | 300 | 221 | 176 |

Discharge Rates in Watts/Cell @ 77°F (25°C) to 1.67 End VPC

| TYPE | Back-up Time in Minutes | | | | | | |
|-----------|-------------------------|-----|-----|-----|-----|-----|-----|
| | 5 | 10 | 15 | 20 | 30 | 40 | 60 |
| DSU12-205 | 409 | 269 | 204 | 165 | 121 | 88 | 69 |
| DSU12-300 | 560 | 373 | 284 | 236 | 176 | 128 | 101 |
| DSU12-350 | 636 | 435 | 336 | 276 | 205 | 150 | 119 |
| DSU12-400 | 722 | 498 | 381 | 311 | 231 | 168 | 133 |
| DSU12-500 | 867 | 646 | 506 | 416 | 309 | 224 | 177 |

Discharge Rates in Watts/Cell @ 77°F (25°C) to 1.65 End VPC

| TYPE | Back-up Time in Minutes | | | | | | |
|-----------|-------------------------|-----|-----|-----|-----|-----|-----|
| | 5 | 10 | 15 | 20 | 30 | 40 | 60 |
| DSU12-205 | 417 | 273 | 204 | 167 | 122 | 88 | 69 |
| DSU12-300 | 571 | 378 | 284 | 238 | 177 | 128 | 102 |
| DSU12-350 | 650 | 441 | 336 | 278 | 207 | 151 | 119 |
| DSU12-400 | 738 | 505 | 381 | 314 | 233 | 169 | 134 |
| DSU12-500 | 890 | 655 | 510 | 419 | 309 | 224 | 177 |

Discharge Rates in Watts/Cell @ 77°F (25°C) to 1.60 End VPC

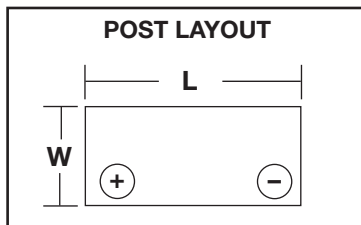
| TYPE | Back-up Time in Minutes | | | | | | |
|-----------|-------------------------|-----|-----|-----|-----|-----|-----|
| | 5 | 10 | 15 | 20 | 30 | 40 | 60 |
| DSU12-205 | 435 | 279 | 204 | 169 | 123 | 89 | 70 |
| DSU12-300 | 591 | 386 | 284 | 241 | 179 | 130 | 103 |
| DSU12-350 | 678 | 452 | 336 | 282 | 209 | 152 | 120 |
| DSU12-400 | 771 | 518 | 381 | 319 | 235 | 171 | 135 |
| DSU12-500 | 941 | 670 | 516 | 419 | 309 | 224 | 177 |

Product Specifications

| TYPE | NOMINAL VOLTAGE | WATTS/CELL @ 15min rate to 1.67 End VPC @ 77°F / 25°C | LENGTH | | WIDTH | | *OVERALL HEIGHT | | WEIGHT | | TERMINAL | TORQUE |
|-----------|-----------------|---|--------|-----|-------|-----|-----------------|-----|--------|------|----------|------------------|
| | | | Inch | mm | Inch | mm | Inch | mm | Lbs | Kg | size | lbf.in |
| DSU12-205 | 12 | 204 | 9.0 | 228 | 5.5 | 139 | 8.2 | 209 | 43.0 | 19.5 | 6mm** | 60 (6.8Nm +/-5%) |
| DSU12-300 | 12 | 284 | 10.3 | 261 | 6.9 | 175 | 8.3 | 210 | 60.0 | 27.2 | 6mm** | 60 (6.8Nm +/-5%) |
| DSU12-350 | 12 | 336 | 12 | 305 | 6.9 | 175 | 8.4 | 214 | 71.0 | 32.2 | 6mm** | 60 (6.8Nm +/-5%) |
| DSU12-400 | 12 | 381 | 13.4 | 341 | 6.8 | 173 | 8.5 | 215 | 80.0 | 36.3 | 6mm** | 60 (6.8Nm +/-5%) |
| DSU12-500 | 12 | 506 | 13.4 | 341 | 6.8 | 173 | 10.8 | 274 | 110.0 | 49.9 | 6mm** | 60 (6.8Nm +/-5%) |

*Height Includes Terminal

**Terminal is a Female Threaded Receptacle



| CHARGING |
|-----------------------------|
| FLOAT |
| 2.25-2.27 Vpc @ 77°F (25°C) |

Please note that when the ambient temperature deviates by more than 9°F the charge voltage will need to be compensated. Consult the Douglas DSU I/O Manual for required adjustments.

