

DVR2000E+

Digital Voltage Regulator

BLUE STAR
Power Systems Inc.

Advanced Features

- ▶ **CAN Bus Communication** - Allows for the integration of the DVR2000E+ as a node on a CAN Network for the purpose of controlling or monitoring regulator performance
- ▶ **True RMS Single and Three Phase Voltage Sensing** - Connect in the sensing mode required per the application. Sense 100 to 600 Volts $\pm 10\%$ at 50 or 60 Hz
- ▶ **True Three Phase Power Monitoring** - Additional CT inputs monitor current on all three phases if required
- ▶ **Generator Soft Start** - Controlled increase to rated voltage limits overshoot during voltage build-up in AVR regulation modes if required
- ▶ **Frame Specific PID Selection** - Regulator tuned to specific frame size and gain settings
- ▶ **Four Digit HMI Display** - Clearly displayed whether changing settings or monitoring regulator status
- ▶ **Expandable Platform** - Features include shunt power capability and RTD monitoring through expansion modules



Specifications

- ▶ **Voltage Regulation** – 0.25% over the entire load range at rated power factor and constant generator frequency
- ▶ **Output Power** – 75VDC, 3.0ADC continuous rating and 150VDC, 7.5ADC forcing capability for one minute
- ▶ **Exciter Field DC Resistance** – 18 to 25 Ω range
- ▶ **Voltage Adjustment** – Minimum of $\pm 10\%$ of nominal voltage range. Remote adjustment can be made from up to 150 feet from voltage regulator
- ▶ **Input Power** – 180 to 240VAC, 250 to 300 Hz PMG power supply
- ▶ **Operating Temperature** – From -40°C to $+70^{\circ}\text{C}$ (-40°F to $+158^{\circ}\text{F}$)
- ▶ **Storage Temperature** – From -40°C to $+85^{\circ}\text{C}$ (-40°F to $+185^{\circ}\text{F}$)
- ▶ **Ingress Protection** – IP52 (front side mounted in conduit box); IP10 (rear side with protective cover)
- ▶ **Shock** – 20g in 3 perpendicular planes
- ▶ **Vibration** – 1 G at 5 to 26 Hz; 0.050" double amplitude (27 to 52 Hz); 7g at 53 to 500 Hz
- ▶ **Weight** – 3 lb. (1361g)
- ▶ **Humidity Testing** – Per MIL-STD-705B, Method 711-D
- ▶ **Salt Fog Testing** – Per MIL-STD- 810E
- ▶ **CAN Protocol** – SAE J1939
- ▶ **Regulator Sensing** – 100 to 600VAC, 50/60 Hz, 1-phase/3-phase
- ▶ **EMI Compatibility**
 - Immunity** - Meets EN 61000-6-2: 2005 Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments
 - Emission** - Meets EN 61000-6-4: 2007 Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments
- ▶ **EMI Compatibility Tests**
 - Immunity** - Electrostatic Discharge (ESD): IEC 61000-4-2 | Radiated RF: IEC 61000-4-3 | Electrical Fast Transient (EFT) / Burst: IEC 61000-4-4
 - Conducted RF: IEC 61000-4-6 | Power Frequency and Magnetic Field: IEC 61000-4-8
 - Emission** - Radiated RF: EN 61000-6-4: 2007, 30 MHz to 1000 MHz

This regulator meets MIL-STD-461C, Part 9 for radiated and conducted emissions and radiated susceptibility when mounted in the generator conduit box.