DVR2000E+ Voltage Regulator

TYPICAL SPECIFICATIONS

The automatic voltage regulator (AVR) shall be a digital design, DVR2000E+ providing 0.25% voltage regulation from no load to full load output.

The AVR shall include the following features:

- Three phase or single phase generator voltage (RMS) sensing
- Three phase or single phase power metering
- Field current sensing
- Field voltage monitoring
- Contact inputs for system interface capability (Dry contact, 3.3 Vdc)
- Contact output for fault indication (Form A, 3 amps continuous)
- Human machine interface (HMI) for AVR status and configuration
- DVRProtal™ Windows-based software for configuration and monitoring
- MODBUS protocol via RS-232 for external communication
- CAN 2.0B J1939 protocol for external metering and control
- "Power On" LED indicator
- Under frequency (volts/hertz) regulation
- Generator paralleling with reactive droop compensation and reactive differential compensation
- Configurable auxiliary input for metering and control
- Simulated reactive power for droop set-up
- Generator power limiting mode

The AVR shall include the following protection alarms:

- Generator under frequency (40.0 – 70.0 Hz)
- Loss of CAN communication (adjustable 1.0 – 45.0 seconds)
- Field Current Limiting (0.5 – 6.5 Adc)
- Power Limiting (5.0 – 115.0 %)

The AVR shall include the following protection shutdowns:

- Field over excitation (0.5000 to 4.000 Adc, adjustable 1.0 to 15.0 seconds)
- Generator over voltage (5.0 to 20.0%, adjustable 0.1 – 15.0 seconds)
- Generator under voltage (5.0 to 50.0%, adjustable 1.0 to 15.0 seconds)
- Generator Imbalance (20.0 – 50.0 %, adjustable 1.0 – 15.0 seconds)
- Generator Loss of sensing
- Instantaneous field over current (11 Adc)
- Regulator over temperature
- Generator Reverse Power (5.0 to 100.0 %, adjustable 1.0 to 15.0 seconds)
- Field Under Excitation (-100 to -5.0 %, adjustable 1.0 to 15.0 seconds)

The AVR shall meet the following tests:

- MIL-STD-705B, Method 711-D
- MIL-STD-810E
- EN61000-6-2: 2005
- EN61000-6.4: 2007
- IEC 61000-4-2, 61000-4-3, 61000-4-4, 61000-4-6 & 61000-4-8