



# DVR® 2400 DIGITAL VOLTAGE REGULATOR

## NEW FEATURES

- USB 2.0 access through front panel
- Euro style connector for low voltage connections
- Event Logging
- PMG voltage metering
- Polarity configuration for external inputs
- Configurable cut-in and cut-out frequencies
- Retain/reset configuration of remote adjust

## FOUR DIGIT HMI DISPLAY

From initial setup to monitoring regulator status, this display provides innovative, fast and easy setup.

## REGULATION MODES

Single and Three phase (AVR), Manual Field Current Regulation (FCR), Reactive Power Regulation (VAR) and Power Factor Regulation (PF). All modes compatible with control by external devices.

## GENERATOR SOFT START

Controlled increase to rated voltage limits overshoot during voltage build-up in AVR modes.

## TRUE RMS VOLTAGE SENSING - SINGLE OR THREE PHASE

Directly sense 100 to 600 Volts at 50/60 Hz. Circuitry senses true RMS voltage for superior regulation.

## SINGLE PHASE POWER METERING

## FRAME SIZE SPECIFIC PID SELECTION

Simply select the appropriate frame size and your gains are set.

## ROBUST GENERATOR PROTECTION FEATURES

9 different Alarm and Shutdown protection features, many are customizable for your application including:

- Field Over & Under Excitation
- Instantaneous Field Over Current
- Generator Over & Under Voltage
- Generator Voltage Imbalance
- Generator Loss of Sensing

# DVR<sup>®</sup> 2400 DIGITAL VOLTAGE REGULATOR

## SPECIFICATIONS

**Voltage Regulation** - 0.25% over load range at rated power factor and constant generator frequency.

**Output Power** - 100 Vdc, 4.0 Adc continuous rating and 190 Vdc, 7.5 Adc forcing capability for one minute.

**Exciter Field DC Resistance** - 18 to 25Ω Range

**Remote Voltage Adjustment** - ±30% of nominal via analog input, ±15% via external contacts.

**Input Power** - 180 to 240 Vac, 250 to 300 Hz PMG power supply

**Regulator Sensing** - 100 to 600 Vac, 50/60 Hz, 1-phase/3phase

**Operating Temperature** - From -40°C to +70°C (-40°F to +158°F)

**Storage Temperature** - From -40° C to +85°C (-40°F to +185°F)

**Ingress Protection** - IP52 (front side mounted in conduit box along with swing cover); IP10 (rear side with protective cover)

**Shock** - 20G in 3 perpendicular planes

**Vibration** - 2.5G at 5 to 26 Hz; 0.050" double amplitude (27 to 52 Hz); 7G at 53 to 500 Hz

**Weight** - 3.5 lb. (1361 g)

**Humidity Testing** - Per MIL-STD-705B, Method 711-D

**Salt Fog Testing** - Per MIL-STD-810E

## 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

**marathon<sup>®</sup>**  
Generators

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#### APPLICATION CONSIDERATIONS

The proper selection and application of power generation products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Regal Beloit America, Inc. and/or its affiliates ("Regal") with respect to the use of products and components is given in good faith and without charge, and Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

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