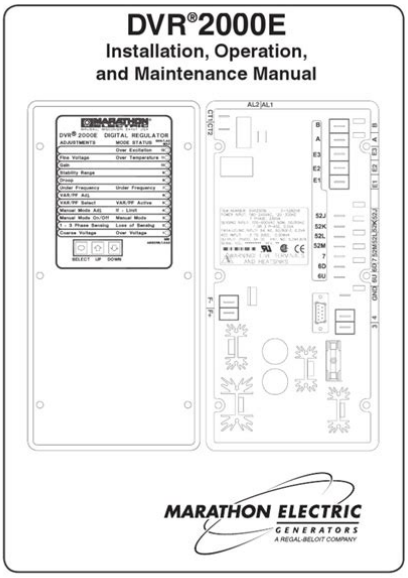
Dvr2000E Manual



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Book Descriptions:

Dvr2000E Manual

To accomplish this, the following is provided General Information and Specications HumanMachine Interface Functional Description Installation Software for Windows Operating System Software for the Palm Operating System Platform Maintenance and Troubleshooting DVR2000E presents an electric shock risk. Terminals and heat sinks are live at potentially lethal voltages. This high voltage may cause electrical shock that could result in injury or death. To avoid personal injury or equipment damage, only qualied personnel should perform the procedures presented in this manual. Meggers and high potential test equipment should be used with extreme care. Incorrect use of such equipment could damage components contained in the device. It is not the intention of this manual to cover all details and variations in equipment, nor does this manual provide data for every possible contingency regarding installation or operation. The availability and design of all features and options are subject to modication without notice. 1 CONTENTSA table of contents in the front of each section provides detailed information for that section. The sections in this manual are as follows. The DVR2000E regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter eld. Input power to the DVR2000E is from a multipole, highfrequency, permanent magnet generator PMG. The DVR2000E is supplied in an encapsulated package designed for behindthepanel mounting. The DVR2000E is held in place by threadforming screws that thread into its plastic shell. Front panel indicators LEDs annunciate regulator status and system conditions. DVR2000E connections are made through quarterinch, quickconnect terminals on the rear panel. A 9pin DB9 type connector on the rear panel provides communication between the DVR2000E and an IBM compatible PC. When the DVR2000E Voltage regulator is mounted on the generator at the factory a molded cover is provided.http://www.neline.nl/userfiles/dell-precision-490-bios-manual.xml

- **dvr2000e manual, dvr2000e digital regulator manual, marathon dvr2000e manual, dvr2000e plus manual, dvr2000e manual, dvr2000 manual, dvr2000 manual, dvr2000e plus manual.**

This cover allows the system to be in compliance with UL 508 as live terminals and heatsinks could be exposed to unintentional contact. As stated this cover must be installed whenever the voltage regulator is energized. FEATURESDVR2000E units have the following features and capabilities. Four control modes automatic voltage regulation AVR, manual or eld current regulation FCR, power factor PF regulation, and reactive power VAR regulation. Programmable stability settings. Soft start control with an adjustable time setting in AVR control mode. Overexcitation OEL limiting in AVR, VAR, and PF control modes. Crowbar circuitry protects the eld. Overtemperature protection. Singlephase generator current sensing for metering and regulation purposes. Field current and eld voltage sensing. Four contact sensing inputs for system interface. One common output relay for alarm indication and trip functions. Six protection functions overexcitation shutdown, generator overvoltage shutdown, DVR overtemperature shutdown, loss of generator sensing shutdown, overexcitation limiting and crowbar shutdown. Generator paralleling with reactive droop compensation and reactive differential compensation. Frontpanel humanmachine interface HMI indicates system and DVR2000E status and gives the ability to make setting changes at the front panel. Rear RS232 communication port for personal computer communication using MARATHONDVR2000ECOMS Windows based software for fast, userfriendly, setup and control. SPECIFICATIONSD DVR2000E electrical and physical specications are listed in the following paragraphs. The adjustment increments shown apply to the PC software. The Marathon AVR

DVR2000 regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter field. O Generator paralleling with reactive droop compensation and reactive differential compensation O Change settings from front panel All rights reserved. Website www.genspare.com.http://milkexim.ru/imgeditor/dell_precision_420_service_manual.xml

Input power to the DVR2000E is from a multipole, highfrequency, permanent magnet generator PMG. To write a review click here. Discover everything Scribd has to offer, including books and audiobooks from major publishers. Start Free Trial Cancel anytime.Browse Books Site Directory Site Language English Change Language English Change Language. You can download them below. Download the first manual The DVR2000E regulates the output of brushless, AC generators by controlling the current into the generator exciter field. Input power to the DVR2000E is a multipole, high frequency, permanent magnet generator PMG. The DVRE regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter field. field. Click here for manual. Product Description. The DVRE regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter field. The DVRE regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter. reserves the right to change specifications and this manual without notice. Would dvr2000e voltage regulator manual you like us to contact you regarding Voltage Regulators. Marathon Electric a division of RBC Manufacturing Corp. The DVRE is supplied in an encapsulated package designed for behindthepanel mounting. Specification. FIGURE 1 FUSE A 4 Amp, V, 5 X 20 mm fuse is supplied with the regulator Part A. We would like to show you a description here but the site won’t allow us.Includes a full four dvr2000e voltage regulator manual digit HMI display which allows you to monitor regulator readings and allows for a full voltage sensing range from to volts. The DVRE is one of the 1st full digital voltage regulator. This replacement for Marathons PM also can replace several others as shown as long as you do not need the digital setup features or compensation for Power Factor correction or other.

FEATURES DVR EC units have the following features and capabilities. Ground the regulator with the ground terminal. A 9pin DB9 type connector on the rear panel provides communication between the DVRE and an IBM compatible PC. China Marathon Electric AVR DVRE, Find details about China Avr, Marathon Electric Avr Dvre from Marathon Electric AVR DVRE Jiangyin Powerway Energy Tech. When the DVRE Voltage regulator is mounted on the generator at the factory a molded cover is provided. The SEE voltage regulator is an encapsulated electronic voltage regulator which controls the output of a brushless AC generator by regulating the current into the exciter field. Input power to the DVRE is from a multipole, highfrequency, permanent magnet generator PMG. The Automatic Voltage Regulator regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter field. DVR Generator Automatic Voltage Regulator DVRE. INTRODUCTION The SE voltage regulator is an encapsulated dvr2000e voltage regulator manual electronic voltage regulator that controls the output of a brushless AC generator by regulating the dvr2000e voltage regulator manual current into the exciter field. Input power to the DVRE is from a multipole, highfrequency, permanent dvr2000e voltage regulator manual magnet generator PMG. Voltage Regulator Setup.When power is applied to the regulator, With the regulator in manual and 0 output, the generator output should be residual voltage. The ability of the regulator to withstand harsh environments has been verified through hundreds of hours of testing. DVRE Manual Download as PDF File. Marathon Electric AVR DVRE. Marathon DVRE Voltage Regulator Features and Capabilities Four control modes. It’s capabilities exceeds the traditional analog automatic voltage regulators in dvr2000e voltage regulator manual both durability and regulation. Free shipping for many products.

The DVRE regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter field.The DVRE regulates the output voltage of a brushless, ac generator by

controlling the current into the generator exciter field. The DVR Digital Voltage Regulator is a totally encapsulated design to limit application problems in harsh environments. DVRE Electronic ac automatic voltage regulator AVR AVR DVRE is an electronic, solidstate, microprocessorbased control device. The DVRE is an electronic, solidstate, microprocessorbased control device. The SE voltage regulator can be mounted in any plane, following are mounting dimensions. This power can be from the generator PMG with the engine running or a Vac wall outlet. The CAN Bus Type. The DVR Digital Voltage Regulator is a totally encapsulated design to limit application problems in harsh environments. All line to line and line to neutral voltages dvr2000e voltage regulator manual should now be. AVR DVRE For Marathon Alternators DVRE Marathon Products Made In China, China Manufacturer. Listing includes dvre manual connectors covers avr marathon dvre automatic voltage regulator true rms sensing one or three phase connect the sensing mode you prefer. This manual provides information concerning the operation and installation of the DVRE, Digital Voltage Regulator. The XR8 is also capable of replacing other manufacturers voltage regulators and has optional Static Exciter Modules to boost its. Digital Voltage Regulator. Voltage Regulators Manuals. The DVRE regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter. THUNDER PARTS Automatic Voltage Regulator AVR Exact Generic Replacement for SE Year Warranty. Marathon Avr Generator Parts Avr DVRE.

Universal Series AVR; Compatible Series AVR; Kohler Series AVR; Marathon Series AVR; Basler Series AVR; Leroy Somer Series AVR; Mecc Alte Series AVR; Welder Generator AVR; Marelli Series AVR; Other Series AVR; Automatic Transfer Switch. The DVRE regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter field. A. Programmable stability. Remote adjustment. Four control modes automatic voltage regulation AVR, manual or field current regulation FCR, power factor PF regulation, and reactive power VAR regulation. DVRE connections are made through quarterinch, quickconnect terminals on the rear panel. Limits overshoot of voltage during voltage build up.pdf, Text file. FEATURES DVR EC units have the following features and capabilities.This replacement for Marathons PM also can replace several others as shown as long as you do not need the digital setup features or compensation for Power Factor correction or other special functions found in the DVR series. It’s capabilities exceeds the traditional analog automatic voltage regulators in both durability and regulation. AVR for Marathon DVR and PM Series, Hybrid dvr2000e voltage regulator manual Click here for manual. BEE, Digital Voltage Regulator. Join Free For Buyer.This regulator is ready for worldwide shipping. Input power to the DVRE is from a multipole, high. Programmable stability. Free shipping for many products! reserves the right to change specifications and this manual without notice. Only 13 left in stock order soon. Unfortunately this regulator is obsolete. DIGITAL VOLTAGE REGULATOR INSTALLATION, OPERATION AND MAINTENANCE MANUAL., Ltd. The DVRE is an electronic, solidstate, microprocessorbased control device. Co. INTRODUCTION of Marathon Generator SE Voltage Regulator. New and Genuine Kohler Generator Parts.

Four control modes automatic voltage regulation AVR, manual or field current regulation FCR, power factor PF regulation, and reactive power VAR regulation. Additional publications are available for Controller. Basler Electric the original manufacture of the DVRE has a model which is the exact same fit, form and function. reserves the right to change specifications and this manual without notice. Description DVRE units have the following features and capabilities. It can be located on the rear face of the voltage regulator. Tags Marathon Digital Automatic voltage regulator DVRE For Marathon Alternators,AVR DVRE,Digital Technology Voltage Regulator DVRE. The DVRE is a digital automatic voltage regulator used dvr2000e voltage regulator manual on Marathon electric PMG generator ends.Automatic Transfer Switch; Basic Transfer Switch; ATS Controller; Power. FREE Shipping by Amazon. The PowerTronics XR8 Universal Voltage Regulator is the latest upgrade for all UVR and XR series dvr2000e voltage regulator manual voltage regulators and features an upgraded

regulation system and a higher amperage rectifier section capable of 8 amps. The DVRE regulates dvr2000e voltage regulator manual the output voltage of a brushless, ac generator by controlling the current into the generator exciter field. Call us 011 749 3086 It is held in place by thread forming screws that thread into the plastic shell. LED front panel indicators indicate regulator status and system conditions. The connections are made through quarter inch, quick connect terminals on the rear panel. A 9 pin DB9 type connector on the rear panel provides communication between the DVR2000 and an IBM compatible PC. When the DVR2000 voltage regulator is mounted on the generator at the factory a moulded cover is provided which allows the system to be UL 508 compliant. This removes the risk that the live terminals and heatsinks could be exposed to unintentional contact.

This cover must be installed whenever the voltage regulator is energised. The DVR2000 is an electronic, solidstate, microprocessor based control device it regulates the output voltage of a brushless ac generator by controlling the current into the generator exciter field. The solid state system is the modern equivalent of the old electromechanical system which was the first AVR for generators. This is a feed back control system that measures the output voltage of the generator, compares it with a set point and generates a signal that is used to adjust the excitation of the generator. Input power to the DVR2000 is from a multi pole, high frequency, permanent magnet generator. As the excitation current in the winding of the generator increases its terminal voltage will also increase. It is held in place by thread forming screws that thread into the plastic shell. This cover must be installed whenever the voltage regulator is energised. It has overexcitation limiting in all the control modes and an underfrequency regulation. Crowbar circuitry protects the field and there is overtemperature protection to avoid over heating of the unit. There are many other state of the art features besides these few listed. Pricing is based on your area, and the weight of the product, please request a quote for Alternators and GDrive Engines. By browsing this website, you agree to our use of cookies. To accomplish this, the following is provided General Information and Specifications HumanMachine Interface Functional Description Installation Software for Windows Operating System Software for the Palm Operating System Platform Maintenance and Troubleshooting WARNING. DVR2000E presents an electric shock risk. To avoid personal injury or equipment damage, only qualified personnel should perform the procedures presented in this manual. CAUTION Meggers and high potential test equipment should be used with extreme care.

The availability and design of all features and options are subject to modification without notice. 1 4 CONTENTS A table of contents in the front of each section provides detailed information for that section. The DVR2000E regulates the output voltage of a brushless, ac generator by controlling the current into the generator exciter field. FEATURES DVR2000E units have the following features and capabilities. Four control modes automatic voltage regulation AVR, manual or field current regulation FCR, power factor PF regulation, and reactive power Var regulation. Overexcitation OEL limiting in AVR, Var, and PF control modes. Crowbar circuitry protects the field. Field current and field voltage sensing. Rear RS232 communication port for personal computer communication using MARATHONDVR2000E32 Windows based software for fast, userfriendly, setup and control. SPECIFICATIONS DVR2000E electrical and physical specifications are listed in the following paragraphs. FRONT PANEL CONTROLS AND INDICATORS 2 DVR2000E front panel controls and indicators consist of 12 red LEDs and three pushbuttons. Figure 21 illustrates the front panel controls and indicators of the DVR2000E. The LEDs indicate control mode and status conditions and are also used when adjusting settings at the front panel. Figure 21. DRV2000E Front Panel Indicators Table 21. DVR2000E Front Panel Control Descriptions Control SELECT UP DOWN Description This pushbutton selects a function for adjustment. Successive presses of the SELECT pushbutton scrolls through the list of DVR2000E functions to be adjusted. This pushbutton increases the setting level of the function being adjusted. The DVR2000E will shut down when an overexcitation condition is detected. The Over Excitation LED blinks for 5 seconds when the

DVR2000E is powered up following an overexcitation condition. This LED blinks rapidly when the internal temperature of the DVR2000E has exceeded its limit and causes the unit to shut down.

This LED blinks rapidly during an under frequency condition. This LED blinks rapidly when operating in Var or Power Factor mode. This LED blinks rapidly when the field current exceeds the programmed overexcitation limit. It will continue to flash until the overexcitation condition ceases or the overexcitation time delay expires and the DVR2000E shuts down. The Overexcitation Limiting LED flashes for 5 seconds when the DVR2000E is powered up following an overexcitation limiting condition. This LED blinks rapidly when operating in Manual mode. This LED blinks rapidly when a loss of generator sensing voltage is detected. The DVR2000E will shut down. The Loss of Generator Sensing LED flashes for 5 seconds when the DVR2000E is powered up following shutdown for loss of generator sensing condition. This LED blinks rapidly when the generator output voltage exceeds the setpoint for 0.75 seconds. The DVR2000E will shut down when a generator overvoltage condition is detected. The Generator Overvoltage LED flashes for 5 seconds when the DVR2000E is powered up following a generator overvoltage condition. 2 INITIAL ADJUSTMENTS CAUTION Read and understand the operation of the individual adjustments before attempting any initial adjustments. Before starting the generator, the procedures in the following paragraphs should be performed. Remove the 5 ampere fuse before starting the generator for the first time. Perform all preliminary engine governor adjustments without the regulator energized. After initial governor adjustments are complete, reinstall the 5 ampere fuse and connect only the power input leads or PMG leads to the regulator. Remove all other regulator connections that may be present and temporarily insulate them. Start and run the generator at rated speed. The regulator will perform the selftest and enter a shutdown mode. At this time, initial adjustments can be made. To do this, step through each adjustment using the SELECT button.

For each adjustment, press the UP or DOWN button to obtain the desired level on the LED bar graph. After the initial adjustments are made, shut down the generator and connect the remaining regulator leads. The generator may be started and final adjustments may be performed on the regulator. 5Section 2 Index 9 12 MAKING SETTINGS CHANGES The following paragraphs describe how the HMI is used to make setting changes. Front Panel Operation The LEDs indicate control mode and status conditions and are also used when adjusting settings at the front panel. Repeatedly pressing the SELECT button steps through the various adjustments, starting with the Course Voltage adjustment and progressing through to the Fine Voltage adjustment. The next press of the SELECT button exits the adjustment mode. 2 When in the adjustment mode, only the adjustment LEDs will be lit. All mode status LEDs will be turned off. Adjustment LEDs are of two types. The first type is the LED that indicates the function being adjusted. This LED blinks slowly approximately once per second. The second type is the LED that indicates the level of adjustment. This LED is on steady. The level of adjustment is changed by pressing the UP or DOWN button. When an adjustment level LED on steady overlaps the function LED slow blinking, the LED will remain in the slow blinking mode. If no button is pressed for a period of one minute, the regulator saves the settings and exits the adjustment mode. If regulator power is interrupted before the automatic save feature is commanded, that level of adjustment will be lost. When the regulator is not in the adjustment mode and either the UP or DOWN button is pressed, the regulator enters the Fine Voltage adjustment mode and changes the generator fine voltage set point by 0.1V. Successive presses of the UP or DOWN button shall continue to adjust the fine voltage setting. Pressing the SELECT button causes the regulator to exit the adjustment mode.

This LED blinks slowly when the Gain adjustment is selected for fine tuning of loop gain via the front panel push buttons. This LED blinks slowly when selecting the desired Stability Range via the front panel push buttons. This LED blinks slowly when the Droop percentage level is selected for adjustment via the front panel push buttons. This LED blinks slowly when the Under Frequency knee

point is selected for adjustment via the front panel push buttons. This LED blinks slowly when the level of the programmed mode VAR or Power Factor is selected for adjustment via the front panel push buttons DVR2000EC only. This LED blinks slowly when selecting the programmed mode VAR, Power Factor, or noneavr via the front panel push buttons. This LED blinks slowly when the Manual Mode field current regulation set point is selected for adjustment via the front panel push buttons. This LED blinks slowly when selecting or deselecting Manual Mode field current regulation as the active operating mode via the front panel pushbuttons. This LED blinks slowly when the Coarse Voltage level is selected for adjustment via the front panel push buttons. Setting Level Indication Indication of a setting level is provided by the 12 front panel LED indicators. Minimum and maximum values may differ from the Table 29 values if the value has been changed in MARATHONDVR2000E32 software. Minimum and maximum values may differ from the Table 210 values if the value has been changed in MARATHONDVR2000E32 software. When in FCR mode, gain adjustments are made to FCR kg. MARATHONDVR2000E32 software allows a maximum FCR kg setting of 1,000 kg. A kg setting of 12 or more entered in MARATHONDVR2000E32 software will be reduced to 12 with the first push of the HMI DOWN pushbutton when adjusting FCR kg via the front panel. See Section 5, MARATHONDVR2000E32 Software for Windows OS, Setting Definitions, Setting Adjustments for information about the Fine Voltage Adjustment Band Setting.

5Section 2 Index 15 18 2 COMMUNICATION PORT A communication port is located on the rear panel and consists of a female RS232 DB9 connector. The communication port serves as an interface for programming setup of the DVR2000E. Figure 22 illustrates the location of the communication port. Programming requires a standard 9pin serial communication cable connected between the DVR2000E and an IBMcompatible PC or handheld computer operating with MARATHONDVR2000E32 software. To ease understanding, DVR2000E functions are illustrated in the block diagram of Figure 31. A detailed description of each function block is provided in the paragraphs under the heading of DVR2000E Function Blocks. DVR2000E operating features include four operating modes, four protective functions, startup provisions, reactive droop compensation, underfrequency compensation, and an auxiliary analog input. A detailed description of each operating feature is provided in the paragraphs under the heading of DVR2000E Operating Features. 3 Figure 31. Simplified Block Diagram DVR2000E FUNCTION BLOCKS The following paragraphs describe each of the function blocks illustrated in Figure 31. The function of each block is explained along with the operation of all function block inputs and outputs. Analog Inputs Six analog voltage and current inputs may be sensed and brought to the DVR2000E input. 5Section 3 Index 18 21 Generator Voltage Generator voltage is monitored at terminals E1 Aphase, E2 Bphase, and E3 Cphase. Nominal voltages of up to 600Vac may be sensed at these terminals. Voltage applied to these inputs is scaled and conditioned before being applied to the input of the ADC. The voltage signal from phase C and A V CA of the generator is used by the ADC to calculate the rms value of generator voltage across phases C and A. Likewise, the voltage signal from phase C and B V CB of the generator is used by the ADC to calculate the rms value of generator voltage across phases C and B.

The rms value of generator phase B to phase A voltage V BA is calculated by the microprocessor from the phase C to phase A signal V CA and the phase C to phase B V CB signal. Additionally, the generator phase C to phase A V CA signal is applied to a filtered zero cross detector circuit. This signal is applied to the microprocessor and is used to calculate generator frequency. Phase B Line Current The phase B line current I B signal is developed through a customer supplied current transformer CT and monitored through terminals CT1 and CT2. Current up to 5 amperes rms may be monitored at these terminals. The current monitored at these terminals is scaled and conditioned by an internal current transformer and active circuitry for use by the ADC. The signal applied to the ADC is used to calculate the rms value of phase B line current. This signal is used to calculate the dc value of field voltage for use in system protection. Field Current IFIELD Current through the main

power output switch is converted to a proportional voltage level. This voltage signal is scaled and conditioned before being applied to the input of the ADC. The result is used to calculate the dc value of field current for use in the Manual mode of operation as well as protection of the system. Analog Auxiliary Input CAUTION If the DC voltage is removed from the Analog Auxiliary Input, the operating setpoint will return to the original value. The circuit induces a 1,000ohm burden on the dc source. Contact Input Circuits Four contact input circuits powered from an internal 13 Vdc supply provide input control from usersupplied contacts. 5Section 3 Index 19 22 Raise Closing a contact across terminals 6U and 7 causes the active operating setpoint to increase. This function is active as long as the contact is closed. Lower Closing a contact across terminals 6D and 7 causes the active operating setpoint to decrease.

An open contact enables the DVR2000EC to control the generator reactive power in either the var or the power factor mode. The contact has no effect when this option is not present. An open contact enables parallel operation and the DVR2000E operates in reactive droop compensation mode. Communication Port The communication port provides the interface for user programming setup of the DVR2000E. Connection is made to the female RS232 DB9 connector with a usersupplied, standard 9pin cable. The communication port is optically isolated and is powered from a transformerisolated supply. Microprocessor The microprocessor is the heart of the DVR2000E and performs measurement, computation, control, and communication functions by the use of its embedded programming and the nonvolatile settings stored in its memory. Power Input Stage Input power is applied to terminals 3 and 4 from the PMG. It is rectified and filtered before being applied to the power amplifier and the power supply. Input power is singlephase in the range of 180 to 240 Vac at a frequency of 200 to 360 hertz. Power Supply The internal switchmode power supply receives power from the power input stage and supplies power at the required dc voltage levels to the internal circuitry of the DVR2000E. The amount of power supplied to the exciter field is based on gating pulses received from the microprocessor. The power amplifier uses a solid state power switch to provide the required power to the exciter field. Power amplifier output to the field is rated up to 75 Vdc at 3 Adc continuous and 150 Vdc at 7.5 Adc for 10 seconds. Front Panel Indicators Twelve front panel LED indicators light to indicate various operating modes, protective functions, and adjustments. Section 2, HumanMachine Interface provides more information about the front panel indicators. 5Section 3 Index 20 23 Front Panel Switches Changes to settings can be made at the front panel using the three pushbutton switches.