

DGU Monitoring System

Key Features

- **Flexibility**—monitor ± 24 , -48 or 130 VDC systems
- **User-Friendly**—easily programmed to your specific system requirements
- **Data Access**—by local display, computer and modem/phone
- **Rectifier Control**—sequential start-up protects AC service and energy management for optimum rectifier efficiency
- **Standard Software**—simplifies programming
- **Alarm Signaling**—by phone or pager for instant response
- **Rack or Wall Mounting**—rack mounts available for 19" (48.26cm) or 23" (58.42cm) widths

Description

The Lorain® Data Gathering Unit (DGU) is a powerful and flexible microprocessor for a wide range of system monitoring and reporting requirements. This compact DGU monitors ± 24 , -48 or 130 VDC systems and provides binary or analog alarm signaling. It can be easily set up for local or remote control of rectifiers and other critical equipment.

Use the DGU to manage your power system through the accurate monitoring and control of energy management functions, output voltage and current status, battery and engine status, alarm reporting, load transfer, auxiliary power status, power room temperature and other special status reporting.

General Information

Marconi combined the best features of its series of microprocessor power system monitor/controllers to develop the DGU. The user friendly software and modular hardware allow this unit to be economically configured for applications from CEVs to central offices.

The DGU's plug-in printed circuit cards allow customization with only the features and capabilities required for each individual application. Additional monitoring and control features can be added any time with optional modular expansion cards

Up to eight users (individuals or groups) can be configured into the system, each of which can be assigned special attributes such as name, password level, phone number and types of alarms to be received. Since each user or user group may not be concerned with the same information, each user can be configured to receive only the information they want. The DGU "mail" function allows users to leave messages for each other. When a user logs on to the DGU, notification is given that a message(s) is waiting.

In addition to the standard displays and commands, 16 programmable status pages are available for customized displays and printouts.



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General Information (continued)

These are useful for grouping information onto a single display. Three user programmable information pages with 25 lines each are also available to display special information such as equipment lists and troubleshooting information.

This system can monitor a variety of analog signals such as AC and DC voltages, temperatures, engine KW, AC currents, etc., as well as a variety of binary signals (alarms) such as rectifier fail, fuse alarm, converter fail, high/low voltage alarms, and many more. Any condition can be configured to call a predetermined number in the event an alarm or combination of alarms comes in. Several alarm reporting methods are available for each user.

Historical information is maintained on both the analog and binary inputs. Statistical data such as busy hour averages, peaks and minimums are maintained on the analog channels to help you better understand power plant drains and future growth requirements. All alarms are retained in a non-volatile memory for use in troubleshooting failures or reviewing the operational record of the power system.

The DGU also has control functions to improve the efficiency of your power system. The energy management function turns rectifiers off and on to meet plant load requirements and keep the chargers running at their peak efficiency. The sequencing function controls the restart of rectifiers when AC service is switching from the commercial AC line to the engine alternator or vice versa. This prevents step loading surges which could stall the engine or overload the service cabinet.

The DGU can be accessed in a variety of ways. For local monitoring, either a large, backlit LCD screen or a vacuum fluorescent display is available, along with an RS232 port for connection to an external computer terminal. For remote monitoring, the system can be equipped with a modem and accessed via the phone line from a remote terminal. A voice option is also available which reports verbally on power systems status when accessed from any DTMF phone.

A System Managing Unit (SMU) networks 14 DGUs together, enabling access to all DGUs through a single phone line, is available for larger applications. Refer to spec. number 586501800 when requesting additional information.

The Lorain DGU editor program allows the user to pre-program the configuration of Lorain DGUs. Since a DGU is not required to do this initial programming, any DGU can be configured in an office environment by engineers, before it is installed. Use the Editor with a personal computer to automatically step through the necessary items for which a DGU must be configured. This is accomplished by editing either an uploadable file or the default which resides within the program. Once a configuration file is created by this program, it can be uploaded to the DGU through a local or remote terminal. This program is supplied within the DGU User's Manual on a 3.5" 360K floppy disk.

Additional Information

For additional specification, engineering and installation information, specify model DGU Data Gathering Unit, spec. number 586501600 (gray), spec. number 586502300 (off-white) or spec. number 586503500 (UL).



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