REMOTE ACCESS SYSTEM CONTROLLER

GRAVITAS DSC1000

LVD73/23/EEC

FEATURES

- Controls up to 64 Rectifiers
- Controls LV Disconnects
- Local or Remote Control & Monitoring
- Ethernet Communications
- 12, 24 or 48VDC Operation
- I^2C Rectifier Monitoring & Control
- Front Panel or Web-Based Programming
- 16-Character, 2-line LCD Display
- 8-Key Touchpad Control
- 16 LED Indicators
- Up to 8 Form C Relay Alarms
- Battery Temperature Compensation

SAFETY CERTIFICATIONS

AGENCY	STANDARD
UL	UL60950
CUL	CSA22.2, No. 60950
DEMKO	EN60950

EMC

EN61000-6-1, 2, 3, 4

DESCRIPTION

The Gravitas DSC1000 is a remote access system controller for telecom power systems. It is used to digitally control and monitor a communications center/site power system. In particular it can be employed with with UNIPOWER Telecom's Sigma, Radian and Ranger Series rectifiers. Embedded versions of the DSC1000 are also used in UNIPOWER Telecom's X75, X100, X150 and X300 Compact DC Power Systems.

The DSC1000 is only 1U high and features local or remote control and monitoring of 12, 24 or 48-volt power systems. Communication is over an Ethernet connection or SNMP (Simple Network Management Protocol) as an option. The unit can control and supervise up to 64 rectifiers in 8 shelves.

The front panel has an LCD matrix display, 16 LED indicators and an 8-key touchpad. The controller can be programmed via the touchpad and 16-character, 2-line matrix display or by means of a PC web page display. Other features include up to 8 Form C relay alarms, battery temperature compensation, up to 8 digital inputs for monitoring, and control of 2 low voltage disconnects.

The rectifiers are controlled via I^2C data over a common 4-conductor telephone cable with RJ11 connectors. A large number of system operating parameters are measured or monitored by the DSC1000. The units are shipped with default settings for 12, 24 or 48-volt operation.

TWO-YEAR WARRANTY

www.unipowertelecom.com

DSC1000 FRONT PANEL

16 LED INDICATORS

LCD ALPHANUMERIC MATRIX DISPLAY 16 CHAR, 2-LINE

8 TOUCHPAD KEYS

DSC1000 FUNCTIONS

- Controls Power System Rectifiers
- Controls Low Voltage Disconnects
- Monitors System Operating Parameters
- Provides Operating Alarms
- Provides Local or Remote Communication

VISUAL DISPLAYS

- 16 LED Indicators
- LCD 16x2 Alphanumeric Matrix Display
- PC Web Page Display

RECTIFIER CONTROL FUNCTIONS

- Battery Float Voltage
- Battery Equalize Voltage
- Battery Voltage Temp. Compensation

ALARM OUTPUTS

- Up to 8 Form C Relay Contacts (4 User Configurable)
- Configurable LEDs
- E-mail Alarms

SYSTEM PARAMETERS DISPLAYED*

- Bus Voltage: System power bus
- Battery Current: Charge/discharge
- Rectifier Current: Total from rectifiers
- Load Current: Total drawn by load
- Battery Temperature
- External Temperature: Separate from battery
- Controller Temperature: Internal temperature
- No. of Rectifiers: Number powering bus

* Displays on PC Web Page or LCD Matrix display

ALARM PARAMETERS

- Overvoltage
- Undervoltage
- End Voltage
- Battery Overtemperature
- External Overtemperature
- Controller Overtemperature
- Fuse or Breaker Trip
- Rectifier Failure
- AC Power Fail (from rectifier or external monitor)
- LV Disconnect Failure
- User-Defined (up to 6)

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RECTIFIER MONITORING DATA

- AC OK (Input)
- DC OK (Output)
- Thermal Warning
- Fans OK (1, 2 & 3)
- Running
- Temperature (Internal)
- Model No.
- Serial No.
- Part No.
- Revision
- County of Origin
- Manufacturer

LED INDICATORS*

PWR:	Controller power supply OK
FLT:	Controller in float charge mode
EQU:	Controller is equalizing batteries
BTST:	Battery test is running
MAJ:	There is a major alarm
MIN:	There is a minor alarm
ACF:	There is AC failure
RFA:	There is a rectifier fault
OTA:	There is an overtemperature alarm
OVA:	There is an overvoltage alarm
UVA:	There is an undervoltage alarm
EVA:	There is an end voltage alaram
LVD:	One or both LVDs have opened
FUSE:	A breaker or fuse is open
CHKB:	There is a battery fault
COMM:	There is an internal communication bus problem

*Also displayed on PC Web Page

DSC1000 OPERATION NOTES

1. This controller handles up to 64 rectifiers in 8 shelves. Although it can control up to 8 rectifiers per shelf, 3 or 4 rectifiers per shelf represent the normal configuration. The basic DSC1000 model controls up to 4 shelves, and the “Full Configuration” model (Option F) controls up to 8 shelves.

2. Rectifier control and monitoring is accomplished through an I^2C cable connection to each shelf. The I^2C cable is a 4-wire telephone cable with RJ11 connectors. The four I^2C wires are: +5V, SDA, SCL and Ground.

3. The DSC1000 can be completely programmed from either the front panel using the touchpad*, LCD alphanumeric display and LED indicator, or from a Personal Computer web page. In the latter case the items from the LCD display and LED indicators are displayed on the web page. The controller and PC are connected by the Ethernet port. Web pages are password protected.

4. Local or remote control and monitoring of a power system is accomplished by means of a PC using an Ethernet connection.

* The alarm matrix setup, however, requires a PC.

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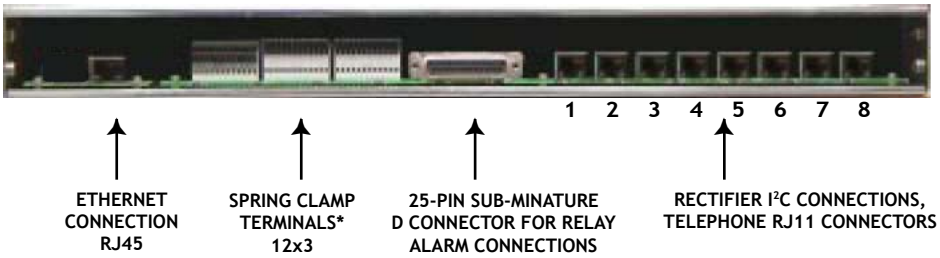
DSC1000 REAR VIEW WITH CONNECTIONS



* These terminals take inputs from rectifier power bus, sense leads, load and rectifier current shunts, LVD status signals, temperature probe inputs and up to 8 customer-selected digital (open/closed) inputs

ORDERING GUIDE

Model No.: DSC1000 - ☐ - ☐

VOLTAGE
12
24
48

OPTIONS*
F = Full Configuration
S = SNMP Software for Ethernet

*Put in alphabetical order

ORDERING NOTES:

1. The basic model DSC1000 has:
   - Connections for 4 rectifier shelves
   - Ethernet communication
   - Separate option for SNMP communication software (Option S)
   - Three external digital (open/closed) inputs
   - Four Form C relay alarm outputs
2. The “Full Configuration” option (Option F) has:
   - Connections for 8 rectifier shelves
   - Ethernet communication
   - Separate option for SNMP communication software (Option S)
   - Eight external digital (open/closed) inputs
   - Eight Form C relay alarm outputs
3. SNMP means Simple Network Management Protocol

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