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OVERVIEW

The Gladiator Gas Monitoring Unit is a multi-channel 19" Rack mounted Controller system that monitors the levels of up to sixteen remotely mounted Gas Sensors. The instrument is a standalone system that can be operated independently, or can also be connected to a PLC or DCS through a RS485 communication port on Modbus RTU protocol and can provide audio/visual alarms when the set values are exceeded.

The instrument offers a 7" color graphic display which sequentially indicates the details of the Gas being monitored in each of the sixteen channels along with it's level and units. This Display is also used to configure the instrument, select Gas names from a library of 24 Gases and 7 Units, set the measured Ranges of each Gas, set the required Alarm Levels, the Alarm Types and Alarm Delays, besides additional functions like Calibration, Retransmission, Drift Values, enabling or disabling Relays, Skipping Channels, setting the Password, performing self-diagnostics, etc.

The display information is multiplexed for eight channels at a time, with a Page Mode which gives complete information of any desired Channel. Further, each channel has an eight-bar multicolor LED bar-graph display for real-time monitoring of Gas levels.

The instrument offers four Relay controls for each channel with three Alarm levels and one Fault output to monitor Sensor Fault /Inhibit output, besides analog retransmission for each of the sixteen channels. Data information of all channels is available on a RS485 port on Modbus RTU protocol.

SPECIFICATIONS

Model	GLADIATOR GAS MONITORING UNIT
Type	Micro-controller based, multi-channel monitoring and control of Gas Sensors.
No. of Channels	16.(optionally 8)
Input Signals	Three-wire Gas Sensors.
Gas Library	24 Gases and 7 Units – freely customizable for each channel.
Indications	7 Inch Colour Graphic Display which sequentially indicates the details of the Gas being monitored in each of the sixteen channels along with it's level and unit
Operator Interface	Touch-Screen Display to configure the instrument, select Gas names from a library of 24 Gases and 7 Units, set the measured Ranges of each Gas, set the required Alarm Levels, the Alarm Types and Alarm Delays, besides additional functions like Calibration, Retransmission, Drift Values, enabling or disabling Relays, Skipping Channels, setting the Password, performing self-diagnostics, etc.
Gas Name Identification	Transparent Insert Windows for each Channel.
Control Outputs	Four control Relay outputs - three for Alarms and one for Fault/Inhibit.
Contact Rating	10 Ampere @ 230 VAC for non-inductive loads.
Alarm Annunciation	Acknowledge and Reset Buttons On Display
Analog Outputs	16 x 4 to 20 mA DC retransmission signals - one for each channel.
Load Driving Capacity	600 Ohms each.
Communication Port	RS485 on Modbus RTU.
Features	Channel Skip, Relay Disable, Latching / Non-latching, Acknowledgeable / Non-Acknowledgeable alarms
Termination	On rear Mother-board.
Power Supply	24 V DC.
Execution	19" Rack system, 3U enclosure with modular channel-cards.
Enclosure	Aluminum Card-frame with plug-in Cards in modular system.
Dimensions	3U x 84T x 250 mm (133.35 x 482.6 x 250 mm).
Operating Temperature	0 to 55°C.
Rel Humidity	0 to 95% non-condensing.

FEATURES

- Multifunctional architecture with simple operational procedure.
- Simultaneous sixteen-channel monitoring of Gas levels.
- Standard 19" EuroRack execution for Full-Rack (16 channel) and Half-Rack (8 channel) options.
- Modular execution in plug-in Euro-card format with minimal rear terminal wiring.
- 16-bit Microcontroller-based Central Controller card.
- Every channel Card with independent 14-bit Microcontroller in modular configuration.
- Three programmable Alarm set-points with potential free Relay change-over contacts.
- Fault control Relay output for Sensor Fault. Total of 64 Relays per Rack
- Inhibit indication by LED flashing for each channel.
- Dedicated analog 4 to 20 mA DC retransmission for each channel (up to 1 km distance).
- RS485 Data communication on Modbus RTU protocol (up to 5 km distance).
- Local and Remote Acknowledge function.
- Stand-alone execution or compatible with PLC / SCADA.
- 7" color touch screen monitor with numeric and bar graph display
- USB port for pen drive for data logging
- Ethernet & Wifi interface options
- Bluetooth enabled keyboard & mouse connectivity