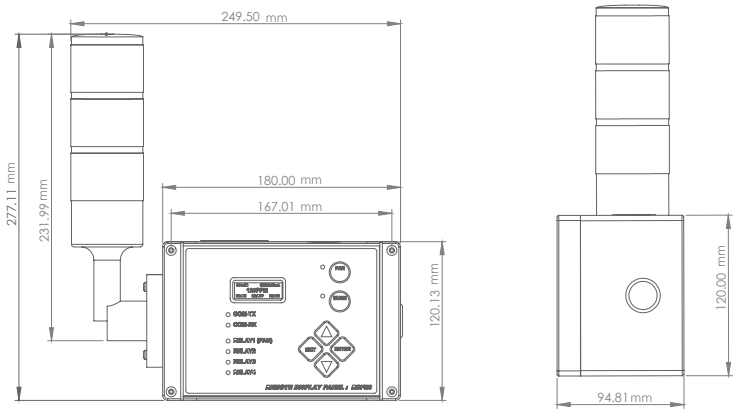
GREYSTONE
ENERGY SYSTEMS INC

SENSOR- ACCESSORIES



RDF52 SERIES

PRODUCT DESCRIPTION

The RDF52 remote display panel is designed to work with the M-Controller2 Gas Monitoring System, which manages remote sensors and relay control modules.
Key features include:

- **Compatibility:** Connects with up to 16 RDF52 units and 12 M-Relay units.
- **Display**: Shows relay status and gas concentrations.
- **Installation:** Wall-mounted, typically near mechanical room entry doors.
- **Outputs:** Four relay outputs for alarms, fans, etc., and a 3-level LED stack light/buzzer.
- **Zones:** Can be assigned to one of eight zones, with all units in a zone performing the same functions.
- **Controls:** Includes a FAN switch (latched/unlatched) and a Hush button to silence buzzers.
- **Durability:** Rated IP66 & NEMA 4, 4X, 12 & 13, and UL listed.
- **Indicators:** Relay status and RS-485 communication indicators on the front.
- **Power Supply:** Designed for 24 VAC/DC.
- **Compliance:** Meets ASHRAE 15 and CSA B52 standards.

This panel provides flexible and programmable control for gas monitoring systems.

SPECIFICATIONS

VOLTAGE	24VDC nominal, range 18 to 30VDC 24VAC nominal, range 15 to 24VAC 50/60HZ
FUSE	F1 on the Main Board: Polyswitch 750mA Polyswitch device resets after the fault is cleared and power to the circuit is removed.
SENSING ELEMENT TECHNOLOGY	Non-dispersive infrared (NDIR)
SENSOR LIFE	> 12 years life expectance in normal commercial environments
ACCURACY	± 2.5%LFL at 0 – 25%LFL standard measurement range ± 5.0%LFL at 25 – 50%LFL extended measurement range
COVERAGE AREA	(see table of gas)
MOUNTING HEIGHT	(see table of gas)
FACTORY CALIBRATION RANGE	(see table of gas)
PANEL INDICATOR	LED Status: Green blinking: Normal status with communication Yellow flash: Sensor Fault Red flash: Alarm and purge

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SPECIFICATIONS

RELAYS OUTPUTS	2 Relays SPDT (Form C), dry contacts 1.0 A maximum at 30 VDC (resistive load) 0.3 A maximum at 125 VAC (resistive load)
TIME DELAYS	Actuation 0 to 60 min in 5min increments De-actuation 0 to 60 min in 5 min increments
RELAYS LIFE EXPECTANCY	Mechanical : 50,000,000 Operations minimum @36000 operations/hours electrical : 200000 operations minimum @ rated load
DIGITAL OUTPUT	RS-485 Modbus (Proprietary GES Controller Protocol) and BACnet MS/TP connects to Q4C Controller, M-Controller and Q-Controller
BAUD RATE	1200, 2400, 4800,9600, 14400, 19200, 28800, 38400, 57600, 76800 Bits/Second (Default: 4800 BPS)
BUZZER	50 db at 10 cm, 2700 Hz When Relay 1 is ON , The buzzer is on Buzzer with 3 programmable tones
OPERATING ENVIRONMMENT	Indoor Use only
OPERATING TEMPERATURE	(see table of gas)
STORAGE TEMPERATURE	-49 to 185°F (-45 to 85°C)
OPERATING HUMIDITY	5% to 95% RH non condensing
OPERATING PRESSURE	Atmospheric +/-10%
ENCLOSURE	IP54 ratings with splashing guard
WIRING	12 AWG to 24 AWG for Screw Terminals Blocks(De -Pluggable) , 16 AWG or 18 AWG wire for Power supply (1km max)
CABLE SPECIFICATION	BELDEN 9841 or equivalent ,120 ohms Input
DIMENSIONS	5.9"x5.9"x1.9"(150mm x 150mm x 50mm)
WEIGH	Less than 0.5lbs

Ensure a complete understanding of all applicable Federal, State, Provincial and Local Health and Safety laws and regulations before using these products.

ACCESSORIES

M-CONTROLLER	Communication central unit, RS-484 port, Modbus protocol, BACnet /MSTP, 3 Relay , 8 Analog outputs
M-RELAYS	Remote Relay Modules to be used with the M-CONTROLLER

ORDERING CODE

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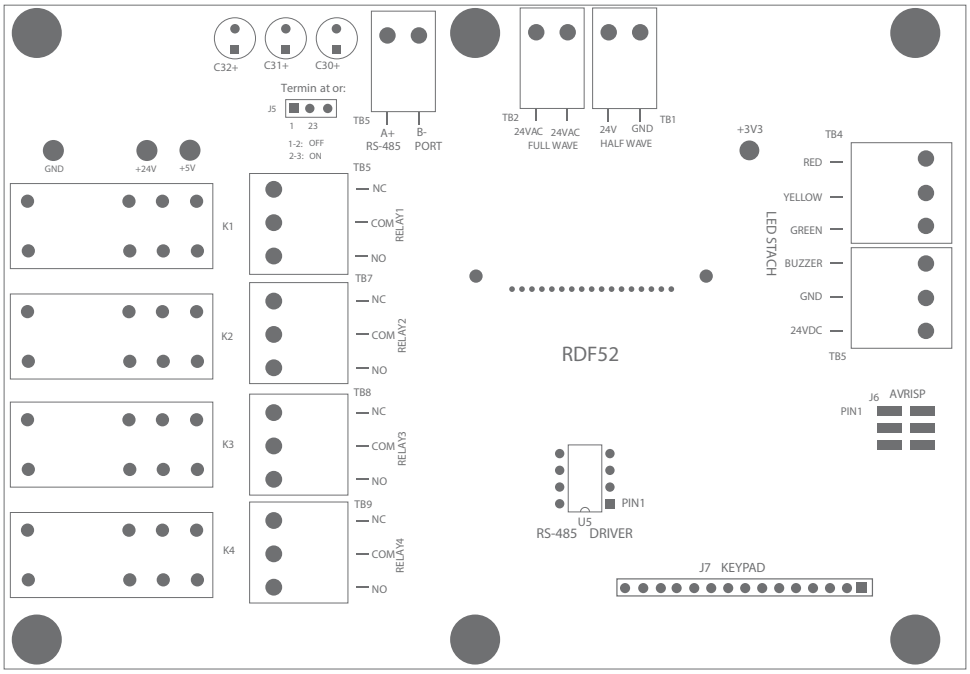
WIRING INFORMATION



RDF52

TERMINAL		FUNCTION
TB5 TB7 TB8 TB9	NC: Normally Close COM: Common NO: Normally Open	4 x Relays Outputs
TB6	24VDC GND Buzzer	Sensor Local bus Main board
TB3	A+ B-	RS-485 port
TB4	Red Yellow Green	Analog Output Output Port to Controller input
TB2	24VAC/VDC	Power IN Full Wave
TB1	24V GND	Power IN Half Wave
J5	1-2: OFF 2-3: ON	Jumper RS-485 terminator

IMPORTANT NOTE

The RDF52 power supply voltage requirements are nominally 24 VAC/DC. The system is wired via the RS-485 network, used by both the the M-Controller2, QIRF2 refrigerant sensors, and any other sensor/transmitters. The RDF52 has a full-wave and a half-wave rectifier circuit on board for flexibility. You will damage devices if you mix half wave and full wave rectifiers on the same AC source. Use extreme caution when sharing a common AC source. Sharing a common DC source is less problematic.

RoHS COMPLIANT

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