GASTRONICS
True Wireless® Gas Detection Technology

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Model RGX-RX-HMIX Gas Detection Controller

Introduction

Introducing the RGX-RX-HMIX Gas Detection Controller — where industrial-grade performance meets exceptional ease of use. This innovative system seamlessly combines the robust processing power and flexible programmability of a true programmable logic controller (PLC) with the intuitive, modern convenience of a vibrant graphic touchscreen HMI. Designed for demanding gas detection applications, the RGX-RX-HMIX empowers operators with real-time visibility, customizable logic, and straightforward navigation — delivering reliable protection, simplified configuration, and enhanced safety without compromising on advanced functionality.

Versatility

- Accommodates both hardwired and wireless systems.
- Two sizes of graphic touchscreen HMI's to choose from - 7" and 10".
- Choose between the RUG5 Basic PLC and the expandible RUG9 Expandible PLC
- Customizable LEDs with options for Drill & Alarm Disable Switch and Reset Button.
- Customizable Controller Cards including I/O, Modems, Flash Disk and Others.
- Wireless Capability for 900/868MHz, 2.4GHz, UHF/VHF.
- Options for Mirror Controllers
- Available in Type 4X Poly-Carbonate Housing or 19" Rack Mount version.
- Supports multiple communication protocols (e.g., Modbus RTU/TCP)
- Multi-zone monitoring and grouping for flexible site layouts
- Field-upgradable firmware for future enhancements
- Gastrac SaaS app compatible

Optional Mirror Controller

Applications

- Oil Rigs,
- Gas Plants
- Refineries
- Offshore Vessels
- Petrochemical
- Chemical Plants
- Power Plants
- Pulp and Paper
- Waste Water Treatment Plants
- Water Treatment Plants

Ordering

RGX-RX-HMIX

2 - 2.4GHz
8 - 868MHz
9 - 900MHz

5 - RUG5
9 - RUG9

7 - 7"HMI
10 - 10"HMI

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Model RGX-RX-HMIX Gas Detection Controller Specification

RGX-RX-HMIX Gas Detection Controller Specifications

- **Human Machine Interface (HMI) Options**

7.0" HMI 5070L TFT touchscreen, 800x480, 16.7M colors
Resistive touch, IP65 front, 24 VDC power
Optional 10.1" HMI cMT3102Xv2 TFT touchscreen, 1024x600, 16.7M colors
Quad-Core processor, 1GB RAM/4GB Flash, 2 Ethernet, IP66 front, 24 VDC power
Modbus RTU master/slave via RS-485, Modbus TCP over Ethernet

- **Programmable Logic Controller (PLC/RTU) Options:**

Rug5: Basic/compact RTU, integrated I/O (8 DI, 4 DO, 4 AI, 1 AO), limited expansion (2 slots for RUG9 cards), Modbus support, programmable alarms/logic
Rug9: Expandable RTU/PLC, up to 512 I/O points (via 7 card cages), digital/analog I/O, RS-232/485, modems, flash logging, Modbus RTU/TCP, fully customizable sequences

- **Detector & Channel Capacity**

Wireless detectors up to 64
Hardwired detectors depend on available I/O on Rug5 or Rug9
Rug5 max 12 x 4-20 mA inputs
Rug9 max 24 x 4-20 mA inputs (with one 8-channel analog input card + base I/O)Includes one 8-channel digital input card and one 8-channel relay output card on Rug9
Configurable alarm relays NO/NC

- **Power Supply & Distribution**

Primary: P&F 5A, 100-240 VAC in, 24 VDC 5A out, overload protection
Secondary: 24VDC to 12VDC DIN rail converter, powers Rug5/Rug9 RTU/PLC and radio

- **Enclosure:**

Allied Moulded AMP1648CCLF
Type 4X Polycarbonate (16"x14"x8" nominal, 15.98"H x 13.98"W x 7.81"D external)
Hinged clear cover, SS snap latch, flange mount w/brass inserts, swing-out panel
Usable depth 8.27", NEMA 4X/IP66 watertight/dust-tight, non-corrosive/UV-resistant

- **Operating Environment**

0°C to 50°C (32°F to 122°F) operating; -20°C to 60°C (-4°F to 140°F) storage
10-90% RH non-condensing; indoor/outdoor (protected from direct extremes)

- **General System Features**

Supports hardwired & wireless detectors (900/868 MHz, 2.4 GHz, UHF/VHF)
Large customizable status/alarm LEDs
Optional switches (drill/alarm disable, reset)
Custom I/O cards, modems, flash storage, mirror controllers
Real-time monitoring & programmable responses

- **Warranty**

2-year limited warranty per Gastronics standard terms

NO.	REVISION	BY	DATE

GASTRONICS
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DRAWN BY:	B.D.	DATE:
CHECKED BY:		DATE:
APP BY:		DATE:
APP BY:		DATE:

RGX-RX-HMIX Gas Detection Controller

SCALE	DWG.	REV.
NONE	1-0	1