



# ToxGas Ranger™ Series

## Alarm & Display Controller

### Model R-4864

## Eight or Sixteen Channel Alarm & Display Controller for Critical Monitoring Applications

- \* 8/16 channels of analog, digital, wireless or bridge-type input
- \* Large LCD display shows values, bar-graph and 24 hr trend data
- \* Built-in support for wireless gas monitors
- \* Individual alarm LEDs for each channel and alarm (total of 48)
- \* Standard 5A SPDT common relays for HORN, A2, A1 and FAULT
- \* Up to 48 discrete relays for easy interface to existing circuitry
- \* Relay voting logic reduces need for external hardware
- \* One or two optional 8-channel 4-20mA analog outputs
- \* ACK button silences HORN without affecting alarm relays
- \* Pushbutton zero and span calibration for directly connected sensors
- \* Operates on a 10-30 VDC or 110/220V 50/60 Hz AC
- \* MODBUS master and slave ports for maximum flexibility
- \* CSA C22.2 No. 1010.1 & 152 for combustibles & ISA S82.02; UL 1604/ C22.2 NO 213 (Div groups A, B, C, D); EN55011 & EN61000 (CE Mark)

### ToxGas Ranger Series™ Model R-4864

The R-4864 is an ideal solution for monitoring up to 16 critical input variables.

### Flexibility

Built around 'plug and play' input and output modules, the ToxGas Ranger™ Series Controller can accept signals from wireless monitors, analog sensors, digital sensors, discrete inputs or even direct connection to bridge-style combustible or VOC sensors. Built in calibration mode, three programmable alarm relays (A1, A2, FAULT and HORN) are included in the base configuration. Up to sixteen 4-20mA analog outputs, 48 discrete relays and an Ethernet interface are available as options.

### Status "At a Glance"

The high resolution graphic LCD displays data as trends, bar-graphs and calibrated engineering units; a 24-hour trend graph for each channel is always available. Forty-eight high intensity LEDs show channel status in real-time. In addition to touch-sensitive buttons, a standard magnetic keypad allows non-intrusive operation in potentially hazardous locations.



### Digitally Connected Wireless Enabled

The ToxGas Ranger™ controller included both master and slave RS-485 serial MODBUS interfaces for maximum flexibility. The controller's master port reads data from remote RS-485 serial and wireless sensors, while the slave port enables remote MODBUS masters to access the controller's channel and configuration data in real time. Built-in support for wireless gas monitors makes it easy to install and manage a wireless system. Using ProtectorView software and MODBUS/ TCP interface, a remote display of the controller's real-time status and stored configuration is available across any Ethernet network.

### Reliability

The ToxGas Ranger™ Series Controller is designed from the ground up for critical alarm monitoring and is CSA certified for use in Class 1 Division 2 hazardous areas. In addition to gas detection, the R-4864 Controller is widely used in flow measurement, tank level monitoring and other critical alarm applications. The R-4864 is available in panel mount, single or dual rack mount, NEMA 4X fiberglass and stainless steel, and NEMA 7 explosion proof enclosures.

<b>ToxGas Ranger™ Series Controller Model R-4864</b>	
<b>Power Input</b>	10-30VDC or 110/220V 50/60Hz AC; 150W AC power supply included; 12 Watts MAX for electronics
<b>Display</b>	Backlit 240x128 pixel LCD shows trend, bar graph and engineering units; 52 discrete LEDs show channel status in real-time
<b>Wireless Input</b>	Up to 16 remote wireless gas monitors. Select option "M" or add external radio module. (MODBUS master port disabled when using wireless)
<b>Analog Input</b>	Optional 8 or 16 4-20mA source into 100 ohms; includes excitation for easy connection to 2 or 3 wire transmitters
<b>MODBUS/IO</b>	MODBUS master RS-485 half or full duplex port capable of reading remote sensors, other compatible slave devices or wireless MODBUS slave RS-485 half or full duplex port capable of being read by remote MODBUS master device
<b>Relay Output</b>	Standard common output relays; A1, A2, FAIL & Horn; SPDT rated 5A @ 30DC/240AC Optional auxillary relay board with secondary A1, A2 and HORN; SPDT rated 5A Optional 8 channel discrete relay board (up to 6x)
<b>Analog Output</b>	Optional 8 or 16 channel 4-20mA output (10 bit D/A) Max loop R is 800 ohms with nominal 24VDC supply
<b>Digital Output</b>	Optional printer output or MODBUS/ TCP interface
<b>Temp</b>	-25C to +65C
<b>Mounting</b>	Panel mount for 19" rack; NEMA 4X wall-mount suitable for class 1 Div 2 Groups B, C, D; NEMA 7 wall-mount suitable for Class 1 Div 1 Groups B, C, D
<b>Dimensions</b>	NEMA 4X fiberglass: W 13" (33mm); H 16" (406mm); D 8.63" (220mm) Panel mount: 5.25"x9.20" cutout
<b>Approvals</b>	CSA C22.2 No. 1010.1 & 152 ofr combustibles & ISA S82.02; UL 1604/ C22.2 No. 213 (Div 2 Groups B, C, D); EN55011 & EN61000 (CE Mark)
<b>Warranty</b>	2 years from the date of purchase

<b>Order Guide</b>	
<b>R-4864 / A / B - C / D - E - F - G - H / J - K - L - M</b>	
<b>"A"</b>	PM= Panel / rack mount for 19" rack N4= NEMA 4X wall-mount for Class 1 Div 2 Groups B, C, D SS= NEMA 4 stainless steel for Class 1 Div 2 Groups B, C, D XP= NEMA 7 wall-mount for Class 1 Div 2 Groups B, C, D
<b>"B"</b> <b>&amp;</b> <b>"C"</b>	00= MODBUS or WIRELESS input 10= 8 channel analog input 21= 2 channels of bridge sensor input 22= 4 channels of bridge sensor input 23= 6 channels of bridge sensor input 24= 8 channels of bridge sensor input
<b>"D"</b>	0= Built-in 4x5A SPDT alarm relays 1= Add one aux common relay board with additional 3x5A SPDT relays
<b>"E"</b>	1= Add one 8-channel analog output 2= Add two 8-channel analog output
<b>"F"</b>	1-6= Add up to six 8-channel relay output boards
<b>"G"</b>	1= Add one parallel printer interface 2= Add MODBUS/ TCP interface
<b>"H"</b>	1= Add 100db alarm (NEMA 4X)
<b>"J"</b>	1= Add expansion plate for NEMA 4X for four additional option locations 2= Add expansion plate for NEMA 7 for three additional option locations
<b>"K"</b>	1= Add one NEMA 4x wall mount enclosure for eight additional options
<b>"L"</b>	0= Standard alarm ACK on controller 1= Local alarm acknowledge button on exterior of NEMA 4X 2= Remote alarm acknowledge button in XP junction box
<b>"M"</b>	0= none 1= 900Mhz internal wireless radio 2= 2.4Ghz internal wireless radio 3= 900Mhz external wireless radio 4= 2.4Ghz external wireless radio

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