HONEYWELL MIDAS®-M

Gas Monitoring System



Bringing new visibility, reliability, and ease-of-use to gas detection in semiconductor processing and industrial manufacturing.

An easy-to-use, cost-effective addition to the Honeywell gas detection portfolio, the Honeywell Midas®-M Gas Detector uses reliable sensor technology to detect more than 35 key toxic, ambient, and flammable gases — easily, quickly, and error-free.

The device monitors points up to 30 meters (100 feet) away while using patented technology to regulate flow rates and ensure error-free gas detection.

The standard power supply and communications capabilities include three onboard relays (Form C), 0 mA to 21 mA analog output, and Modbus®/TCP Ethernet digital outputs for easy connectivity to control and alarm systems' ports for optimal connectivity and service interaction.

With flexible features and options, the Midas-M Gas Detector works right out of the box and configures easily to meet your needs. Each plug-and-play sensor cartridge is pre-calibrated, so it's ready when you are. That means longer sensor life, quick-and-easy replacement, and no operator error due to incorrect or depleted sensors. With the Midas-M Gas Detector, customers can get extended sensor calibration periods, patented diagnostics, and lower cost of ownership.

APPLICATIONS

- Semiconductor processing
- Light industrial manufacturing
- University laboratories
- Aerospace
- Wastewater

FEATURES AND BENEFITS

CLEAR VISIBILITY

The Midas-M Gas Detector is equipped with bright LEDs and an intuitive interface that provides instant alerts to gas readings or alarm levels.

CALIBRATION COMPLETED

Factory-calibrated sensors reduce need for frequent gas testing.

EASY INSTALLATION

Compact in size making it suitable for crowded, complex process environments where space is at a premium, the Midas-M Gas Detector is simple to install with its plug-and-play capability.

POE PROTOCOL

The detector includes the innovative Power over Ethernet (PoE) protocol — a single Ethernet connection for all power, control and communication requirements.

INTEGRATED SECURITY

The Midas-M Gas Detector's interface includes password-protected menus to maintain system integrity.

Honeywell

Midas®-M Specifications

TABLE 1.	
TRANSMITTER DIMENSION	
Size (unit with Cartridge)	136 mm (H) x 83 mm (W) x 152 mm (D) (5.35 in x 3.27in x 5.98 in)
Weight - Transmitter	1.3 kg (2.87 lb)
Weight - Cartridge	0.17 kg ~ 0.22 kg (0.38 lb ~ 0.49 lb) dependent on sensor type
OPTIONAL RELAY DIMENSION	
Size	137 mm (H) x 84 mm (W) x 41 mm (D) (5.39 in x 3.31 in x 1.61 in)
Weight	0.31 kg (0.68 lb)
POWER REQUIREMENTS	
Operating Voltage	24 VDC Nominal, -15 to 10% (20.4 VDC to 26.4 VDC)
Operating Voltage with Power Over Ethernet (PoE)	48 VDC PoE (IEEE 802.3af compliant)
POWER CONSUMPTION	
Transmitter unit (normal condition)[1]	Typ. 5 W
Transmitter unit (full load condition)[2]	≤ 11.45 W
Transmitter with Optional Relay	≤ 12.9 W
OUTPUTS	
Visual	Alarm, Power, Fault LEDs, and LCD with all the gas readings and events. LEDs: Power (Green), Alarm 1 (Red), Alarm 2 (Red), Fault (Yellow)
Relays in Transmitter	(3) Relays for Alarm 1, Alarm 2 and Fault rated 1.0 A @ 30 Vdc or 0.5 A @ 125 Vac Max 10 uA @ 10 mV minimum, configurable as normally open or closed, latched or unlatched
Relays in Optional Relay	8 relays for Alarm 1 and Alarm 2 of each channel and a relay for common fault rated 1.0 A @ 30 Vdc or 0.5 A @ 125 Vac Max 10 uA @ 10 mV minimum, configurable as normally open or closed, latched or unlatched
Analog	3 wire sink, 3 wire source, or 4 wire fully isolated; 0 mA to 21 mA for each channel
Digital Communications	Modbus/TCP Ethernet/Power over Ethernet (PoE)
CERTIFICATIONS AND SPECIFICATION	
	CE marked Meets EN 50270:2015+AC:2016 and EN 61000-6-4:2007+A1 ETL approved UL 61010-1:2012 Ed.3 IEEE 802.3af-2003
PERFORMANCE	
	Refer to individual sensor datasheets
TRANSPORT SYSTEM	
Flow Rate	600 mL/min
Transport Time	2 seconds to 25 seconds maximum
Sample Line Tubing	3.18 mm ID x 6.35 mm OD (0.125 in x 0.25 in)
Tubing Length	Up to 30 m (100 ft) with FEP tubing
Exhaust Line Tubing	4.76 mm ID x 6.35 mm OD (0.188 in x 0.25 in)
Exhaust Length	Up to 30 m (100 ft)
Ambient Port	In line air filter required
OPERATING TEMPERATURE	
	0°C to 40°C (32°F to 104°F)
WIRING REQUIREMENT	
4-20 mA	2 wire, 14 AWG maximum
Digital	CAT5 Cable or equivalent: RJ45 connector

Midas®-M Specifications

TABLE 1. (continued)

GAS CONCENTRATION DISPLAY AND INTERFACE	
Instrument	4-digit alphanumeric display with separate units, concentration bar graph for each channel and other icon driven indicators 4 button interface keypad
Remote	Internet browser access via Ethernet
INSTALLATION DETAILS	
Mounting	Wall mounted using pre-drilled holes on chassis. Options for DIN rail
Material	Cover: Plastic (Polycarbonate) Chassis/Mounting bracket: Zinc plated steel Red frame: Liquid coated aluminum
WARRANTY	
Transmitter Unit	1 year
Sensor Cartridge	2 years

[1] Normal condition: (1) No gas alarm, (2) Without tube and pressure/vacuum
[2] Full load condition: (1) All 4 channels gas alarm are on, (2) Maximum tubing length and pressure/vacuum on the inlet/exhaust line

SMART SENSORS			
Gas Name	**Chemical Formula**	**Range**	**Sensor Part Number**
Hydrogen Chloride	HCl	0 - 8 ppm	MMS-E2
Boron Trichloride	BCl_3	0 - 8 ppm	MMS-E2
Dichlorosilane	SiH_2Cl_2	0 - 8 ppm	MMS-E2
Hydrogen Bromide	HBr	0 - 8 ppm	MMS-E2
Silane	SiH_4	0 - 20 ppm	MMS-X2
Disilane	Si_2H_6	0 - 20 ppm	MMS-X2
Hydrogen	H_2	0 - 1000 ppm	MMS-G2
Chlorine	Cl_2	0 - 2 ppm	MMS-L2
Ammonia	NH_3	0 - 100 ppm	MMS-A2
Carbon Monoxide	CO	0 - 100 ppm	MMS-C2
Phosphine	PH_3	0 - 1200 ppb	MMS-R2
Ozone	O_3	0 - 0.4 ppm	MMS-U2
Oxygen	O_2	0 - 25% v/v	MMS-D2
Sulfur Dioxide	SO_2	0 - 8 ppm	MMS-S2
Hydrogen Fluoride	HF	0 - 12 ppm	MMS-Z2
Boron Trifluoride	BF_3	0 - 8 ppm	MMS-Z2
Tungsten Hexafluoride	WF_6	0 - 12 ppm	MMS-Z2

HONEYWELL SAFETY PRODUCTS

Americas
Honeywell Analytics
405 Barclay Boulevard
Lincolnshire, IL 60069
Tel: +1 847 955 8200
Toll free: +1 800 538 0363
Fax: +1 847 955 8208
detectgas@honeywell.com

Europe, Middle East, and Africa
Life Safety Distribution AG (LSD)
Javastrasse 2
8604 Hegnau
Switzerland
Tel: +41 (0)44 943 4300
Fax: +41 (0)44 943 4398
gasdetection@honeywell.com

Asia Pacific, India
Honeywell Analytics Asia Pacific, Co., Ltd.
7F SangAm IT Tower
434 Worldcup Buk-ro, Mapo-gu
Seoul 03922
South Korea
Tel: +82 (0)2 6909 0300
Fax: +82 (0)2 2025 0388
India Tel: +91 124 4752700
analytics.ap@honeywell.com

Mainland China
Honeywell Industrial Safety Gas Detectors
Building#1, 555 Huanke Road Zhang Jiang
Hi-Tech Park Pudong New Area Shanghai
201203, China
Tel: 021-80386800
Fax: 021-60246070
gaschina@honeywell.com

Taiwan
Honeywell Taiwan Ltd
6F-2, No.8, ZiQiang S. Road, Jubei City,
30264 Taiwan
Tel: +886-3-5169284
Fax: +886-3-5169339
analytics.tw@honeywell.com

Manuals and other information about this product are available at:
www.honeywellanalytics.com/en/products/Midas-M

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