



MIDAS is a gas monitoring system for fast and reliable response to the presence of virtually all of the gases used or generated in the Semiconductor manufacturing industry. MIDAS offers lower cost of ownership benefits for gas detection through a combination of extended sensor calibration periods and flexible communications architecture and patented diagnostics that monitor sensor performance and flow control.

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analytics**



MIDAS® is a universal transmitter platform that detects the majority of toxic, ambient and flammable gases that must be monitored in the Fab. The pre-calibrated 'plug-and-play' smart sensor cartridge makes sensor replacement quick and easy to manage with no tools required, and prevents any operator error associated with using incorrect or depleted sensors. Bright LED lights and an intuitive, icon driven interactive menu guarantee instant alert to the gas reading or alarm level coupled with password protected menus for configuration, test and calibration.

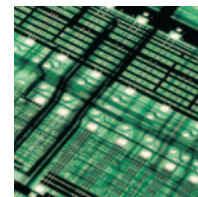
MIDAS® is very compact in size and its easy access metal chassis design makes it simple to install in crowded, increasingly complex process environments or retro fit applications where space is at a premium. MIDAS® has flexible power and communications built in as standard including 3 on-board relays, 0 - 22mA analog output, Modbus/ TCP Ethernet digital outputs, as well as the innovative Power over Ethernet (PoE) protocol - a single Ethernet connection for all power, control and communication requirements. Cost effective integration with PLC and FieldBus systems is greatly simplified with the MIDAS® architecture.

MIDAS® will monitor points up to 30m (100 feet) away from the transmitter and flow rates are regulated automatically using patented control technology to ensure error free gas sensing operation. Zellweger Analytics designs and manufactures its own sensors using advanced robotics to ensure unbeatable quality and reliability.

MIDAS® is complimented by the innovative Chemcassette® range of ultra sensitive low ppb toxic gas detection analyzers and our worldwide network of service engineers who operate on a 24/7 basis.

Features:

- Over 35 gases available with extended 2 year warranty*
- Smart sensor cartridge with on board 'e-calibration' certificate
- 3 built in relays (Form C) for Alarm 1, 2 and Fault
- Power over Ethernet (PoE) communication and power platform
- Keypad Interface and remote Web Browser Interface
- Pyrolyzer and Analog Input modules that connect to any transmitter
- Password protected menu levels to preserve system integrity
- Bright LEDs and intuitive Icon Driven, large backlit LCD display
- Factory-calibrated sensors to reduce need for frequent gas testing
- Isolated 0-22 mA Analog Output with fault and event reporting
- Modbus/TCP Ethernet for easy connectivity to all control and alarm systems ports for control connectivity and service interaction
- Robust extractive pump system (2 year lifetime) sampling up to 30m
- Interactive Training Simulator tool
- CE marked for total immunity to Radio Frequency Interference
- Reflex® sensor health check for improved safety
- TempraSure™ temperature compensation technology as appropriate
- Event logging to review sensor history
- Patented reporting technology confirms likely gas release to avoid nuisance alarms



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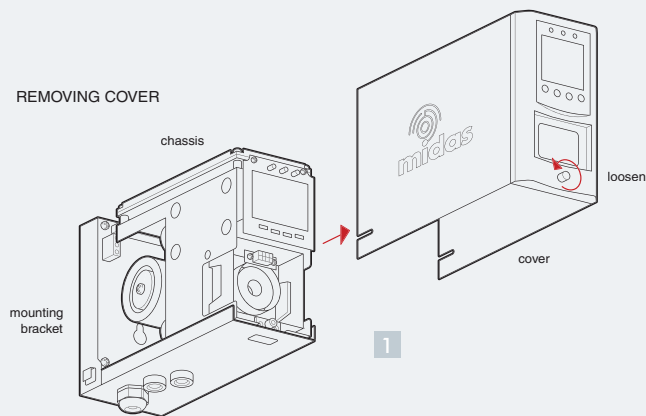
(* standard 1 year warranty)

Installation Details

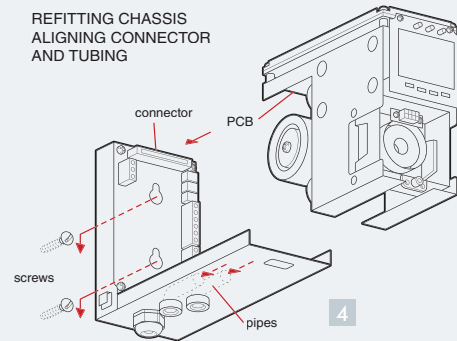


Mechanical

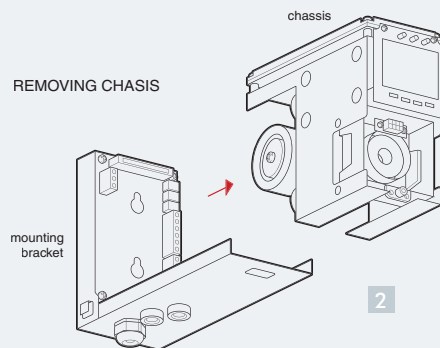
REMOVING COVER



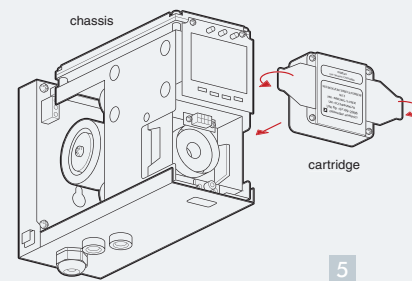
REFITTING CHASSIS ALIGNING CONNECTOR AND TUBING



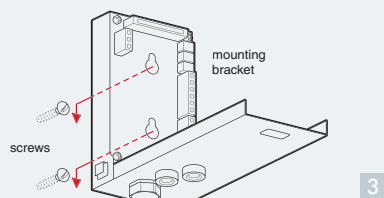
REMOVING CHASSIS



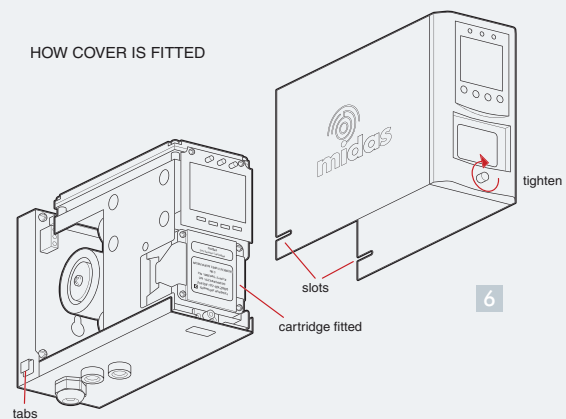
HOW CARTRIDGE IS FITTED



ATTACHING BRACKET TO SCREWS ON A WALL



HOW COVER IS FITTED

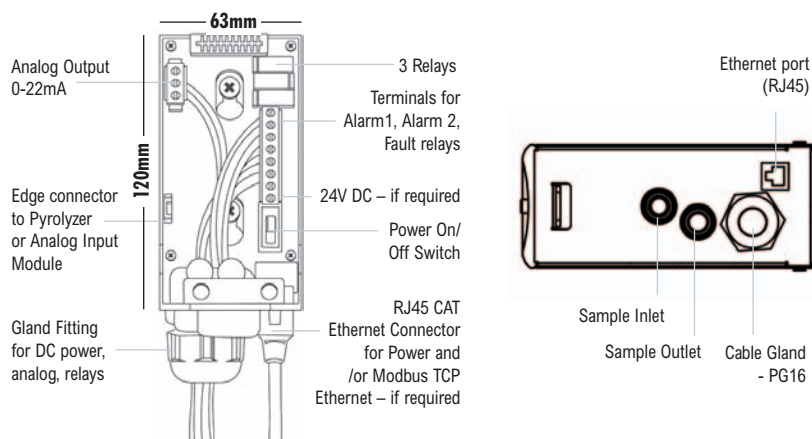


General Specifications



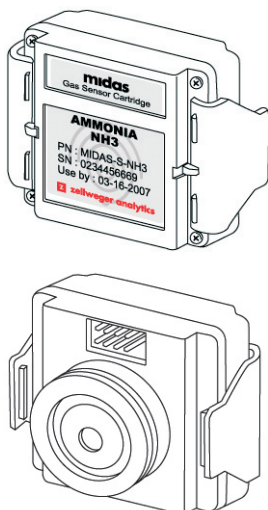
Electrical

All wiring permutations shown for example purposes



Detectable Gases

Gas Name	Chemical Formula	Range	Sensor Part Number
Ammonia	NH ₃	0 - 100 ppm	MIDAS-S-NH3
Arsine	AsH ₃	0 - 0.2 ppm	MIDAS-S-ASH
Boron Trichloride	BCl ₃	0 - 8.0 ppm	MIDAS-S-HCL
Boron Trifluoride	BF ₃	0 - 4.0 ppm	MIDAS-S-HFX
Bromine	Br ₂	0 - 0.4 ppm	MIDAS-S-BR2
Carbon Dioxide	CO ₂	0 - 2.0% vol	MIDAS-S-CO2
Carbon Monoxide	CO	0 - 100 ppm	MIDAS-S-COX
Chlorine	Cl ₂	0 - 2.0 ppm	MIDAS-S-HAL
Chlorine Dioxide	ClO ₂	0 - 0.4 ppm	MIDAS-S-BR2
Chlorine Trifluoride	ClF ₃	0 - 0.4 ppm	MIDAS-S-SF4
Diborane	B ₂ H ₆	0 - 0.4 ppm	MIDAS-S-HYD
Dichlorosilane	H ₂ SiCl ₂	0 - 8.0 ppm	MIDAS-S-HCL
Disilane	Si ₂ H ₆	0 - 20 ppm	MIDAS-S-SHX
Fluorine	F ₂	0 - 4.0 ppm	MIDAS-S-HAL
Germane	GeH ₄	0 - 0.8 ppm	MIDAS-S-HYD
Hydrogen (% LEL)	H ₂	0 - 100% LEL	MIDAS-S-LEL
Hydrogen (ppm)	H ₂	0 - 1000 ppm	MIDAS-S-H2X
Hydrogen Bromide	HBr	0 - 8.0 ppm	MIDAS-S-HCL
Hydrogen Chloride	HCl	0 - 8.0 ppm	MIDAS-S-HCL
Hydrogen Cyanide	HCN	0 - 20 ppm	MIDAS-S-HCN
Hydrogen Fluoride	HF	0 - 12 ppm	MIDAS-S-HFX
Hydrogen Selenide	H ₂ Se	0 - 0.2 ppm	MIDAS-S-HSE
Hydrogen Sulfide	H ₂ S	0 - 40 ppm	MIDAS-S-H2S
Methane (% LEL)	CH ₄	0 - 100% LEL	MIDAS-S-LEL
Nitrogen Dioxide	NO ₂	0 - 12 ppm	MIDAS-S-NO2
Nitrogen Oxide	NO	0 - 100 ppm	MIDAS-S-NOX
Nitrogen Trifluoride	NF ₃	0 - 40 ppm	MIDAS-S-HFX
Oxygen Proficiency & Deficiency	O ₂	0 - 25% vol	MIDAS-S-O2X
Ozone	O ₃	0 - 0.4 ppm	MIDAS-S-O3X
Phosphine	PH ₃	0 - 1.2 ppm	MIDAS-S-PH3
Phosphorous Oxychloride	POCl ₃	0 - 0.4 ppm	MIDAS-S-POC
Silane	SiH ₄	0 - 20 ppm	MIDAS-S-SHX
Silane (low level)	SiH ₄	0 - 2.0 ppm	MIDAS-S-SHL
Sulfur Dioxide	SO ₂	0 - 8.0 ppm	MIDAS-S-SO2
Sulfur Tetrafluoride	SF ₄	0 - 0.4 ppm	MIDAS-S-SF4
Tetra Ethyl Ortho Silicate	TEOS	0 - 40 ppm	MIDAS-S-TEO
Tungsten Hexafluoride	WF ₆	0 - 12 ppm	MIDAS-S-HFX



MIDAS detectors are not ETL approved for monitoring in or sampling from classified areas above 25% LEL

Transmitter Dimension	
Size (unit with Sensor)	120mm (H) x 63mm (W) x 150mm (D)
Weight (unit with Sensor)	0.8Kg
Pyrolyzer / Analog Module Dimensions (Options)	
Size	70mm (H) x 63mm (W) x 83mm (D)
Weight	0.41 Kg
Power Requirements	
Operating Voltage	24V DC Nominal +/- 10%
Operating Voltage with Power over Ethernet (PoE)	36 - 57 VDC via PoE, 48V DC Nominal
Power Consumption	
Transmitter Unit	~ 5.0 W
With Pyrolyzer (Option)	< 12.95 W
Outputs	
Visual	Alarm, Power and Fault lights as well as back lit LCD display with all gas readings and events
Relays	3 relays for Alarm1, Alarm 2 and Fault rated 1.0A @ 30VDC or 0.5A @125VAC; configurable NO or NC, latched or unlatched
Analog	2 wire isolated, 0 - 22mA, Sink or Source
Digital Communications	Modbus / TCP Ethernet / Power over Ethernet (PoE)
Service Port	RS232C / PPP protocol
Certification & Specification	
European	CE marked; meets EN 50270:1999 (Type2) and EN 55011:2000
Environmental	ETL approved UL 61010B and CSA-C22.2 No. 1010.1-92
Performance	Designed to meet with UL 2075 (pending 2004)
Electrical	IEEE 802.3af-2003
Response Times:	
Flow Rate	500 mL/min
Transport Time	2 - 30 seconds maximum
Performance	
	LDL < LAL
	LAL = _TLV (typically 12% FSD)
	FSD = 4 x TLV
Sampling Distance	
Tubing Length	Up to 30m (100 feet) with FEP tubing dependant on gas
Ambient Point Monitoring	In line air filter recommended
Exhaust Length	Up to 30m (100 feet)
Tubing Requirement	
Sample	6.35mm OD (1/4") x 3.18mm (1/8"), FEP, 30m (100 feet) maximum dependant on gas type
Exhaust	6.35mm (1/4") OD x 4.76mm (3/16"), FEP, 30m (100 feet)
Operating Temperature	
Unit with Sensor	0°C (32°F) to 40°C (104°F)
Wiring Requirement	
4-20mA/DC Power/Relays	14 AWG Maximum
Digital	CAT 5 cable or equivalent, RJ45 connector
Gas Concentration Display & Interface	
Instrument	4-digit alphanumeric display with separate measurement units, flow rate bar graph and other icon driven indicators. 4 button membrane keypad
Remote Interface	PC / PDA Internet Browser access via Ethernet or other Bus system
Warranty	
Transmitter Unit	1 year
Sensor Cartridge	1 year standard; 2 year with extended warranty program
Expected Lifetime of Pump	> 2 years
Installation Details	
Mounting	Wall mounted using 2 pre-drilled holes on rear chassis
Material	Steel case with paint finish

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customer business center

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Ordering Information

UNIT	PART NUMBER
Transmitter	MIDAS-T-001
Pyrolyzer	MIDAS-T-00P
Analog Input	MIDAS-T-00A

Please Note:

While every effort has been made to ensure accuracy in this publication, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines.

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