

Technical Note

Midas SW revision 2.16.b8 (1.16.b8) software release

1998-2004 Rev 1 7/22

Revision	Midas	Midas w/Tricolor LCD
From	v1.16.b2	v2.16.b3
To	v1.16.b8	v2.16.b8

New Enhancements:

1. Addition of a K-Factor (or correction factor) feature to provide more flexibility for the Midas operational parameters
 - *Configured by Webpages Gas/Alarm menu only!
- A user can adjust by navigating to the “Configuration” menu and select “Gas/Alarms” to adjust K-Factor by adding a user gas.

Gas / Alarm Configuration:

Setup Gas:

Gas:	Phosphine	<input type="button" value="Add"/>	<input type="button" value="Remove"/>	
User Gas Name:	Phosphine User Gas			Less than the maximum 29 alphabet characters
K-Factor:	1.000			Available range is more than "0.1"
Range:	0.0 - 1200			ppb
Alarm Level 1:	150			ppb <input checked="" type="radio"/> Normal (up) <input type="radio"/> Depletion (down)
Alarm Level 2:	300			ppb <input checked="" type="radio"/> Normal (up) <input type="radio"/> Depletion (down)
Dead Band:	135			ppb
Alarm Delay:	3			seconds
Latching Alarms:	<input type="checkbox"/>			
Relay State:	<input checked="" type="radio"/> Normally De-Energized <input type="radio"/> Normally Energized			
Calibration Period:	180		days	

Technical Note

- Input Items related to the K-factor can now be edited.
 - User Gas Name
 - up to 29 characters
 - K-Factor
 - Default: 1.000
 - Dead Band
 - Default, minimum and maximum vary by cartridge and gas selection
- When a user configures the K-factor, these related items with “Range”, “Alarm1”, “Alarm2” and “Dead Band” are automatically adjusted to an applied value by the configured factor.

General <ul style="list-style-type: none">• Status• Event History• Calibration Certificate• Contact Info / Help Configuration <ul style="list-style-type: none">• General• Gas/Alarms• mA output• Faults• Network• Security• Time/Date Calibration <ul style="list-style-type: none">• Zero Calibration• Span Calibration• Flow Calibration• 4-20 mA Calibration Test	Gas / Alarm Configuration:	
	Setup Gas:	
	Gas: User Gas <input type="button" value="Add"/> <input type="button" value="Remove"/>	
	User Gas Name: <input type="text" value="UserGas1"/>	Less than the maximum 29 alphabet characters
	K- Factor: <input type="text" value="1.000"/>	Available range is more than "0.1"
	Range: <input type="text" value="0.0 - 1200"/>	ppb
	Alarm Level 1: <input type="text" value="150"/>	ppb <input checked="" type="radio"/> Normal (up) <input type="radio"/> Depletion (down)
	Alarm Level 2: <input type="text" value="300"/>	ppb <input checked="" type="radio"/> Normal (up) <input type="radio"/> Depletion (down)
	Dead Band: <input type="text" value="135"/>	ppb
	Alarm Delay: <input type="text" value="3"/>	seconds
Latching Alarms: <input type="checkbox"/>		
Relay State: <input checked="" type="radio"/> Normally De-Energized <input type="radio"/> Normally Energized		
Calibration Period: <input type="text" value="180"/>	days	
<input type="button" value="Accept"/> <input type="button" value="Reset"/> <input type="button" value="Change to Default"/>		

Technical Note

- User Data can be created and deleted dynamically.

The screenshot shows a web-based configuration interface for gas sensors. On the left is a navigation menu with sections: General (Status, Event History, Calibration Certificate, Contact Info / Help), Configuration (General, Gas/Alarms, mA output, Faults, Network, Security, Time/Date), and Calibration (Zero Calibration, Span Calibration, Flow Calibration, 4-20 mA Calibration). The main area is titled 'Gas / Alarm Configuration:' and contains a table for 'Setup Gas:'. The table has columns for Gas, User Gas Name, K-Factor, Range, Alarm Level 1, Alarm Level 2, Dead Band, Alarm Delay, Latching Alarms, Relay State, and Calibration Period. The 'Remove' button is highlighted in red. The 'Add' button is also visible. The 'Relay State' section has radio buttons for 'Normally De-Energized' (selected) and 'Normally Energized'. The 'Calibration Period' is set to 180 days.

- When to use this function there are some constraints below.
 - User Data is needed to use this new function to adjust a K-factor (Correction Factor) in each sensor.
 - Only one User Data can be created by pressing a button, “Add”.
 - User Data can be deleted by pressing a button, “Remove”.
 - Configured Correction Factor and related data depending on the factor are saved into Sensor Cartridge’s no-volatile memory.
 - User Data/K-factor adjustments are not available in O2 as well as a few other cartridges that have a list of gases selections of more than 8 gases to be selected from. The below list is the cartridge part numbers that do not allow for this enhancement.

MIDAS-S/E-O2X	MIDAS-S/E-O3H	MIDAS-S/E-PH3	MIDAS-S/E-SHL	MIDAS-S/E-SO2
MIDAS-S/E-O2S	MIDAS-S/E-O3X	MIDAS-S/E-PHX	MIDAS-S/E-SHX	MIDAS-I-SF6

Technical Note

2. New pass/fail Gas Calibration Results can now be obtained via the Modbus TCP/IP interface

Ref. Address. Reg. Name	Bits	Function
40001 STTS Status		
nibble 0	0-3	Monitoring state integer
		0: Warmup 1: Monitor mode with inhibit state "none" 2: Monitor mode but alarms inhibited, inhibit state "ALm" 3: Monitor mode but alarms and faults inhibited, inhibit state "AL-Ft" 4: Monitor mode but fully Inhibited, inhibit state "ALL" 5: Alarm / Fault Simulation 6: Bump test mode (largely same as state 2) 7: 4-20 mA loop Calibration mode 8: Calibration Mode other than state 7 9-15: for future expansion
nibble1	4-5	Fault Status Integer
		0: No fault 1: Maintenance fault active 2: Instrument fault active
	6	Alarm1 active
nibble2	7	Alarm 2 active
	8	Relay 1 energized
	9	Relay 2 energized
	10	Relay 3 energized
nibble3	11	Heartbeat Bit – toggles every second to confirm communications
	12	Relays under remote Modbus/TCP control
	13	Last Zero Calibration Success
	14	Last Span Calibration Success
	15	for future expansion

40051	fConfiguredGasConc
40052	
40053	fTemperature
40054	
40055	Cartridge serial number prefix
40056	Cartridge serial number suffix
40057	Application Major Revision (High Byte : Major Revision, Low Bytes : Minor Revision)
40058	Application Minor Revision (High Byte : Coprocessor Version, Low Bytes : Boot Loader Correct, "1", Not "0")
40059	Sensor FW Version (High Byte : Sensor FW Version, Low Bytes : Pyrolyzer FW Version)
40060	Analog Input Module SW Version (High Byte : Analog Input Version, "0" if module not fitted. Low Bytes : "0")
40061	Time reported by the Midas clock in UNIX format (seconds since 1970)
40062	Time reported by the Midas clock in UNIX format (seconds since 1970)
40063	Transmitter Serial Number Prefix (S12345678, tempSerial[] only indicates the number) Prefix = (tempSerial[0] x 1000) + (tempSerial[1] x 100) + (tempSerial[2] x 10) + (tempSerial[3])
40064	Transmitter Serial Number Surfix (S12345678, tempSerial[] only indicates the number) Surfix = (tempSerial[3] x 1000) + (tempSerial[4] x 100) + (tempSerial[5] x 10) + (tempSerial[6])
40065	Zero Calibration Success Time reported by the Midas clock in UNIX format (seconds since 1970)
40066	Zero Calibration Success Time reported by the Midas clock in UNIX format (seconds since 1970)
40067	Span Calibration Success Time reported by the Midas clock in UNIX format (seconds since 1970)
40068	Span Calibration Success Time reported by the Midas clock in UNIX format (seconds since 1970)

3. Build in additional support of Pyro communications port to be used for future options.

Technical Note

General bug fixes:

1. CRC error corrections; a potential CRC failure may be reported when the Midas transmitter attempts to write data to the Cartridge EEPROM. Data handling and addition of a 3 time write attempt has been implemented to prevent potential of data corruption of the Cartridge EEPROM data.
2. NH₃ and SiH₄ F44 (Reflex®) premature reporting; Root cause was related to the Cartridge EEPROM data write cycles. Data handling and addition of a 3 time write attempt has been implemented to prevent potential of data corruption of the Cartridge EEPROM data.
3. mA increase during Zero Calibration; The mA was observed to be increasing during a Zero Gas Calibration when should be stable at 2mA (or user defined level) when in Zero Calibration mode (not impacted during Span Calibrations).
4. Password protection fix; Correction to security passcode requirements to ensure proper access security protocols are enforced.
5. mA signal generation of 21mA; Correction of having the Midas transmitter generate published 21mA versus the current 20mA under certain conditions.

Technical Note

Find out more:

<https://sps.honeywell.com/us/en/products/safety/gas-and-flame-detection>

Contact Honeywell Analytics:

Europe, Middle East, Africa

Life Safety Distribution GmbH
Javastrasse 2
8604 Hegnau
Switzerland
Tel: +41 (0)44 943 4300
Fax: +41 (0)44 943 4398
gasdetection@honeywell.com

Customer Service:

Tel: 00800 333 222 44 (Freephone number)

Tel: +41 44 943 4380 (Alternative number)

Fax: 00800 333 222 55

Middle East Tel: +971 4 450 5800 (Fixed Gas Detection)

Middle East Tel: +971 4 450 5852 (Portable Gas Detection)

Americas

Honeywell Analytics Distribution Inc.
405 Barclay Blvd.
Lincolnshire, IL 60069
USA
Tel: +1 847 955 8200
Toll free: +1 800 538 0363
Fax: +1 847 955 8210
detectgas@honeywell.com

RAE Systems by Honeywell

Phone: 408.952.8200

Toll Free: 1.888.723.4800

Fax: 408.952.8480

Asia Pacific

Honeywell Industrial Safety
7F SangAm IT Tower,
434, Worldcupbuk-ro, Mapo-gu,
Seoul 03922,
Korea

Tel: +82 (0) 2 6909 0300

Fax: +82 (0) 2 2025 0328

India Tel: +91 124 4752700

China Tel: +86 10 5885 8788 3000

analytics.ap@honeywell.com

Technical Support

EMEA: gastechsupportemea@honeywell.com

Americas: is.gas.techsupport@honeywell.com

AP: gas.techsupport.apaci@honeywell.com

LATAM: SoporteTecnico.HGAS@Honeywell.com

Brazil: SuporteTecnico.HGAS@Honeywell.com

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. This publication is not intended to form the basis of a contract and the company reserves the right to amend the design and specification without notice.