Honeywell

Technical Note

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

1998-2004 Rev 1 7/22

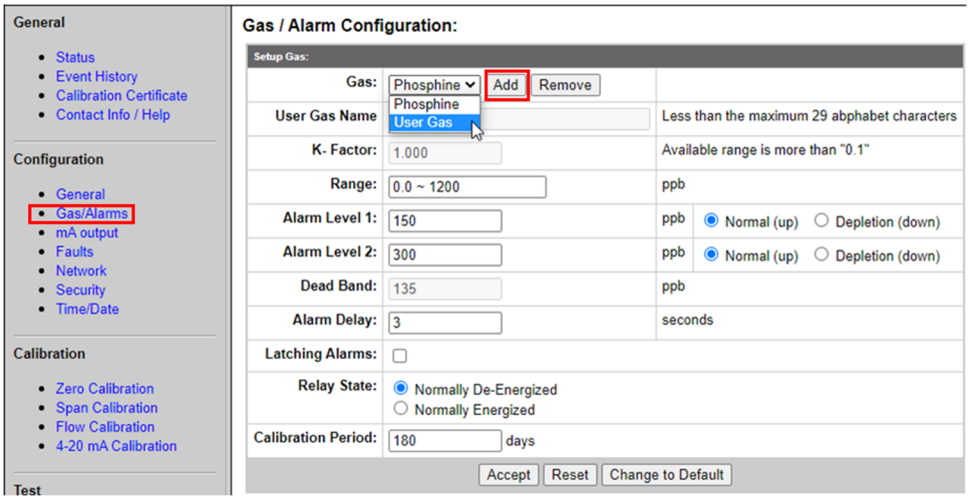
Revision	Midas	Midas w/Tricolor LCD
From	v1.16.b2	v2.16.b3
To	v1.16.b8	v2.16.b8

New Enhancements:

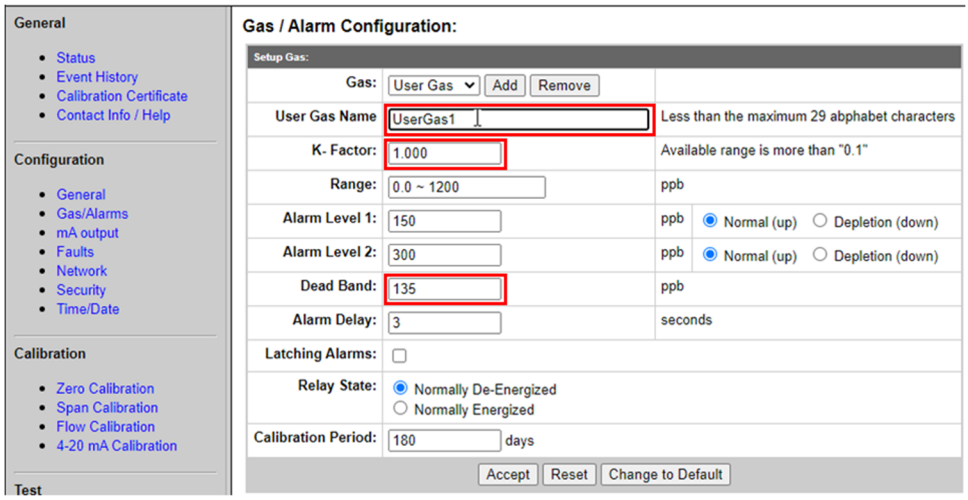
1. Addition of a K-Factor (or correction factor) feature to provide more flexibility for the Midas operational perameters

   **Configured by Webpages Gas/Alarm menu only!*

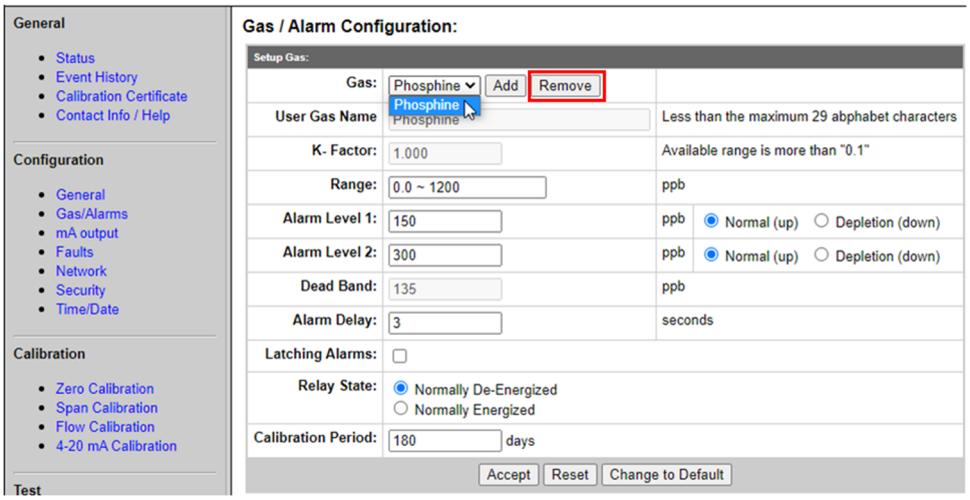
- A user can adjust by navigating to the "Configuration" menu and select "Gas/Alarms" to adjust K-Factor by adding a user gas.



- 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.



- User Data can be created and deleted dynamically.



- 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

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	
	7	Alarm 2 active	
nibble2	8	Relay 1 energized	
	9	Relay 2 energized	
	10	Relay 3 energized	
	11	Heartbeat Bit – toggles every second to confirm communications	
nibble3	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 (S**12345678**, 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 (S**12345678**, 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.

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 implimented to prevent potential of data corruption of the Cartridge EEPROM data.
2. NH3 abd 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 implimented to prevent potential of data corruption of the Cartridge EEPROM data.
3. mA increase during 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.

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Find out more:
https://sps.honeywell.com/us/en/products/safety/gas-and-flame-detection

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