

# General Monitors U.S. **Configurations**



Effective 28 July 2017



Rev. 5-2017

*Because every life has a **purpose...***



## Flame Detection Equipment

---

FL4000H .....	1-2
FL3100H .....	1-3
FL3101H .....	1-4
FL3100H-H2 .....	1-5
FL802 .....	1-6
TL105 .....	1-7
FLAME-ACC .....	1-8

## MODEL FL4000H INTELLIGENT MULTI-SPECTRAL FLAME DETECTION SYSTEM



FL4000H - 1 - 0 - 1 - 3 - 1 - 1 - 1

### INTELLIGENT MSIR FLAME DETECTION SYSTEM

■ (Std) FL4000H INTELLIGENT MSIR FLAME DETECTION SYSTEM

#### A. ALARM-OUTPUT

- 1-  (Std) DUAL MODBUS - 0-20mA, NO RELAYS
- 2-  DUAL MODBUS - 0-20mA, RELAYS
- 3-  SINGLE MODBUS - 3.5mA RELAYS, HART
- 4-  SINGLE MODBUS - 1.25mA RELAYS, HART
- 5-  SINGLE MODBUS - 1.25mA NO RELAYS, HART
- 6-  SINGLE MODBUS - 3.5mA NO RELAYS, HART

#### B. RELAY-STATE-NC:

- 0-  (Std) NO RELAYS
- 1-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### C. SENSITIVITY:

- 1-  (Std) HIGH
- 2-  MEDIUM
- 3-  LOW

#### D. TIME-DELAY:

- 1-  0 SECOND DELAY
- 2-  8 SECOND DELAY
- 3-  (Std) 10 SECOND DELAY
- 4-  14 SECOND DELAY

#### E. APPROVALS/LANGUAGE:

- 1-  (Std) CSA/FM/ATEX/IECEx (GMI)
- 2-  CSA/FM/ATEX/IECEx (GMIL)
- 3-  CCCF APPROVALS-LED indication for China (GMI)
- 4-  CCCF APPROVALS-LED indication for China (GMIL)

#### F. WIRING-ARRANGEMENT:

- 1-  (Std) 3/4" NPT CONDUIT ENTRY
- 2-  2x25mm

#### G. MOUNTING BRACKET

- 0-  W/O MOUNTING BRACKET
- 1-  (Std) W/MOUNTING BRACKET

## MODEL FL3100H UV/IR FLAME DETECTOR



FL3100H - 1 - 5 - 1 - 3 - 1 - 1 - 1

### FLAME DETECTOR:

(Std) UV/IR FLAME DETECTOR

#### A. ALARM-OUTPUT:

- 1-  (Std) SINGLE MODBUS (CUSTOMER TO CONFIGURE) 4-20mA & RELAYS
- 2-  DUAL MODBUS (CUSTOMER TO CONFIGURE) RELAYS, NO 4-20mA
- 3-  SINGLE MODBUS (GMI TO CONFIGURE) 4-20mA & RELAYS
- 4-  DUAL MODBUS (GMI TO CONFIGURE) RELAYS, NO 4-20mA
- 5-  SINGLE MODBUS (CUST CONFIG) 4-20mA & RELAYS HART 3.5mA
- 6-  SINGLE MODBUS (CUST CONFIG) 4-20mA & RELAYS HART 1.25mA

#### B. RELAY-STATE-NC:

- 1-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  (Std) NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### C. SENSITIVITY:

- 1-  (Std) 100% SENSITIVITY
- 2-  75% SENSITIVITY
- 3-  50% SENSITIVITY

#### D. TIME-DELAY:

- 2-  2 SECOND DELAY
- 3-  (Std) 4 SECOND DELAY
- 4-  8 SECOND DELAY
- 5-  10 SECOND DELAY

#### E. HOUSING/FIRE-TYPE:

- 1-  (Std) ALUMINUM
- 2-  STAINLESS STEEL
- 3-  ALUMINUM / HYDROGEN
- 4-  STAINLESS STEEL/ HYDROGEN

#### F. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA
- 3-  ATEX/IEC Ex

#### G. CABLE ENTRY:

- 1-  (Std) 2x3/4" NPT
- 2-  2X25mm

#### Notes:

Mounting bracket not included. See Accessories sheet for options.

## MODEL FL3101H UV FLAME DETECTOR



FL3101H - 1 - 5 - 1 - 3 - 1 - 1 - 1

### FLAME DETECTOR: (Std) UV FLAME DETECTOR

#### A. ALARM-OUTPUT:

- 1-  (Std) SINGLE MODBUS (CUSTOMER TO CONFIGURE) 4-20mA & RELAYS
- 2-  DUAL MODBUS (CUSTOMER TO CONFIGURE) RELAYS, NO 4-20mA
- 3-  SINGLE MODBUS (GMI TO CONFIGURE) 4-20mA & RELAYS
- 4-  DUAL MODBUS (GMI TO CONFIGURE) RELAYS, NO 4-20mA
- 5-  SINGLE MODBUS (CUST CONFIG) 4-20mA & RELAYS HART 3.5mA
- 6-  SINGLE MODBUS (CUST CONFIG) 4-20mA & RELAYS HART 1.25mA

#### B. RELAY-STATE-NC:

- 1-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  (Std) NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### C. SENSITIVITY:

- 1-  (Std) 100% SENSITIVITY
- 2-  75% SENSITIVITY
- 3-  50% SENSITIVITY

#### D. TIME-DELAY:

- 2-  2 SECOND DELAY
- 3-  (Std) 4 SECOND DELAY
- 4-  8 SECOND DELAY
- 5-  10 SECOND DELAY

#### E. HOUSING/FIRE-TYPE:

- 1-  (Std) ALUMINUM
- 2-  STAINLESS STEEL

#### F. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA
- 3-  ATEX/IECEX
- 4-  CCCF-LED indication for China (GMI)
- 5-  CCCF-LED indication for China (GMIL)
- 6-  FM/CSA-LED indication for Mexico

#### G. CABLE ENTRY:

- 1-  (Std) 3/4" NPT
- 2-  2 x 25 mm
- 3-  2 x 20 mm

#### Notes:

Mounting bracket not included. See Accessories sheet for options.

## MODEL FL3100H-H2 UV/IR HYDROGEN FLAME DETECTOR



FL3100H - 1 - 5 - 1 - 3 - 3 - 1 - 1

### HYDROGEN Flame Detector (Std) UV/IR HYDROGEN FLAME DETECTOR

#### A. Alarm-OUTPUT:

- 1-  (Std) Single Modbus (CUSTOMER TO CONFIGURE) 4-20mA & RELAYS
- 2-  Dual Modbus (CUSTOMER TO CONFIGURE) RELAYS, NO 4-20mA
- 3-  Single Modbus (GMI TO CONFIGURE) 4-20mA & RELAYS
- 4-  Dual Modbus (GMI TO CONFIGURE) RELAYS, NO 4-20mA
- 5-  Single Modbus (CUST CONFIG) 4-20mA & RELAYS HART 3.5mA
- 6-  Single Modbus (CUST CONFIG) 4-20mA & RELAYS HART 1.25mA

#### B. RELAY-STATE-NC:

- 1-  Latch Alarm/Non-Latch Warn De-Energized
- 2-  Latch Alarm/Non-Latch Warn Energized
- 3-  Latch Alarm/Latch Warn De-Energized
- 4-  Latch Alarm/Latch Warn Energized
- 5-  (Std) Non-Latch Alarm/Non-Latch Warn De-Energized
- 6-  Non-Latch Alarm/Non-Latch Warn Energized
- 7-  Non-Latch Alarm/Latch Warn De-Energized
- 8-  Non-Latch Alarm/Latch Warn Energized

#### C. SENSITIVITY:

- 1-  (Std) 100% SENSITIVITY
- 2-  75% SENSITIVITY
- 3-  50% SENSITIVITY

#### D. TIME-DELAY:

- 2-  2 SECOND DELAY
- 3-  (Std) 4 SECOND DELAY
- 4-  8 SECOND DELAY
- 5-  10 SECOND DELAY

#### E. HOUSING/FIRE-TYPE:

- 3-  (Std) ALUMINUM / HYDROGEN
- 4-  STAINLESS STEEL/ HYDROGEN

#### F. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA
- 3-  ATEX/IEC Ex

#### G. CABLE ENTRY:

- 1-  (Std) 2 x 3/4" NPT
- 2-  2 x 25 mm

#### Notes:

Mounting bracket not included. See Accessories sheet for options.

## MODEL FL802 EIGHT CHANNEL FLAME READOUT/RELAY MODULE



FL802- 1 - 1 - 2 - 8

### READOUT DISPLAY:

■ (Std) EIGHT CHANNEL FLAME READOUT/RELAY MODULE

#### A. RELAY-STATE-NC:

- |          |   |
|----------|---|
| 1- (Std) | LATCH ALARM/NON-LATCH WARN DE-ENERGIZED     |
| 2-       | LATCH ALARM/NON-LATCH WARN ENERGIZED        |
| 3-       | LATCH ALARM/LATCH WARN DE-ENERGIZED         |
| 4-       | LATCH ALARM/LATCH WARN ENERGIZED            |
| 5-       | NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED |
| 6-       | NON-LATCH ALARM/NON-LATCH WARN ENERGIZED    |
| 7-       | NON-LATCH ALARM/LATCH WARN DE-ENERGIZED     |
| 8-       | NON-LATCH ALARM/LATCH WARN ENERGIZED        |

#### B. ZONES-VOTING:

- |          |                         |
|----------|-------------------------|
| 1- (Std) | SINGLE ZONE - ONE VOTE  |
| 2-       | SINGLE ZONE - TWO VOTES |
| 3-       | DUAL ZONE - ONE VOTE    |
| 4-       | DUAL ZONE - TWO VOTES   |

#### C. TIME-DELAY:

- |          |                    |
|----------|--------------------|
| 1-       | 1 SECOND DELAY     |
| 2- (Std) | 4 SECOND DELAY     |
| 3-       | 8 SECOND DELAY     |
| 4-       | ALARM NON-LATCHING |

#### D. ACTIVE CHANNELS:

- |          |                       |
|----------|-----------------------|
| 1-       | ONE ACTIVE CHANNEL    |
| 2-       | TWO ACTIVE CHANNELS   |
| 3-       | THREE ACTIVE CHANNELS |
| 4-       | FOUR ACTIVE CHANNELS  |
| 5-       | FIVE ACTIVE CHANNELS  |
| 6-       | SIX ACTIVE CHANNELS   |
| 7-       | SEVEN ACTIVE CHANNELS |
| 8- (Std) | EIGHT ACTIVE CHANNELS |

## MODEL TL105 TL105 TEST LAMP



TL105 - 0 - 2

### MODEL TL105 TEST LAMP (Std) TEST LAMP

#### A. LAMP-SETTINGS:

- 0-  (Std) FL4000, FL4000H SENSITIVITY
- 1-  FL3100, FL3110, FL3000 SENSITIVITY
- 2-  FL3101, FL3101H, FL3111, FL3001 SENSITIVITY
- 3-  FL3102, FL3112, FL3002 SENSITIVITY
- 4-  TYPE V, VI SENSITIVITY

#### B. BATTERY-CHARGER:

- 1-  NO CHARGER
- 2-  (Std) 71676-1 CHARGER ASSEMBLY - TL105



## Accessories FLAME DETECTION

### FL3100 Detector

714000-1 FL3100H ELECTRONIC RETRO KIT

### FL3101, FL3102, FL4000 Detector

CALL SERVICE REPAIR

### FL3100H Detector

71471-1 UV/IR DETECTOR BOARD FL3100H  
 71461-2 OUTPUT BOARD  
 71461-3 OUTPUT DUAL MODBUS FL3100H  
 71481-1 CONTROL BOARD 4-20 UV/IR FL3100H  
 71481-2 CONTROL BOARD 4-20 HART UV/IR FL3100H  
 71481-3 CONTROL BOARD DUAL MODBUS UV/IR FL3100H  
 71481-4 CONTROL BOARD, HART 1.25  
 70567-2 ASSEMBLY UV SOURCE TUBE W/O COVER FL3100/FL3101  
 71127-1 SENSOR UV FLAME FL3100/FL3101  
 70596-2 LAMP, IR SOURCE  
 70552-2 DETECTOR IR

### FL3101H Detector

71461-2 OUTPUT BOARD  
 71481-1 CONTROL BOARD 4-20 UV/IR FL3100H  
 71471-2 UV DETECTOR BOARD FL3100H  
 70567-2 ASSEMBLY UV SOURCE TUBE W/O COVER FL3100/FL3101  
 71127-1 SENSOR UV FLAME FL3100/FL3101

### FL4000H Detector

712005-1 OPTICAL ASSEMBLY W/CONFIGURATION KIT FL4000H  
 712005-2 OPTICAL ASSEMBLY HART W/CONFIGURATION KIT FL4000H  
 712005-3 OPTICAL ASSEMBLY HART 1.25 W/CONFIGURATION KIT FL4000H  
 71281-1A FIELD WIRING BOARD FOR FL4000H W/RELAYS  
 71281-2 FIELD WIRING BOARD FOR FL4000H W/O RELAYS

### DETECTOR MOUNTING HARDWARE:

961-003 SWIVEL ELBOW 3/4 ALUMINUM  
 961-004 UNION 3/4 ALUMINUM  
 70515-1 STANDARD SWIVEL KIT (961-003, 961-004)  
 71172-1 BRACKET ASSEMBLY, ALUMINUM, (FL310X SERIES)  
 71172-2 BRACKET ASSEMBLY, STAINLESS STEEL, (FL310X SERIES)  
 71370-1 BRACKET ASSEMBLY, STAINLESS STEEL, (FL4000)

### BATTERY CHARGER:

70384-1 BATTERY CHARGER (TL101, TL102, TL103, TL104)  
 70338-1 BATTERY PACK (TL101, TL102, TL103 & TL104)  
 71650-1 BATTERY PACK, 12V, TL105 NiMH  
 71676-1 CHARGER ASSEMBLY - TL105

### FL802 MOUNTING HARDWARE:

10201-1 ASSEMBLY 2in PANEL MOUNT  
 10195-1 ASSEMBLY 2in WALL MOUNT  
 10199-1 ASSEMBLY 4in PANEL MOUNT  
 10202-1 ASSEMBLY 4in WALL MOUNT  
 10548-1 8in HALF RACK  
 10200-1 19in PANEL MOUNT RACK  
 10187-1 BLANK 2in PANEL  
 10191-1 BLANK 4in PANEL

### MISCELLANEOUS:

954-007 WRENCH 6in LONG REACH T HANDLE 3/16 ALLEN WRENCH  
 10272-1 WINDOW CLEANING SOLUTION  
 712006-1 RAIN GUARD KIT, FL4000H  
 71552-1 FLAME SHIELD ASSEMBLY, FL3100H, RAIN/SNOW GUARD  
 71270-1 FILM HOLDER KIT FL4000  
 71271-1 FILM REPLACEMENT KIT FL4000



## S5000 Gas Monitor

---

S5000 .....	2-2
S5000 Sensors .....	2-3
S5000 Replacement Sensors & Accessories .....	2-4

## S5000 GAS MONITOR

S5000 -  1  2  3  4  5  6  7

### GAS MONITOR

General Monitors S5000 Gas Monitor

#### 1. MATERIAL:

- 2-  STAINLESS STEEL - IIB+H2/B,C,D
- 3-  STAINLESS STEEL - IIC/A (for acetylene applications)

#### 2. OUTPUTS:

- 0-  (std) ANALOG OUT/BLUETOOTH/MODBUS/HART 1.25
- 1-  ANALOG OUT/BLUETOOTH/MODBUS/HART 3.5
- 2-  ANALOG OUT/BLUETOOTH/MODBUS/HART 1.25/RELAYS
- 3-  ANALOG OUT/BLUETOOTH/MODBUS/HART 3.5/RELAYS
- 4-  ANALOG OUT/NO BLUETOOTH/MODBUS/HART 1.25
- 5-  ANALOG OUT/NO BLUETOOTH/MODBUS/HART 3.5
- 6-  ANALOG OUT/NO BLUETOOTH/MODBUS/HART 1.25/RELAYS
- 7-  ANALOG OUT/NO BLUETOOTH/MODBUS/HART 3.5/RELAYS

#### 3. RELAY STATE:

- 0-  (Std) NO RELAYS
- 1-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### 4. APPROVALS:

- 0-  (std) CSA
- 1-  ATEX/IECEX

#### 5. CUSTOM:

- 00-  (std) NONE
- 01-  STAINLESS STEEL TAG

#### 6. SENSOR #1:

- Dxx-  Digital Sensor (see gas code list)
- Mxx-  Passive MOS (see MOS list)
- Rxx-  IR400 (see IR list)
- Cxx-  Passive Catalytic Bead (see CB list)

#### 7. SENSOR #2:

- 000-  No Sensor - only if sensor #1 = Mxx or Cxx
- D00-  No Sensor - only if sensor #1 = Dxx or Rxx (for future upgrade)
- Dxx-  Digital Sensor - only if sensor #1 = Dxx or Rxx (see gas code list)

SENSOR OPTIONS AVAILABLE ON NEXT PAGE

## S5000 GAS MONITOR SENSOR OPTIONS

### DIGITAL GAS SENSORS

	Type
D00 - No sensor or sensor body (transmitter only)	Div. 1
D01 - No sensor (comes w/sensor body and blank)	XCell
D10 - Carbon monoxide, 0-100 ppm	XCell
D11 - Carbon monoxide, 0-500 ppm	XCell
D12 - Carbon monoxide, 0-1000 ppm	XCell
D14 - Carbon monoxide, hydrogen resistant, 0-100 ppm	XCell
D16 - Oxygen 0-25%	XCell
D20 - Hydrogen sulfide, 0-10 ppm	XCell
D21 - Hydrogen sulfide, 0-50 ppm	XCell
D22 - Hydrogen sulfide, 0-100 ppm	XCell
D60 - Combustible, 0-100% LEL - Methane (5.0%)	XCell
D61 - Combustible, 0-100% LEL - Propane (2.1%)	XCell
D65 - Combustible, 0-100% LEL - Methane (4.4%)	XCell
D66 - Combustible, 0-100% LEL - Propane (1.7%)	XCell

### PASSIVE CATALYTIC BEAD (CB) SENSORS

C00 - Use for replacement transmitter w/passive cat bead
C04 - 10058-1, Stainless steel
C10 - 11159-8, Stainless steel, 0-20% LEL, ATEX
C11 - 11159-1, Stainless steel, 0-100% LEL, ATEX

### PASSIVE MOS SENSORS

M00 - Use for replacement transmitter w/MOS
M04 - 50448-1, Stainless steel, 0-100 ppm H <sub>2</sub> S
M05 - 50448-5, Stainless steel, 0-50 ppm H <sub>2</sub> S
M06 - 50448-9, Stainless steel, 0-20 ppm H <sub>2</sub> S
M14 - 51457-1, Stainless steel, 0-100 ppm H <sub>2</sub> S, ATEX
M15 - 51457-5, Stainless steel, 0-50 ppm H <sub>2</sub> S, ATEX
M16 - 51457-9, Stainless steel, 0-20 ppm H <sub>2</sub> S, ATEX

### INFRARED SENSORS (IR400)

R31 - Stainless steel, Methane, IR400-4-01-2-2-0-1-0
R32 - Stainless steel, Propane, IR400-4-02-2-2-0-1-0
R43 - Stainless steel, Methane, IECEx, IR400-4-13-2-2-0-1-0
R44 - Stainless steel, Propane, IECEx, IR400-4-14-2-2-0-1-0

## S5000 REPLACEMENT SENSORS AND ACCESSORIES

A-5K-SENS -  1  2  3  4  5  0

### REPLACEMENT SENSORS - XCell DIGITAL

#### 1. GAS CODE:

01 -	No sensor (use for sensor body only, includes blank)
10 -	Carbon monoxide, 0-100 ppm
11 -	Carbon monoxide, 0-500 ppm
12 -	Carbon monoxide, 0-1000 ppm
14 -	Carbon monoxide, hydrogen resistant, 0-100 ppm
16 -	Oxygen 0-25%
20 -	Hydrogen sulfide, 0-10 ppm
21 -	Hydrogen sulfide, 0-50 ppm
22 -	Hydrogen sulfide, 0-100 ppm
60 -	Combustible, 0-100% LEL - Methane (5.0%)
61 -	Combustible, 0-100% LEL - Propane (2.1%)
65 -	Combustible, 0-100% LEL - Methane (4.4% ATEX)
66 -	Combustible, 0-100% LEL - Propane (1.7% ATEX)

#### 2. MATERIAL:

0-  STAINLESS STEEL

#### 3. APPROVALS:

F-  CSA  
A-  ATEX/IECEX  
0-  None (no sensor body)

#### 4. SENSOR BODY:

0-  None  
1-  3/4" NPT  
2-  M25

#### 5. FUTURE USE:

0-  NONE

### REPLACEMENT SENSORS - PASSIVE

10058-1	Catalytic Bead Stainless Steel Hydrocarbon 0-100% LEL
11159-1	Catalytic Bead Stainless Steel Hydrocarbon 0-100% LEL ATEX
11159-8	Catalytic Bead Stainless Steel Hydrocarbon 0-20% LEL ATEX
50448-1	MOS Stainless Steel 0-100 ppm H2S
50448-5	MOS Stainless Steel 0-50 ppm H2S
50448-9	MOS Stainless Steel 0-20 ppm H2S
51457-1	MOS Stainless Steel 0-100 ppm H2S ATEX
51457-5	MOS Stainless Steel 0-50 ppm H2S ATEX
51457-9	MOS Stainless Steel 0-20 ppm H2S ATEX

### REPLACEMENT SENSORS - INFRARED

IR400-4-01-2-2-0-1-0	IR400, stainless steel, Methane
IR400-4-02-2-2-0-1-0	IR400, stainless steel, Propane
IR400-4-13-2-2-0-1-0	IR400, stainless steel, Methane, IECEX
IR400-4-14-2-2-0-1-0	IR400, stainless steel, Propane, IECEX

**Note:** The above sensors/configurations are approved for use with the S5000. Only quote sensors listed above for replacements.

### ACCESSORIES

324240-1	Remote junction box, stainless steel, IIB+H2
324240-3	Remote junction box, stainless steel, IIC
10176947	Duct mount kit, rectangular
10179124	Duct mount kit, round, small (12"-20" / 305-508 mm diameter)
10179321	Duct mount kit, round, large (20"-40" / 508-1016 mm diameter)
10176946	Universal pipe mount kit, 20-150 mm, X5000/S5000
10184683	XCell digital sensor guard replacement <sup>1,2</sup>
32545-1	IR400 splash guard replacement
32545-2	IR400 splash guard w/out screen
10180254	Sunshield, X5000/S5000
CALKIT1	XCell digital calibration kit (includes 1 LPM regulator (922-022), XCell cal cap, XCell sensor guard, tubing, case)
922-022	Regulator, 1 LPM <sup>2</sup>
10181450	XCell digital sensor calibration cap, X5000/S5000 <sup>1,2</sup>
32554-1	IR400 calibration cup

<sup>1</sup> - Accessories included with XCell digital sensors

<sup>2</sup> - Accessories included with XCell digital calibration kit

## Combustible Gas Detection Equipment

---

580A .....	3-2
610A .....	3-3
S4000CH .....	3-4
IR400 .....	3-5
IR4000S .....	3-6
IR4000M .....	3-7
IR5500 .....	3-8
DC110 .....	3-9
S4000CR .....	3-10
IR4000SR .....	3-11
10266 .....	3-12
HC-CAL .....	3-13
HC-ACC .....	3-14

## MODEL 580A DUAL CHANNEL COMBUSTIBLE GAS CONTROLLER



580A - 1 - 1 - 0 0 - 0

**CONTROLLER:**  
(Std) CONTROLLER

**A. POWER:**

- 1-  (Std) 110 VAC/24 VDC  
2-  220 VAC/24 VDC

**B. RELAY-STATE:**

- 1-  (Std) LATCH ALARM/NON-LATCH WARN DE-ENERGIZED  
2-  LATCH ALARM/NON-LATCH WARN ENERGIZED  
3-  LATCH ALARM/LATCH WARN DE-ENERGIZED  
4-  LATCH ALARM/LATCH WARN ENERGIZED  
5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED  
6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED  
7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED  
8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

**C. COMBUSTIBLE-SENSOR: (price per active channel)\***

- 00-  (Std) NONE

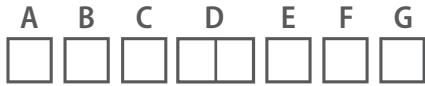
**D. ACTIVE CHANNELS\*:**

- 0-  CONTROLLER ONLY

**Note**

\* Quote sensors and sensor housings separately. If quoting less than 2 sensors be sure to include sensor simulator for the remaining inactive channel.

## MODEL 610A FOUR CHANNEL COMBUSTIBLE GAS CONTROLLER



610A - 1 - 1 - 1 - 0 0 - 1 - 2 - 0

### CONTROLLER:

(Std) FOUR CHANNEL COMBUSTIBLE GAS CONTROLLER

#### A. POWER:

- 1-  (Std) 110 VAC/24 VDC
- 2-  220 VAC/24 VDC

#### B. RELAY-ALARM:

- 1-  (Std) COMMON RELAY/COMMON ALARMS
- 2-  DISCRETE RELAYS/COMMON ALARMS
- 3-  DISCRETE RELAYS/DISCRETE ALARMS

#### C. RELAY-STATE:

- 1-  (Std) LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### D. COMBUSTIBLE-SENSOR: (price per active channel)\*

- 00-  (Std) NONE

#### E. VERSION:

- 1-  (Std) FM VERSION

#### F. ZONE-CONTROLLER:

- 1-  ZONE CONTROLLER - ON - (USE COMMON RELAY/ALARM OPTION)
- 2-  (Std) ZONE CONTROLLER - OFF

#### G. ACTIVE CHANNELS\*:

- 0-  CONTROLLER ONLY

#### Note:

\* Quote sensors and sensor housings separately. If quoting less than 4 sensors be sure to include sensor simulator for any remaining inactive channels.



## MODEL S4000CH COMBUSTIBLE GAS INTELLIGENT SENSOR



S4000CH - 1 - 0 - 0 1 - 1

### COMBUSTIBLE GAS INTELLIGENT SENSOR (Std) S4000CH COMBUSTIBLE GAS INTELLIGENT SENSOR

#### A. RELAYS-NC:

- |                                   |  |
|-----------------------------------|--|
| 1- <input type="checkbox"/> (Std) | 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS                |
| 2- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS               |
| 3- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS, HAZWATCH CAL  |
| 4- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS, HAZWATCH CAL |
| 5- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, HART 1.25mA               |
| 6- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, HART 1.25mA                 |
| 7- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, HART 3.5mA                |
| 8- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, HART 3.5mA                  |

#### B. RELAY-STATE-NC:

- |                                   |   |
|-----------------------------------|---|
| 0- <input type="checkbox"/> (Std) | NO RELAYS                                   |
| 1- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN DE-ENERGIZED     |
| 2- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN ENERGIZED        |
| 3- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN DE-ENERGIZED         |
| 4- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN ENERGIZED            |
| 5- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED |
| 6- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN ENERGIZED    |
| 7- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN DE-ENERGIZED     |
| 8- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN ENERGIZED        |

#### C. COMBUSTIBLE-SENSOR:

- |                                    |  |
|------------------------------------|--|
| 00- <input type="checkbox"/>       | NONE   |
| 01- <input type="checkbox"/> (Std) | 10001-1 SENSOR ALUMINUM STANDARD INDUSTRIAL HYDROCARBON          |
| 02- <input type="checkbox"/>       | 10001-1R SENSOR ALUMINUM POISON RESISTANT INDUSTRIAL HYDROCARBON |
| 03- <input type="checkbox"/>       | 10014-1 SENSOR ALUMINUM HI-TEMP INDUSTRIAL HYDROCARBON           |
| 04- <input type="checkbox"/>       | 10014-1R SENSOR ALUMINUM HI-TEMP POISON RESISTANT HYDROCARBON    |
| 05- <input type="checkbox"/>       | 10022-1 SENSOR ALUMINUM PTB INDUSTRIAL HYDROCARBON               |
| 06- <input type="checkbox"/>       | 10058-1 SENSOR STAINLESS STEEL STANDARD INDUSTRIAL HYDROCARBON   |
| 07- <input type="checkbox"/>       | 10058-1R SENSOR SS POISON RESISTANT INDUSTRIAL HYDROCARBON       |
| 08- <input type="checkbox"/>       | 10164-1 SENSOR ALUMINUM HYDROGEN SPECIFIC                        |
| 09- <input type="checkbox"/>       | 10387-4 SENSOR AL SUPER POISON RESISTANT INDUSTRIAL HYDROCARBON  |
| 12- <input type="checkbox"/>       | 11159-1L SENSOR STAINLESS STEEL STANDARD INDUSTRIAL HC ATEX      |
| 13- <input type="checkbox"/>       | 11159-2L SENSOR STAINLESS STEEL HI-TEMP HC ATEX                  |

#### D. APPROVALS/LANGUAGE/TERMINAL TYPE:

- |                                   |  |
|-----------------------------------|--|
| 1- <input type="checkbox"/> (Std) | ATEX/CSA-Aluminum Housing, PUSH TERMINAL         |
| 3- <input type="checkbox"/>       | ATEX/CSA-Aluminum Housing, SCREW TERMINAL        |
| 5- <input type="checkbox"/>       | ATEX/CSA-STAINLESS STEEL HOUSING                 |
| 6- <input type="checkbox"/>       | ATEX/CSA-STAINLESS STEEL HOUSING SCREW TERMINALS |
| 9- <input type="checkbox"/>       | ATEX/CSA-Aluminum Housing, PUSH TERMINAL, BLUE   |
| 10- <input type="checkbox"/>      | ATEX/CSA-Aluminum Housing, SCREW TERMINAL, BLUE  |
| 14- <input type="checkbox"/>      | InMetro-Aluminum Housing, PUSH TERMINAL          |
| 15- <input type="checkbox"/>      | InMetro-Aluminum Housing, SCREW TERMINAL         |
| 16- <input type="checkbox"/>      | InMetro-STAINLESS STEEL HOUSING                  |
| 17- <input type="checkbox"/>      | InMetro-STAINLESS STEEL HOUSING SCREW TERMINALS  |

## MODEL IR400 POINT IR COMBUSTIBLE GAS DETECTOR



IR400 - 0 - 0 1 - 1 - 2 - 0 - 1 - 0

### DETECTOR

(Std) POINT IR COMBUSTIBLE GAS DETECTOR

#### A. OUTPUT:

- |                                   |   |
|-----------------------------------|---|
| 0- <input type="checkbox"/> (Std) | 0-20mA MODBUS (ID=1)                    |
| 1- <input type="checkbox"/>       | 0-20mA HART 3.5mA*                      |
| 2- <input type="checkbox"/>       | 0-20mA HAZARD WATCH CALIBRATION         |
| 3- <input type="checkbox"/>       | 0-20mA MODBUS (CUSTOMER TO SPECIFY ID#) |
| 4- <input type="checkbox"/>       | 0-20mA HART 1.25mA                      |

#### B. CALIBRATION:

- |                                    |                       |
|------------------------------------|-----------------------|
| 01- <input type="checkbox"/> (Std) | METHANE               |
| 02- <input type="checkbox"/>       | PROPANE               |
| 03- <input type="checkbox"/>       | BENZENE               |
| 04- <input type="checkbox"/>       | HEXANE                |
| 05- <input type="checkbox"/>       | PENTANE               |
| 06- <input type="checkbox"/>       | ETHYLENE              |
| 07- <input type="checkbox"/>       | BUTANE                |
| 08- <input type="checkbox"/>       | ETHANE                |
| 12- <input type="checkbox"/>       | 0-100% VOLUME METHANE |
| 13- <input type="checkbox"/>       | METHANE-IEC           |
| 14- <input type="checkbox"/>       | PROPANE-IEC           |
| 15- <input type="checkbox"/>       | HEXANE-IEC            |
| 16- <input type="checkbox"/>       | PENTANE-IEC           |
| 17- <input type="checkbox"/>       | BUTANE-IEC            |
| 18- <input type="checkbox"/>       | ETHANE-IEC            |
| 21- <input type="checkbox"/>       | PROPYLENE             |
| 22- <input type="checkbox"/>       | ETHYLENE-IEC          |

#### C. HOUSING-MATERIAL:

- |                                   |                                |
|-----------------------------------|--------------------------------|
| 1- <input type="checkbox"/> (Std) | ALUMINUM (3/4 - 14 NPT)        |
| 2- <input type="checkbox"/>       | STAINLESS STEEL (3/4 - 14 NPT) |

#### D. OPTICAL-GUARD:

- |                                   |                         |
|-----------------------------------|-------------------------|
| 0- <input type="checkbox"/>       | NO SPLASH GUARD         |
| 1- <input type="checkbox"/>       | SPLASH GUARD W/O SCREEN |
| 2- <input type="checkbox"/> (Std) | SPLASH GUARD W/SCREEN   |

#### E. JUNCTION-BOX:

- |                                   |   |
|-----------------------------------|---|
| 0- <input type="checkbox"/> (Std) | NO J-BOX  |
| 1- <input type="checkbox"/>       | 31305-1 JUNCTION BOX W/SWITCH, AL, CSA/FM                       |
| 2- <input type="checkbox"/>       | 31305-2 JUNCTION BOX W/O SWITCH, AL, CSA/FM                     |
| 5- <input type="checkbox"/>       | 31421-5 ASSEMBLY, EUROPEAN, STANDARD JUNCTION BOX W/SWITCH, SST |
| 6- <input type="checkbox"/>       | 31421-6 ASSEMBLY, EUROPEAN, JUNCTION BOX W/O SWITCH, ALUMINUM   |

#### F. APPROVALS-LANGUAGES:

- |                                   |          |
|-----------------------------------|----------|
| 1- <input type="checkbox"/> (Std) | GMI-GMIL |
|-----------------------------------|----------|

#### G. AUTOMATIC REMOTE GAS CALIBRATOR:

- |                                   |         |
|-----------------------------------|---------|
| 0- <input type="checkbox"/> (Std) | NO ARGC |
|-----------------------------------|---------|

#### Note:

\* IR400 3.5 mA HART output is **not** compatible with the IR4000S monitor. Must order with 1.25 mA HART option to use with IR4000S.

## MODEL IR4000S SINGLE POINT MONITOR



IR4000S- 0 - 0 - 0 2 - 1 - 0 - 1

### SINGLE POINT MONITOR

(Std) SINGLE POINT MONITOR

#### A. MONITOR OUTPUT:

0-  (Std) IR400/IR2100 (0-100 RANGE)

#### B. RELAY-STATE-NC:

- 0-  (Std) NO RELAYS
- 1-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### C. DETECTOR:

- 00-  NO DETECTOR
- 01-  IR400-0-01-1-1-0-1-0 METHANE, NO SCREEN, ALUMINUM
- 02-  (Std) IR400-0-01-1-2-0-1-0 METHANE, SCREEN, ALUMINUM
- 03-  IR400-0-01-2-1-0-1-0 METHANE, NO SCREEN, STAINLESS STEEL
- 04-  IR400-0-01-2-2-0-1-0 METHANE, SCREEN, STAINLESS STEEL
- 05-  IR400-0-02-1-1-0-1-0 PROPANE, NO SCREEN, ALUMINUM
- 06-  IR400-0-02-1-2-0-1-0 PROPANE, SCREEN, ALUMINUM
- 09-  IR400-0-04-1-2-0-1-0 HEXANE, SCREEN, ALUMINUM
- 13-  IR400-4-01-2-2-0-1-0 METHANE, SCREEN, STAINLESS STEEL, HART, USED W/IR4000S
- 21-  IR400-4-01-1-2-0-1-0 METHANE, SCREEN, ALUMINUM, HART, USED W/IR4000S
- 22-  IR400-4-02-1-2-0-1-0 PROPANE, SCREEN, ALUMINUM, HART, USED W/IR4000S
- 23-  IR400-4-04-1-2-0-1-0 HEXANE, SCREEN, ALUMINUM, HART, USED W/IR4000S
- 24-  IR400-4-05-1-2-0-1-0 PENTANE, SCREEN, ALUMINUM, HART, USED W/IR4000S
- 25-  IR400-4-07-1-2-0-1-0 BUTANE, SCREEN, ALUMINUM, HART, USED W/IR4000S
- 45-  IR400-4-07-2-2-0-1-0 BUTANE, SCREEN, STAINLESS STEEL, HART, USED W/IR4000S

#### D. CONNECTOR TYPE:

- 1-  (Std) PUSH TERMINAL
- 2-  SCREW TERMINAL

#### E. JUNCTION-BOX

- 0-  (Std) NO J-BOX
- 1-  31305-1 JUNCTION BOX W/SWITCH, AL, CSA
- 2-  31305-2 JUNCTION BOX W/O SWITCH, AL, CSA
- 6-  31421-6 ASSEMBLY, EUROPEAN, JUNCTION BOX W/O SWITCH
- 7-  31421-5 ASSEMBLY, EUROPEAN, JUNCTION BOX W/SWITCH, SST

#### F. APPROVALS/LANGUAGE/HOUSING MATERIAL

- 1-  (Std) ALUMINUM HOUSING
- 4-  STAINLESS STEEL HOUSING
- 8-  GREY, NO ZINC SST

#### Notes:

1. IR400 3.5 mA HART is **not** compatible with the IR4000S. Must order with 1.25 mA HART option.
2. See Toxic section for IR700 configurations w/IR4000S-CO2 version.

## MODEL IR4000M MULTIPLE POINT MONITOR



IR4000M - 0 - 0 - 00 - 1 - 0 - 1 - 1

### MULTIPLE POINT MONITOR (Std) MULTIPLE POINT MONITOR

#### A. MONITOR OUTPUT:

- 0-  (Std) 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS
- 1-  4-20mA OUTPUT W/RELAYS, W/DUAL MODBUS
- 2-  4-20mA OUTPUT, W/O RELAYS, HART 1.25mA
- 3-  4-20mA OUTPUT, W/RELAYS, HART 1.25mA

#### B. RELAY-STATE-NC:

- 0-  (Std) NO RELAYS
- 1-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### C. ELECTRONICS IR:

- 00-  (Std) NO DETECTOR

#### D. CONNECTOR TYPE:

- 1-  (Std) PUSH-TYPE TERMINAL
- 2-  SCREW TERMINAL

#### E. JUNCTION-BOX

- 0-  (Std) NO J-BOX

#### F. DETECTOR QUANTITY:

- 0-  NO DETECTOR
- 1-  (Std) ONE - CONFIGURATION ONLY - DOES NOT INCLUDE IR400
- 2-  TWO - CONFIGURATION ONLY - DOES NOT INCLUDE IR400
- 3-  THREE - CONFIGURATION ONLY - DOES NOT INCLUDE IR400
- 4-  FOUR - CONFIGURATION ONLY - DOES NOT INCLUDE IR400
- 5-  FIVE - CONFIGURATION ONLY - DOES NOT INCLUDE IR400
- 6-  SIX - CONFIGURATION ONLY - DOES NOT INCLUDE IR400
- 7-  SEVEN - CONFIGURATION ONLY - DOES NOT INCLUDE IR400
- 8-  EIGHT - CONFIGURATION ONLY - DOES NOT INCLUDE IR400

#### G. APPROVALS/LANGUAGES:

- 1-  (Std) ALUMINUM HOUSING
- 3-  STAINLESS STEEL HOUSING

## MODEL IR5500 OPEN PATH COMBUSTIBLE GAS DETECTOR



IR5500 - 1 - 1 - 1 - 1 - 2 - 2 - 1 - 1 - 1 - 1

### IR OPEN PATH COMBUSTIBLE GAS DETECTOR

(Std) IR5500 IR OPEN PATH COMBUSTIBLE GAS DETECTOR

#### A. ALARM-RELAYS:

- 0-  RELAYS INHIBITED
- 1-  (Std) W/ALARM RELAYS ALL DE-ENERGIZED
- 2-  W/ALARM RELAYS ALL ENERGIZED

#### B. ALARM-RELAY-STATES:

- 1-  (Std) LATCH HIGH, NON-LATCH LOW, NON-LATCH ppm HIGH
- 2-  LATCH HIGH, NON-LATCH LOW, LATCH ppm HIGH
- 3-  LATCH HIGH, LATCH LOW, NON-LATCH ppm HIGH
- 4-  LATCH HIGH, LATCH LOW, LATCH ppm HIGH
- 5-  NON-LATCH HIGH, NON-LATCH LOW, NON-LATCH ppm HIGH
- 6-  NON-LATCH HIGH, NON-LATCH LOW, LATCH ppm HIGH
- 7-  NON-LATCH HIGH, LATCH LOW, NON-LATCH ppm HIGH
- 8-  NON-LATCH HIGH, LATCH LOW, LATCH ppm HIGH

#### C. ID NUMBER OPTION:

- 1-  (Std) ID=1
- 2-  CUSTOMER TO SPECIFY ID#

#### D. MOUNTING ASSEMBLY:

- 0-  NO MOUNTING ASSEMBLY
- 1-  (Std) PAN-TILT ARM ASSEMBLY
- 2-  PAN-TILT BASE ASSEMBLY

#### E. OUTPUT:

- 1-  DUAL ANALOG/DUAL MODBUS
- 2-  (Std) 0-20mA/1.25mA HART/MODBUS
- 3-  0-20mA/3.5mA HART/MODBUS
- 5-  SPLIT RANGE 0-20mA/1.25mA HART/MODBUS
- 6-  SPLIT RANGE 0-20mA/3.5mA HART/MODBUS

#### F. RANGE:

- 1-  5-30 METERS (SHORT RANGE)
- 2-  (Std) 20-100 METERS (STD RANGE)
- 3-  80-150 METERS (LONG RANGE)

#### G. IR-SOURCE/THREAD TYPE:

- 0-  NO SOURCE
- 1-  (Std) 3/4in NPT
- 2-  25mm
- 3-  3/4in NPT w/VISIBLE LIGHT FILTER
- 4-  25mm w/VISIBLE LIGHT FILTER

#### H. IR-RECEIVER/GAS TYPE/THREAD TYPE:

- 0-  NO RECEIVER
- 1-  (Std) METHANE 3/4in NPT
- 2-  METHANE 25mm
- 4-  PROPANE 3/4in NPT
- 5-  PROPANE 25mm

#### I. CONNECTOR TYPE

- 1-  (Std) PUSH TERMINAL
- 2-  SCREW TERMINAL
- 3-  SCREW TERMINAL M20, GREY
- 4-  SCREW TERMINAL 3/4 NPT, GREY

#### J. APPROVALS:

- 1-  (Std) FM/CSA/ATEX/IEC Ex
- 3-  GOST

#### NOTES:

IR5500 must be purchased with approved mounting arms in order for approvals to be valid.  
For path lengths between 20-30 meters, use standard range configuration for optimal performance.

# MODEL DC110 EIGHT CHANNEL COMBUSTIBLE GAS REDOUT/RELAY MODULE



DC110 - 1 - 1 - 2 - 8

### READOUT DISPLAY:

(Std) EIGHT CHANNEL COMBUSTIBLE GAS READOUT/RELAY MODULE

#### A. RELAY-STATE-NC:

- 1-  (Std) LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED NO CHARGE
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### B. VERSION:

- 1-  (Std) FM VERSION
- 2-  NON-FM VERSION

#### C. VOTING:

- 1-  VOTING OPTION - ON
- 2-  (Std) VOTING OPTION - OFF

#### D. ACTIVE CHANNELS:

- 1-  ONE ACTIVE CHANNEL
- 2-  TWO ACTIVE CHANNELS
- 3-  THREE ACTIVE CHANNELS
- 4-  FOUR ACTIVE CHANNELS
- 5-  FIVE ACTIVE CHANNELS
- 6-  SIX ACTIVE CHANNELS
- 7-  SEVEN ACTIVE CHANNELS
- 8-  (Std) EIGHT ACTIVE CHANNELS

## Model S4000CR COMBUSTIBLE GAS SMART/INTELLIGENT SENSOR RETROFIT KIT



S4000CR - 1 - 1 - 2 - 1

### COMBUSTIBLE GAS INTELLIGENT SENSOR

(Std) S4000CR COMBUSTIBLE GAS INTELLIGENT SENSOR RETROFIT KIT

#### A. RELAYS-NC:

- |                                   |  |
|-----------------------------------|--|
| 1- <input type="checkbox"/> (Std) | 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS                |
| 2- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS               |
| 3- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS, HAZWATCH CAL  |
| 4- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS, HAZWATCH CAL |
| 5- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, HART 1.25mA               |
| 6- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, HART 1.25mA                 |
| 7- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, HART 3.5mA                |
| 8- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, HART 3.5mA                  |

#### B. RELAY-STATE-NC:

- |                                   |   |
|-----------------------------------|---|
| 1- <input type="checkbox"/> (Std) | NO RELAYS                                   |
| 2- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN DE-ENERGIZED     |
| 3- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN ENERGIZED        |
| 4- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN DE-ENERGIZED         |
| 5- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN ENERGIZED            |
| 6- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED |
| 7- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN ENERGIZED    |
| 8- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN DE-ENERGIZED     |
| 9- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN ENERGIZED        |

#### C. CURRENT MODEL:

- |                                   |   |
|-----------------------------------|---|
| 1- <input type="checkbox"/>       | S104/S106A (not available for units manufactured prior to 1995) |
| 2- <input type="checkbox"/> (Std) | S4000C-   |

#### D. TERMINAL TYPE:

- |                                   |                |
|-----------------------------------|----------------|
| 1- <input type="checkbox"/> (Std) | PUSH TERMINAL  |
| 2- <input type="checkbox"/>       | SCREW TERMINAL |

## MODEL IR4000SR FMD TO IR4000S RETROFIT KIT



IR4000SR - 1 - 1 - 2 - 1

### FMD to IR4000S RETROFIT KIT (Std) IR4000SR

---

#### A. MONITOR OUTPUT:

1-  (Std) IR400/IR2100 (0-100 RANGE)

---

#### B. RELAY-STATE-NC:

- 1-  (Std) NO RELAYS
- 2-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 3-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 4-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 5-  LATCH ALARM/LATCH WARN ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 7-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 9-  NON-LATCH ALARM/LATCH WARN ENERGIZED

---

#### C. TERMINAL TYPE:

- 1-  PUSH TERMINAL
- 2-  (Std) SCREW TERMINAL

---

#### D. APPROVALS/LANGUAGE:

- 1-  (Std) GMI-GMIL
  - 2-  GMIL
- 
-



## MODEL 10266 HC HOUSING ASSEMBLY



10266 - 0 1 - 1 - 1

### HC HOUSING ASSEMBLY:

(Std) 10266 HC HOUSING ASSEMBLY

#### A. COMBUSTIBLE-SENSOR:

00- □	NONE
01- □ (Std)	10001-1 SENSOR ALUMINUM STANDARD INDUSTRIAL HYDROCARBON
02- □	10001-1R SENSOR ALUMINUM POISON RESISTANT INDUSTRIAL HYDROCARBON
03- □	10014-1 SENSOR ALUMINUM HI-TEMP INDUSTRIAL HYDROCARBON
04- □	10014-1R SENSOR ALUMINUM HI-TEMP POISON RESISTANT HYDROCARBON
05- □	10022-1 SENSOR ALUMINUM PTB INDUSTRIAL HYDROCARBON
06- □	10058-1 SENSOR STAINLESS STEEL STANDARD INDUSTRIAL HYDROCARBON
07- □	10058-1R SENSOR SS POISON RESISTANT INDUSTRIAL HYDROCARBON
08- □	10164-1 SENSOR ALUMINUM HYDROGEN SPECIFIC
09- □	10387-4 SENSOR AL SUPER POISON RESISTANT INDUSTRIAL HYDROCARBON
12- □	11159-1 SENSOR STAINLESS STEEL STANDARD INDUSTRIAL HC ATEX
13- □	11159-1L SENSOR STAINLESS STEEL STANDARD INDUSTRIAL HC ATEX
14- □	11159-2 SENSOR STAINLESS STEEL HI-TEMP HC ATEX
15- □	11159-2L SENSOR STAINLESS STEEL HI-TEMP HC ATEX
16- □	990-1063 SENSOR ALUMINUM HI-TEMP INDUSTRIAL HC W/96in LEADS
17- □	990-1127 SENSOR SS HI-TEMP HC CENELEC (W/LUGS) W/96in LEADS
18- □	990-1160 10014-1 SENSOR W/120in LEADS
19- □	990-1161 11159-2L SENSOR W/120in LEADS
20- □	990-1162 10014-1 SENSOR W/144in LEADS
21- □	990-1163 1159-2L SENSOR W/144in LEADS
22- □	990-1165 10014-1 SENSOR W/180in LEADS
23- □	990-1166 10014-1 SENSOR W/240in LEADS
24- □	990-1167 11159-2L SENSOR W/240in LEADS
25- □	990-1168 11159-2L SENSOR W/180in LEADS

#### B. HOUSING:

0- □	NONE
1- □ (Std)	10252-1 SENSOR HOUSING
3- □	10545-1 HOUSING, EEXE, HI-TEMP, M20 ENTRY
4- □	10252-3 HI-TEMP SENSOR HOUSING
5- □	914-155 HOUSING POLYESTER 20mm, B13-020-1

#### C. SPLASH/DUST-GUARD:

0- □	NONE
1- □ (Std)	10395-1 SPLASH GUARD ASSEMBLY
2- □	1800822-1 GUARD DUST SINTERED 60 MICRON
3- □	10110-1 DUST GUARD ASSEMBLY - 1 GUARD & 1 REPLACEABLE SCREEN
4- □	10535-1 AL TEST GAS APPLICATOR W/STAINLESS STEEL FITTINGS

## Calibration Equipment

### PORTABLE PURGE CALIBRATOR (kit contains 1400275-x cylinder, cat bead hardware kit 1400272-1):

1400276-1	CALIBRATION PP METHANE 50% LEL
1400276-5	CALIBRATION PP HYDROGEN 50% LEL
1400276-4	CALIBRATION PP BUTANE 50% LEL
1400276-8	CALIBRATION PP ETHANE 50% LEL
1400276-10	CALIBRATION PP PENTANE 50% LEL
1400276-6	CALIBRATION PP PROPANE 50% LEL
1400178-1	CALIBRATION PP HEXANE 50% LEL

### REPLACEMENT PARTS FOR PORTABLE PURGE:

925-026	TUBING (PRICED PER FOOT) - 3 FEET RECOMMENDED
1400152-1	SMALL CALIBRATION CUP
1400154-1	LARGE CALIBRATION CUP (USE W/DUST GUARD)
1400272-1	HARDWARE KIT - CATALYTIC BEAD (922-023 regulator, tubing, cal cups)
922-022	REGULATOR 0-1000 psi 1000 mL/MIN
922-023	REGULATOR 0-1000 psi 500 mL/MIN
922-026	REGULATOR 0-500 psig 0.3 slpm - for Hexane

### REPLACEMENT CYLINDERS:

1400275-1A	CYLINDER REPLACEMENT METHANE 50%
1400275-5A	CYLINDER REPLACEMENT HYDROGEN 50%
1400275-4A	CYLINDER REPLACEMENT BUTANE 50%
1400275-8A	CYLINDER REPLACEMENT ETHANE 50%
1400275-6A	CYLINDER REPLACEMENT PROPANE 50%
1400275-10A	CYLINDER REPLACEMENT PENTANE 50%
1400262-11A	CYLINDER OXYGEN 20.9%
31486-1A	HEXANE AT 50% LEL

### CALIBRATION CHAMBER:

10543-1	3-LITER CALIBRATION CHAMBER W/250 MICRO-LITER SYRINGE
---------	---

### REPLACEMENT PART FOR CAL CHAMBER:

928-715	SYRINGE, 250 MICRO-LITER
928-700	DISH FOR 3 LITER CHAMBER

### CALIBRATION TOOLS:

30060-1	CALIBRATION MAGNET
31037-1	DOUBLE CALIBRATION MAGNET (FOR OPEN PATH)

### AUTOMATIC REMOTE GAS CALIBRATOR (ARGC) KITS

80155-1	ARGC AUTOMATIC REMOTE GAS CAL ASSY W/PUSH TERMINALS
80155-2	ARGC AUTOMATIC REMOTE GAS CAL ASSY W/SCREW TERMINALS

### ARGC/RGC ACCESSORIES/SPARES:

32547-1	ARGC JUNCTION BOX PUSH TERMINALS
32547-2	ARGC JUNCTION BOX SCREW TERMINALS
32547-3	ARGC JUNCTION BOX PUSH TERMINALS, SST
32547-4	ARGC JUNCTION BOX SCREW TERMINALS, SST
32541-1*	RGC-IR REMOTE GAS CALIBRATOR-IR ONLY
32541-2*	RGC-IR REMOTE GAS CALIBRATOR NO SCREEN
80146-2	RGC PRESSURE REGULATOR ASSEMBLY (for disposable cylinders only)
80153-1*	RGC REMOTE GAS CALIBRATOR ONLY
80154-1	SOLENOID VALVE ASSEMBLY, ARGC KITS
80161-1*	REMOTE GAS CALIBRATOR - HIGH TEMPERATURE (RGC-HT)

\*requires pressure regulator assy p/n 80146-2

### GAS CHECK (IR2100) (assembly contains 1400275-x cylinder, IR2100 hardware kit 1400271-2):

31434-1	ASSEMBLY GAS KIT METHANE IR2100
31434-4	ASSEMBLY GAS KIT BUTANE IR2100
31434-6	ASSEMBLY GAS KIT PROPANE IR2100
31434-8	ASSEMBLY GAS KIT ETHANE IR2100
31468-7	ASSEMBLY GAS KIT HEXANE IR2100
1400271-2	HARDWARE KIT - IR2100 (contains 922-022 regulator, tubing, 31450-1 cal cup)

### GAS CHECK (IR400) (assembly contains 1400275-x cylinder, IR400 hardware kit 1400270-2):

32575-1	ASSEMBLY GAS KIT METHANE IR400
32575-4	ASSEMBLY GAS KIT BUTANE IR400
32575-6	ASSEMBLY GAS KIT PROPANE IR400
32575-8	ASSEMBLY GAS KIT ETHANE IR400
32575-9	ASSEMBLY GAS KIT ETHYLENE IR400
32575-10	ASSEMBLY GAS KIT PENTANE IR400
32548-7	ASSEMBLY GAS KIT HEXANE IR400
1400270-2	HARDWARE KIT - IR400 (contains 922-022 regulator, tubing, 32554-1 cal cup)
32554-1	CALIBRATION CUP IR400

## Accessories COMBUSTIBLE GAS DETECTION

### SENSORS:

10001-1	SENSOR ALUMINUM STANDARD INDUSTRIAL HYDROCARBON
10001-1R	SENSOR ALUMINUM POISON RESISTANT INDUSTRIAL HYDROCARBON
10014-1	SENSOR ALUMINUM HI-TEMP INDUSTRIAL HYDROCARBON
10014-1R	SENSOR ALUMINUM HI-TEMP POISON RESISTANT HYDROCARBON
10022-1	SENSOR ALUMINUM PTB INDUSTRIAL HYDROCARBON
10058-1	SENSOR STAINLESS STEEL STANDARD INDUSTRIAL HYDROCARBON
10058-1R	SENSOR SS POISON RESISTANT INDUSTRIAL HYDROCARBON
10164-1	SENSOR ALUMINUM HYDROGEN SPECIFIC
10387-4	SENSOR AL SUPER POISON RESISTANT INDUSTRIAL HYDROCARBON
11159-1	SENSOR STAINLESS STEEL STANDARD INDUSTRIAL HC ATEX
11159-1L	SENSOR STAINLESS STEEL STANDARD INDUSTRIAL HC ATEX
11159-2	SENSOR STAINLESS STEEL HI-TEMP HC ATEX
11159-2L	SENSOR STAINLESS STEEL HI-TEMP HC ATEX
10102-1	SENSOR SIMULATOR COMBUSTIBLE GAS

### SENSOR HOUSING:

10252-1	SENSOR HOUSING
10252-3	HI-TEMP SENSOR HOUSING

### SENSOR ACCESSORIES:

10460-2	TEST GAS APPLICATOR
10535-1	AL TEST GAS APPLICATOR W/STAINLESS STEEL FITTINGS
990-1107	TEST GAS APPLICATOR W/O 1/4 STAINLESS STEEL FITTING
10041-1	DUCT MOUNTING PLATE
10044-1	DUST GUARD KIT - 1 GUARD & 12 REPLACEABLE SCREENS
10042-1	REPLACEABLE SCREENS, BOX OF 12
10066	FLOW BLOCK
10066SS	FLOW BLOCK - Stainless Steel
10395-1	SPLASH GUARD ASSEMBLY
10110-1	DUST GUARD ASSEMBLY - 1 GUARD & 1 REPLACEABLE SCREEN
1800822-1	DUST GUARD SINTERED 60 MICRON
50060-1	H2S GUARD
50061-1	PURAFIL INSERT ASSEMBLY

### MOUNTING HARDWARE:

10201-1	ASSEMBLY 2in PANEL MOUNT
10195-1	ASSEMBLY 2in WALL MOUNT
10199-1	ASSEMBLY 4in PANEL MOUNT
10202-1	ASSEMBLY 4in WALL MOUNT
10548-1	ASSEMBLY 8in HALF RACK
10200-1	ASSEMBLY 19in PANEL MOUNT RACK
10187-1	BLANK 2in PANEL
10191-1	BLANK 4in PANEL

### S4000CH INTELLIGENT SENSOR:

31225-1	BASE ASSY SMART SENSOR
32424-1A	COVER ASSEMBLY
32441-1A	DISPLAY BOARD
32451-1A	RELAY BOARD, 2 COMM, PUSH TERMINAL
32451-2A	RELAY BOARD, 2 COMM, SCREW TERMINAL
32461-1A	CONTROL BOARD, PUSH TERMINAL
32461-2A	CONTROL BOARD, HART, PUSH TERMINAL
32461-3A	CONTROL BOARD, SCREW TERMINAL
32461-4A	CONTROL BOARD, HART, SCREW TERMINAL
32461-5A	CONTROL BOARD, HART, 1.25mA PUSH
32461-6A	CONTROL BOARD, HART 1.25mA, SCREW

### 610A CONTROLLER:

27111-1A	CONTROL BOARD MASTER 610A
27111-2A	CONTROL BOARD (SLAVE)
27111-5A	CONTROL BOARD (SLAVE)

## Accessories COMBUSTIBLE GAS DETECTION

### IR400 IR POINT GAS DETECTOR:

31305-1	JUNCTION BOX w/SWITCH, CSA/FM, AL
31305-2	JUNCTION BOX w/o SWITCH, CSA/FM, AL
31305-3	JUNCTION BOX w/SWITCH, CSA/FM, SST
31305-4	JUNCTION BOX w/o SWITCH, CSA/FM, SST
31305-5	JUNCTION BOX w/o SWITCH, ATEX/IECEX, SST, ADMA, GREY
31305-6	JUNCTION BOX w/o SWITCH, ATEX/IECEX, AL
31305-7	JUNCTION BOX w/o SWITCH, ATEX/IECEX, SST
31414-1	ZERO SWITCH ASSEMBLY STAINLESS STEEL METRIC
31414-4	ZERO SWITCH ASSEMBLY STAINLESS STEEL 3/4 NPT
32545-1	SPLASH GUARD STANDARD IR400
32545-2	SPLASH GUARD w/o SCREEN IR400
31420-1	FLOW BLOCK
31483-1	DUCT MOUNTING PLATE, SST
31421-5	EUROPEAN, STANDARD JUNCTION BOX w/SWITCH
31421-6	EUROPEAN, STANDARD JUNCTION BOX w/o SWITCH
31545-1	RAIN GUARD ASSEMBLY IR

### IR5500 OPEN PATH DETECTOR:

329001-1	IR5500 SOURCE ASSY, 3/4" NPT, SCREW, STD RANGE
329001-2	IR5500 SOURCE ASSY, 3/4" NPT, PUSH, STD RANGE
329001-9	IR5500 SOURCE ASSY, 3/4" NPT, SCREW, STD RANGE, VISIBLE LIGHT FILTER
329001-10	IR5500 SOURCE ASSY, 3/4" NPT, PUSH, STD RANGE, VISIBLE LIGHT FILTER
329001-25	IR5500 SOURCE ASSY, 3/4" NPT, SCREW, SHORT RANGE
329001-26	IR5500 SOURCE ASSY, 3/4" NPT, PUSH, SHORT RANGE
329001-31	IR5500 SOURCE ASSY, 3/4" NPT, SCREW, SHORT RANGE, VISIBLE LIGHT FILTER
329001-32	IR5500 SOURCE ASSY, 3/4" NPT, PUSH, SHORT RANGE, VISIBLE LIGHT FILTER
329073-1	PAN-TILT ARM ASSEMBLY IR5500 (STD)
329071-1	PAN-TILT BASE ASSEMBLY IR5500
329082-1	LONG RANGE ALIGNMENT KIT IR5500
329083-1	FILTER KIT IR5500, METHANE
329084-1	FILTER KIT IR5500, PROPANE
329097-1	VISIBLE LIGHT FILTER IR5500
329113-1	ATTENUATOR IR5500
329118-1	LAMP REPLACEMENT KIT IR5500
954-021	ALLEN WRENCH T-HANDLE 5mm X 9in BALL END
31037-1	DOUBLE CALIBRATION MAGNET (FOR OPEN PATH)

### IR4000S SINGLE POINT MONITOR:

32441-1A	DISPLAY BOARD
32451-1A	RELAY BOARD, 2 COMM, PUSH TERMINAL
32451-2A	RELAY BOARD, 2 COMM, SCREW TERMINAL
32491-3A	CONTROL BOARD, MODBUS
32564-1A	COVER ASSEMBLY IR4000S EXPLOSION PROOF
30060-1	CALIBRATION MAGNET

### IR4000M MULTIPLE POINT MONITOR:

32441-1A	DISPLAY BOARD
32451-1A	RELAY BOARD, 2 COMM, PUSH TERMINAL
32451-2A	RELAY BOARD, 2 COMM, SCREW TERMINAL
32491-1A	CONTROL BOARD, MODBUS
32564-2	COVER ASSEMBLY IR4000M EXPLOSION PROOF
32951-1A	CONTROL BOARD, HART
32951-3	CONTROL BOARD, HART, 1.25mA
32951-4	CONTROL BOARD, HART, 1.25mA SCREW
30060-1	CALIBRATION MAGNET

## Hydrogen Sulfide Gas Detection Equipment

---

2280A .....	4-2
S4000TH .....	4-3
TS4000H .....	4-5
DT210 .....	4-5
S4000TR .....	4-6
H2S-CAL .....	4-7
H2S-ACC .....	4-8

## MODEL 2280A FOUR CHANNEL H2S CONTROLLER



2280A - 1 - 1 - 1 - 0 0 - 1 - 4

### CONTROLLER:

(Std) FOUR CHANNEL HYDROGEN SULFIDE CONTROLLER

#### A. POWER:

1-  (Std) 110 VAC/24 VDC  
2-  220 VAC/24 VDC

#### B. RELAY-ALARM:

1-  (Std) COMMON RELAY/COMMON ALARMS  
4-  DISCRETE RELAYS/DISCRETE ALARMS

#### C. RELAY-STATE-NC:

1-  (Std) LATCH ALARM/NON-LATCH WARN DE-ENERGIZED  
2-  LATCH ALARM/NON-LATCH WARN ENERGIZED  
3-  LATCH ALARM/LATCH WARN DE-ENERGIZED  
4-  LATCH ALARM/LATCH WARN ENERGIZED  
5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED  
6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED  
7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED  
8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### D. H2S-SENSOR: (price per active channel)

00-  (Std) NONE\*

#### E. H2S-METER-SCALE:

1-  (Std) 99 ppm SCALE  
2-  50 ppm SCALE  
3-  20 ppm SCALE

#### F. ACTIVE CHANNELS:

0-  CONTROLLER ONLY

#### Note:

\* Quote sensors and sensor housings separately. If quoting less than 4 sensors be sure to include sensor simulator for any remaining inactive channels.

## MODEL S4000TH HYDROGEN SULFIDE INTELLIGENT SENSOR



S4000TH - 1 - 0 - 0 1 - 1

### HYDROGEN SULFIDE INTELLIGENT SENSOR

(Std) HYDROGEN SULFIDE INTELLIGENT SENSOR

#### A. RELAYS1-NC:

- |                                   |  |
|-----------------------------------|--|
| 1- <input type="checkbox"/> (Std) | 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS                |
| 2- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS               |
| 3- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS, HAZWATCH CAL  |
| 4- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS, HAZWATCH CAL |
| 5- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, HART 1.25mA               |
| 6- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, HART 1.25mA                 |
| 7- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, HART 3.5mA                |
| 8- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, HART 3.5mA                  |

#### B. RELAY-STATE-NC:

- |                                   |   |
|-----------------------------------|---|
| 0- <input type="checkbox"/> (Std) | NO RELAYS                                   |
| 1- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN DE-ENERGIZED     |
| 2- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN ENERGIZED        |
| 3- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN DE-ENERGIZED         |
| 4- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN ENERGIZED            |
| 5- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED |
| 6- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN ENERGIZED    |
| 7- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN DE-ENERGIZED     |
| 8- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN ENERGIZED        |

#### C. H2S-SENSOR:

- |                                    |   |
|------------------------------------|---|
| 00- <input type="checkbox"/>       | NONE  |
| 01- <input type="checkbox"/> (Std) | 50445-1 SENSOR ALUMINUM 0-100 ppm H2S                       |
| 02- <input type="checkbox"/>       | 50445-5 SENSOR ALUMINUM 0-50 ppm H2S                        |
| 03- <input type="checkbox"/>       | 50445-9 SENSOR ALUMINUM 0-20 ppm H2S                        |
| 04- <input type="checkbox"/>       | 50448-1 SENSOR STAINLESS STEEL 0-100 ppm H2S                |
| 05- <input type="checkbox"/>       | 50448-5 SENSOR STAINLESS STEEL 0-50 ppm H2S                 |
| 06- <input type="checkbox"/>       | 50448-9 SENSOR STAINLESS STEEL 0-20 ppm H2S                 |
| 11- <input type="checkbox"/>       | 51457-1L SENSOR STAINLESS STEEL ATEX H2S 0-100 ppm (W/LUGS) |
| 12- <input type="checkbox"/>       | 51457-5L SENSOR STAINLESS STEEL ATEX H2S 0-50 ppm (W/LUGS)  |
| 13- <input type="checkbox"/>       | 51457-9L SENSOR STAINLESS STEEL ATEX H2S 0-20 ppm (W/LUGS)  |
| 14- <input type="checkbox"/>       | NO SENSOR - 0-50 ppm RANGE                                  |
| 15- <input type="checkbox"/>       | NO SENSOR - 0-20 ppm RANGE                                  |

#### D. APPROVALS/LANGUAGE/TERMINAL TYPE:

- |                                   |   |
|-----------------------------------|---|
| 1- <input type="checkbox"/> (Std) | ATEX/CSA-ALUMINUM HOUSING                         |
| 3- <input type="checkbox"/>       | ATEX/CSA-ALUMINUM HOUSING, SCREW TERMINAL         |
| 5- <input type="checkbox"/>       | ATEX/CSA-STAINLESS STEEL HOUSING                  |
| 6- <input type="checkbox"/>       | ATEX/CSA-STAINLESS STEEL HOUSING SCREW TERMINAL   |
| 20- <input type="checkbox"/>      | Inmetro nameplate, AL HOUSING, PUSH               |
| 21- <input type="checkbox"/>      | Inmetro nameplate, AL HOUSING, SCREW              |
| 22- <input type="checkbox"/>      | Inmetro nameplate, STAINLESS STEEL HOUSING, PUSH  |
| 23- <input type="checkbox"/>      | Inmetro nameplate, STAINLESS STEEL HOUSING, SCREW |

## MODEL TS4000H INTELLIGENT SENSOR TOXIC GAS FOR HYDROGEN SULFIDE



TS4000H - 1 - 0 - 11 - 15 - 1

### TOXIC SENSOR:

(Std) INTELLIGENT SENSOR TOXIC GAS

#### A. RELAYS-NC:

- |                                   |  |
|-----------------------------------|--|
| 1- <input type="checkbox"/> (Std) | 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS  |
| 2- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS |
| 3- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, HART 1.25mA |
| 4- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, HART 1.25mA   |
| 5- <input type="checkbox"/>       | 4-20mA OUTPUT, W/O RELAYS, HART 3.5mA  |
| 6- <input type="checkbox"/>       | 4-20mA OUTPUT, W/RELAYS, HART 3.5mA    |

#### B. RELAY-STATE-NC:

- |                                   |   |
|-----------------------------------|---|
| 0- <input type="checkbox"/> (Std) | NO RELAYS                                   |
| 1- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN DE-ENERGIZED     |
| 2- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN ENERGIZED        |
| 3- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN DE-ENERGIZED         |
| 4- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN ENERGIZED            |
| 5- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED |
| 6- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN ENERGIZED    |
| 7- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN DE-ENERGIZED     |
| 8- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN ENERGIZED        |

#### C. TOXIC SENSOR:

- |                                    |  |
|------------------------------------|--|
| 00- <input type="checkbox"/>       | NONE   |
| 10- <input type="checkbox"/>       | 45186-10 HYDROGEN SULFIDE - 0-20 ppm, 0-50 ppm |
| 11- <input type="checkbox"/> (Std) | 45186-11 HYDROGEN SULFIDE - 0-100 ppm          |

#### D. MEASURING-RANGES:

- |                                    |                            |
|------------------------------------|----------------------------|
| 14- <input type="checkbox"/>       | HYDROGEN SULFIDE 0-20 ppm  |
| 15- <input type="checkbox"/> (Std) | HYDROGEN SULFIDE 0-100 ppm |
| 16- <input type="checkbox"/>       | HYDROGEN SULFIDE 0-50 ppm  |

#### E. APPROVALS/LANGUAGE/TERMINAL TYPE

- |                                   |                                |
|-----------------------------------|--------------------------------|
| 1- <input type="checkbox"/> (Std) | PUSH TERMINALS                 |
| 2- <input type="checkbox"/>       | SCREW TERMINALS                |
| 3- <input type="checkbox"/>       | STAINLESS STEEL HOUSING, Push  |
| 4- <input type="checkbox"/>       | STAINLESS STEEL HOUSING, SCREW |
| 6- <input type="checkbox"/>       | SCREW TERMINAL M20, Grey       |
| 7- <input type="checkbox"/>       | SCREW TERMINAL 3/4 NPT, Grey   |



## MODEL DT210 EIGHT CHANNEL H2S READOUT/RELAY MODULE



DT210 - 1 - 1 - 2 - 8

### READOUT DISPLAY:

(Std) DT210 EIGHT CHANNEL H2S READOUT/RELAY MODULE

#### A. RELAY-STATE-NC:

- 1-  (Std) LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### B. H2S-METER-SCALE:

- 1-  (Std) 99 ppm SCALE
- 2-  50 ppm SCALE
- 3-  20 ppm SCALE

#### C. VOTING:

- 1-  VOTING OPTION - ON
- 2-  (Std) VOTING OPTION - OFF

#### D. ACTIVE CHANNELS:

- 1-  ONE ACTIVE CHANNEL
- 2-  TWO ACTIVE CHANNELS
- 3-  THREE ACTIVE CHANNELS
- 4-  FOUR ACTIVE CHANNELS
- 5-  FIVE ACTIVE CHANNELS
- 6-  SIX ACTIVE CHANNELS
- 7-  SEVEN ACTIVE CHANNELS
- 8-  (Std) EIGHT ACTIVE CHANNELS

## MODEL S4000TR H2S INTELLIGENT SENSOR RETROFIT KIT



S4000TR - 1 - 1 - 2 - 1

### HYDROGEN SULFIDE INTELLIGENT SENSOR: (Std) HYDROGEN SULFIDE INTELLIGENT SENSOR RETROFIT KIT

#### A. RELAYS-NC:

- 1-  (Std) 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS
- 2-  4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS
- 3-  4-20mA OUTPUT, W/O RELAYS, W/O MODBUS, HAZWATCH CAL
- 4-  4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS, HAZWATCH CAL
- 5-  4-20mA OUTPUT, W/O RELAYS, HART 1.25mA
- 6-  4-20mA OUTPUT, W/RELAYS, HART 1.25mA
- 7-  4-20mA OUTPUT, W/O RELAYS, HART 3.5mA
- 8-  4-20mA OUTPUT, W/RELAYS, HART 3.5mA

#### B. RELAY-STATE-NC:

- 1-  (Std) NO RELAYS
- 2-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 3-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 4-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 5-  LATCH ALARM/LATCH WARN ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 7-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 9-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### C. CURRENT MODEL:

- 1-  S214/S216A
- 2-  (Std) S4000T-

#### D. TERMINAL TYPE

- 1-  (Std) PUSH TERMINAL
- 2-  SCREW TERMINAL

## CALIBRATION EQUIPMENT HYDROGEN SULFIDE GAS DETECTION

### CAL KITS FOR CONTROLLERS INCLUDES BREAKER BOTTLE AND THE FOLLOWING AMPOULES:

50009-6	4 AT 20 ppm, 4 AT 50 ppm, 4 AT 100 ppm, 0-100 ppm SCALE
50009-7	4 AT 10 ppm, 4 AT 25 ppm, 4 AT 50 ppm, 0-50 ppm SCALE
50009-8	4 AT 5 ppm, 4 AT 10 ppm, 4 AT 20 ppm, 0-20 ppm SCALE

### CAL KITS FOR SMART SENSORS INCLUDES BREAKER BOTTLE AND THE FOLLOWING AMPOULES:

50009-9	12 AT 50 ppm, (0-100 ppm SCALE)
50009-16	12 AT 25 ppm, (0-50 ppm SCALE)
50009-10	12 AT 10 ppm, (0-20 ppm SCALE)

### CAL KITS FOR CONTROLLERS INCLUDES THE FOLLOWING AMPOULES:

50008-6	4 AT 20 ppm, 4 AT 50 ppm, 4 AT 100 ppm, 0-100 ppm SCALE
50008-7	4 AT 10 ppm, 4 AT 25 ppm, 4 AT 50 ppm, 0-50 ppm SCALE
50008-8	4 AT 5 ppm, 4 AT 10 ppm, 4 AT 20 ppm, 0-20 ppm SCALE

### CAL KITS FOR SMART SENSORS INCLUDES THE FOLLOWING AMPOULES:

50008-9	50 ppm
50008-16	25 ppm
50008-10	10 ppm

### CAL KITS IN BOXES OF 12:

50008-11	6 AT 20 ppm, 6 AT 50 ppm, (0-100 ppm SCALE)
50008-17	5 ppm
50008-10	10 ppm
50008-15	20 ppm
50008-16	25 ppm
50008-9	50 ppm
50008-14	100 ppm

### PRICE BREAKS FOR AMPOULES (MULTIPLES OF 100 ONLY):

100 to 400  
500 and Up

50004-11	5 ppm
50004-3	10 ppm
50004-9	20 ppm
50004-21	25 ppm
50004-13	50 ppm
50004-5	100 ppm

### PLASTIC BREAKER BOTTLES

50000	SINGLE BREAKER BOTTLE
50020-1	DOUBLE BREAKER BOTTLE

### H2S PORTABLE PURGE CALIBRATOR

1400250-1	10 ppm H2S PORTABLE PURGE CALIBRATOR ASSEMBLY
1400250-2	20 ppm H2S PORTABLE PURGE CALIBRATOR ASSEMBLY
1400250-3	25 ppm H2S PORTABLE PURGE CALIBRATOR ASSEMBLY
1400250-4	35 ppm H2S PORTABLE PURGE CALIBRATOR ASSEMBLY
1400250-5	50 ppm H2S PORTABLE PURGE CALIBRATOR ASSEMBLY
1400250-7	100 ppm H2S PORTABLE PURGE CALIBRATOR ASSEMBLY
1400255-1A	CYLINDER HYDROGEN SULFIDE 10 ppm
1400255-2A	CYLINDER HYDROGEN SULFIDE 20 ppm
1400255-3A	CYLINDER HYDROGEN SULFIDE 25 ppm
1400255-4A	CYLINDER HYDROGEN SULFIDE 35 ppm
1400255-5A	CYLINDER HYDROGEN SULFIDE 50 ppm
1400255-7A	CYLINDER HYDROGEN SULFIDE 100 ppm
922-023	REGULATOR (0.5 L/MIN)
1400266-2	CALIBRATION CUP - H2S
931-085	TUBING, 3/16 ID X 5/16 OD X 1/16W TYGON SE200 price/ft
1400267-1	H2S PORTABLE PURGE HARDWARE KIT (922-023 regulator, tubing, cup)

## ACCESSORIES HYDROGEN SULFIDE GAS DETECTION

### SENSORS (MOS):

50445-1	SENSOR ALUMINUM 0-100 ppm H2S
50445-5	SENSOR ALUMINUM 0-50 ppm H2S
50445-9	SENSOR ALUMINUM 0-20 ppm H2S
50448-1	SENSOR STAINLESS STEEL 0-100 ppm H2S
50448-5	SENSOR STAINLESS STEEL 0-50 ppm H2S
50448-9	SENSOR STAINLESS STEEL 0-20 ppm H2S
51457-1	SENSOR STAINLESS STEEL ATEX H2S 0-100 ppm
51457-1L	SENSOR STAINLESS STEEL ATEX H2S 0-100 ppm (W/LUGS)
51457-5	SENSOR STAINLESS STEEL ATEX H2S 0-50 ppm
51457-5L	SENSOR STAINLESS STEEL ATEX H2S 0-50 ppm (W/LUGS)
51457-9	SENSOR STAINLESS STEEL ATEX H2S 0-20 ppm
51457-9L	SENSOR STAINLESS STEEL ATEX H2S 0-20 ppm (W/LUGS)
50460-3	SENSOR SIMULATOR

### SENSOR HOUSING:

10252-1	SENSOR HOUSING
---------	----------------

### SENSOR ACCESSORIES:

10041-1	DUCT MOUNTING PLATE
10044-1	DUST GUARD KIT - 1 GUARD & 12 REPLACEABLE SCREENS
10042-1	REPLACEABLE SCREENS, BOX OF 12
10395-1	SPLASH GUARD ASSEMBLY
10110-1	DUST GUARD ASSEMBLY - 1 GUARD & 1 REPLACEABLE SCREEN
1800822-1	DUST GUARD SINTERED 60 MICRON

### MOUNTING HARDWARE:

10201-1	ASSEMBLY 2in PANEL MOUNT
10195-1	ASSEMBLY 2in WALL MOUNT
10199-1	ASSEMBLY 4in PANEL MOUNT
10202-1	ASSEMBLY 4in WALL MOUNT
10548-1	ASSEMBLY 8in HALF RACK
10200-1	ASSEMBLY 19in PANEL MOUNT RACK
10187-1	BLANK 2in PANEL
10191-1	BLANK 4in PANEL

### SENSORS (TS4000H):

45186-10	HYDROGEN SULFIDE - 0-20 ppm, 0-50 ppm
45186-11	HYDROGEN SULFIDE - 0-100 ppm

### S4000TH INTELLIGENT SENSOR:

32451-1A	RELAY BOARD, 2 COMM, PUSH TERMINAL
32451-2A	RELAY BOARD, 2 COMM, SCREW TERMINAL
32471-1A	CONTROL BOARD, NO HART, PUSH TERMINAL S4000TH
32471-2A	CONTROL BOARD, HART, PUSH TERMINAL S4000TH
32471-3A	CONTROL BOARD, NO HART, SCREW TERMINAL S4000TH
32471-4A	CONTROL BOARD, HART, SCREW TERMINAL S4000TH
32471-9A	CONTROL BOARD, HART 1.25mA, PUSH
32471-10A	CONTROL BOARD, HART 1.25mA, SCREW
32441-1A	DISPLAY BOARD
32424-2A	COVER ASSEMBLY S4000TH



## Toxic Gas Detection Equipment

---

TS4000H .....	5-2
IR700 .....	5-3
IR4000S .....	5-4
MC600 .....	5-5
TS4000R .....	5-7
TOXIC-ACC .....	5-8

## MODEL TS4000H INTELLIGENT SENSOR TOXIC GAS



TS4000H - 1 - 0 - 03 - 01 - 1

### TOXIC SENSOR:

(Std) INTELLIGENT SENSOR TOXIC GAS

#### A. RELAYS-NC:

- |                             |  |
|-----------------------------|--|
| 1- (Std)                    | 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS  |
| 2- <input type="checkbox"/> | 4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS |
| 3- <input type="checkbox"/> | 4-20mA OUTPUT, W/O RELAYS, HART 1.25mA |
| 4- <input type="checkbox"/> | 4-20mA OUTPUT, W/RELAYS, HART 1.25mA   |
| 5- <input type="checkbox"/> | 4-20mA OUTPUT, W/O RELAYS, HART 3.5mA  |
| 6- <input type="checkbox"/> | 4-20mA OUTPUT, W/RELAYS, HART 3.5mA    |

#### B. RELAY-STATE-NC:

- |                                   |   |
|-----------------------------------|---|
| 0- <input type="checkbox"/> (Std) | NO RELAYS                                   |
| 1- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN DE-ENERGIZED     |
| 2- <input type="checkbox"/>       | LATCH ALARM/NON-LATCH WARN ENERGIZED        |
| 3- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN DE-ENERGIZED         |
| 4- <input type="checkbox"/>       | LATCH ALARM/LATCH WARN ENERGIZED            |
| 5- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED |
| 6- <input type="checkbox"/>       | NON-LATCH ALARM/NON-LATCH WARN ENERGIZED    |
| 7- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN DE-ENERGIZED     |
| 8- <input type="checkbox"/>       | NON-LATCH ALARM/LATCH WARN ENERGIZED        |

#### C. TOXIC SENSOR:

- |                                    |   |
|------------------------------------|---|
| 00- <input type="checkbox"/>       | NONE  |
| 01- <input type="checkbox"/>       | 45123-1 CHLORINE DIOXIDE                                      |
| 02- <input type="checkbox"/>       | 45123-2 CHLORINE  |
| 03- <input type="checkbox"/> (Std) | 45123-3 CARBON MONOXIDE                                       |
| 04- <input type="checkbox"/>       | 45123-4 HYDROGEN CHLORIDE                                     |
| 06- <input type="checkbox"/>       | 45186-6 AMMONIA   |
| 07- <input type="checkbox"/>       | 45123-7 NITRIC OXIDE - 4 week lead time due to shelf life     |
| 08- <input type="checkbox"/>       | 45123-8 NITROGEN DIOXIDE - 4 week lead time due to shelf life |
| 09- <input type="checkbox"/>       | 45123-9 SULFUR DIOXIDE  |
| 10- <input type="checkbox"/>       | 45186-10 HYDROGEN SULFIDE - 0-20 ppm, 0-50 ppm                |
| 11- <input type="checkbox"/>       | 45186-11 HYDROGEN SULFIDE - 0-100 ppm                         |
| 12- <input type="checkbox"/>       | 45186-12 HYDROGEN 0-500 ppm                                   |
| 20- <input type="checkbox"/>       | 45213-1 OXYGEN DEFICIENCY -20°C                               |
| 21- <input type="checkbox"/>       | 45249-1 OXYGEN DEFICIENCY -40°C                               |

#### D. MEASURING-RANGES:

- |                                    |                            |
|------------------------------------|----------------------------|
| 01- <input type="checkbox"/> (Std) | CARBON MONOXIDE 0-100 ppm  |
| 02- <input type="checkbox"/>       | CARBON MONOXIDE 0-500 ppm  |
| 03- <input type="checkbox"/>       | CHLORINE 0-10 ppm          |
| 04- <input type="checkbox"/>       | CHLORINE 0-20 ppm          |
| 05- <input type="checkbox"/>       | CHLORINE DIOXIDE 0-3 ppm   |
| 06- <input type="checkbox"/>       | HYDROGEN CHLORIDE 0-20 ppm |
| 07- <input type="checkbox"/>       | NITRIC OXIDE 0-100 ppm     |
| 08- <input type="checkbox"/>       | NITROGEN DIOXIDE 0-20 ppm  |
| 09- <input type="checkbox"/>       | AMMONIA 0-50 ppm           |
| 10- <input type="checkbox"/>       | AMMONIA 0-100 ppm          |
| 12- <input type="checkbox"/>       | OXYGEN 0-25%               |
| 13- <input type="checkbox"/>       | SULFUR DIOXIDE 0-20 ppm    |
| 14- <input type="checkbox"/>       | HYDROGEN SULFIDE 0-20 ppm  |
| 15- <input type="checkbox"/>       | HYDROGEN SULFIDE 0-100 ppm |
| 16- <input type="checkbox"/>       | HYDROGEN SULFIDE 0-50 ppm  |
| 17- <input type="checkbox"/>       | SULFUR DIOXIDE 0-100 ppm   |
| 18- <input type="checkbox"/>       | HYDROGEN 0-500 ppm         |
| 19- <input type="checkbox"/>       | CO 0-2000 ppm              |

#### E. APPROVALS/LANGUAGE/TERMINAL TYPE

- |                                   |                                |
|-----------------------------------|--------------------------------|
| 1- <input type="checkbox"/> (Std) | PUSH TERMINALS                 |
| 2- <input type="checkbox"/>       | SCREW TERMINALS                |
| 3- <input type="checkbox"/>       | PUSH, STAINLESS STEEL HOUSING  |
| 4- <input type="checkbox"/>       | SCREW, STAINLESS STEEL HOUSING |
| 6- <input type="checkbox"/>       | SCREW TERMINAL M20, Grey       |
| 7- <input type="checkbox"/>       | SCREW TERMINAL 3/4 NPT, Grey   |

## MODEL IR700 POINT IR CARBON DIOXIDE DETECTOR



IR700 - 0 - 2 - 1 - 2 - 1

### DETECTOR

(Std) POINT IR CARBON DIOXIDE DETECTOR

#### A. OUTPUT:

- |                                   |   |
|-----------------------------------|---|
| 0- <input type="checkbox"/> (Std) | 0-20mA MODBUS (ID=1)                    |
| 1- <input type="checkbox"/>       | 0-20mA HART 3.5mA                       |
| 2- <input type="checkbox"/>       | 0-20mA HAZARD WATCH CALIBRATION         |
| 3- <input type="checkbox"/>       | 0-20mA MODBUS (CUSTOMER TO SPECIFY ID#) |
| 4- <input type="checkbox"/>       | 0-20mA HART 1.25mA                      |

#### B. RANGES:

- |                                   |             |
|-----------------------------------|-------------|
| 1- <input type="checkbox"/>       | 0-2000 PPM  |
| 2- <input type="checkbox"/> (Std) | 0-5000 PPM  |
| 3- <input type="checkbox"/>       | 0-10000 PPM |
| 4- <input type="checkbox"/>       | 0-30000 PPM |
| 5- <input type="checkbox"/>       | 0-50000 PPM |

#### C. HOUSING-MATERIAL:

- |                                   |                                |
|-----------------------------------|--------------------------------|
| 1- <input type="checkbox"/> (Std) | ALUMINUM (3/4 - 14 NPT)        |
| 2- <input type="checkbox"/>       | STAINLESS STEEL (3/4 - 14 NPT) |

#### D. OPTICAL-GUARD:

- |                                   |                         |
|-----------------------------------|-------------------------|
| 0- <input type="checkbox"/>       | NO SPLASH GUARD         |
| 1- <input type="checkbox"/>       | SPLASH GUARD W/O SCREEN |
| 2- <input type="checkbox"/> (Std) | SPLASH GUARD W/SCREEN   |

#### E. APPROVALS-LANGUAGES:

- |                                   |      |
|-----------------------------------|------|
| 1- <input type="checkbox"/> (Std) | GMI  |
| 2- <input type="checkbox"/>       | GMIL |

## MODEL IR4000S SINGLE POINT MONITOR - CO2



IR4000S - 1 - 0 - 4 0 - 1 - 0 - 1

### SINGLE POINT MONITOR

(Std) SINGLE POINT MONITOR

#### A. MONITOR OUTPUT:

- 1-  (Std) IR700 (0-5000 RANGE)
- 2-  IR700 (0-2000 RANGE)
- 3-  IR700 (0-10000 RANGE)
- 4-  IR700 (0-30000 RANGE)
- 5-  IR700 (0-50000 RANGE)

#### B. RELAY-STATE-NC:

- 0-  (Std) NO RELAYS
- 1-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### C. DETECTOR:

- 00-  NO DETECTOR
- 40-  (Std) IR700-0-2-1-2-1 CO2, 5000 ppm, SCREEN, ALUMINUM
- 43-  IR700-0-5-1-2-1 CO2, 50000 ppm, SCREEN, ALUMINUM
- 44-  IR700-0-1-1-2-1 CO2, 2000 ppm, SCREEN, ALUMINUM
- 95-  IR700-4-2-2-2-1 CO2, 50000 ppm, SCREEN, SST, HART 1.25

#### D. CONNECTOR TYPE:

- 1-  (Std) PUSH TERMINAL
- 2-  SCREW TERMINAL

#### E. JUNCTION-BOX

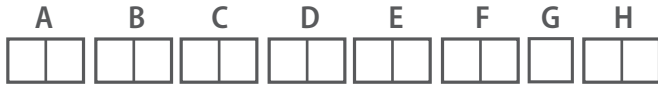
- 0-  (Std) NO J-BOX
- 1-  31305-1 JUNCTION BOX W/SWITCH
- 2-  31305-2 JUNCTION BOX W/O SWITCH
- 6-  31421-6 ASSEMBLY, EUROPEAN, STANDARD JUNCTION BOX W/SWITCH, SST
- 7-  31421-5 ASSEMBLY, EUROPEAN, JUNCTION BOX W/O SWITCH, ALUMINUM

#### F. APPROVALS/LANGUAGE/HOUSING MATERIAL

- 1-  (Std) ALUMINUM HOUSING
- 4-  STAINLESS STEEL HOUSING
- 8-  STAINLESS STEEL HOUSING, GREY NO ZINC



# MODEL MC600 MULTI-CHANNEL CONTROLLER



MC600 - 0 0 - 0 0 - 0 0 - 0 0 - 0 0 - 0 0 - 1 - 0 0

## MULTI-CHANNEL CONTROLLER: (Std) MC600 MULTI-CHANNEL CONTROLLER

### A-F. CHANNEL #1 - CHANNEL #6 : - FIELD DEVICES NOT INCLUDED

- 00-  (Std) NONE
- 01-  (HC) HYDROCARBON 0-100 CONTROLLER
- 02-  (H2S) HYDROGEN SULFIDE 0-20 CONTROLLER
- 03-  (H2S) HYDROGEN SULFIDE 0-50 CONTROLLER
- 04-  (H2S) HYDROGEN SULFIDE 0-100 CONTROLLER
- 29-  (H2) HYDROGEN 0-500 ppm - TS4000/H
- 43-  (ClO2) CHLORINE DIOXIDE 0-3 ppm - TS4000/H
- 44-  (Cl2) CHLORINE 0-10 ppm - TS4000/H
- 45-  (Cl2) CHLORINE 0-20 ppm - TS4000/H
- 46-  (CO) CARBON MONOXIDE 0-100 ppm - TS4000/H
- 47-  (CO) CARBON MONOXIDE 0-500 ppm - TS4000/H
- 48-  (HCL) HYDROGEN CHLORIDE 0-20 ppm - TS4000/H
- 49-  (NO) NITRIC OXIDE 0-100 ppm - TS4000/H
- 50-  (NO2) NITROGEN DIOXIDE 0-20 ppm - TS4000/H
- 51-  (SO2) SULFUR DIOXIDE 0-20 ppm - TS4000/H
- 53-  (O2) OXYGEN 0-25% BY VOLUME - TS4000/H
- 54-  (NH3) AMMONIA 0-100 ppm - TS4000/H
- 55-  (NH3) AMMONIA 0-50 ppm - TS4000H
- 57-  (H2S) HYDROGEN SULFIDE 0-100 ppm - TS4000/H
- 59-  (H2S) HYDROGEN SULFIDE 0-20 ppm - TS4000/H
- 62-  (HC) HYDROCARBON - S4000C/CH
- 69-  (H2S) HYDROGEN SULFIDE 0-20 ppm - S4000T/TH
- 70-  (H2S) HYDROGEN SULFIDE 0-50 ppm - S4000T/TH
- 71-  (H2S) HYDROGEN SULFIDE 0-100 ppm - S4000T/TH
- 72-  LEL - IR400/IR2100
- 73-  % BY VOLUME - IR400/IR2100
- 76-  (CO2) CARBON DIOXIDE - IR700/IR7000 - 0-5,000 ppm
- 25-  (CO2) CARBON DIOXIDE - IR700/IR7000 - 0-2,000 ppm
- 26-  (CO2) CARBON DIOXIDE - IR700/IR7000 - 0-10,000 ppm
- 27-  (CO2) CARBON DIOXIDE - IR700/IR7000 - 0-30,000 ppm
- 28-  (CO2) CARBON DIOXIDE - IR700/IR7000 - 0-50,000 ppm
- 85-  (H2S) HYDROGEN SULFIDE 0-50 ppm - TS4000/H
- 86-  (SO2) SULFUR DIOXIDE 0-100 PPM - TS4000/H
- 87-  (ULTRASONIC) OBSERVER
- 88-  (ULTRASONIC) SURVEYOR
- 90-  (HC) HYDROCARBON 0-5000 ppm - IR5500
- 91-  (HC) HYDROCARBON 0-5 LEL - IR5500
- 92-  (HC) HYDROCARBON 0-2000 ppm - IR5500 PROPANE
- 93-  (HC) HYDROCARBON 0-1 LEL - IR5500 PROPANE

### G. RELAY-STATE:

- 1-  (Std) LA ALARM HIGH, NL ALARM LOW, NL WARN DE-ENERGIZED
- 2-  NL ALARM HIGH, NL ALARM LOW, NL WARN DE-ENERGIZED
- 3-  LA ALARM HIGH, LA ALARM LOW, NL WARN DE-ENERGIZED
- 4-  LA ALARM HIGH, LA ALARM LOW, LA WARN DE-ENERGIZED
- 5-  NL ALARM HIGH, NL ALARM LOW, NL WARN ENERGIZED
- 6-  LA ALARM HIGH, NL ALARM LOW, NL WARN ENERGIZED
- 7-  LA ALARM HIGH, LA ALARM LOW, NL WARN ENERGIZED
- 8-  LA ALARM HIGH, LA ALARM LOW, LA WARN ENERGIZED

continued on next page

5-5

## MODEL MC600 MULTI-CHANNEL CONTROLLER

### H. ACCESSORIES:

00-□ (Std)	NONE
01-□	BUZZER (24 VDC)
02- □	REMOTE (24 VDC)
03-□	BUZZER , REMOTE (24 VDC)
04-□	POWER SUPPLY (110 VAC)
05- □	POWER SUPPLY (220 VAC)
06-□	POWER SUPPLY , BUZZER (110VAC)
07-□	POWER SUPPLY , BUZZER (220VAC)
08- □	POWER SUPPLY , REMOTE (110VAC)
09-□	POWER SUPPLY , REMOTE (220VAC)
10-□	POWER SUPPLY, BUZZER, REMOTE (110 VAC)
11-□	POWER SUPPLY, BUZZER, REMOTE (220 VAC)
12- □	POWER SUPPLY, CLASS I DIV 2
13-□	POWER SUPPLY, CLASS I DIV 2, BUZZER
14-□	POWER SUPPLY, CLASS I DIV 2, REMOTE
15- □	POWER SUPPLY, CLASS I DIV 2, BUZZER, REMOTE

#### Notes:

To configure for obsolete field devices, contact factory.

## MODEL TS4000R TOXIC GAS INTELLIGENT SENSOR RETROFIT KIT



TS4000R - 1 - 0 - 0 1 - 1

### TOXIC GAS INTELLIGENT SENSOR RETROFIT KIT (Std) TOXIC GAS INTELLIGENT SENSOR RETROFIT KIT

#### A. RELAYS-NC:

- 1-  (Std) 4-20mA OUTPUT, W/O RELAYS, W/O MODBUS
- 2-  4-20mA OUTPUT, W/RELAYS, W/DUAL MODBUS
- 3-  4-20mA OUTPUT, W/O RELAYS, HART 1.25mA
- 4-  4-20mA OUTPUT, W/RELAYS, HART 1.25mA
- 5-  4-20mA OUTPUT, W/O RELAYS, HART 3.5mA
- 6-  4-20mA OUTPUT, W/RELAYS, HART 3.5mA

#### B. RELAY-STATE-NC:

- 0-  (Std) NO RELAYS
- 1-  LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 2-  LATCH ALARM/NON-LATCH WARN ENERGIZED
- 3-  LATCH ALARM/LATCH WARN DE-ENERGIZED
- 4-  LATCH ALARM/LATCH WARN ENERGIZED
- 5-  NON-LATCH ALARM/NON-LATCH WARN DE-ENERGIZED
- 6-  NON-LATCH ALARM/NON-LATCH WARN ENERGIZED
- 7-  NON-LATCH ALARM/LATCH WARN DE-ENERGIZED
- 8-  NON-LATCH ALARM/LATCH WARN ENERGIZED

#### C. MEASURING-RANGES:

- 01-  (Std) CARBON MONOXIDE 0-100 ppm
- 02-  CARBON MONOXIDE 0-500 ppm
- 03-  CHLORINE 0-10 ppm
- 04-  CHLORINE 0-20 ppm
- 05-  CHLORINE DIOXIDE 0-3 ppm
- 06-  HYDROGEN CHLORIDE 0-20 ppm
- 07-  NITRIC OXIDE 0-100 ppm
- 08-  NITROGEN DIOXIDE 0-20 ppm
- 09-  AMMONIA 0-50 ppm
- 10-  AMMONIA 0-100 ppm
- 12-  OXYGEN 0-25%
- 13-  SULFUR DIOXIDE 0-20 ppm
- 14-  HYDROGEN SULFIDE 0-20 ppm
- 15-  HYDROGEN SULFIDE 0-100 ppm
- 16-  HYDROGEN SULFIDE 0-50 ppm
- 17-  SULFUR DIOXIDE 0-100 ppm
- 18-  HYDROGEN 0-500 ppm

#### D. APPROVALS/LANGUAGE/TERMINAL TYPE:

- 1-  (Std) ENGLISH-
- 2-  ENGLISH-SCREW TERMINAL

## ACCESSORIES TOXIC GAS DETECTION

### Sensors (TS400/TS420/TS4000/TS4000H):

45123-3	CARBON MONOXIDE
45123-2	CHLORINE
45123-1	CHLORINE DIOXIDE
45123-4	HYDROGEN CHLORIDE
45123-7	NITRIC OXIDE
45123-8	NITROGEN DIOXIDE
45123-9	SULFUR DIOXIDE
45213-1	OXYGEN DEFICIENCY
45249-1	OXYGEN DEFICIENCY SENSOR - 40C OXYGEN CHEM CELL SENSOR
45186-6	AMMONIA
45186-10	HYDROGEN SULFIDE - 0-20 ppm, 0-50 ppm
45186-11	HYDROGEN SULFIDE - 0-100 ppm
45186-12	HYDROGEN 0-500 ppm

### Calibration (TS400/TS420/TS4000/TS4000H) - kits include 1400262-x cylinder and 1400268-1 or 1400269-1 hardware kit:

1400263-9	CALIBRATION KIT CARBON MONOXIDE 50 ppm
1400263-10	CALIBRATION KIT CARBON MONOXIDE 250 ppm
1400263-3	CALIBRATION KIT CHLORINE 5 ppm
1400263-36	CALIBRATION KIT CHLORINE 10 ppm
1400263-5	CALIBRATION KIT HYDROGEN CHLORIDE 10 ppm
1400263-6	CALIBRATION KIT NITRIC OXIDE 50 ppm
1400263-7	CALIBRATION KIT NITROGEN DIOXIDE 10 ppm
1400263-11	CALIBRATION KIT OXYGEN 20.9%
1400263-8	CALIBRATION KIT SULFUR DIOXIDE 10 ppm
1400263-37	CALIBRATION KIT SULFUR DIOXIDE 50 ppm
1400263-1	CALIBRATION KIT AMMONIA 25 ppm
1400263-2	CALIBRATION KIT AMMONIA 50 ppm
1400263-33	CALIBRATION KIT HYDROGEN SULFIDE 50 ppm
1400263-34	CALIBRATION KIT HYDROGEN SULFIDE 25 ppm
1400263-35	CALIBRATION KIT HYDROGEN SULFIDE 10 ppm
1400263-38	CALIBRATION KIT HYDROGEN 250 ppm H2 PURGE ASSY .5L/M
1400263-12	CALIBRATION KIT HYDROGEN 500 ppm H2 PURGE ASSY. 5 L/M

1400262-38A	CYLINDER HYDROGEN 250 ppm .5L/M
1400262-12A	CYLINDER HYDROGEN 500 ppm .5L/M
1400262-22A	CYLINDER CHLORINE 10 ppm
1400262-9A	CYLINDER CARBON MONOXIDE 50 ppm
1400262-10A	CYLINDER CARBON MONOXIDE 250 ppm
1400262-3A	CYLINDER CHLORINE 5 ppm
1400262-5A	CYLINDER HYDROGEN CHLORIDE 10 ppm
1400262-6A	CYLINDER NITRIC OXIDE 50 ppm
1400262-7A	CYLINDER NITROGEN DIOXIDE 10 ppm
1400262-11A	CYLINDER OXYGEN 20.9%
1400262-8A	CYLINDER SULFUR DIOXIDE 10 ppm
1400262-21A	CYLINDER SULFUR DIOXIDE 50 ppm
1400262-1A	CYLINDER AMMONIA 25 ppm
1400262-2A	CYLINDER AMMONIA 50 ppm
1400255-1A	CYLINDER HYDROGEN SULFIDE 10 ppm
1400255-3A	CYLINDER HYDROGEN SULFIDE 25 ppm
1400255-5A	CYLINDER HYDROGEN SULFIDE 50 ppm

1400268-1	HARDWARE KIT: 922-023 REGULATOR (0.5 lpm), TUBING, CALIBRATION CUP
1400269-1	HARDWARE KIT: 922-022 REGULATOR,(1.0 lpm) TUBING, CALIBRATION CUP
922-022	REGULATOR 0-1000 psi 1000 mL/MIN
922-023	REGULATOR 0-1000 psi 500 mL/MIN
931-085	TUBING, 3/16 ID X 5/16 OD X 1/16W TYGON SE200 PRICE/FT
45172-1A	CALIBRATION PLUG ASSEMBLY
1400152-1	SMALL CALIBRATION CUP

## ACCESSORIES TOXIC GAS DETECTION

### TS-Series Accessories:

10252-1	SENSOR HOUSING
70631-2	TOXIC SPLASH GUARD
45167-1	TOXIC SPLASH GUARD - FOR CL2, CL02 & O3 ONLY
45170-1	FLOW BLOCK
45081-1	TOXIC DUST GUARD
45080-1	DUST GUARD FILTER
30060-1	MAGNET

### IR700 Accessories:

31305-1	JUNCTION BOX W/SWITCH
31305-2	JUNCTION BOX W/O SWITCH
31414-1	ZERO SWITCH ASSEMBLY STAINLESS STEEL METRIC
31414-4	ZERO SWITCH ASSEMBLY STAINLESS STEEL 3/4 NPT
32545-1	ASSEMBLY SPLASH GUARD STANDARD IR400
32545-2	ASSEMBLY SPLASH GUARD W/O SCREEN IR400
31420-1	ASSEMBLY, FLOW BLOCK
31483-1	DUCT MOUNTING PLATE, SST
31545-1	RAIN GUARD ASSEMBLY IR

### IR700 Calibration:

31478-1	IR700 GAS KIT 2,500 ppm CO2 / 5,000 ppm range
31478-2	IR700 GAS KIT 5,000 ppm CO2 / 10,000 ppm range
31478-3	IR700 GAS KIT 15,000 ppm CO2 / 30,000 ppm range
31478-4	IR700 GAS KIT 25,000 ppm CO2 / 50,000 ppm range
31478-5	IR700 GAS KIT 1,000 ppm CO2 / 2,000 ppm range
914-172	CYLINDER CASE (FOR TWO CYLINDERS) W/SHOULDER STRAP
1400262-17A	CYLINDER REPLACEMENT NITROGEN 99.9% 1L/M
1400262-16A	CYLINDER REPLACEMENT CARBON DIOXIDE 2,500 ppm
1400262-27A	CYLINDER REPLACEMENT CARBON DIOXIDE 15,000 ppm
1400262-37A	CYLINDER REPLACEMENT CARBON DIOXIDE 5,000 ppm
1400262-40A	CYLINDER REPLACEMENT CARBON DIOXIDE 25,000 ppm
1400262-41A	CYLINDER REPLACEMENT CARBON DIOXIDE 1,000 ppm

### MC600 ACCESSORIES

65101-1A	4-20mA BOARD
65111-1A	HC BOARD
65121-1A	MOS BOARD
65088-1	PLUG ASSEMBLY, CONDUIT ENTRIES
65074-1A	SOUNDER ASSEMBLY
65003-2A	POWER SUPPLY ASSEMBLY W/HARDWARE
65003-3A	POWER SUPPLY ASSEMBLY, CLASS I, DIV II
65151-1A	CONTROL BOARD, MC600

### TS4000H ACCESSORIES

32441-1A	DISPLAY BOARD
32451-1A	RELAY BOARD, 2 COMM, PUSH TERMINAL
32451-2A	RELAY BOARD, 2 COMM, SCREW TERMINAL
46100-1	INTERFACE MODULE, TOXIC GAS
46114-1A	ASSY, W/RELAYS & COMM TS4000H
46121-1A	TS4000H CONTROL BOARD
46121-2A	TS4000H CONTROL BOARD SCREW TERMINAL
46131-1A	TS4000H HART CONTROL BOARD
46131-2A	MODBUS HART CONTROL BOARD SCREW TS4000H
46131-3A	CONTROL BOARD, HART 1.25mA, PUSH
46131-4A	CONTROL BOARD, HART 1.25mA, SCREW

### TS4000 ACCESSORIES

USE TS4000R



## Zero Two A Series Modules

---

2602A .....	6-2
4802A .....	6-3
TA102A .....	6-4
TA202A .....	6-5
TA402A .....	6-6
TA502A .....	6-7
CC02A .....	6-8
FM002A .....	6-9
IN042 .....	6-10
MD002 .....	6-11
PS002 .....	6-12
RK002 .....	6-13
RL002 .....	6-14
ZN002A .....	6-15
02-ACC .....	6-16

## MODEL 2602A 02A SERIES HYDROGEN SULFIDE GAS CONTROLLER



2602A - 4 - 1 - 0 0 - 1 - 3 - 3 - 0 - 1

### CONTROL MODULE:

(Std) 02A SERIES HYDROGEN SULFIDE GAS CONTROLLER

#### A. RELAYS/OUTPUT:

- 1-  NO RELAYS, W/O 4-20mA
- 2-  RELAYS, W/O 4-20mA
- 3-  NO RELAYS, W/4-20mA
- 4-  (Std) RELAYS, W/4-20mA

#### B. RELAY-STATE-NC:

- 1-  (Std) LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 2-  LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 3-  LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 4-  LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED
- 5-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 6-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 7-  NON-LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 8-  NON-LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED

#### C. H2S-SENSOR: (price per active channel)

- 00-  (Std) NONE

#### D. H2S-METER-SCALE:

- 1-  (Std) 99 ppm SCALE
- 2-  50 ppm SCALE
- 3-  20 ppm SCALE

#### E. CARD-TEST/RAMP-TIME:

- 3-  (Std) INHIBITED RELAYS - 3 SECOND RAMP TIME
- 4-  INHIBITED RELAYS - 10 SECOND RAMP TIME
- 5-  ACTIVATE RELAYS - 3 SECOND RAMP TIME
- 6-  ACTIVATE RELAYS - 10 SECOND RAMP TIME

#### F. INHIBIT/COMPATIBLE:

- 3-  (Std) FAULT NOT ACTIVE/CAL, FUA OUTPUTS
- 4-  FAULT NOT ACTIVE/COMPATIBLE
- 5-  FAULT ACTIVE/CAL, FUA OUTPUTS
- 6-  FAULT ACTIVE/COMPATIBLE

#### G. SENSOR-HOUSING: (price per active channel)

- 0-  (Std) NONE

#### H. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA

## MODEL 4802A 02A SERIES COMBUSTIBLE GAS CONTROLLER



4802A - 4 - 1 - 0 0 - 1 - 3 - 0 - 1

### CONTROL MODULE:

(Std) 4802A 02A SERIES COMBUSTIBLE GAS CONTROLLER

#### A. RELAYS/OUTPUT:

- 1-  NO RELAYS, W/O 4-20mA
- 2-  RELAYS, W/O 4-20mA
- 3-  NO RELAYS, W/4-20mA
- 4-  (Std) RELAYS, W/4-20mA

#### B. RELAY-STATE-NC:

- 1-  (Std) LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 2-  LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 3-  LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 4-  LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED
- 5-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 6-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 7-  NON-LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 8-  NON-LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED

#### C. COMBUSTIBLE-SENSOR: (price per active channel)

- 00-  (Std) NONE

#### D. CARD-TEST/RAMP-TIME:

- 1-  (Std) INHIBITED RELAYS - 3 SECOND RAMP TIME
- 2-  INHIBITED RELAYS - 10 SECOND RAMP TIME
- 3-  ACTIVATE RELAYS - 3 SECOND RAMP TIME
- 4-  ACTIVATE RELAYS - 10 SECOND RAMP TIME

#### E. INHIBIT/COMPATIBLE:

- 1-  (Std) FAULT NOT ACTIVE/CAL, FUA OUTPUTS
- 2-  FAULT NOT ACTIVE/COMPATIBLE
- 3-  FAULT ACTIVE/CAL, FUA OUTPUTS
- 4-  FAULT ACTIVE/COMPATIBLE

#### F. SENSOR-HOUSING: (price per active channel)

- 0-  (Std) NONE

#### G. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA
- 2-  CE AND RUSSIAN WITH RUSSIAN NAMEPLATE
- 3-  CE/ATEX-GMIL WITH ENGLISH NAMEPLATE
- 4-  ENGLISH GMI ATEX
- 5-  CE ONLY WITH ENGLISH NAMEPLATE-GMIL



## MODEL TA102A 02A SERIES COMBUSTIBLE GAS TRIP AMPLIFIER USE WITH SMART SENSOR



TA102A - 2 - 1 - 1 - 1 - 1

### TRIP AMPLIFIER:

(Std) 02A SERIES COMBUSTIBLE GAS TRIP AMPLIFIER

#### A. RELAYS/OUTPUT:

- 1-  NO RELAYS
- 2-  (Std) RELAYS

#### B. RELAY-STATE-NC:

- 0-  NO RELAYS
- 1-  (Std) LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 2-  LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 3-  LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 4-  LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED
- 5-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 6-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 7-  NON-LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 8-  NON-LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED

#### C. CARD-TEST/RAMP-TIME:

- 1-  (Std) INHIBITED RELAYS - 3 SECOND RAMP TIME
- 2-  INHIBITED RELAYS - 10 SECOND RAMP TIME
- 3-  ACTIVATE RELAYS - 3 SECOND RAMP TIME
- 4-  ACTIVATE RELAYS - 10 SECOND RAMP TIME
- 5-  ACTIVATE RELAYS - 10 SECOND RAMP TIME

#### D. INHIBIT/COMPATIBLE:

- 1-  (Std) FAULT NOT ACTIVE/CAL, FUA OUTPUTS
- 2-  FAULT NOT ACTIVE/COMPATIBLE
- 3-  FAULT ACTIVE/CAL, FUA OUTPUTS
- 4-  FAULT ACTIVE/COMPATIBLE

#### E. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA

## MODEL TA202A 02A SERIES H2S TRIP AMPLIFIER USE WITH SMART SENSORS



TA202A - 2 - 1 - 1 - 1 - 1 - 1

### TRIP AMPLIFIER:

(Std) TA202A 02A SERIES HYDROGEN SULFIDE TRIP AMPLIFIER

#### A. RELAYS/OUTPUT:

- 1-  NO RELAYS
- 2-  (Std) RELAYS

#### B. RELAY-STATE-NC:

- 1-  (Std) LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 2-  LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 3-  LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 4-  LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED
- 5-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 6-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 7-  NON-LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 8-  NON-LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED

#### C. H2S-METER-SCALE:

- 1-  (Std) 99 ppm SCALE
- 2-  50 ppm SCALE
- 3-  20 ppm SCALE

#### D. CARD-TEST/RAMP-TIME:

- 1-  (Std) INHIBITED RELAYS - 3 SECOND RAMP TIME
- 2-  INHIBITED RELAYS - 10 SECOND RAMP TIME
- 3-  ACTIVATE RELAYS - 3 SECOND RAMP TIME
- 4-  ACTIVATE RELAYS - 10 SECOND RAMP TIME

#### E. INHIBIT/COMPATIBLE:

- 1-  (Std) FAULT NOT ACTIVE/CAL, FUA OUTPUTS
- 2-  FAULT NOT ACTIVE/COMPATIBLE
- 3-  FAULT ACTIVE/CAL, FUA OUTPUTS
- 4-  FAULT ACTIVE/COMPATIBLE

#### F. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA

## MODEL TA402A 02A SERIES FLAME TRIP AMPLIFIER USE WITH FL3100 SERIES



TA402A - 2 - 1 - 6 - 1 - 1

### TRIP AMPLIFIER:

(Std) TA402A 02A SERIES FLAME TRIP AMPLIFIER

#### A. RELAYS/OUTPUT:

- 1-  NO RELAYS
- 2-  (Std) RELAYS

#### B. RELAY-STATE-NC:

- 1-  (Std) LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 2-  LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 3-  LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 4-  LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED
- 5-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 6-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 7-  NON-LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 8-  NON-LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED

#### C. TIME-DELAY-CARD-TEST:

- 1-  1 SECOND CARD TEST - RELAYS
- 2-  1 SECOND CARD TEST - RELAYS
- 3-  2 SECOND CARD TEST - RELAYS
- 4-  2 SECOND CARD TEST - RELAYS
- 5-  4 SECOND CARD TEST - RELAYS
- 6-  (Std) 4 SECOND CARD TEST - RELAYS
- 7-  8 SECOND CARD TEST - RELAYS
- 8-  8 SECOND CARD TEST - RELAYS

#### D. INHIBIT/COMPATIBLE:

- 1-  (Std) FAULT NOT ACTIVE/CAL, FUA OUTPUTS
- 2-  FAULT NOT ACTIVE/COMPATIBLE
- 3-  FAULT ACTIVE/CAL, FUA OUTPUTS
- 4-  FAULT ACTIVE/COMPATIBLE

#### E. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA

# MODEL TA502A 02A SERIES GENERIC TRIP AMPLIFIER



TA502A - 2 - 1 - 0 7 - 1 - 1 - 1 - 1

## TRIP AMPLIFIER:

(Std) TA502A SERIES GENERIC TRIP AMPLIFIER

### A. RELAYS/OUTPUT:

- 1-  NO RELAYS
- 2-  (Std) RELAYS

### B. RELAY-STATE-NC:

- 1-  (Std) LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 2-  LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 3-  LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 4-  LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED
- 5-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), DE-ENERGIZED
- 6-  NON-LATCH ALARM (A2), NON-LATCH WARN (A1), ENERGIZED
- 7-  NON-LATCH ALARM (A2), LATCH WARN (A1), DE-ENERGIZED
- 8-  NON-LATCH ALARM (A2), LATCH WARN (A1), ENERGIZED

### C. MODE/DISPLAY-RANGE:

- 00-  0-1 / STANDARD MODE
- 01-  0-2 / STANDARD MODE
- 02-  0-5 / STANDARD MODE
- 03-  0-10 / STANDARD MODE
- 04-  0-20 / STANDARD MODE
- 05-  0-25 / STANDARD MODE
- 06-  0-50 / STANDARD MODE
- 07-  (Std) 0-100 / STANDARD MODE
- 08-  0-2 / TS400 MODE
- 09-  0-5 / TS400 MODE
- 10-  0-10 / TS400 MODE
- 11-  0-20 / TS400 MODE
- 12-  0-25 / TS400 MODE
- 13-  0-50 / TS400 MODE
- 14-  0-100 / TS400 MODE
- 15-  0-500 / TS400 MODE
- 16-  0-25 / TS420 MODE
- 19-  0-25 / S720/TS4000H MODE
- 20-  Observer-i MODE: EA 01
- 21-  Observer-i MODE: Classic

### D. DISPLAY-MULTIPLIER:

- 1-  (Std) 1 = X 1, (3 Digit)
- 2-  2 = X 10, (3 Digit)
- 3-  3 = X 100, (3 Digit)

### E. CARD-TEST/RAMP-TIME:

- 1-  (Std) INHIBITED RELAYS - 3 SECOND RAMP TIME
- 2-  INHIBITED RELAYS - 10 SECOND RAMP TIME
- 3-  ACTIVATE RELAYS - 3 SECOND RAMP TIME
- 4-  ACTIVATE RELAYS - 10 SECOND RAMP TIME
- 5-  INHIBITED RELAYS - 1 SECOND RAMP TIME
- 6-  ACTIVATE RELAYS - 1 SECOND RAMP TIME

### F. INHIBIT/COMPATIBLE:

- 1-  (Std) FAULT NOT ACTIVE/CAL, FUA OUTPUTS
- 2-  FAULT NOT ACTIVE/COMPATIBLE
- 3-  FAULT ACTIVE/CAL, FUA OUTPUTS
- 4-  FAULT ACTIVE/COMPATIBLE

### G. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA

## MODEL CC02A 02A SERIES COMMUNICATIONS

---



CC02A - 1 - 1

### 02A SERIES COMMUNICATIONS MODULE: (Std) 02A SERIES COMMUNICATIONS MODULE

---

#### A. POWER:

1-  (Std) 24 VDC

---

#### B. APPROVALS/LANGUAGE:

1-  (Std) FM/CSA

---

---

## MODEL FM002A 02A SERIES FACILITIES MODULE

---



FM002A- 1 - 1

### FACILITIES MODULE:

(Std) FM002A 02A SERIES FACILITIES MODULE

---

#### A. RELAY-STATE-3:

- 0-  NO RELAYS  
1-  (Std) DE-ENERGIZED  
2-  ENERGIZED
- 

#### B. APPROVALS/LANGUAGE:

- 1-  (Std) FM/CSA
- 
-

## MODEL IN042 02A SERIES INPUT CARD



IN042 - 1 - 1 - 1 - 1 - 2 - 4 - 1

### INPUT MODULE:

(Std) 02A SERIES SMOKE CARD

#### A. FAULT-INHIBIT:

- 1-  (Std) NON-LATCH FAULT/COMMON FAULT
- 2-  NON-LATCH FAULT/DISCRETE FAULT
- 3-  LATCH FAULT/COMMON FAULT
- 4-  LATCH FAULT/DISCRETE FAULT

#### B. ALARM-STATES-1:

- 1-  (Std) NON-LATCH DE-ENERGIZED A1 OUTPUT
- 2-  NON-LATCH ENERGIZED A1 OUTPUT
- 3-  LATCH DE-ENERGIZED A1 OUTPUT
- 4-  LATCH ENERGIZED A1 OUTPUT
- 5-  NON-LATCH DE-ENERGIZED A2 OUTPUT
- 6-  NON-LATCH ENERGIZED A2 OUTPUT
- 7-  LATCH DE-ENERGIZED A2 OUTPUT
- 8-  LATCH ENERGIZED A2 OUTPUT

#### C. ZENER-OPTIONS:

- 1-  (Std) NO BARRIER
- 2-  BARRIER

#### D. CARD-TEST/TIME-DELAY:

- 1-  (Std) ALARMS INHIBITED/IMMEDIATE
- 2-  ALARMS INHIBITED/2 SECOND DELAY
- 3-  ALARMS ACITVATE/IMMEDIATE
- 4-  ALARMS ACTIVATE/2 SECOND DELAY

#### E. OPER-MODE:

- 1-  CALLPOINT MODE NORMALLY CLOSED
- 2-  (Std) DETECTOR/CALL POINT MODE NORM OPEN

#### F. ACTIVE CHANNELS:

- 1-  ONE ACTIVE CHANNEL
- 2-  TWO ACTIVE CHANNELS
- 3-  THREE ACTIVE CHANNELS
- 4-  (Std) FOUR ACTIVE CHANNELS

#### G. APPROVALS/LANGUAGE:

- 1-  (Std) ENGLISH

## MODEL MD002 MONITOR DRIVER

A	B	C	D	E	F	G	H
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MD002 - 1 - 1 - 0 0 - 1 - 1 - 1 - 0 - 1

### MONITOR DRIVER: (Std) MONITOR DRIVER

#### A. ALARM-INPUTS:

- 1-  (Std) LOW ACTIVATION (ALL INPUTS)
- 2-  HIGH ACTIVATION (ALL INPUTS)
- 3-  OTHER (SPECIFY PER INPUT)

#### B. ALARM-OUTPUTS:

- 1-  (Std) LATCHING (ALL OUTPUTS)
- 2-  NON-LATCHING (ALL OUTPUTS)
- 3-  OTHER (SPECIFY PER OUTPUT)

#### C. ACTIVATION-TIME-DELAY:

- 00-  (Std) 0 SECOND DELAY ALL DRIVERS
- 01-  10 SECOND DELAY ALL DRIVERS
- 02-  20 SECOND DELAY ALL DRIVERS
- 03-  30 SECOND DELAY ALL DRIVERS
- 04-  40 SECOND DELAY ALL DRIVERS
- 05-  50 SECOND DELAY ALL DRIVERS
- 06-  60 SECOND DELAY ALL DRIVERS
- 07-  OTHER (SPECIFY)

#### D. MANUAL-ABORT:

- 1-  (Std) DISABLED ALL DRIVERS
- 2-  ENABLED ALL DRIVERS
- 3-  OTHER (SPECIFY)

#### E. CARD-TEST:

- 1-  (Std) INHIBITED ALARMS
- 2-  ACTIVE ALARMS

#### F. INHIBIT-MODE:

- 1-  (Std) FAULT NOT ACTIVE
- 2-  FAULT ACTIVE

#### G. ACTIVE DRIVERS:

- 0-  (Std) NO ACTIVE DRIVERS
- 1-  ONE ACTIVE CHANNEL
- 2-  TWO ACTIVE CHANNELS
- 3-  THREE ACTIVE CHANNELS
- 4-  FOUR ACTIVE CHANNELS

#### H. APPROVALS/LANGUAGES:

- 1-  (Std) ENGLISH



## MODEL PS002 02 SERIES POWER SUPPLY

---



PS002 - 1

**POWER SUPPLY:**  
(Std) 02 SERIES POWER SUPPLY

---

**A. POWER:**

1- <input type="checkbox"/> (Std)	110 VAC/24 VDC
2- <input type="checkbox"/>	220 VAC/24 VDC

---

---

## MODEL RK002 02A SERIES RACK



RK002 - 1 6 - 1 - 2

### RACK:

(Std) 02A SERIES RACK

#### A. RACK-SIZE:

02- <input type="checkbox"/>	2 CHANNEL RACK MOUNT W/SCREW TERMINALS
04- <input type="checkbox"/>	4 CHANNEL RACK MOUNT W/SCREW TERMINALS
24- <input type="checkbox"/>	4 CHANNEL RACK MOUNT W/O SCREW TERMINALS
08- <input type="checkbox"/>	8 CHANNEL RACK MOUNT W/SCREW TERMINALS
28- <input type="checkbox"/>	8 CHANNEL RACK MOUNT W/O SCREW TERMINALS
16- <input type="checkbox"/> (Std)	16 CHANNEL RACK MOUNT W/SCREW TERMINALS
36- <input type="checkbox"/>	16 CHANNEL RACK MOUNT W/O SCREW TERMINALS

#### B. BEZEL:

1- <input type="checkbox"/> (Std)	WITHOUT PANEL MOUNT BEZEL
2- <input type="checkbox"/>	WITH PANEL MOUNT BEZEL (not available with A-02)

#### C. CARDS:

2- <input type="checkbox"/> (Std)	CARDS NOT INSTALLED
-----------------------------------	---------------------

## MODEL RL002 02 SERIES RELAY CARD

---



RL002 - 1

**RELAY MODULE:**  
(Std) 02 SERIES RELAY CARD

---

**A. RELAY-STATE-3:**

1- <input type="checkbox"/> (Std)	DE-ENERGIZED
2- <input type="checkbox"/>	ENERGIZED

---

---

## MODEL ZN002A 02A SERIES ZONE CONTROLLER



ZN002A - 1 - 1 - 1

### ZONE CONTROLLER MODULE: (Std) 02A SERIES ZONE CONTROLLER

#### A. ZONE-INPUTS:

- 1-  (Std)      LOW ACTIVATION
- 2-       HIGH ACTIVATION

#### B. ALARM STATES:

- 1-  (Std)      LATCH ALARM, NON-LATCH WARN DE-ENERGIZED
- 2-       LATCH ALARM, NON-LATCH WARN ENERGIZED
- 3-       LATCH ALARM, LATCH WARN DE-ENERGIZED
- 4-       LATCH ALARM, LATCH WARN ENERGIZED
- 5-       NON-LATCH ALARM, NON-LATCH WARN DE-ENERGIZED
- 6-       NON-LATCH ALARM, NON-LATCH WARN ENERGIZED
- 7-       NON-LATCH ALARM, LATCH WARN DE-ENERGIZED
- 8-       NON-LATCH ALARM, LATCH WARN ENERGIZED

#### C. APPROVALS/LANGUAGE:

- 1-  (Std)      FM/CSA

## REPLACEMENT PARTS ZERO TWO SERIES

---

921-377 CONNECTOR 32 POSITION FEMALE

11127-1 CONTROLLER BLANK PANEL

11213-1 FACILITIES MODULE BLANK PANEL

---

---



## Ultrasonic Gas Detection

---

OBSERVER-i .....	7-2
SURVEYOR .....	7-3
ULTRA-ACC .....	7-4

## Observer-i Ultrasonic Gas Detector



OBSERVERi - 1 - 1 - 1 - 1 - 1 - 1

### DETECTOR

(Std) OBSERVER-i

#### A. OUTPUT OPTION:

- |                                   |   |
|-----------------------------------|---|
| 1- <input type="checkbox"/> (Std) | 4-20 mA SOURCE CURRENT, DUAL MODBUS         |
| 2- <input type="checkbox"/>       | 4-20 mA SINK CURRENT, DUAL MODBUS           |
| 3- <input type="checkbox"/>       | 3.5 mA HART, SOURCE CURRENT, SINGLE MODBUS  |
| 4- <input type="checkbox"/>       | 3.5 mA HART, SINK CURRENT, SINGLE MODBUS    |
| 5- <input type="checkbox"/>       | 1.25 mA HART, SOURCE CURRENT, SINGLE MODBUS |
| 6- <input type="checkbox"/>       | 1.25 mA HART, SINK CURRENT, SINGLE MODBUS   |

#### B. RELAY STATE:

- |                                   |                    |
|-----------------------------------|--------------------|
| 1- <input type="checkbox"/> (Std) | ALARM DE-ENERGIZED |
| 2- <input type="checkbox"/>       | ALARM ENERGIZED    |

#### C. CABLE ENTRY/CONNECTOR TYPE:

- |                                   |                          |
|-----------------------------------|--------------------------|
| 1- <input type="checkbox"/> (Std) | M20 SCREW TERMINAL       |
| 2- <input type="checkbox"/>       | 3/4in NPT SCREW TERMINAL |

#### D. APPROVALS/LANGUAGE:

- |                                   |                   |
|-----------------------------------|-------------------|
| 1- <input type="checkbox"/> (Std) | CSA/FM-ATEX/IECEX |
| 2- <input type="checkbox"/>       | Inmetro           |

#### E. OPERATING MODE:

- |                                   |                      |
|-----------------------------------|----------------------|
| 1- <input type="checkbox"/> (Std) | ENHANCED MODE (EAO1) |
| 2- <input type="checkbox"/>       | ENHANCED MODE (EAO2) |
| 3- <input type="checkbox"/>       | ENHANCED MODE (EAO3) |
| 4- <input type="checkbox"/>       | CLASSIC MODE         |

#### F. MICROPHONE ASSEMBLY:

- |                                   |      |
|-----------------------------------|------|
| 1- <input type="checkbox"/> (Std) | NGMM |
|-----------------------------------|------|

## **SURVEYOR** ULTRASONIC GAS LEAK DETECTOR

---



**SURVEYOR - 1 - 1**

### **DETECTOR**

(Std) SURVEYOR ULTRASONIC GAS LEAK DETECTOR----INTRINSICALLY SAFE

---

#### **A. APPROVALS/LANGUAGE:**

1-  (Std) ATEX

---

#### **B. CABLE ENTRY:**

1-  (Std) 2XM20 ENTRY

---

---



## ACCESSORIES ULTRASONIC LEAK DETECTOR ACCESSORIES

### 1701:

Gasonic 1701	PORTABLE TEST & CALIBRATION UNIT (was p/n 80510-1)
80575-1	BATTERY PACK ASSEMBLY
80570-1A	BATTERY CHARGER 1701
80538-1	CALIBRATION PROCESS OF 1701

### SB100:

SB100-1000	Ultrasonic Gas Tester (includes 940-407 charger, shoulder strap and case)
940-407	SB100 Charger

### OBSERVER-i:

805773-1A	Microphone
805554-3A	Sound Source Tower Assembly
805708-1	Windscreen Support Assembly

### OBSERVERH:

80332-1	MICROPHONE 40AB
956-023	TORQUE WRENCH FOR OBSERVER
914-169	ADAPTER M20 TO 3/4 NPT BRASS EExd

### SURVEYOR:

80332-1	MICROPHONE 40AB
---------	-----------------

### SPARES/ACCESSORIES:

80333-1	WINDSCREEN
80499-1	MAGNET STICK FOR DISPLAY
80601-1	ASSEMBLY MOUNTING BRACKET
80610-1	TAG PLATE EXTRA
80612-1	SUN SHADE

### DOCUMENTATION:

MANOBSERVER	MANUAL GASSONIC OBSERVER BB6017
MANSURVEYOR	MANUAL SURVEYOR, BB6019
BB6012	USER GUIDE FOR GASSONIC 1701 BB6012
80569-1	FLOW CHART FOR GASSONIC 1701 BB6030

### ONSITE CONSULTING SERVICES/TRAINING:

80615-1	DOCUMENTATION REPORT 1-10 DETECTORS
80616-1	DOCUMENTATION REPORT 1-30 DETECTORS
80617-1	ENGINEERING RATE PER DAY (OFFSHORE)
80618-1	ENGINEERING RATE PER DAY (ONSHORE)
80619-1	DAILY ALLOWANCE
80620-1	TRAINING COURSE (AT FACTORY) - RATE PER PERSON
80621-1	TRAINING COURSE (AT CUSTOMER) - RATE PER DAY



## Specialty Products

---

nonGMI SYSTEMS ..... 8-2

## Specialty Products

### STROBES

- |   |        |  |
|---|--------|--|
| 1 | SRK    | SPECTRALERT WALL MOUNT STROBE LIGHT, GENERAL PURPOSE/UNCLASSIFIED, 12/24VDC, CLEAR STROBE, LABELED "FIRE" SUITABLE FOR OUTDOOR INSTALLATION, WEATHERPROOF, C/W: SRK, INCLUDES WEATHERPROOF<br>1-2 weeks lead time  |
| 2 | XB15UL | MEDC HAZARDOUS AREA STROBE LIGHT, CLASS I, DIV. 2, GROUPS A, B, C & D, NEMA 4X, 24VDC OR 120VAC, NATURAL BLACK BODY INCLUDES WIRE LENS GUARD AVAILABLE COLORS, RED AMBER, YELLOW, BLUE, CLEAR, GREEN<br>1-2 weeks lead time  |
| 3 | 27XST  | FEDERAL SIGNAL EXPLOSION PROOF STROBE LIGHT, CLASS I, DIV. 1, GROUPS C & D, NEMA 4X, 24VDC OR 120VAC, AVAILABLE COLORS: RED, AMBER, BLUE, CLEAR, GREEN<br><br>Mounting Options:<br>Pendant Mounting Kit, P/N PMXC-SB<br>Ceiling Mounting Kit, P/N CMXC-SB<br>Wall Mounting Kit, P/N WMXC-SB<br>2-3 weeks lead time |

### AUDIBLE SOUNDERS

- |   |             |   |
|---|-------------|---|
| 4 | HRK         | SPECTRALERT WALL MOUNT ELECTRONIC SOUNDER, GENERAL PURPOSE/UNCLASSIFIED, 12/24VDC, LABELED "FIRE SUITABLE FOR OUTDOOR INSTALLATION, WEATHERPROOF, INCLUDES WEATHERPROOF MOUNTING BACKBOX<br>1-2 weeks lead time |
| 5 | SSM24-6-WBB | SYSTEM SENSOR 6" ELECTRIC ALARM BELL, 24 VDC, C/W:WBB,RED WEATHERPROOF MOUNTING BACKBOX<br>1-2 weeks lead time  |
| 6 | DB3B-UL     | MEDC HAZARDOUS LOCATIONS ELECTRONIC SOUNDER, CLASS I, DIV. 2, GROUPS A, B, C & D, 120VAC OR 24VDC, 115 DB OUTPUT AT 10 FT, NATURAL BLACK FINISH WITH 28 ON-BOARD TONES<br>2-3 weeks lead time                   |
| 7 | 300X        | FEDERAL SIGNAL EXPLOSION PROOF SELECTONE SOUNDER, CLASS I, DIV. 1, GROUPS C & D, 24VDC OR 120VAC, 104dB OUTPUT, C/W: UTM UNIVERSAL TONE MODULE<br>2-3 weeks lead time   |
| 8 | 41X-024-1   | FEDERAL SIGNAL EXPLOSION PROOF VIBRATING HORN, CLASS I, DIV. 1, GROUPS C & D, NEMA 4X 110dB OUTPUT, 24VDC<br>2-3 weeks lead time  |
| 9 | 31X-120-3   | FEDERAL SIGNAL EXPLOSION PROOF VIBRATING HORN, CLASS I, DIV. 1, GROUPS C & D, NEMA 4X 110dB OUTPUT, 120VAC<br>2-3 weeks lead time   |

## Specialty Products

### COMBINATION HORN/STROBE

- 10 P4RK SPECTRALERT WALL MOUNT SOUNDER/STROBE, GENERAL PURPOSE/UNCLASSIFIED, 12/24VDC, LABELED "FIRE", SUITABLE FOR OUTDOOR INSTALLATION, INCLUDES WEATHERPROOF MOUNTING BACKBOX  
1-2 weeks lead time

### SMOKE DETECTORS

- 11 DI-3-DB-3S PYROTRONICS IONIZATION 2-WIRE TYPE SMOKE DETECTOR, C/W: DB-3S MOUNTING BASE (CAN BE USED WITH IN042 CARD)  
1-2 weeks lead time
- 12 4W-B NOTIFIER SYSTEM SENSOR I3 PHOTOELECTRIC SMOKE DETECTOR, P/N 4W-B  
1-2 weeks lead time

### HEAT DETECTORS

- 13 27121-000-190 FENWAL EXPLOSION PROOF HEAT DETECTOR, CLASS I, DIV. 1, GROUPS C & D, 190 DEGREE F, (CAN BE USED WITH IN042 CARD)  
1-2 weeks lead time

### MANUAL PULL STATIONS

- 14 NBG-12-SB-10 NOTIFIER DOUBLE ACTION MANUAL FIRE ALARM STATION, RED, C/W: SB-10 MOUNTING BACKBOX (CAN BE USED WITH IN042 CARD)  
1-2 weeks lead time
- 15 RMS-6T-EXP-KLLP RMS EXPLOSION PROOF MANUAL PULL STATION, CLASS I, DIV. 1, GROUPS C & D, NEMA 4X, RED, (CAN BE USED WITH IN042 CARD)  
2-3 weeks lead time

### POWER SUPPLIES

- 17 1SVR427032R0000 ABB DIN RAIL MOUNT POWER SUPPLY, 120/220VAC INPUT, 24VDC OUTPUT, 2 AMP, CLASS I, DIV. 2, GROUPS C & D RATED  
1-2 weeks lead time
- 18 1SVR427024R0000 ABB DIN RAIL MOUNT POWER SUPPLY, 120/220 VAC INPUT, 24VDC OUTPUT, 5 AMP, CLASS I, DIV. 2, GROUPS C & D  
1-2 weeks lead time
- 19 1SVR427025R0000 ABB DIN RAIL MOUNT POWER SUPPLY, 120/220 VAC INPUT, 24VDC OUTPUT, 10 AMP  
1-2 weeks lead time
- 20 1SVR427026R0000 ABB DIN RAIL MOUNT POWER SUPPLY, 120/220 VAC INPUT, 24VDC OUTPUT, 20 AMP  
2-3 weeks lead time
- 21 PBA600F-24VDC COSEL POWER SUPPLY, 120/220VAC INPUT, 24VDC OUTPUT, 27 AMP  
4-6 weeks lead time
- 22 PBA1500F-24 COSEL POWER SUPPLY, 120/220VAC INPUT, 24VDC OUTPUT, 50 AMP  
4-6 weeks lead time

### MISCELLANEOUS

- 23 990-900-ADB-F AIR DUCT MOUNT BRACKET-FLAT  
1-2 weeks lead time
- 24 990-900-PMB PIPE MOUNT BRACKET  
1-2 weeks lead time
- 25 990-900-ADB-R AIR DUCT MOUNT BRACKET - ROUND  
1-2 weeks lead time

# ADDENDUM

## Senscient ELDS™ - OPEN PATH LASER GAS DETECTION

### AMMONIA - NH<sub>3</sub>

Part Number	Description	Approval	Measurement	Length
S-1080-3	ELDS	ATEX/IECEX	1000 ppm.m	5-40m
S-1080-4	ELDS	CSA/UL	1000 ppm.m	5-40m
S-1080-5	ELDS	EAC TC RU	1000 ppm.m	5-40m
S-1080-7	ELDS	InMetro	1000 ppm.m	5-40m
M-1080-3	ELDS	ATEX/IECEX	1000 ppm.m	40-120m
M-1080-4	ELDS	CSA/UL	1000 ppm.m	40-120m
M-1080-5	ELDS	EAC TC RU	1000 ppm.m	40-120m
M-1080-7	ELDS	InMetro	1000 ppm.m	40-120m
S-1082-3	ELDS	ATEX/IECEX	5000 ppm.m	5-40m
S-1082-4	ELDS	CSA/UL	5000 ppm.m	5-40m
M-1082-3	ELDS	ATEX/IECEX	5000 ppm.m	40-120m
M-1082-4	ELDS	CSA/UL	5000 ppm.m	40-120m
S-1087-3	ELDS	ATEX/IECEX	15000 ppm.m	5-40m
S-1087-4	ELDS	CSA/UL	15000 ppm.m	5-40m
M-1087-3	ELDS	ATEX/IECEX	15000 ppm.m	40-120m
M-1087-4	ELDS	CSA/UL	15000 ppm.m	40-120m

### CARBON DIOXIDE - CO<sub>2</sub>

S-1070-3	ELDS	ATEX/IECEX	300000 ppm.m	5-40m
S-1070-4	ELDS	CSA/UL	300000 ppm.m	5-40m
S-1070-5	ELDS	EAC TC RU	300000 ppm.m	5-40m
S-1070-7	ELDS	InMetro	300000 ppm.m	5-40m
M-1070-3	ELDS	ATEX/IECEX	300000 ppm.m	40-120m
M-1070-4	ELDS	CSA/UL	300000 ppm.m	40-120m
M-1070-5	ELDS	EAC TC RU	300000 ppm.m	40-120m
M-1070-7	ELDS	InMetro	300000 ppm.m	40-120m

### ETHYLENE - C<sub>2</sub>H<sub>4</sub>

S-1092-3	ELDS	ATEX/IECEX	1 LEL.m	5-40m
S-1092-4	ELDS	CSA/UL	1 LEL.m	5-40m
S-1092-5	ELDS	EAC TC RU	1 LEL.m	5-40m
S-1092-7	ELDS	InMetro	1 LEL.m	5-40m
M-1092-3	ELDS	ATEX/IECEX	1 LEL.m	40-120m
M-1092-4	ELDS	CSA/UL	1 LEL.m	40-120m
M-1092-5	ELDS	EAC TC RU	1 LEL.m	40-120m
M-1092-7	ELDS	InMetro	1 LEL.m	40-120m
L-1092-3	ELDS	TEX	1 LEL.m	120-200m
L-1092-4	ELDS	CSA/UL	1 LEL.m	120-200m
L-1092-5	ELDS	EAC TC RU	1 LEL.m	120-200m
L-1092-7	ELDS	InMetro	1 LEL.m	120-200m
S-1091-3	ELDS	ATEX/IECEX	10000 ppm.m	5-40m
S-1091-4	ELDS	CSA/UL	10000 ppm.m	5-40m
S-1091-5	ELDS	EAC TC RU	10000 ppm.m	5-40m
S-1091-7	ELDS	InMetro	10000 ppm.m	5-40m
M-1091-3	ELDS	ATEX/IECEX	10000 ppm.m	40-120m
M-1091-4	ELDS	CSA/UL	10000 ppm.m	40-120m
M-1091-5	ELDS	EAC TC RU	10000 ppm.m	40-120m
M-1091-7	ELDS	InMetro	10000 ppm.m	40-120m

## Senscient ELDS- OPEN PATH LASER GAS DETECTION

### HYDROGEN CHLORIDE - HCl

<u>Part Number</u>	<u>Description</u>	<u>Approval</u>	<u>Measurement</u>	<u>Length</u>
S-1060-3	ELDS	ATEX/IECEX	50 ppm.m	5-60m
S-1060-4	ELDS	CSA/UL	50 ppm.m	5-60m
S-1060-5	ELDS	EAC TC RU	50 ppm.m	5-60m
S-1060-7	ELDS	InMetro	50 ppm.m	5-60m

### HYDROGEN FLUORIDE - HF

S-1050-3	ELDS	ATEX/IECEX	25 ppm.m	5-60m
S-1050-4	ELDS	CSA/UL	25 ppm.m	5-60m
S-1050-5	ELDS	EAC TC RU	25 ppm.m	5-60m
S-1050-7	ELDS	InMetro	25 ppm.m	5-60m
S-1051-3	ELDS	ATEX/IECEX	50 ppm.m	5-60m
S-1051-4	ELDS	CSA/UL	50 ppm.m	5-60m
S-1051-5	ELDS	EAC TC RU	50 ppm.m	5-60m
S-1051-7	ELDS	InMetro	50 ppm.m	5-60m
M-1051-3	ELDS	ATEX/IECEX	50 ppm.m	60-120m
M-1051-4	ELDS	CSA/UL	50 ppm.m	60-120m
S-1052-3	ELDS	ATEX/IECEX	200 ppm.m	5-60m
S-1052-4	ELDS	CSA/UL	200 ppm.m	5-60m
S-1052-5	ELDS	EAC TC RU	200 ppm.m	5-60m
S-1052-7	ELDS	InMetro	200 ppm.m	5-60m
M-1052-4	ELDS	CSA/UL	200 ppm.m	60-120m
S-1054-3	ELDS	ATEX/IECEX	1000 ppm.m	5-60m
S-1054-4	ELDS	CSA/UL	1000 ppm.m	5-60m
M-1054-3	ELDS	ATEX/IECEX	1000 ppm.m	60-120m
M-1054-4	ELDS	CSA/UL	1000 ppm.m	60-120m

### HYDROGEN SULFIDE - H2S

S-2052-3	ELDS	ATEX/IECEX	250 ppm.m	5-60m
S-2052-4	ELDS	CSA/UL	250 ppm.m	5-60m
S-2052-5	ELDS	EAC TC RU	250 ppm.m	5-60m
S-2052-7	ELDS	InMetro	250 ppm.m	5-60m
S-2057-3	ELDS	ATEX/IECEX	500 ppm.m	5-60m
S-2057-4	ELDS	CSA/UL	500 ppm.m	5-60m
S-2057-5	ELDS	EAC TC RU	500 ppm.m	5-60m
S-2057-7	ELDS	InMetro	500 ppm.m	5-60m
S-2053-3	ELDS	ATEX/IECEX	1000 ppm.m	5-60m
S-2053-4	ELDS	CSA/UL	1000 ppm.m	5-60m
S-2053-5	ELDS	EAC TC RU	1000 ppm.m	5-60m
S-2053-7	ELDS	InMetro	1000 ppm.m	5-60m
S-2055-3	ELDS	ATEX/IECEX	1500 ppm.m	5-60m
S-2058-3	ELDS	ATEX/IECEX	5000 ppm.m	5-60m
S-2058-4	ELDS	CSA/UL	5000 ppm.m	5-60m
S-2054-3	ELDS	ATEX/IECEX	15000 ppm.m	5-60m
S-2054-4	ELDS	CSA/UL	15000 ppm.m	5-60m
S-2054-5	ELDS	EAC TC RU	15000 ppm.m	5-60m
S-2054-7	ELDS	InMetro	15000 ppm.m	5-60m

## Senscient ELDS- OPEN PATH LASER GAS DETECTION

### METHANE - CH<sub>4</sub>

<b>Part Number</b>	<b>Description</b>	<b>Approval</b>	<b>Measurement</b>	<b>Length</b>
S-1012-3	ELDS	ATEX/IECEX	1 LEL.m	5-40m
S-1012-4	ELDS	CSA/UL	1 LEL.m	5-40m
S-1012-5	ELDS	EAC TC RU	1 LEL.m	5-40m
S-1012-7	ELDS	InMetro	1 LEL.m	5-40m
M-1012-3	ELDS	ATEX/IECEX	1 LEL.m	40-120m
M-1012-4	ELDS	CSA/UL	1 LEL.m	40-120m
M-1012-5	ELDS	EAC TC RU	1 LEL.m	40-120m
M-1012-7	ELDS	InMetro	1 LEL.m	40-120m
L-1012-3	ELDS	ATEX/IECEX	1 LEL.m	120-200m
L-1012-4	ELDS	CSA/UL	1 LEL.m	120-200m
L-1012-5	ELDS	EAC TC RU	1 LEL.m	120-200m
L-1012-7	ELDS	InMetro	1 LEL.m	120-200m
S-1015-3	ELDS	ATEX/IECEX	5 LEL.m	5-40m
S-1015-4	ELDS	CSA/UL	5 LEL.m	5-40m
S-1015-5	ELDS	EAC TC RU	5 LEL.m	5-40m
S-1015-7	ELDS	InMetro	5 LEL.m	5-40m
M-1015-3	ELDS	ATEX/IECEX	5 LEL.m	40-120m
M-1015-4	ELDS	CSA/UL	5 LEL.m	40-120m
M-1015-5	ELDS	EAC TC RU	5 LEL.m	40-120m
M-1015-7	ELDS	InMetro	5 LEL.m	40-120m
L-1015-3	ELDS	ATEX/IECEX	5 LEL.m	120-200m
L-1015-4	ELDS	CSA/UL	5 LEL.m	120-200m
L-1015-5	ELDS	EAC TC RU	5 LEL.m	120-200m
L-1015-7	ELDS	InMetro	5 LEL.m	120-200m
S-1010-3	ELDS	ATEX/IECEX	1000 ppm.m	5-40m
S-1010-4	ELDS	CSA/UL	1000 ppm.m	5-40m
S-1010-5	ELDS	EAC TC RU	1000 ppm.m	5-40m
S-1010-7	ELDS	InMetro	1000 ppm.m	5-40m
M-1010-3	ELDS	ATEX/IECEX	1000 ppm.m	40-120m
M-1010-4	ELDS	CSA/UL	1000 ppm.m	40-120m
M-1010-5	ELDS	EAC TC RU	1000 ppm.m	40-120m
M-1010-7	ELDS	InMetro	1000 ppm.m	40-120m

#### Notes:

120-200m path length not available in 1000 ppm.m range.



## Senscient ELDS - OPEN PATH LASER GAS DETECTION

### METHANE - CH4 - HVAC - Ventilation Zone

Part Number	Description	Approval	Measurement	Length
VZ-1020-3	ELDS	ATEX/IECEX	10% LEL.m	0.5-5m
VZ-1020-4	ELDS	CSA/UL	10% LEL.m	0.5-5m
VZ-1020-5	ELDS	EAC TC RU	10% LEL.m	0.5-5m
VZ-1020-7	ELDS	InMetro	10% LEL.m	0.5-5m
VZ-1021-3	ELDS	ATEX/IECEX	25% LEL.m	0.5-5m
VZ-1021-4	ELDS	CSA/UL	25% LEL.m	0.5-5m
VZ-1021-5	ELDS	EAC TC RU	25% LEL.m	0.5-5m
VZ-1021-7	ELDS	InMetro	25% LEL.m	0.5-5m
VZ-1022-3	ELDS	ATEX/IECEX	100% LEL.m	0.5-5m
VZ-1022-4	ELDS	CSA/UL	100% LEL.m	0.5-5m
VZ-1022-5	ELDS	EAC TC RU	100% LEL.m	0.5-5m
VZ-1022-7	ELDS	InMetro	100% LEL.m	0.5-5m

### METHANE - CH4 - HVAC - Cross Duct\*

XD-1020-3	ELDS	ATEX/IECEX	10% LEL.m	0.5-5m
XD-1020-4	ELDS	CSA/UL	10% LEL.m	0.5-5m
XD-1020-5	ELDS	EAC TC RU	10% LEL.m	0.5-5m
XD-1020-7	ELDS	InMetro	10% LEL.m	0.5-5m
XD-1021-3	ELDS	ATEX/IECEX	25% LEL.m	0.5-5m
XD-1021-4	ELDS	CSA/UL	25% LEL.m	0.5-5m
XD-1021-5	ELDS	EAC TC RU	25% LEL.m	0.5-5m
XD-1021-7	ELDS	InMetro	25% LEL.m	0.5-5m
XD-1022-3	ELDS	ATEX/IECEX	100% LEL.m	0.5-5m
XD-1022-4	ELDS	CSA/UL	100% LEL.m	0.5-5m
XD-1022-5	ELDS	EAC TC RU	100% LEL.m	0.5-5m
XD-1022-7	ELDS	InMetro	100% LEL.m	0.5-5m

\* XD orders must include a mount plate with every unit.

### METHANE - CH4 - HVAC - Coal Bed\*

XC-1021-3	ELDS	ATEX/IECEX	25% LEL.m	0.5-5m
XC-1021-4	ELDS	CSA/UL	25% LEL.m	0.5-5m
XC-1021-5	ELDS	EAC TC RU	25% LEL.m	0.5-5m
XC-1021-7	ELDS	InMetro	25% LEL.m	0.5-5m
XC-1022-3	ELDS	ATEX/IECEX	100% LEL.m	0.5-5m
XC-1022-4	ELDS	CSA/UL	100% LEL.m	0.5-5m
XC-1022-5	ELDS	EAC TC RU	100% LEL.m	0.5-5m
XC-1022-7	ELDS	InMetro	100% LEL.m	0.5-5m

\* XC orders must include a mount plate with every unit.

### METHANE - CH4 - HVAC - Mounting Plates

A-5123-0	ELDS	XD, Mount Plates	400mm (with ELDS Purchase)
A-5124-0	ELDS	XD, Mount Plates	250mm (with ELDS purchase)
A-5125-0	ELDS	XD, Mount Plates	180mm (with ELDS Purchase)

## Senscient ELDS - OPEN PATH LASER GAS DETECTION

### SOUR GAS - CH<sub>4</sub> / H<sub>2</sub>S

<u>Part Number</u>	<u>Description</u>	<u>Approval</u>	<u>Measurement</u>	<u>Length</u>
S-2013-3	ELDS	ATEX/IECEX	250 ppm.m	5-60m
S-2013-4	ELDS	CSA/UL	250 ppm.m	5-60m
S-2013-5	ELDS	EAC TC RU	250 ppm.m	5-60m
S-2013-7	ELDS	InMetro	250 ppm.m	5-60m
S-2033-3	ELDS	ATEX/IECEX	500 ppm.m	5-60m
S-2033-4	ELDS	CSA/UL	500 ppm.m	5-60m
S-2033-5	ELDS	EAC TC RU	500 ppm.m	5-60m
S-2033-7	ELDS	InMetro	500 ppm.m	5-60m
S-2043-3	ELDS	ATEX/IECEX	15000 ppm.m	5-60m
S-2043-4	ELDS	CSA/UL	15000 ppm.m	5-60m
S-2043-5	ELDS	EAC TC RU	15000 ppm.m	5-60m
S-2043-7	ELDS	InMetro	15000 ppm.m	5-60m

### ACCESSORIES:

A-5000-1	ELDS General Alignment Scope (not for XD, XC, or VZ)
A-5030-2	ELDS Glass Gassing Cell
A-5040-1	ELDS Stainless Steel Tanks
A-5060-1	ELDS Computer, UL1604
A-5060-2	ELDS Computer, ATEX Zone2
A-5060-3	ELDS Computer, Australia
A-5060-4	ELDS Tablet, C1Z2 HazLoc
A-5065-0	ELDS Tablet, General Purpose
A-5101-1	ELDS RS485 Interface Cable
A-5080-1	ELDS Sunshade, Standard
A-5080-2	ELDS Sunshade, Screw Spare
A-5081-2	ELDS Sunshade, Large
A-5080-7	ELDS Snow Covers, in place of Sunshade
A-5080-8	ELDS Snow Covers
A-5080-3	ELDS Grounding Spares Kit
A-5080-4	ELDS Mounting Bracket
A-5080-5	ELDS Allen Key M12
A-5080-6	ELDS Replacement Housing Lid
A-5140-1	ELDS U-Bolt, Standard
A-5150-3	ELDS SS Reducers, M25(male) to M20(female)
A-5121-2	ELDS XD Gassing Cell
A-5130-0	ELDS XD Alignment Bushing Kit
A-5135-0	ELDS XD Mount Plates 400mm
A-5136-0	ELDS XD Mount Plates 250mm
A-5137-0	ELDS XD Mount Plates 180mm
A-5047-0	ELDS XD High Temp Window
A-5047-1	ELDS XD Replacement Lens
A-5002-1	ELDS XD Alignment Scope, Red Dot
A-5003-1	ELDS XD Scope Adapter Kit
A-5001-1	ELDS VZ Alignment Scope