

MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

FEATURES: 2-Wire

New &
smarter
2-Wire

NH₃
Ammonia

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -40° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 60 seconds
- **Fast Recovery** - 90% recovery in less than 2 minutes
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 1 ppm |
| Response Time: | <60 sec. to 90% of final reading |
| Recovery Time: | <2 min. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -40°C to +50°C -40°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <5 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2211SMTR |

Note: Specifications subject to change without notice



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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

**New &
Smarter
2-Wire**

**AsH₃
Arsine**

FEATURES: 2-Wire

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 10% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -20° C to +40° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
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- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 2+ years of normal life
- **Long Life** - over 2 years continuous operation
- **Fast Response** - 90% of reading in less than 30 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|---|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.00-1.00 ppm; 0.00-10.00 ppm |
| Output Signal: | Linear |
| Resolution: | .01 ppm |
| Response Time: | <30 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 10% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -20°C to +40°C -4°F to +104°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <.02 ppm |
| Position Sensitivity: | None |
| Storage Life: | >6 months in container |
| Life Expectancy: | >2 years in clean air |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2240SMTR |

Note: Specifications subject to change without notice

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Patented Technology
no false alarms
Gas Detection Systems
ISO 9001:2000 Certified

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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

**New &
Smarter
2-Wire**

**Br₂
Bromine**

FEATURES: 2-Wire

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
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- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-5.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2203SMTR |

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Gas Detection Systems
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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

FEATURES: 2-Wire



- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 15% to 90% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
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- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 2+ years of normal life
- **Long Life** - over 2 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 60 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|-----------------------|---|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0-200 ppm; 0-2000 ppm |
| Output Signal: | Linear |
| Resolution: | 1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <60 sec. to 90% recovery |
| Humidity Range: | 15% - 90% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | -1 to +3 ppm |
| Position Sensitivity: | None |
| Storage Life: | 6 months in container |
| Life Expectancy: | >2 years in clean air |



CO
Carbon Monoxide

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction



TRANSMITTER SPECIFICATIONS:

| | |
|---------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2222SMTR |

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MIL-RAM TECHNOLOGY

no false alarms

Gas Detection Systems



Cl₂ Chlorine

FEATURES: 2-Wire

2-Wire *smarter* Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -40° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
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- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
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- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**



SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-5.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -40°C to +50°C -40°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |

TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2201SMTR |

Note: Specifications subject to change without notice



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MIL - R A M T E C H N O L O G Y

no false alarms

Gas Detection Systems

FEATURES: 2-Wire

New &
Smarter
2-Wire

ClO₂
Chlorine Dioxide

2-Wire *smarter* Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
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- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
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- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|-----------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-5.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|---------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2204SMTR |

Note: Specifications subject to change without notice

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no false alarms

Gas Detection Systems



**B₂H₆
Diborane**

FEATURES: 2-Wire

2-Wire *smarter* Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 10% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -20° C to +40° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
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- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 2+ years of normal life
- **Long Life** - over 2 years continuous operation
- **Fast Response** - 90% of reading in less than 30 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|---|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.00-1.00 ppm; 0.00-10.00 ppm |
| Output Signal: | Linear |
| Resolution: | .01 ppm |
| Response Time: | <30 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 10% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -20°C to +40°C -4°F to +104°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <.02 ppm |
| Position Sensitivity: | None |
| Storage Life: | >6 months in container |
| Life Expectancy: | >2 years in clean air |



Part No. 01-2241SMTR

TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2241SMTR |

Note: Specifications subject to change without notice



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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

**New &
smarter
2-Wire**

**F₂
Fluorine**

FEATURES: 2-Wire

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
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- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-5.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2202SMTR |

Note: Specifications subject to change without notice



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MIL-RAM TECHNOLOGY

no false alarms

Gas Detection Systems

**New &
Smarter
2-Wire**

**N₂H₄
Hydrazine**

FEATURES: **2-Wire**

2-Wire *smarter* Transmitter

- ***no false alarms*** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 10% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -20° C to +40° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type ***smarter*** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 2+ years of normal life
- **Long Life** - over 2 years continuous operation
- **Fast Response** - 90% of reading in less than 90 seconds
- **Fast Recovery** - 90% recovery in less than 60 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|---|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.00-1.00 ppm; 0.00-10.00 ppm |
| Output Signal: | Linear |
| Resolution: | .01 ppm |
| Response Time: | <90 sec. to 90% of final reading |
| Recovery Time: | <60 sec. to 90% recovery |
| Humidity Range: | 10% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -20°C to +40°C -4°F to +104°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <.02 ppm |
| Position Sensitivity: | None |
| Storage Life: | >6 months in container |
| Life Expectancy: | >18 months in clean air |

Self-Calibration = Cost Reduction



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2243SMTR |

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no false alarms

Gas Detection Systems

**New &
Smarter
2-Wire**

**HBr
Hydrogen Bromide
2-Wire *smarter* Transmitter**

FEATURES: 2-Wire

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration cover time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 60 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <60 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2216SMTR |

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no false alarms

Gas Detection Systems

FEATURES: 2-Wire

New &
Smarter
2-Wire

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 60 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <60 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric $\pm 15\%$ |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |

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Patented Technology
no false alarms
Gas Detection Systems
ISO 9001:2000 Certified

HCI
Hydrogen Chloride
2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2206SMTR |

Note: Specifications subject to change without notice

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no false alarms

Gas Detection Systems

**New &
Smarter
2-Wire**

**HCN
Hydrogen Cyanide
2-Wire *smarter* Transmitter**

FEATURES: 2-Wire

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 60 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0-50 ppm |
| Output Signal: | Linear |
| Resolution: | 1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <60 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2215SMTR |

Note: Specifications subject to change without notice



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Gas Detection Systems

FEATURES: **2-Wire**

**New &
Smarter
2-Wire**

**HF
Hydrogen Fluoride
2-Wire *smarter* Transmitter**

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required – calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 60 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <60 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2207SMTR |

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Gas Detection Systems

FEATURES: 2-Wire



- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 60 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <60 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric \pm 15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |

HI
Hydrogen Iodide

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2209SMTR |

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no false alarms

Gas Detection Systems

FEATURES: 2-Wire

New &
Smarter
2-Wire

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-5.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |

MIL-RAM
Patented Technology
no false alarms
Gas Detection Systems
ISO 9001:2000 Certified

H₂O₂
Hydrogen Peroxide
2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2217SMTR |

Note: Specifications subject to change without notice

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MIL - R A M T E C H N O L O G Y

no false alarms

Gas Detection Systems

FEATURES: 2-Wire

New &
smarter
2-Wire

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -40° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0-50 ppm; 0-100 ppm |
| Output Signal: | Linear |
| Resolution: | 1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -40°C to +50°C -40°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |

H₂S
Hydrogen Sulfide

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2210SMTR |

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MIL-RAM TECHNOLOGY

no false alarms

Gas Detection Systems



I₂
Iodine

FEATURES: 2-Wire

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -40° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**



SENSORS:

| | |
|-----------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-5.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -40°C to +50°C -40°F to +122°F |
| Pressure Range: | Atmospheric \pm 15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |

TRANSMITTER SPECIFICATIONS:

| | |
|---------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2228SMTR |

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MIL - R A M T E C H N O L O G Y

no false alarms

Gas Detection Systems

FEATURES: 2-Wire

New &
Smarter
2-Wire

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 60 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <60 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |

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Patented Technology
no false alarms
Gas Detection Systems
ISO 9001:2000 Certified

HNO₃

Nitric Acid Vapors

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2212SMTR |

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no false alarms

Gas Detection Systems

**New &
smarter
2-Wire**

**NO
Nitric Oxide**

FEATURES: **2-Wire**

2-Wire *smarter* Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 15% to 90% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 2+ years of normal life
- **Long Life** - over 2 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 60 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|---|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0-200 ppm; 0-2000 ppm |
| Output Signal: | Linear |
| Resolution: | 1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <60 sec. to 90% recovery |
| Humidity Range: | 15% - 90% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <10 ppm |
| Position Sensitivity: | None |
| Storage Life: | 6 months in container |
| Life Expectancy: | >2 years in clean air |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2223SMTR |

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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

FEATURES: 2-Wire

New &
Smarter
2-Wire

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 45 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <45 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



NO₂
Nitrogen Dioxide

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2205SMTR |

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no false alarms

Gas Detection Systems

**New &
smarter
2-Wire**

O₂
Oxygen

FEATURES: 2-Wire

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 15% to 90% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -15° C to +40° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 2+ years of normal life
- **Long Life** - over 2 years continuous operation
- **Fast Response** - 90% of reading in less than 30 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|-----------------------|---|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-25.0% |
| Output Signal: | Linear |
| Resolution: | 0.1% |
| Response Time: | <30 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 15% - 90% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -15°C to +40°C 5°F to +104°F |
| Pressure Range: | Atmospheric ±15% |
| Position Sensitivity: | None |
| Storage Life: | 6 months in container |
| Life Expectancy: | >2 years in clean air |

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Patented Technology
no false alarms
Gas Detection Systems
ISO 9001:2000 Certified



TRANSMITTER SPECIFICATIONS:

| | |
|---------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2225SMTR |

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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

**New &
smarter
2-Wire**

O₃
Ozone

FEATURES: 2-Wire

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type **smarter** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 90 seconds
- **Fast Recovery** - 90% recovery in less than 45 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <90 sec. to 90% of final reading |
| Recovery Time: | <45 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2213SMTR |

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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

**New &
Smarter
2-Wire**

**PH₃
Phosphine**

FEATURES: 2-Wire

2-Wire ***smarter*** Transmitter

Self-Calibration = Cost Reduction

- ***no false alarms*** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 10% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -20° C to +40° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
- **Non-Intrusive One-Man Calibration** - use magnet to actuate zero and span calibration switches behind enclosure glass window - no manual adjustments required - no need to open enclosure
- **Off-site Sensor Calibration** - calibrate sensor in lab and install on any same type ***smarter*** Transmitter with no further calibration required - calibration data automatically uploads to transmitter to ensure precise calibration
- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 2+ years of normal life
- **Long Life** - over 2 years continuous operation
- **Fast Response** - 90% of reading in less than 30 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|---|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.00-1.00 ppm; 0.00-10.00 ppm |
| Output Signal: | Linear |
| Resolution: | .01 ppm |
| Response Time: | <30 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 10% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -20°C to +40°C -4°F to +104°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <.02 ppm |
| Position Sensitivity: | None |
| Storage Life: | >6 months in container |
| Life Expectancy: | >2 years in clean air |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2245SMTR |

Note: Specifications subject to change without notice



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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

**New &
Smarter
2-Wire**

**SiH₄
Silane**

FEATURES: 2-Wire

2-Wire **smarter** Transmitter

Self-Calibration = Cost Reduction

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0% to 99% relative humidity - intermittent
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- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 2+ years of normal life
- **Long Life** - over 2 years continuous operation
- **Fast Response** - 90% of reading in less than 30 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|---|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-50.0 ppm; 0.0-100.0 ppm |
| Output Signal: | Linear |
| Resolution: | .01 ppm |
| Response Time: | <30 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 10% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -20°C to +40°C -4°F to +104°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <.02 ppm |
| Position Sensitivity: | None |
| Storage Life: | >6 months in container |
| Life Expectancy: | >2 years in clean air |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2246SMTR |

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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

**New &
smarter
2-Wire**

**SO₂
Sulfur Dioxide**

FEATURES: **2-Wire**

2-Wire *smarter* Transmitter

Self-Calibration = Cost Reduction

- **no false alarms** - does not react with changes in temperature/humidity/pressure
- **Does Not Drift** - no autozeroing or adjustments required
- **Rapid Warm-up** - ready to calibrate 3 minutes after power applied - does not require bias voltage to stay ready - no need to wait hours for stabilization
- **Not Affected by Humidity** - 5% to 95% relative humidity - continuous
0% to 99% relative humidity - intermittent
- **Not Affected by Temperature** - -25° C to +50° C is not temperature compensated
- **Self-Calibration** - microcontroller electronics automatically adjusts span calibration over time based on typical life curve for sensor - sensors not routinely calibrated stay much closer to proper calibration - reduces calibration frequency - actual field calibration data re-adjusts life curve
- **Sensor Life Remaining** - determined based on sensor life curve, calibration history and electrical characteristics of sensor - shown on LCD display
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- **Peak Value** - 15 min. TWA/No. days since last gas calibrated
- **Diagnostics** - continuous analysis of transmitter system to report any fault conditions, including replace sensor and sensor disconnected
- **Loop Test** - transmitter outputs 4/8/12/16/20mA signal to verify readings and alarms at controller electronics
- **Maintenance Free** - no replenishment of electrolyte or water during 3+ years of normal life
- **Long Life** - over 3 years continuous operation
- **Fast Response** - 90% of reading in less than 60 seconds
- **Fast Recovery** - 90% recovery in less than 30 seconds
- **Not Saturated** by occasional high concentrations of gas in the work environment (continuous gas exposure reduces service life)
- **Stays Awake** - does not go to sleep when gas is absent for long periods of time
- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <60 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2208SMTR |

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MIL - RAM TECHNOLOGY

no false alarms

Gas Detection Systems

FEATURES: **2-Wire**



H₂SO₄
Sulfuric Acid Vapors
2-Wire *smarter* Transmitter

Self-Calibration = Cost Reduction

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- **Does Not Drift** - no autozeroing or adjustments required
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- **Chemically Selective**

SENSORS:

| | |
|------------------------------|--|
| Detection Principle: | Electrochemical |
| Detection Method: | Diffusion (Sample-Draw Available, Nema 4X) |
| Detection Range: | 0.0-20.0 ppm; 0.0-200 ppm |
| Output Signal: | Linear |
| Resolution: | 0.1 ppm |
| Response Time: | <60 sec. to 90% of final reading |
| Recovery Time: | <30 sec. to 90% recovery |
| Humidity Range: | 5% - 95% RH, non-condensing - continuous 0% - 99% RH, non-condensing - intermittent |
| Temperature Range: | -25°C to +50°C -13°F to +122°F |
| Pressure Range: | Atmospheric ±15% |
| Zero Drift: | <0.1 ppm |
| Position Sensitivity: | Install vertically |
| Storage Life: | >18 months in container |
| Life Expectancy: | >3 years in clean air - factory rechargeable many times |



TRANSMITTER SPECIFICATIONS:

| | |
|----------------------------|---|
| Operating Voltage: | 10-30VDC, 2-Wire Loop Powered |
| Transmitter Output: | 4-20 mA |
| Sampling Method: | Diffusion (Sample-Draw Available) |
| Calibration Method: | Non-Intrusive, magnetic switches |
| Enclosure: | CSA/FM/UL/CENELEC/KEMA Class I, Div. I, Groups B/C/D Class II, Groups E/F/G Class III, Type 4X |
| Weight: | 3.5lbs/1.589kg. |
| Part No.: | 01-2214SMTR |

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