# Dräger

# Dräger X-am<sup>®</sup> 5600

Featuring an ergonomic design and innovative infrared sensor technology, the Dräger X-am<sup>®</sup> 5600 is the smallest gas detection instrument for the measurement of up to 6 gases. Ideal for personal monitoring applications, this robust and water-tight detector provides accurate, reliable measurements of explosive, combustible and toxic gases and vapors as well as oxygen.



# SMALL YET ROBUST

Small, light and easy to use - the robust and water-tight Dräger X-am 5600 is designed for single-handed operation in tough industrial environments. Water- and dustproof according to IP 67 and with an integrated rubber boot, the device provides optimal functionality even under harsh conditions.

# **DURABLE INFRARED TECHNOLOGY**

Thanks to the high stability and a resistance to contamination, Dräger infrared sensors can generally be used for up to eight years. This advanced technology reduces the cost of ownership considerably because less replacement sensors are needed. In addition, a sensor calibration is only necessary every 12 months which reduces maintenance costs.

# SINGLE OR DUAL SENSOR – ACCURATE MEASUREMENT RESULTS

The new Dräger infrared sensors can be used for the measurement of explosive substances or  $CO_2$ . The infrared sensor IR Ex allows the measurement of explosive, combustible hydrocarbons in the range of the lower explosive limit. With this sensor, measurements in the range of 0 – 100 Vol.-% for methane, propane and ethylene are also possible. The infrared sensor IR  $CO_2$ , with a measurement resolution of 0.01 Vol.-%, provides safe and exact measurements as well as a warning against toxic concentrations of carbon dioxide in the ambient air. For those applications where the reliable measurement of explosive substances and CO<sub>2</sub> is specifically needed, the advantages of both can be achieved by a dual sensor (Dual IR CO<sub>2</sub>/Ex).

#### ALSO IN COMBINATION WITH HYDROGEN

Besides hydrocarbons, hydrogen can also be an explosive gas. Because sensors based on infrared technology do not warn against hydrogen explosion dangers, the Dräger X-am 5600 combines two sensor signals (Infrared Ex and electrochemical  $H_2$ ) for reliable hydrogen detection. The X-am 5600 provides the advantages of poison-free technology to be used in areas where, until now, only catalytic Ex sensors have been used.

# VARIOUS MONITORING POSSIBILITIES

Thanks to the combination of innovative infrared technology and the latest electrochemical Dräger XXS miniature sensors, this 1-to-6 gas detector reliably detects explosive, combustible and harmful concentrations of O<sub>2</sub>, Cl<sub>2</sub>, CO, CO<sub>2</sub>, H<sub>2</sub>, H<sub>2</sub>S, HCN, NH<sub>3</sub>, NO, NO<sub>2</sub>, PH<sub>3</sub>, SO<sub>2</sub>, Amine, Odorant, COCl<sub>2</sub>, Ozone and organic vapors. With the PC software



Dräger X-am<sup>®</sup> 5600 Small, light and tough for singlehanded detection of up to 6 gases.

Dräger CC-Vision, the sensors can easily be exchanged, calibrated or converted to meet the needs of different applications.

### FLEXIBLE USE

This small gas detection instrument is perfectly suited as a personal monitor. The simple two-button control panel allows for the intuitive use of the device. The gas inlets – on the upper and front side – provide optimal measurement accuracy even if they are inadvertently placed in a pocket or a gas inlet is covered. An optional external pump which can be operated with hoses up to 30 m or 98 ft. in length is the perfect solution for pre-entry measurements in tanks or pipelines. To monitor entire areas, the Dräger X-am 5600 can be used in combination with the innovative Dräger X-zone 5000.

#### SUITABLE FOR EX ZONE 0

The small and reliable gas detector is suitable for use in areas classified as zone 0, which are areas where explosive atmospheres are always to be expected.

# SIMPLE SOLUTION FOR BUMP TESTS

Simple, quick, and professional: From bump testing to complete documentation, users can choose from a range of practical, on-site solutions for optimal safety in every application. Both the Dräger X-dock automatic test and calibration station and the Dräger Bump Test Station are ideal system extensions that save costs and time.



#### ORDER INFORMATION

| Consisting of: basic instrument with an i             | ntegrated data logger, support CD, manufacturer's a | nd calibration certificates. |                                     |            |
|---|---|------------------------------|-------------------------------------|------------|
| A functional instrument must include up               | to 4 sensors and a power supply unit.               |                              |                                     |            |
| Infrared-Sensors                                      | Measuring Range                                     | Resolution                   | Response<br>time (t <sub>90</sub> ) | Order code |
| DrägerSensor Dual IR Ex/CO <sub>2</sub> <sup>1)</sup> | 0 – 100 % LEL                                       | 1 % LEL                      | Ex: 15 sec.                         | 68 11 960  |
|   | 0 – 100 Vol% Methane, Propane, Ethylene             | 0.1 Vol% CH <sub>4</sub>     | CO <sub>2</sub> : 31 sec.           |            |
|   | 0 – 5 Vol% CO <sub>2</sub>                          | 0.01 Vol% CO <sub>2</sub>    |                                     |            |
| DrägerSensor IR Ex <sup>1)</sup>                      | 0 – 100 % LEL                                       | 1 % LEL                      | 15 sec.                             | 68 12 180  |
| -   | 0 – 100 Vol% Methane, Propane, Ethylene             | 0.1 Vol% CH₄                 |                                     |            |
| DrägerSensor IR CO <sub>2</sub>                       | 0 – 5 Vol% CO <sub>2</sub>                          | 0.01 Vol% CO <sub>2</sub>    | 31 sec.                             | 68 12 190  |

# ORDER INFORMATION

| Electrochemical Sensors  | Measuring Range                                      | Resolution                  | Response time (190)        | Order Code |
|--|--|-----------------------------|----------------------------|------------|
| DrägerSensor XXS O <sub>2</sub>  | 0 – 25 Vol%  | 0.1 Vol%                    | 10 sec.                    | 68 10 881  |
| DrägerSensor XXS CO  | 0 – 2,000 ppm  | 2 ppm                       | 25 sec.                    | 68 10 882  |
| DrägerSensor XXS O₂ 100  | 0 - 100 Vol%   | 0.5 Vol%                    | 5 sec.                     | 68 12 385  |
| DrägerSensor XXS CO HC   | 0 – 10,000 ppm                                       | 5 ppm                       | 25 sec.                    | 68 12 010  |
| DrägerSensor XXS CO/H <sub>2</sub> compensated                         | 0 – 2,000 ppm CO                                     | 2 ppm                       | 25 sec.                    | 68 11 950  |
| DrägerSensor XXS H₂S   | 0 – 200 ppm  | _ 1 ppm                     | 15 sec.                    | 68 10 883  |
| DrägerSensor XXS H₂S LC  | 0 – 100 ppm  | 0.1 ppm                     | 15 sec.                    | 68 11 525  |
| DrägerSensor XXS H₂S HC  | 0 – 1,000 ppm  | 2 ppm                       | 15 sec.                    | 68 12 015  |
| DrägerSensor XXS CO/H₂S  | <u>0 – 2,000 ppm CO / 0 – 200 ppm H<sub>2</sub>S</u> | <u>1 ppm H₂S / 2 ppm CO</u> | 20 sec.                    | 68 11 410  |
| DrägerSensor XXS NO  | 0 – 200 ppm  | 0.1 ppm                     | 10 sec.                    | 68 11 545  |
| DrägerSensor XXS NO <sub>2</sub>                                       | 0 – 50 ppm   | 0.1 ppm                     | 15 sec.                    | 68 10 884  |
| DrägerSensor XXS SO <sub>2</sub>                                       | 0 – 100 ppm  | 0.1 ppm                     | 15 sec.                    | 68 10 885  |
| DrägerSensor XXS PH₃   | 0 – 20 ppm   | 0.01 ppm                    | 10 sec.                    | 68 10 886  |
| DrägerSensor XXS PH₃ HC  | 0 – 2,000 ppm  | 1 ppm                       | 10 sec.                    | 68 12 020  |
| DrägerSensor XXS HCN   | 0 – 50 ppm   | 0.1 ppm                     | 10 sec. (t <sub>50</sub> ) | 68 10 887  |
| DrägerSensor XXS NH₃   | <u>0 – 300 ppm</u>                                   | _ <u>1 ppm</u>              | 10 sec. (t <sub>50</sub> ) | 68 10 888  |
| DrägerSensor XXS CO <sub>2</sub>                                       | <u>0 – 5 Vol%</u>                                    | 0.1 Vol%                    | 30 sec. (t <sub>50</sub> ) | 68 10 889  |
| DrägerSensor XXS Cl₂   | <u>0 – 20 ppm</u>                                    | 0.05 ppm                    | 30 sec.                    | 68 10 890  |
| DrägerSensor XXS H <sub>2</sub>  | <u>0 – 2,000 ppm</u>                                 | 5 ppm                       | 10 sec.                    | 68 12 370  |
| DrägerSensor XXS H <sub>2</sub> HC                                     | <u>0 – 4 Vol%</u>                                    | 0.01 Vol%                   | 20 sec.                    | 68 12 025  |
| DrägerSensor XXS OV  | <u>0 – 200 ppm</u>                                   | 0.5 ppm                     | 20 sec. (t <sub>50</sub> ) | 68 11 530  |
| DrägerSensor XXS OV-A  | <u>0 – 200 ppm</u>                                   | _ <u>1 ppm</u>              | 40 sec. (t <sub>50</sub> ) | 68 11 535  |
| DrägerSensor XXS Amine   | <u>0 – 100 ppm</u>                                   | <u>1 ppm</u>                | 30 sec.                    | 68 12 545  |
| DrägerSensor XXS Odorant   | <u>0 – 40 ppm</u>                                    | 0.5 ppm                     | 90 sec.                    | 68 12 535  |
| DrägerSensor XXS COCl <sub>2</sub>                                     | <u>0 – 10 ppm</u>                                    | 0.01 ppm                    | 20 sec.                    | 68 12 005  |
| DrägerSensor XXS Ozone   | 0 – 10 ppm   | 0.01 ppm                    | 10 sec. (t <sub>50</sub> ) | 68 11 540  |
| Electrochemical Sensors with 5 years warran                            | ty   |                             |                            |            |
| DrägerSensor XXS E CO  | 0 – 2,000 ppm  | 2 ppm                       | 15 sec.                    | 68 12 212  |
| DrägerSensor XXS E H₂S   | 0 – 200 ppm  | 1 ppm                       | 15 sec.                    | 68 12 213  |
| DrägerSensor XXS E O₂  | 0 – 25 Vol%  | 0.1 Vol%                    | 10 sec.                    | 68 12 211  |
| <sup>1)</sup> Special colliburation for Evidence and subilable (standa |  |                             |                            |            |

<sup>1)</sup> Special calibration for Ex sensors are available (standard setting: methane)

# Power supply units

| · · · · · · · · · · · · · · · · · · ·  |           |
|--|-----------|
| NiMH power supply T4   | 83 18 704 |
| NiMH power supply T4 high capacity   | 83 22 244 |
| Power pack & charging set consisting of: rechargeable NiMH power supply T4, charging module and a single charger (for worldwide use)       | 83 18 785 |
| Power pack & charging set HC consisting of: rechargeable NiMH power supply HC T4, charging module and a single charger (for worldwide use) | 83 22 785 |
| Battery holder ABT 0100 (without batteries)  | 83 22 237 |
| Alkaline batteries T3 (2 pcs.) for battery holder 83 22 237  | 83 22 239 |
| Alkaline batteries T4 (2 pcs.) for battery holder 83 22 237  | 83 22 240 |
|  |           |
| Charging accessories   |           |

Charging module83 18 639Charging set basic, consisting of one charging module and a single power supply (worldwide use)83 20 333Power supply with connection cable (worldwide use) for max. 20 charging modules83 15 805Single charger (worldwide use) for max. 5 charger modules83 16 994Single charger (worldwide use) for max. 2 charger modules83 15 635Car charging connection cable 12 V / 24 V for a charging module45 30 057Vehicle charger mounting kit for one Dräger X-am® 1/2/5x00 charging module83 18 779

Pump accessories

| Dräger X-am® 1/2/5x00 external pump  | 83 19 400 |
|--|-----------|
| Hand pump adapter  | 83 19 195 |
| Confined space entry set, with an external pump and 3 m or 9 ft. hose        | 83 19 399 |
| Carrying case Dräger X-am <sup>®</sup> 1/2/5x00 external pump (without pump) | 83 19 385 |

Calibration accessories

| Calibration cradle   | 83 18 752 |
|--|-----------|
| Dräger X-dock 5300 for Dräger X-am® 1/2/5x00   |           |
| Dräger Bump Test Station for Dräger X-am <sup>®</sup> 5600, not including gas cylinder | 83 19 131 |
| Dräger Bump Test Station for Dräger X-am <sup>®</sup> 5600, complete                   |           |
| with one test gas cylinder 58L (gas and concentration variable)                        |           |
| Nonane Checker   | 83 20 080 |

| Communication accessories                                      | Order code |
|--|------------|
| Dräger GasVision   | 83 14 034  |
| Dräger CC-Vision   | Freeware   |
| USB DIRA with USB cable, communication adapter infrared to USB | 83 17 409  |
|  |            |
| System components  |            |

| Dräger X-zone® 5000 – 868 MHz, 12 Ah                       | 83 20 740 |
|--|-----------|
| Dräger X-zone® 5000 – 868 MHz, 24 Ah                       | 83 20 741 |
| Dräger X-zone <sup>®</sup> 5000 – 868 MHz, 12 Ah with pump | 83 20 742 |
| Dräger X-zone® 5000 – 868 MHz, 24 Ah with pump             | 83 20 743 |
|  |           |

In conjunction with the portable alarm amplifier Dräger X-zone® 5000 the units are combined to a new system; to monitor whole working areas or to connect to external alarm contacts.

#### **TECHNICAL DATA**

| Dimensions (W × H × D) | 47 × 130 × 44 mm; 1.85 × 5.12 × 1.73 inches                 |   |  |
|------------------------|---|---|--|
| Weight                 | 250 g; 8.8 oz.  |   |  |
| Ambient conditions     | Temperature   | - 20 to + 50 °C; - 4 to + 122 °F                  |  |
|                        | Pressure  | 700 to 1300 mbar; 20.7 to 38.4 inch Hg            |  |
|                        | Humidity  | 10 to 95 % RH                                     |  |
| Alarms                 | Visual  | 360°  |  |
|                        | Audible   | Multi-tone > 90 dB at 30 cm; 1 ft.                |  |
|                        | Vibration   |   |  |
| Ingress Protection     | IP 67   |   |  |
| Operating time         | ~ 9 h or rather ~ 10.5 h                                    |   |  |
| Charging time          | < 4 hours   |   |  |
| Data logger            | Can be read out via Infrared > 1000 hours                   |   |  |
|                        | with 6 gases and a recording interval of 1 value per minute |   |  |
| Pump operation         | Maximum hose length 30 m; 98 ft.                            |   |  |
| Approvals              | ATEX  | IM1 Ex ia IMa                                     |  |
|                        |   | II 1G Ex ia IIC T4/T3 Ga                          |  |
|                        | Measurement performance certificate                         | EN 50104 (2002) + A1 (2004) O <sub>2</sub>        |  |
|                        |   | EN 45544 CO, CO <sub>2</sub> and H <sub>2</sub> S |  |
|                        |   | EN 60079-29-1:2007 Methane, Propane, Nonane       |  |
|                        |   | EN 50271:2001 Software and documentation          |  |
|                        | IEC   | Ex ia I Ma  |  |
|                        |   | Ex ia IIC T4/T3 Ga for MQG 01**                   |  |
|                        | MED   | Marine Equipment Directive 96/98/EC               |  |
|                        | CSA C US  | Div.1, Class I, Groups A,B,C,D T4/T3              |  |
|                        |   | A/Ex ia IIC T4/T3 /Ga                             |  |

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