

Notes on approval

Marking

The following labels are examples only and may vary. With regard to the intended use in potentially explosive atmospheres, the content of the label corresponds to the current and certified marking.

X-am 2500

X-am 5000

0098

XXXX

X-am 2500

Type: MQG 0011

EA3C KZ 7500361.01.01.04668

0Ex da ia IIC T4/T3 Ga X

PO Ex da ia I Ma X

0158 UK

CA 8505

0097/YYYY

s 14-ABV40-0098X

I M1 / II G

IP67

C 22.2 No.152

Ex da ia IIC T4/T3 Ma/Ga

BVS 10 ATEX E 080X

PGF 10 G 001X

TÜV23UKEX147X

Intrinsically safe Ex ia, CSA 11 800517

Class I&II, Div. 1, Gr. A,B,C,D,E,F,G TC T4/T3

Class I, Zone 0, A/Ex da ia IIC T4/T3 Ga

-20°Cs Ta ≤ +50/+40°C: see Battery Pack!

For TC T4/T3: see Battery Pack!

Warning: Read manual for safety precautions.

Avertissement: Lire le manuel avant utilisation.

Do not change or charge batteries in haz loc.

Draeger Safety, DE-23560 Lübeck, Germany
Importer (UK): Draeger Safety UK Ltd, Blyth, UK

Serial No. 1)

0098

XXXX

X-am 5000

Type: MQG 0010

EA3C KZ 7500361.01.01.04668

0Ex da ia IIC T4/T3 Ga X

PO Ex da ia I Ma X

0158 UK

CA 8505

0097/YYYY

s 14-ABV40-0098X

I M1 / II G

IP67

C 22.2 No.152

Ex da ia IIC T4/T3 Ma/Ga

BVS 10 ATEX E 080X

PGF 10 G 001X

TÜV23UKEX147X

Intrinsically safe Ex ia, CSA 11 800517

Class I&II, Div. 1, Gr. A,B,C,D,E,F,G TC T4/T3

Class I, Zone 0, A/Ex da ia IIC T4/T3 Ga

-20°Cs Ta ≤ +50/+40°C: see Battery Pack!

For TC T4/T3: see Battery Pack!

Warning: Read manual for safety precautions.

Avertissement: Lire le manuel avant utilisation.

Do not change or charge batteries in haz loc.

Draeger Safety, DE-23560 Lübeck, Germany
Importer (UK): Draeger Safety UK Ltd, Blyth, UK

Serial No. 1)

X-am 5600

X-am 5600

Type: MQG 0100

EA3C KZ 7500361.01.01.04668

0EEx da Ia IIC T4/T3 Ga X

PO Ex da Ia I Ma X

C **E**0158 **UK**
8505 0097/YYYY

UK s 14-AV4BO-0099X

I M1 / II 1G

Ex Ia I/II C T4/T3 Ma/Ga

BVS 10 ATEX E 080X

PFG 10 G 001X

TUV23UKEX7147X

-20°C ≤ Ta ≤ +50/+40°C: see Battery Pack!
For TC T4/T3: see Battery Pack!

Warning: Read manual for safety precautions.

Avvertimento: Lire le manuel avant utilisation.

Do not change or charge batteries in haz loc.

Dräger Safety, DE-23560 Lübeck, Germany
Importer (UK): Draeger Safety UK Ltd, Blyth, UK

Serial No. 1)

X-am 5600

X-am 5600

Type: MQG 0101

C **E**0158

I M1 / II 1G

Ex Ia I/II C T4/T3 Ma/Ga

BVS 10 ATEX E 080X

PFG 10 G 001X

C22.2 No.152

for comb. sensor

Um=4.6V Im=1.3A

IECEx BVS 10.0053X

ANZEx 11.2003X

Intrinsically safe Ex ia, CSA 11 1800517

Class I&II, Div. 1, Gr. A,B,C,D,E,F,G TC T4/T3

Class I, Zone 0, A/Ex Ia IIC T4/T3 Ga

-20°C ≤ Ta ≤ +50/+40°C: see Battery Pack!

For TC T4/T3: see Battery Pack!

Warning: Read manual for safety precautions.

Avvertimento: Lire le manuel avant utilisation.

Do not change or charge batteries in haz loc.

Dräger Safety, DE-23560 Lübeck, Germany

Serial No. 1)

- 1) Serial Number key: The third letter of the serial number specifies the manufacturing year (M = 2019, N = 2020, P = 2021, R = 2022, S = 2023, T = 2024, U = 2025, W = 2026, X = 2027, Y = 2028, Z = 2029, etc.; Letters G, I, O, Q are omitted), the fourth letter the manufacturing month (A = January, B = February, C = March, etc.; Letters G, I are omitted). Example: Serial Number ARMB-0001: the third letter is M the fourth B, which means that the unit was manufactured in February 2019.

Only for USA:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC responsible party:

Draeger Inc.

7256 S. Sam Houston W. Parkway

Suite 100

Houston, Tx 77085 USA

phone: +1 346-802-6111

e-mail: DIHouston.Approvals@draeger.com

Only for Australia:

Limited Manufacturer Guarantee

We are going paperless.

Scan the QR code and enter document number 9033743.



www.draeger.com/ifu

9033743

Declaration of conformity for X-am 2500 / 5000 / 5600

EU-Konformitätserklärung EU-Declaration of Conformity

Document No. / Document No.: SE20117-04

Wir / We:

Dräger Safety AG & Co. KGaA, Revalstraße 1, 23560 Lübeck, Germany

erklären in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that the product

Gasmessgerät Typ MQG 0011, 0010, 01** (X-am 2500, 5000, 5600)
Gas Detection Instrument type MQG 0011, 0010, 01** (X-am 2500, 5000, 5600)

mit der EU-Baumusterprüfbescheinigung / Expertise
is in conformity with the EU-type Examination Certificate /
Expertise

ausgestellt von den notified body
Stelle mit der Kenn-Nr.
Issued by the Notified Body
with Identification No.

DEKRA Testing and
Certification GmbH
Hauptwerkstr. 15
D-70565 Stuttgart
0153

BVS 10 ATEX E 080 X
MEDB00002ZA

DNV GL SE
Brookbocks 18
D-20487 Hamburg
0308

und mit den folgenden Richtlinien unter Anwendung der aufgeführten Normen übereinstimmt
and it is compliance with the following directives by application of the listed standards

Bestimmungen der Richtlinie provisions of directive		Nummer sowie Ausgabedatum der Norm Number and date of issue of standard
2014/54/EU	ATEX-Richtlinie ATEX Directive	EN IEC 60079-0:2014, EN 60079-1:2014 ¹⁾ , EN 60079-11:2012, EN 60079-26-1:2016, EN 50271:2018
2014/53/EU	Schiffsanlagungs-Richtlinie Marine Equipment Directive	EN IEC 60079-0:2014, EN 60079-1:2014 ¹⁾ , EN 60079-11:2012, EN 60079-26-1:2016, IEC 60946:2002+A1:2008, IEC 60033:2015, IEC 60060-504:2016
2014/30/EU	EMV-Richtlinie EMC Directive	EN 50271:2018+AC:2018 and its addenda Type 1 EN 50109-3-2:2014, EN 61000-3-3:2013
2011/65/EU 2015/863/EU	Richtlinie RoHS Directive	EN IEC 60060:2018

gilt nicht für MQG 01** (X-am 5600) / not applicable for MQG 01** (X-am 5600)

Überwachung der Qualitäts-
sichernden Produktion durch
Zurveillance of Quality Assurance
Produktion by

DEKRA Testing and
Certification GmbH
Hauptwerkstr. 15
D-70565 Stuttgart
0153

DNV GL SE
Brookbocks 18
D-20487 Hamburg
0308

Zertifikat Nr. /
Certificate No.

MED04000017F, Rev. No.: xx

Lübeck, 2021-06-30

Ort und Datum (gg-mm-jj)
Place and date (yy-mm-dd)

Dr. Marcus Pankla
Head of Product Engineering
Approved Product Qualification
Safety Products
Research & Development

Dräger

UK Declaration of Conformity

Document No.

11220712-00

We

Dräger Safety AG & Co. KGaA, Revalstraße 1, 23560 Lübeck, Germany

declare under our sole responsibility that the product

Gas Detection Instrument type MQG 0011, 0010, 01** (X-am 2500, 5000, 5600)

is in conformity with the UK-Type Examination

(Part 1) of the

Certificate of Expertise

TÜV 23 UKEK 7147 X

DNV MERB0000224

TÜV Rheinland UK Ltd.

1011 Stratford Road

Slisbury, Solihull

B80 4BN

B571

DNV UK Ltd.

35 Stamford Street

Vivo Building

London SE1 1LQ

United Kingdom

0897

Issued by the Approved Body

with Identification No.

and is in compliance with the following UK regulations by application of the listed standards

Statutory Instrument	Number and date of issue of designated standard
SI 2016/1107 Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres	EN IEC 60079-0:2018, EN 60079-1:2014 ¹⁾ , EN 60079-11:2012, EN 60079-26-1:2016, EN 50271:2018
SI 2016/1523 Marine Equipment Regulation	EN IEC 60079-0:2018, EN 60079-1:2014 ¹⁾ , EN 60079-11:2012, EN 60079-26-1:2016, IEC 60082-604:2016, IEC 60333:2016, EN IEC 60945:2002+A1:2008
SI 2019/1591 Electromagnetic Compatibility (EMC)	EN 60770:2019+AC:2016 supplément: type 2 EN 60770:2019+AC:2016 EN 61000-3-2:2014, EN 61000-3-3:2013
SI 2012/3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment	EN IEC 63000:2018

not applicable for MQG 01** (X-am 5600)

Surveillance of Quality Assurance

Production by

(Annex 3A (Part 2))

DEKRA Certification UK Ltd

Stokenchurch House

Oxford Road

United Church, WPI4 3PK

United Kingdom

8035

DNV UK Ltd.

35 Stamford Street

Vivo Building

London SE1 1LQ

United Kingdom

0897

Lübeck, 2023-11-02

Place and date (yyyy-mm-dd)

Herr Pöhl

Head of R&D Safety

Inspector (UK)

Dräger Safety UK Ltd

Revaler Ocean

35 Stamford Street

Blyth, Northumbria NE24 4YQ, UK

Sensor data

Excerpt: For details, see instructions for use/data sheets for the respective sensor. The instructions for use, technical manual and data sheets for the utilized sensors can be downloaded from: www.draeger.com/ifu and the PC software CC-Vision from: www.draeger.com/software

	DUAL IR Ex / CO ₂ (ES) 6811960 (6851880)									
	CatEx 125 PR 6812950	CatEx 125 PR Gas 6813080	XXS H ₂ S 6810883	XXS H ₂ S-LC 6811525	XXS H ₂ -HC 6812025	XXS O ₂ 6810881	XXS CO 6810882	XXS CO-LC 6813210	IR Ex (ES) 6812180 (6851881)	IR CO ₂ (ES) 6812190 (6851882)
	X-am 2500/5000		X-am 5000/5600	X-am 2500/5000/5600	X-am 5600	X-am 2500/5000/5600			X-am 5600	
Measuring principle	Catalytic combustion	Catalytic combustion	Electrochemical	Electrochemical	Electrochemical	Electrochemical	Electrochemical	Electrochemical	Infrared	Infrared
Indication range	0 to 100 %LEL 0 to 100 Vol% (CH ₄)	0 to 100 %LEL 0 to 100 Vol% (CH ₄)	0 to 200 ppm	0 to 200 ppm	0 to 100 %LEL	0 to 25 Vol%	0 to 2000 ppm	0 to 2000 ppm	0 to 100 %LEL	0 to 5 Vol%
Measuring range (certified)	0 to 100 %LEL ¹⁾	0 to 100 %LEL ¹⁾ 0 to 5 Vol%	1 to 100 ppm	0.4 to 100 ppm	0 to 100 %LEL	0 to 25 Vol%	3 to 500 ppm	3 to 500 ppm	0 to 100 %LEL (CH ₄ , C ₃ H ₈ , C ₉ H ₂₀)	0.01 to 5 Vol%
Capture range ²⁾	+2 to -5 % LEL	+2 to -5 % LEL	±2 ppm	±0.4 ppm	±0.02 Vol%	20.9 Vol% ³⁾ ±0.4 Vol%	±6 ppm	±1.4 ppm	±1 %LEL	390 ppm ±100 ppm
Drift per month	≤±3 %LEL	≤±3 %LEL	≤1.9 % of measured value but not ≤0.2 ppm	≤1.9 % of measured value but not ≤0.2 ppm	±4 %LEL		±0.3 Vol%	≤1.2 % of measured value but not ≤1 ppm	≤1.2 % of measured value but not ≤1 ppm	≤±3 %LEL
Warm-up time	35 s	35 s	≤5 min	≤5 min	≤ 60 min	≤5 min	≤5 min	≤5 min	≤72 s	≤72 s
Effect of sensor poisons Effect of 400 ppm min HMDS in methane volatile silicon, sulphur, heavy metal com- pounds or halogenated hydrocarbons	≤1 %LEL/ Possible poisoning	≤1 %LEL/ Possible poisoning	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Linearity error	≤2 %LEL (CH ₄) ≤5 %LEL (C ₃ H ₈)	≤4 %LEL (CH ₄) ≤1 %LEL (C ₃ H ₈)	≤4 % of measured value but not ≤1≤ppm	≤4 % of measured value but not ≤1≤ppm	±1.5 %LEL	≤0.3 Vol%	≤2 % of measured value but not ≤2 ppm	≤2 % of measured value but not ≤2 ppm	≤4 %LEL	≤4 % of measured value but not ≤0.005 %
Standards Measuring function for explosive atmospheres, oxygen deficiency / enrichment and toxic gases, DEKRA Testing and Certification GmbH: BVS 10 ATEX E 080X ¹⁾ , PFG 10 G 001X	EN 60079-29-1 EN 50271	EN 60079-29-1 EN 50271	EN 45544-1:1999 EN 45544-2:1999 EN 50271	EN 45544-1:2015 EN 45544-2:2015 EN 45544-3:2015 EN 50271	EN 60079-29-1 EN 50271	EN 50104 EN 50271	EN 45544-1:1999 EN 45544-2:1999 EN 50271	EN 45544-1:2015 EN 45544-2:2015 EN 45544-3:2015 EN 50271	EN 60079-29-1 EN 50271	EN 45544-1:1999 (2015, ES) EN 45544-2:1999(2015, ES) EN 45544-3:1999(2015, ES) EN 50271
Cross-sensitivities	exist ⁴⁾	exist ⁴⁾	Additively affected by: SO ₂ , NO ₂ , H ₂ Negatively affected by: Cl ₂	Additively affected by: SO ₂ , NO ₂ , H ₂ Negatively affected by : Cl ₂	Additively affected by: C ₂ H ₂ , NO, CO ⁵⁾	Negatively affected by: C ₂ H ₆ , C ₂ H ₄ , C ₂ H ₂ , CO ₂ , H ₂ No O ₂ measurement in He	Additively affected by: C ₂ H ₂ , H ₂ , NO	Additively affected by: C ₂ H ₂ , H ₂ , NO	exist ⁴⁾	n/a
Diffusion										
Time of response t _{0...90}	≤17 s (CH ₄) ≤25 s (C ₃ H ₈)	≤10 s (CH ₄) ≤18 s (C ₃ H ₈)	≤15 s	≤18 s	≤20 s	≤10 s	≤25 s	≤25 s	≤20 s (CH ₄) ≤40 s (C ₃ H ₈)	≤33 s
Time of response t _{0...50} (Ex, Tox) Time of response t _{0...20} (O ₂)	≤7 s (CH ₄)	≤7 s (CH ₄)	≤6 s	≤6 s	≤11 s	≤5 s	≤12 s	≤12 s	≤10 s (CH ₄) / ≤12 s (C ₃ H ₈)	≤15 s
Time of recovery t _{0...10}	≤17 s (CH ₄) ≤25 s (C ₃ H ₈)	≤10 s (CH ₄) ≤18 s (C ₃ H ₈)	≤18 s	≤21 s	≤20 s		n/a	≤26 s	≤25 s	≤20 s (CH ₄) ≤40 s (C ₃ H ₈)
Time of recovery t _{0...50}	≤7 s (CH ₄)	≤7 s (CH ₄)	≤11 s	≤15 s	≤11 s	n/a	≤15 s	≤15 s	≤10 s (CH ₄) ≤12 s (C ₃ H ₈)	≤15 s
Calibration adapter										
Time of response t _{0...90}	≤350 s (C ₉ H ₂₀)	≤29 s other certified gases ≤25 s (C ₄ H ₈)	–	–	–	–	–	–	≤212 s (C ₉ H ₂₀)	–
Time of response t _{0...50}	≤91 s (C ₉ H ₂₀)	≤15 s other certified gases ≤14 s (C ₄ H ₈)	–	–	–	–	–	–	≤24 s (C ₉ H ₂₀)	–

- 1) CatEx 125 PR: alkanes from methane to nonane
CatEx 125 PR Gas: methane, propane, ethane, ethene, ethine, propene, n-butane, i-butene, hydrogen
LEL values in accordance with EN 60079-20-1. At air speed of 0 to 6 m/s, the deviation of the reading is 5 to 10 % of the measured value. For an adjustment to propane, the deviation of the display in the range of 80 to 120 kPa can be up to 8 %LEL.
- 2) This range of measured values is known as capture range where minor measured value fluctuations (e.g. signal noise, concentration fluctuations) does not result in a changing display. Measured values outside the capture range are displayed using their actual measured values. By using Dräger CC-Vision the set capture range can be read out and activated/deactivated. The capture range is continuously activated in measuring mode and is disabled in calibration mode. The following capture range applies if the DrägerSensor CatEx 125 PR Gas is used for underground mining application: +0.1 or -0.2 Vol%, respectively.
- 3) For the fresh air calibration, it is assumed that the oxygen concentration in the ambient air is 20.9 Vol% O₂.
- 4) The instrument responds to most combustible gases (sensor 6813080) or most gases and vapours (sensor 6812950, 6851881). The sensitivities differ depending on the type of gas. Dräger recommends a calibration using the target gas to be measured. Regarding catalytic combustion sensors in the range of alkanes, the sensitivity decreases from methane to nonane.
- 5) Increased hydrogen concentrations within the range of XXS H₂-HC may result into false alarms by additive effect on the XXS H₂S and the XXS CO, as well as due to the negative effect on the XXS O₂

Note:

- For operation and storage within the limits of -20 to + 50 °C and 10 to 90 % (95 % briefly) r. F. the following pressure ranges applies: 800 to 1100 hPa (use in potentially explosive atmospheres) or 700 to 1300 hPa (measuring function).
- The sensor data applies for diffusion mode up to a max. air flow velocity of 6 m /s.
- The requirements of the standards regarding error limits are valid for the whole operating range of the device, deviations are:
 - XXS CO-LC sensor, increased indication at >40 °C; at zero-point ≤4 ppm, test gas concentration ≤14 %.
 - Dual IR (ES) and XXS H₂-HC sensors, the deviations of indication with pressure in test gas within the full pressure range is up to 1.5 times higher than within the range of the standard.
- In sub-zero temperatures, the response times of the XXS CO-LC and XXS O2 sensor may be increased compared to room temperature. If necessary, check response times (see instructions for use).