

Data sheet Geopal Marine Detectors



All Geopal marine detectors are produced and tested in Denmark.



Geopal GPM-EX
The GPM-EX is an explosion proof detector certified for use in hazardous areas. It can be fitted with different sensors according to the target gas.



Geopal GPM-EX-V
Detector designed for pipe and duct mounting.



Geopal GPM-OX
The GPM-OX is an explosion proof detector certified for use in hazardous areas. Made of robust materials for use in aggressive environments GPM-OX is for oxygen only.



Geopal GMP-O2
The GPM-O2 is used in non-classified areas. Made of robust materials. GPM-O2 is for oxygen only in non-classified areas.



Geopal GPM-CC
The GPM-CC is used in non-classified areas. Made of robust materials. Can be fitted with different sensors according to the target gas.



Geopal GPM-CC-V
Detector designed for pipe and duct mounting.

Different types of Geopal marine detectors can be connected to our gas alarm monitors depending on specific applications and requirements.

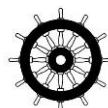
All Geopal marine detectors specified in this data sheet must be connected to alarm monitors. Please refer to other data sheet and www.geopal.dk for specification of Standard Alone detectors.

Our marine detector range can be divided into following categories:

- Explosion and flame proofed detectors for use in classified zone 1 and 2 areas
- Standard detectors for general applications
- Detectors for duct and pipe mounting

Approvals and General Safety

EX Approvals	II 2G Ex d IIC T5 Gb The ATEX directive 2014/34/EU and later amendments Ex certificate: TÜV 16 ATEX 176482 X Notified body for CENELEC/ATEX: TÜV 0044 IECEX Certificate No.: TUN 11.0006X
Approvals	CE compliant and accordance with: EMC directive, 2004/108/EC MED directive 961981 IACS E10: 2006 IEC 60 945:2002 and Corrigendum 1: 2008 IEC 60 092-504:2001-03 IEC 60 533:1999-11
Performance	IEC 60 204-1: Electrical equipment of machines. IEC 61010-1: Safety requirements for electrical equipment for measurement, control and laboratory use. Low Voltage Directive 2006/95/EC (LVD)
Quality	Management certified according to ISO 9001:2015



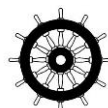
Detectors for classified areas

GPM-EX Semiconductor

Monitors the detectors can be connected to	GPM-02C, GPM-04C, GPM-03R, GP-SA-2, GP-AMP
Available gases	Methane (CH ₄), Propane (C ₃ H ₈), Butane (C ₄ H ₁₀), Hydrogen (H ₂), Hexane (C ₆ H ₁₄), Benzene (C ₆ H ₆), Ethane (C ₂ H ₆), Ethylene (C ₂ H ₄), R404A, R407C, R417A, R134A, Ammonia (NH ₃), etc.
Detection range	0-40,000 ppm, 0-100 % LEL
Response time T90	< 5 seconds depending on gas type
Repeatability	+/- 5 % of FS range
Accuracy	+/- 5 % of FS range
Long-term stability	< 5 % FS / 12 months
Sensor	Semiconductor
Material housing	Aluminium chromating, chem. resistant paint/AISI 316L
IP rating	IP 65 DIN 60529
Weight	1,5 kg
Dimensions	LxWxD 162 x 125 x 95 mm (width without cable gland M20)
Max operating conditions	Temperature -20 °C to +80 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature -22 °C to +80 °C Humidity 0 %RH to 95 %RH

GPM-EX Catalytic

Monitors the detectors can be connected to	GPM-02C, GPM-04C, GPM-03R, GPM-SA-2, GPM-L3C, GP-AMP
Available gases	Methane (CH ₄), Propane (C ₃ H ₈), Butane (C ₄ H ₁₀), Hydrogen (H ₂), Hexane (C ₆ H ₁₄), Ethylene (C ₂ H ₄), Ethanol (C ₂ H ₅ OH), Ammonia (NH ₃), etc.
Detection range	0-40,000 ppm, 0-100 % LEL
Response time T90	< 20 seconds depending on gas type
Repeatability	+/- 2 % of FS range
Accuracy	+/- 1 % of FS range
Long-term stability	< 3 % FS / 12 months
Sensor	Catalytic
Material housing	Aluminium chromating, chem. resistant paint/AISI 316L
IP rating	IP 65 DIN 60529
Weight	1,5 kg
Dimensions	LxWxD 172 x 125 x 95 mm (width without cable gland M20)
Max operating conditions	Temperature -20 °C to +80 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature -22 °C to +80 °C Humidity 0 %RH to 95 %RH

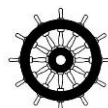


GPM-EX NDIR HC

Monitors the detectors can be connected to	GPM-02C, GPM-04C, GPM-03R, GPM-SA-2, GPM-L3C, GP-AMP
Available gases	Methane (CH ₄), Propane (C ₃ H ₈), Butane (C ₄ H ₁₀), Hexane (C ₆ H ₁₄), Benzene (C ₆ H ₆), Ethane (C ₂ H ₆), Ethylene (C ₂ H ₄), Ethanol (C ₂ H ₅ OH), Isopropanol (C ₃ H ₈ O), etc.
Detection range	0-100 % LEL
Response time T90	< 30 seconds
Repeatability	+/- 2 % of FS range
Accuracy	+/- 1 % of FS range
Long-term stability	< 3 % FS / 12 months
Sensor	NDIR
Material housing	Aluminium chromating, chem. resistant paint/AISI 316L
IP rating	IP 65 DIN 60529
Weight	1,5 kg
Dimensions	LxWxD 172 x 125 x 95 mm (width without cable gland M20)
Max operating conditions	Temperature -20 °C to +60 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature -22 °C to +80 °C Humidity 0 %RH to 95 %RH

GPM-EX Electrochemical

Monitors the detectors can be connected to	GPM-02C, GPM-04C, GPM-03R, GPM-SA-2, GPM-L3C, GP-AMP
Available gases	Carbon Monoxide (CO), Hydrogen Sulfide (H ₂ S), Nitrogen Dioxide (NO ₂), Hydrogen (H ₂), Hydrogen Chloride (HCl), Hydrogen Cyanide (HCN), Ammonia (NH ₃), Sulfur Dioxide (SO ₂), Phosphine (PH ₃), Methanol (CH ₃ OH), etc.
Detection range	0-5000 ppm
Response time T90	< 60 seconds depending on gas type
Repeatability	+/- 2 % of FS range
Accuracy	+/- 3 % of FS range
Long-term stability	< 2 % FS / 12 months
Sensor	Electrochemical
Material housing	Aluminium chromating, chem. resistant paint/AISI 316L
IP rating	IP 65 DIN 60529
Weight	1,5 kg
Dimensions	LxWxD 172 x 125 x 95 mm (width without cable gland M20)
Max operating conditions	Temperature -20 °C to +50 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature 0 °C to +30 °C Humidity 0 %RH to 95 %RH

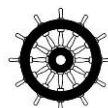


GPM-EX NDIR CO2

Monitors the detectors can be connected to	GPM-02C, GPM-04C, GPM-03R, GPM-SA-2, GPM-L3C, GP-AMP
Available gases	Carbon Dioxid (CO ₂)
Detection range	0-1 Vol.-%, 0-3 Vol.-%, 0-20 Vol.-%, 0-100 Vol.-%
Response time T90	< 60 seconds
Repeatability	+/- 2 % of FS range
Accuracy	+/- 1 % of FS range
Long-term stability	< 3 % FS / 12 months
Sensor	NDIR
Material housing	Aluminium chromating, chem. resistant paint/AISI 316L
IP rating	IP 65 DIN 60529
Weight	1,5 kg
Dimensions	LxWxD 172 x 125 x 95 mm (width without cable gland M20)
Max operating conditions	Temperature -20 °C to +60 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature -22 °C to +80 °C Humidity 0 %RH to 95 %RH

GPM-OX

Monitors the detectors can be connected to	GPM-03R, GPM-L3C, GP-AMP
Available gases	Oxygen (O ₂)
Detection range	0-10 Vol.-%, 0-30 Vol.-%, 0-100 Vol.-%
Response time T90	< 15 seconds
Repeatability	+/- 3 % of FS range
Accuracy	+/- 2 % of FS range
Long-term stability	< 4 % FS / 12 months
Sensor	Electrochemical
Material housing	Aluminium chromating, chem. resistant paint/AISI 316L
IP rating	IP 65 DIN 60529
Weight	1,8 kg
Dimensions	LxWxD 210 x 125 x 95 mm (width without cable gland M20)
Max operating conditions	Temperature 0 °C to +40 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature -15 °C to +50 °C Humidity 0 %RH to 95 %RH



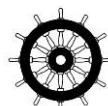
Detectors for not classified areas

GPM-CC Semiconductor

Monitors the detectors can be connected to	GPM-02C, GPM-04C, GPM-03R, GPM-SA-2, GP-AMP
Available gases	Methane (CH ₄), Propane (C ₃ H ₈), Butane (C ₄ H ₁₀), Hydrogen (H ₂), Hexane (C ₆ H ₁₄), Benzene (C ₆ H ₆), Ethane (C ₂ H ₆), Ethylene (C ₂ H ₄), R404A, R407C, R417A, R134A, Ammonia (NH ₃), etc.
Detection range	0-40,000 ppm, 0-100 % LEL
Response time T90	< 5 seconds depending on gas type
Repeatability	+/- 5 % of FS range
Accuracy	+/- 5 % of FS range
Long-term stability	< 5 % FS / 12 months
Sensor	Semiconductor
Material housing	Polycarbonate/POM
IP rating	IP 65 DIN 60529
Weight	0,3 kg
Dimensions	LxWxD 150 x 80 x 58 mm
Max operating conditions	Temperature -25 °C to +80 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature -25 °C to +80 °C Humidity 0 %RH to 95 %RH

GPM-CC Catalytic

Monitors the detectors can be connected to	GMP-02C, GMP-04C, GMP-03R, GPM-SA-2, GPM-L3C, GP-AMP
Available gases	Methane (CH ₄), Propane (C ₃ H ₈), Butane (C ₄ H ₁₀), Hydrogen (H ₂), Hexane (C ₆ H ₁₄), Benzene (C ₆ H ₆), Ethane (C ₂ H ₆), Ethylene (C ₂ H ₄), Ethanol (C ₂ H ₅ OH), Ammonia (NH ₃), etc.
Detection range	0-40,000 ppm, 0-100 % LEL
Response time T90	< 20 seconds depending on gas type
Repeatability	+/- 2 % of FS range
Accuracy	+/- 1 % of FS range
Long-term stability	< 3 % FS / 12 months
Sensor	Catalytic
Material housing	Polycarbonate/POM
IP rating	IP 65 DIN 60529
Weight	0,3 kg
Dimensions	LxWxD 160 x 80 x 58 mm
Max operating conditions	Temperature -40 °C to +80 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature -25 °C to +80 °C Humidity 0 %RH to 95 %RH



GPM-O₂

Monitors the detectors can be connected to	GPM-03R, GPM-L3C, GP-AMP
Available gases	Oxygen (O ₂)
Detection range	0-10 Vol.-%, 0-30 Vol.-%, 0-100 Vol.-%
Response time T90	< 15 seconds
Repeatability	+/- 3 % of FS range
Accuracy	+/- 2 % of FS range
Long-term stability	< 4 % FS / 12 months
Sensor	Electrochemical
Material housing	Polycarbonate/POM
IP rating	IP 65 DIN 60529
Weight	0,3 kg
Dimensions	LxWxD 180 x 80 x 50 mm
Max operating conditions	Temperature 0 °C to +40 °C Humidity 0 %RH to 100 %RH, noncondensing Pressure 1013 mbar ±10%
Storage	Temperature -15 °C to +50 °C Humidity 0 %RH to 95 %RH

