

Detectors

Geopal Detectors Classified and non-classified areas

Many different types of Geopal detectors can be connected to our gas alarm monitors depending on specific applications and requirements. All Geopal detectors specified in this data sheet must be connected to alarm monitors and all detectors are produced and tested in Denmark.

Please refer to other data sheet and www.geopal.dk for specification of Standard Alone detectors.

Our 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

Classified area

Geopal GJ-EX

The GJ-EX is an explosion proof detector certified for use in hazardous areas and for use at temperatures up to 80° C.

It can be fitted with different sensors according to the target gas.
GJ-EX is also available in a version for pipe and duct mounting.

Geopal GJ-EX 150

The GJ-EX 150 is an explosion-proof detector certified for use in zone 1. Made of robust materials for use in aggressive environments.

It can be fitted with different sensors according to the target gas.
GJ-EX-150 is also available in a version for pipe and duct mounting.

Geopal GJ-OX

The GJ-OX is an explosion proof detector certified for use in zone 1. Made of robust materials for use in aggressive environments.

GJ-OX is for oxygen only in classified areas.



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ITS-123ATEXQ36745



DBI APPROVED INSTALLATION COMPANY
AGA: 233.301

DBI reg. no 233.301



Intertek

DIC444QMS

Detectors

Geopal Detectors

Classified and non-classified areas

Non-classified area

Geopal GJ-O2

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

Geopal GJ-C

The GJ-C is used in non-classified areas. Made of robust materials.

Can be fitted with different sensors according to the target gas.

GJ-C is also available in a version for pipe and duct mounting.

Geopal GJ-CO2

The GJ-CO2 detector is for installation in non-classified areas. Made of robust materials. For detection of CO₂.

GJ-CO2 is also available in a version for pipe and duct mounting.



Approvals and general safety

EX Approvals	<p>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</p>
Approvals (Directives and Standards)	<p>Electromagnetic Compatibility Directive (EMC) 2014/30/EU Low Voltage Directive 2014/35/EC EN 60 204-1; EN 61 010-1; EN 61 326-1 (2013); EN 61 000-6-2 (2005); EN 61 000-6-3 (2012); EN 50 270 (2015)</p>
Quality	<p>ISO 9001:2015</p>



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GJ-EX Semiconductor	
Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-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

GJ-EX Catalytic	
Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-03R, GP-SA-2, GJD-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

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GJ-EX NDIR HC	
Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-03R, GP-SA-2, GJD-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, 0-100 Vol.-%
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

GJ-EX Electrochemical	
Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-03R, GP-SA-2, GJD-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

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GJ-EX NDIR CO2	
Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-03R, GP-SA-2, GJD-L3C, GP-AMP
Available gases	Carbon Dioxid (CO2)
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
GJ-EX 150°C	
Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-03R, GP-SA-2, GJD-L3C, GP-AMP
Available gases	Methane (CH4), Propane (C3H8), Butane (C4H10), Hydrogen (H2), Hexane (C6H14), Ethylene (C2H4), Ethanol (C2H5OH), Ammonia (NH3), 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	2,5 kg
Dimensions	LxWxD 360 x 125 x 95 mm (width without cable gland M20)
Max operating conditions	Temperature -20 °C to +150 °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

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GJ-OX		
Monitors the detectors can be connected to	GJ-03R, GJD-L3C, GP-AMP	
Available gases	Oxygen (O2)	
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

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Geopal Detectors Non-classified areas

GJ-C Semiconductor	
Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-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	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

GJ-C Catalytic	
Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-03R, GP-SA-2, GJD-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



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GJ-O2		
Monitors the detectors can be connected to	GJ-03R, GJD-L3C, GP-AMP	
Available gases	Oxygen (O2)	
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
GJ-CO2		
Monitors the detectors can be connected to	GJD-L3C, GJ-03R	
Available gases	Carbon dioxid (CO2)	
Detection range	0-2000 ppm, 0-10000 ppm, 0-3 Vol.-%	
Response time T90	< 30 seconds	
Repeatability	+/- 2 % of FS range	
Accuracy	+/- 2 % of FS range	
Long-term stability	< 3 % FS / 12 months	
Sensor	NDIR	
Material housing	Polycarbonate/POM	
IP rating	IP 56 DIN 60529	
Weight	0,4 kg	
Dimensions	LxWxD 82 x 90 x 150 mm	
Max operating conditions	Temperature	-25 °C to +40 °C
	Humidity	0 %RH to 90 %RH, noncondensing
	Pressure	1013 mbar ±10%
Storage	Temperature	-25 °C to +50 °C
	Humidity	0 %RH to 95 %RH

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