



# Geopal Detectors

All Geopal detectors are produced and tested in Denmark.



### Geopal GJ-EX

The GJ-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 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 and can be fitted with different sensors according to the target gas.



### 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.



### 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.



### Geopal GJ-CO2

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



### Geopal GJ-EX-V / GJ-C-V

Detectors designed for pipe and duct mounting.

Please refer to [Data Sheet "Pipe mounted gas detector"](#) for more information.



**geopal** SYSTEM A/S®

Skelstedet 10B - DK-2950 Vedbæk, Danmark  
 Tel. +45 45 67 06 00  
 www.geopal.dk · [info@geopal.dk](mailto:info@geopal.dk)  
 EA 11210FE



DIC444QMS



DBI reg.no. 233.301



SP14ATEX7159

# Technical Data

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. Please refer to other data sheet and [www.geopal.dk](http://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

## 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 ( <i>Directives and Standards</i> )	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)
Quality	ISO 9001:20015

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Skelstedet 10B - DK-2950 Vedbæk, Danmark  
Tel. +45 45 67 06 00  
[www.geopal.dk](http://www.geopal.dk) · [info@geopal.dk](mailto:info@geopal.dk)  
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# Technical Data

## Detectors for classified areas

### 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 <sub>4</sub> ), Propane (C <sub>3</sub> H <sub>8</sub> ), Butane (C <sub>4</sub> H <sub>10</sub> ), Hydrogen (H <sub>2</sub> ), Hexane (C <sub>6</sub> H <sub>14</sub> ), Benzene (C <sub>6</sub> H <sub>6</sub> ), Ethane (C <sub>2</sub> H <sub>6</sub> ), Ethylene (C <sub>2</sub> H <sub>4</sub> ), R404A, R407C, R417A, R134A, Ammonia (NH <sub>3</sub> ), 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 <sub>4</sub> ), Propane (C <sub>3</sub> H <sub>8</sub> ), Butane (C <sub>4</sub> H <sub>10</sub> ), Hydrogen (H <sub>2</sub> ), Hexane (C <sub>6</sub> H <sub>14</sub> ), Ethylene (C <sub>2</sub> H <sub>4</sub> ), Ethanol (C <sub>2</sub> H <sub>5</sub> OH), Ammonia (NH <sub>3</sub> ), 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

# Technical Data

## 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 <sub>4</sub> ), Propane (C <sub>3</sub> H <sub>8</sub> ), Butane (C <sub>4</sub> H <sub>10</sub> ), Hexane (C <sub>6</sub> H <sub>14</sub> ), Benzene (C <sub>6</sub> H <sub>6</sub> ), Ethane (C <sub>2</sub> H <sub>6</sub> ), Ethylene (C <sub>2</sub> H <sub>4</sub> ), Ethanol (C <sub>2</sub> H <sub>5</sub> OH), Isopropanol (C <sub>3</sub> H <sub>8</sub> 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 <sub>2</sub> S), Nitrogen Dioxide (NO <sub>2</sub> ), Hydrogen (H <sub>2</sub> ), Hydrogen Chloride (HCl), Hydrogen Cyanide (HCN), Ammonia (NH <sub>3</sub> ), Sulfur Dioxide (SO <sub>2</sub> ), Phosphine (PH <sub>3</sub> ), Methanol (CH <sub>3</sub> 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

# Technical Data

## GJ-EX NDIR CO<sub>2</sub>

Monitors the detectors can be connected to	GJD-02C, GJD-04C, GJ-03R, GP-SA-2, GJD-L3C, GP-AMP
Available gases	Carbon Dioxided (CO <sub>2</sub> )
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 (CH <sub>4</sub> ), Propane (C <sub>3</sub> H <sub>8</sub> ), Butane (C <sub>4</sub> H <sub>10</sub> ), Hydrogen (H <sub>2</sub> ), Hexane (C <sub>6</sub> H <sub>14</sub> ), Ethylene (C <sub>2</sub> H <sub>4</sub> ), Ethanol (C <sub>2</sub> H <sub>5</sub> OH), Ammonia (NH <sub>3</sub> ), 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

# Technical Data

## GJ-OX

Monitors the detectors can be connected to	GJ-03R, GJD-L3C, GP-AMP
Available gases	Oxygen (O <sub>2</sub> )
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

# Technical Data

## Detectors for not 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 <sub>4</sub> ), Propane (C <sub>3</sub> H <sub>8</sub> ), Butane (C <sub>4</sub> H <sub>10</sub> ), Hydrogen (H <sub>2</sub> ), Hexane (C <sub>6</sub> H <sub>14</sub> ), Benzene (C <sub>6</sub> H <sub>6</sub> ), Ethane (C <sub>2</sub> H <sub>6</sub> ), Ethylene (C <sub>2</sub> H <sub>4</sub> ), R404A, R407C, R417A, R134A, Ammonia (NH <sub>3</sub> ), 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 <sub>4</sub> ), Propane (C <sub>3</sub> H <sub>8</sub> ), Butane (C <sub>4</sub> H <sub>10</sub> ), Hydrogen (H <sub>2</sub> ), Hexane (C <sub>6</sub> H <sub>14</sub> ), Benzene (C <sub>6</sub> H <sub>6</sub> ), Ethane (C <sub>2</sub> H <sub>6</sub> ), Ethylene (C <sub>2</sub> H <sub>4</sub> ), Ethanol (C <sub>2</sub> H <sub>5</sub> OH), Ammonia (NH <sub>3</sub> ), 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

# Technical Data

## GJ-O<sub>2</sub>

Monitors the detectors can be connected to	GJ-03R, GJD-L3C, GP-AMP
Available gases	Oxygen (O <sub>2</sub> )
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-CO<sub>2</sub>

Monitors the detectors can be connected to	GJD-L3C, GJ-03R
Available gases	Carbon dioxid (CO <sub>2</sub> )
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