

REFRIGERANT SENSOR

Danfoss Gas / Refrigerant Sensor (DGS)

The Danfoss Gas Sensor (Type DGS) is designed to support Refrigeration and Air Conditioning Applications; its state-of-the-art fixed gas detector can detect a wide range of different gases and offers customers absolute confidence that both safety and compliance requirements are met or exceeded.

Customer Benefits:

- Cost Effective Detection
- Automatic Monitoring
- Legal Compliance
- Environmental Considerations
- Better Performance
- Tailored to Task, Tailored to Gas / Refrigerant
- Increased Connectivity
- Stand-Alone

Applications:

Compliance health & safety on new or existing systems in:

- Supermarkets
- Process Refrigeration Plants
- Refrigerated & Storage Warehousing
- Special Applications areas/zones

Typical Refrigerant gas applications include:

- Halocarbons – HFCs, HCFCs, CFCs
- Carbon Dioxide
- Hydrocarbons



Technical Information	DGS
Power Supply	12/24 volt AC/DC ±20%
Power Consumption	EC: 60 mA SC: 153 mA, at 12V ir: 136mA
Power Monitoring	Green LED
Visual Alarm	Red LED
Audible Alarm	Sounder, enabled/disabled
Fault Monitoring	Red LED ON – GREEN OFF
Fault State	0-0.5V (1-5V), 0-1V(2-10V), 0-2mA(4-20mA)
Analogue Outputs	0-5V, 1-5V, 0-10V, 2-10V, 4-20mA
Digital Outputs	1 x Relay (1 amp / 24 V d.c. / 120 V a.c)
Time Delay	Selectable Delay: 0, 1, 5, 10 min.

Sensor Information		Semiconductor with Filter (mutigas) SC Halocarbons	Semiconductor with (mutigas) SC Hydrocarbons	Infrared IR CO ²
Typical Measurement Range		0-1,000 ppm	0-1,000 ppm	0-10,000 ppm 0-20,000 ppm 0-50,000 ppm
Relay Factory Default Setting		50% of range		
Temperature Range	IP41	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
	IP66	-40°C to +50°C	-40°C to +50°C	-40°C to +50°C
Humidity Range non condensing		0 to 95%	0 to 95%	0 to 95%
Typical Sensor Life		5 Years	5 Years	5 Years
Alarm Threshold	T50	76 sec (filtered)	50 sec (filtered)	50 sec
	T90	215 sec (filtered)	90 sec (filtered)	120 sec
Recovery Time		600 sec	200 sec	235 sec
Linearity		Linear over calibrated range		
Calibration Requirement		Standards generally require annual test or calibration. Refer to Airefrig Australia or Danfoss for instructions. Semiconductor sensors are non-selective, but calibrated to a specific gas.		

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Danfoss Gas / Refrigerant Sensor (DGS) – cont'd

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Airefrig Part Number	Description	Refrig Type	IP Rating	Range PPM	Alarm Factory Set	Time Delay Factory Set	Digital Outputs (Relay)	Analog Output	Temp (RH%) Range	List Price Excl GST
80Z0276	DGS-SG fixed sensor	R407F	IP41 Refer picture No.1	0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-20 to +50°C (0 to 95%)	\$684.60
80Z2088	DGS-SG fixed sensor	R410A		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-20 to +50°C (0 to 95%)	\$684.60
80Z2090	DGS-SG fixed sensor	R22		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-20 to +50°C (0 to 95%)	\$684.60
80Z2092	DGS-SG fixed sensor	R134A		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-20 to +50°C (0 to 95%)	\$684.60
80Z2093	DGS-SG fixed sensor	R407A		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-20 to +50°C (0 to 95%)	\$684.60
80Z2098	DGS-SG fixed sensor	R404A / R507		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-20 to +50°C (0 to 95%)	\$684.60
80Z2095	DGS-IR fixed sensor	CO ²		0-10,000	5000 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-20 to +50°C (0 to 95%)	\$1,698.27

80Z0277	DGS-SC fixed sensor	R407F	IP66 Refer picture No.2	0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-40 to +50°C (0 to 95%) Freezer Room	\$904.82
80Z2087	DGS-SC fixed sensor	R410A		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-40 to +50°C (0 to 95%) Freezer Room	\$904.82
80Z2091	DGS-SC fixed sensor	R22		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-40 to +50°C (0 to 95%) Freezer Room	\$904.82
80Z2089	DGS-SC fixed sensor	R134A		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-40 to +50°C (0 to 95%) Freezer Room	\$904.82
80Z2094	DGS-SC fixed sensor	R407A		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-40 to +50°C (0 to 95%) Freezer Room	\$904.82
80Z2099	DGS-SC fixed sensor	R404A / R507		0-1000	500 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-40 to +50°C (0 to 95%) Freezer Room	\$904.82
80Z2096	DGS-IR fixed sensor	CO ²		0-10,000	5000 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-40 to +50°C (0 to 95%) Freezer Room	\$1,908.27

80Z2097	DGS-IR Remote Sensor 3metre lead	CO ²	IP66 Refer picture No.3	0-10,000	5000 ppm (Adjustable)	No Delay 1,5 or 10min	1 x relay 1 amp/24Vdc	0-5V or 1-5V 4-20Ma 0-10V or 2-10V	-40 to +50°C (0 to 95%) Freezer Room	\$2,074.38
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Note: All the above units require 12/24 volt AC/DC power supply plus have visual & audible alarms.
Sensor calibration or replacement is required every 12-24 months depending on local regulations



Picture No.1
(IP41 Model)
Fixed sensor



Picture No.2
(IP66 Model)
Fixed sensor



Picture No.3
(IP66 Model)
With remote
3 metre sensor