



Gas sensor

DST G54A / DST G54C / DST G55A

Description

The new A2L gas sensor is designed for use in the refrigeration and food retail market. Our thermal conductivity technology ensures precise measurements min. 15-year lifetime, and robust design approved for systems using R454A, R454C and R455A. Our unique design is optimized to ensure performance over the lifetime even in harsh application environment as it is robust against condensation, dirt, dust, and UV light. Additionally, we have built-in flexibility in terms of hardware and software allowing for easy customization and system integration.

Features & Benefits

- Flexible alarm threshold and customizable software
- Patented, robust design
- Output modes: Modbus, Relay and Dual output
- Constant consistent refrigerant % LFL measurement

Product details

General data

Sensor specifications

Measuring range	0 – 100% LFL
Alarm threshold	13 – 19%
Operating temperature	-40 – 175 °F (-40 – 80 °C)
Maximum temperature	-40 – 200 °F (-40 – 95 °C)
Storage temperature	-67 – 203 °F (-55 – 95 °C)
Operating pressure	700 – 1200 mbar
Operating humidity	0 – 100% RH with condensation
Enclosure protection (EN 60529)	IP54
Connector protection (EN 60529)	IP56 and IP57
Flame rating	UL 94 V – 0

Electrical specifications

Output mode ⁽¹⁾	Relay specification	Modbus specification	Dual output specification
Supply voltage	24 V AC \pm 10% and 24 V DC (8 – 32 V DC)	5 V DC \pm 10% 24 V AC \pm 10% and 24 V DC (8 – 32 V DC)	24 V AC \pm 10% and 24 V DC (8 – 32 V DC)
Power consumption (estimated)⁽²⁾	1.6 VA max.	1.6 VA max.	1.6 VA max.
Digital Output	–	RS485, 120 Ω termination included in sensor	RS485, 120 Ω termination included in sensor

⁽¹⁾ Other configurations available upon request

⁽²⁾ 1.0 VA version available upon request.

Mechanical characteristics

Materials – Enclosure	PA66 25% GF
Materials – Electrical connection	Nylon
Net weight (depending on the format)	0.04 – 0.06 kg

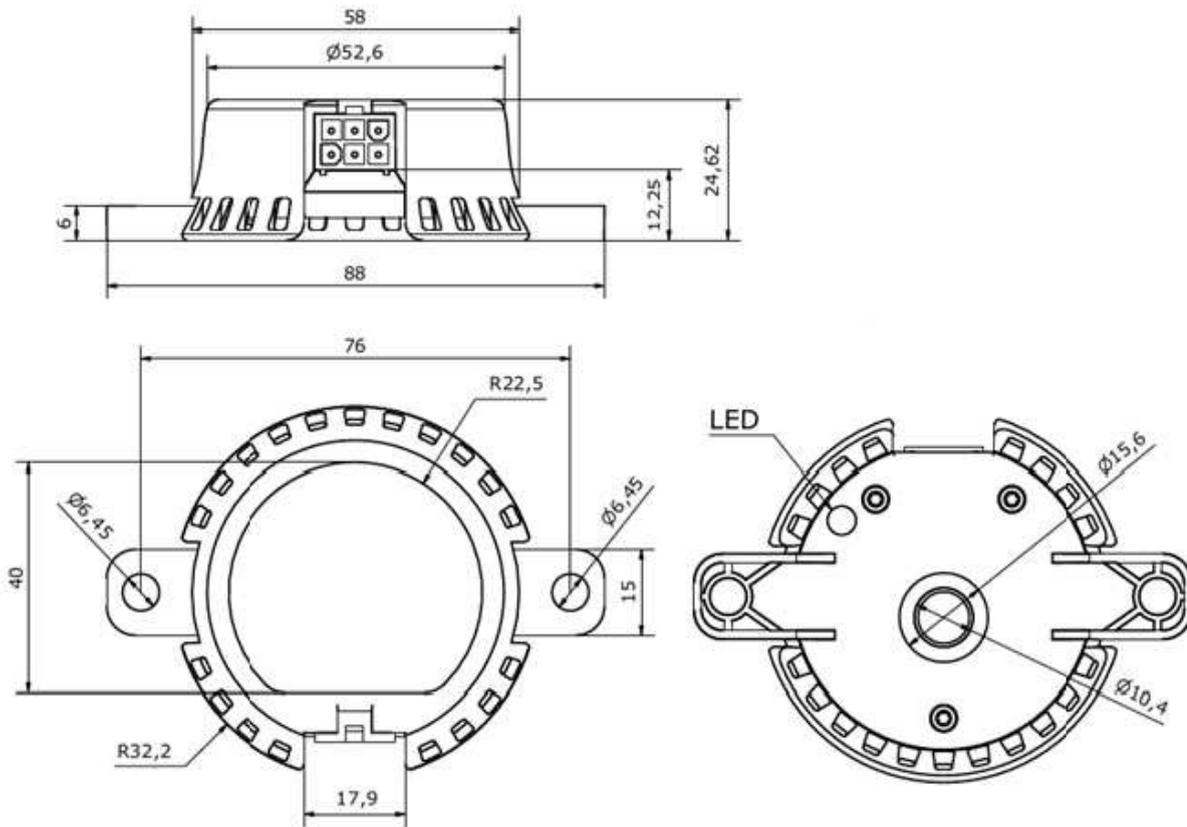
Performance and environmental conditions

Performance specifications

Accuracy at ambient 15 – 25 °C, 30 – 70%	\pm 2.5% LFL
Accuracy across operating range	\pm 5.0% LFL
Response time	< 15 s
Sensor recovery time	< 5 minutes in clean air
Lifetime	Min 15-year lifetime – self monitoring
Mitigation recovery timer	0 – 5 minutes (others upon request)
Alarm response	Relay open – LED red – Alarm flag
Alarm reset	2.5% LFL hysteresis

Dimensions & weights

Dimensions



NOTE:

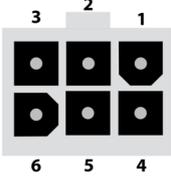
Dimensions are in mm, unless stated otherwise.

Disclaimer/Information:

Sensor stores diagnostic values for warranty and analysis. Data can be provided by returning the product. A service fee may apply.

Connections

Electrical connections

Type code	S-standard (6 PIN)
	 <p>The diagram shows a 6-pin connector with pins numbered 1 through 6. Pin 1 is at the top right, pin 2 is at the top middle, pin 3 is at the top left, pin 4 is at the bottom right, pin 5 is at the bottom middle, and pin 6 is at the bottom left.</p>
Electrical connection, Modbus	Pin 1: Supply voltage Pin 2: Earth/Ground Pin 3: Mod A (Data +) Pin 4: Mod B (Data -) Pin 5: Not connected Pin 6: Not connected
Electrical connection, Relay	Pin 1: Supply voltage Pin 2: Earth/Ground Pin 3: Not connected Pin 4: Not connected Pin 5: Input relay Pin 6: Normally open contacts output
Electrical connection, Dual output	Pin 1: Supply voltage Pin 2: Earth/Ground Pin 3: Mod A (Data +) Pin 4: Mod B (Data -) Pin 5: Input relay Pin 6: Normally open contacts output
Enclosure IP	IP54

NOTE: Please check store.danfoss.com to find the correct variant for your requirements.

Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
Export Control Declaration	Refrigerant Leakage Sensor	Danfoss	
EU Declaration	Danfoss EU-UK 073R0000.01	Danfoss	UK RoHS
Electrical Safety Certificate	UL E534311-20240718 20240722	UL - Underwriters Laboratories inc.	

Contact details

Online support

Danfoss offers a wide range of support along with our products, including digital information, software, mobile apps and expert guidance. See the possibilities below.



The Danfoss Design center

Discover the Design Center, our advanced digital platform that streamlines product selection. With integrated tools and enhanced type pages, it's simpler than ever to access product information and documentation, and to select the right products. Check the availability of Danfoss products at partner locations and enjoy seamless transitions from selection to purchase with our basket-to-basket functionality. Whether you're buying from our distributors or directly from the Product Store, the Design Center simplifies your experience. Learn more at: designcenter.danfoss.com.



The Danfoss product store

The Danfoss Product Store is a one-stop shop available 24/7 for our customers, no matter where you are in the world or what area of industry you work in. Browse our catalog, check product details and documentation, view your prices and product availability, and quickly finalize your purchase. Start browsing at: store.danfoss.com.



Danfoss Partner Portal/Product Data tool

Designed to support you with easy access to product data extracts, essential resources, tools, and information. The Partner Portal provides a centralized hub for product documentation, training materials, marketing assets, and technical support, ensuring you have everything you need to succeed and grow your business with Danfoss. The Partner Portal is available 24/7 at: partner.danfoss.com and is ready to support your business.



Find technical documentation

Find technical documentation you need to get your project up running. Get direct access to our official collection of data sheets, certificates and declarations, manuals and guides, 3D models and drawings, case stories, brochures, and much more. Start searching now at: documentation.danfoss.com.



Danfoss Learning

Danfoss Learning is a free online learning platform. It features courses and materials specifically designed to help engineers, installers, service technicians, and wholesalers better understand the products, applications industry topics, and trends that will help you do your job better. Find your local Danfoss website here: learning.danfoss.com.



Get local information and support

Local Danfoss websites are the main sources for help and information about our company and products. Find product availability, get the latest regional news, or connect with a nearby expert - all in your own language. Find your local Danfoss website here: danfoss.com.

Danfoss A/S

Climate Solutions . danfoss.com . +45 7488 2222

Any information, including, but not limited to information on selection of product, its application or use, product design, weight, dimensions, capacity or any other technical data in product manuals, catalogues description, advertisements, etc. and whether made available in writing, orally, electronically, online or via download, shall be considered informative, and is only binding if and to the extent, explicit reference is made in a quotation or order confirmation. Danfoss cannot accept any responsibility for possible errors in catalogues, brochures, videos and other material. Danfoss reserves the right to alter its products without notice. This also applies to products ordered but not delivered provided that such alterations can be made without changes to form, fit or function of the products. All trademarks in this material are property of Danfoss A/S or Danfoss group companies. Danfoss and the Danfoss logo are trademarks of Danfoss A/S. All rights reserved.
