Gas sensor
DST G300

For refrigeration purposes

Description

The DST G300 gas sensor is expertly crafted for the refrigeration and food retail markets, offering unparalleled precision and reliability. Leveraging advanced thermal conductivity technology, this sensor guarantees accurate measurements throughout its impressive minimum 15-year lifetime.

Its robust design is certified for use with R454A, R454C, and R455A refrigerants, ensuring compatibility and performance in diverse systems.

Engineered to withstand harsh environments, the DST G300 is resilient against condensation, dirt, dust, and UV light, maintaining optimal functionality over time. Its unique design incorporates both hardware and software flexibility, facilitating seamless customization and integration into existing systems.

The DST G300 sensor is the intelligent choice for those seeking a simplified, hassle-free solution that delivers dependable results across three refrigerant types.

Features & benefits

- Flexible alarm threshold and customizable software
- Designed for versatility on R454A, R454C and R455A
- 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	11% (R455A) and 15% (R454C + R454A) LFL[1]
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

[1] May vary depending on refrigerant.

Performance specifications

Accuracy at ambient 15 – 25 °C, 30 – 70%	±2.5% LFL
Accuracy across operating range	±5.0% LFL
Response time	< 15 s
Sensor recovery time	< 5 minutes in clean air
Lifetime	min. 15-year lifetime – self monitoring
Alarm reset timer	5 minutes (can be customized)
Alarm response	Relay open – LED red – Alarm flag
Alarm reset	2.5% LFL hysteresis

Electrical specifications

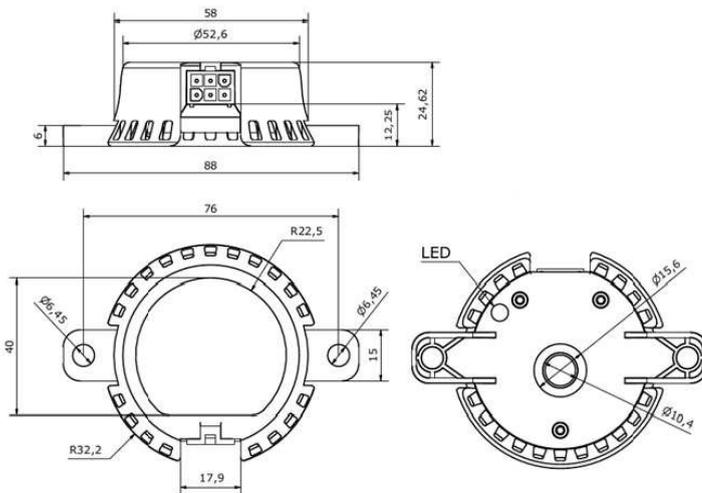| Output mode	Relay specification	Modbus specification	Dual output specification
Supply voltage	24 V AC ±10% and 24 V DC (8 – 32 V DC)	5 V DC ±10% 24 V AC ±10% and 24 V DC (8 – 32 V DC)	24 V AC ±10% and 24 V DC (8 – 32 V DC)
Current requirement[1]	1.6 VA max.	1.6 VA max.	1.6 VA max.
Digital output	–	RS485, 120 Ω termination included in sensor	RS485, 120 Ω termination included in sensor

[1] Other current limits upon request

Materials

Mechanical characteristics

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

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.

Functions

Electrical connections

Type code	Standard (6 PIN)
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 contact's 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 contact's 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	Gas sensor	Danfoss	

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.

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