

Data Sheet

A3 Gas Sensor

For general HVAC purposes



The new A3 gas sensor is designed for use in general HVAC applications

Accurate and compact leak detector designed based on IEC 60355-2-40 and compatible to customer's application specifications – both hardware and software.

Photoacoustic technology offers +15 years lifetime, immunity to poisoning, fast response time and reliable self-diagnostics.

Features :

- Designed for use with R290 (others on request)
- Output modes: Modbus RTU on RS485, Relay, Relay & Modbus
- Supply voltage: 5 V DC, 12-24 V AC/DC
- Designed for +15 years lifetime without calibration
- Self-diagnostics
- CE marked
- ATEX compliant signal relay

Product specification

Technical data

Table 1: Sensor specifications

Measuring Range	0 to 100% LFL
Alarm Threshold	15% LFL
Operating Temperature	-40 °C to 80 °C
Maximum Temperature (intermittent)	-40 °C to 105 °C
Storage Temperature	-40 °C to 80 °C
Operating Pressure	700 to 1200 mbar
Operating Humidity	0% to 100% RH
Enclosure Protection (EN 60529)	IP 55
Connector Protection (EN 60529)	IP 56 and IP57

Table 2: Performance specifications

Accuracy at ambient (15°C to 25°C), 0-25% LFL	±2.5% LFL
Accuracy across operating range, 0-25% LFL	±5.0% LFL
Response time	< 27 s
Sensor recovery time	< 5min in clean air
Mitigation recovery timer	5 sec – can be customizable
Alarm reset timer	Depending the output mode: Relay open – LED red – Alarm flag
Reset setpoint	2,5% LFL below alarm setpoint

Table 3: Electrical specifications

Output mode	Modbus	Modbus	Modbus & Relay ⁽¹⁾	Relay ⁽¹⁾
Supply voltage	12-24V AC/DC ±10%	5V DC ±10%	12-24V AC/DC ±10%	12-24V AC/DC ±10%
Power consumption	1.0W max 0.5W average	0.4W max 0.3W average	1.1W max 0.6W average	1.1W max 0.6W average
Digital output	RS485, 120Ohm termination included in sensor	RS485, 120Ohm termination included in sensor	RS485, 120Ohm termination included in sensor	-
Code number	073G2060	073G2061	073G2062	073G2063

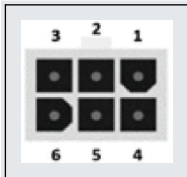
⁽¹⁾ Relay information : 30V/1A max switching load (signal relay).

Table 4: Mechanical characteristics

Materials – Enclosure	PA66 25% glass filled(Top), PC(Bottom)
Materials – Electrical connection	Nylon
Net weight (depending on the format)	0.04 - 0.06 kg

Electrical connections

Table 5: Electrical connections

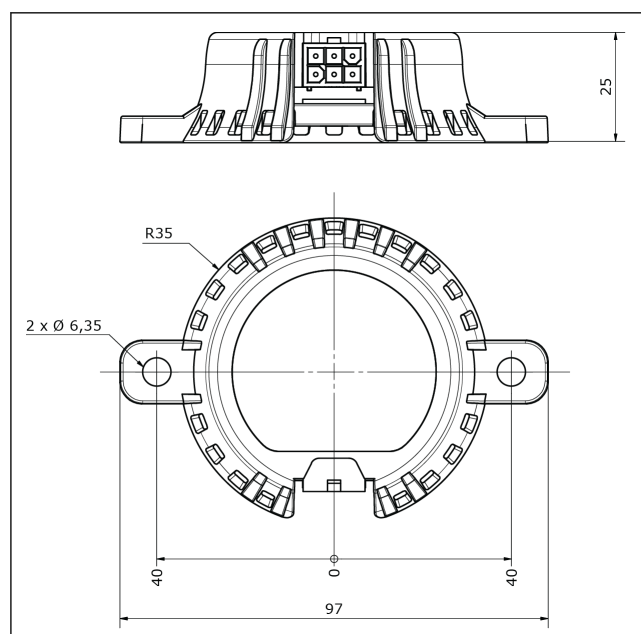
Type code	Standard (6 PIN)
	
Electrical connection, ModBus	Pin 1: Supply voltage Pin 2: Ground Pin 3: Mod A Pin 4: Mod B Pin 5: No connection Pin 6: No connection
Electrical connection, Relay	Pin 1: Supply voltage Pin 2: Ground Pin 3: No connection Pin 4: No connection Pin 5: Relay input Pin 6: Relay output
Electrical connection, combo	Pin 1: Supply voltage Pin 2: Ground Pin 3: Mod A Pin 4: Mod B Pin 5: Relay input Pin 6: Relay output

NOTE:

Please check store.danfoss.com to find the correct variant for your requirements. (in progress)

Dimensions

Figure 1: Dimensions



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.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

Table 6: Certificates and declarations

File name	Document type	Document topic	Approval authority
073R0004	EU-UK declaration	EMCD/RoHS	Danfoss (CE)
073R0006	Manufacturer's declaration	No source of ignition	Danfoss
073R0006	Manufacturer's declaration	IEC 60335-2-40, Ed.7, Annex LL	Danfoss
073R0007	Manufacturer's declaration	ATEX compliant	Danfoss

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