Data sheet



Radiator Sensors

Danfoss Aero® Thermostatic series

Description

The Danfoss Aero® series is a comprehensive portfolio of premium quality thermostatic sensors, produced in Denmark.

Danfoss Aero® thermostats use a unique gas filled technology, that gives the fastest reacting self-acting thermostat in the world.

Features & benefits

- Gas technology - fastest and most precise temperature control
- Highest-class Control Accuracy (CA 0.2 K) per amended EN215
- Danfoss RA Click mount - fast, save, tool-less
- Modern and user-friendly design
- Easy to operate, easy to clean
- Facilities designed for the visually impaired
- Facilities for limiting and locking temperature set-point, also available as accessory
- Frost protection setting
- A theft protection, from factory or available as accessory

Quality



Danfoss Aero® thermostatic sensors are certified according to the European standard EN 215.

All Danfoss radiator thermostats are manufactured in factories, assessed and certified by BVC (Bureau Veritas Certification) against ISO 9001 and ISO 14001.

Applications

The Danfoss Aero® thermostat is compatible with all types of heating systems, and its compact design ensures an easy and discreet installation.

The use of Danfoss Aero® gas-filled thermostats is highly recommended for applications with small P-band (1K).

Danfoss Aero® series includes:

- Standard thermostats with built-in or remote sensor
- Variants with connection for radiator valves and radiators with integrated valves, type Danfoss RA
- Variants with connection for Danfoss valves, type Danfoss RA/V & RA/VL
- RA/V and RA/VL service kits including stuffing box

Ordering

Product code numbers

Type	Sensor version	Sensor type	Capillary tube length [m] [Max]	Sensor setting temperature [°C] [Min]	Sensor setting temperature [°C] [Max]	Connection type to valve	Zero-blocking	Limiter pins	EN 215 Certified	Code number
Danfoss Aero® Sensors	Standard	Built-in sensor		7	28	RA	No	Yes	Yes	015G4590
Danfoss Aero® Sensors	Standard	Remote Sensor	2.0	7	26	RA	No	Yes	Yes	015G4592
Danfoss Aero® Sensors	Standard, Temp. limited	Built-in sensor		7	21	RA	No	Yes	Yes	015G4680
Danfoss Aero® Sensors	Standard, Temp. limited	Built-in sensor		7	21	RA	No	Yes	Yes	015G4690
Danfoss Aero® Sensors	Standard, Temp. limited	Remote Sensor	2.0	7	21	RA	No	Yes	Yes	015G4692
Danfoss Aero® Sensors	Standard	Built-in sensor		7	28	RA	No	Yes		015G5201
Danfoss Aero® Sensors	Service	Built-in sensor		7	28	RAV	No	No	No	015G4560
Danfoss Aero® Sensors	Service	Remote Sensor	2.0	7	26	RAV	No	No	No	015G4562
Danfoss Aero® Sensors	Service	Built-in sensor		7	28	RAVL	No	Yes	No	015G4550
Danfoss Aero® Sensors	Service	Remote Sensor	2.0	7	26	RAVL	No	Yes	No	015G4552

Accessories code numbers

Description	Code number
Limiting pins for RA (10 pcs.)	013G1246
Anti-theft plug for snap-lock sensors, white	013G5245
Protection cap for Danfoss Aveo and Aero RA/VL sensors	015G4950
Protection cap for Danfoss Aveo and Aero RA/V sensors	015G4951

Functions

Thermostatic sensors are proportional controls, regulating the heat supply in relation to the difference between the temperature set on the sensor and the temperature of ambient air, detected by the thermostat.

The thermal expansion element (bellow) responds to room temperature by expanding or contracting proportionally. The movement is transmitted onto the control element of the thermostatic valve.

Danfoss Aero® series of thermostatic sensors are fitted with gas-filled bellows, ensuring fast response time to changing ambient temperature.

The Danfoss Aero® thermostat is installed onto a radiator valve. The combination of the thermostat and radiator valve, controls the amount of water which flows into radiator to the suitable flow level that is required to maintain the room temperature on the set level.

Settings

The required room temperature is set by turning the setting dial. The temperature scales below shows the correlation between scale values and the room temperature. The temperature values stated are for guidance only as the obtained room temperature will often be influenced by installation conditions.

Locking and limitation of the temperature set-point of the Danfoss Aero® thermostats are carried out using the limiter pins placed at the back of the sensor. The procedure is described in the instruction.

Danfoss Aero®



Setting position

❄ 1 2 3 4 5

7 14 17 20 23 26 °C

Room temperature

❄ = Frost protection setting

Danfoss Aero® 015G4680 & 015G4690



Setting position

❄ 1 2 3

7 14 17 20 °C

Room temperature

❄ = Frost protection setting

Danfoss Aero ® 015G4622



Setting position

❄ 1 2 3

7 14 17 20 °C

Room temperature

❄ = Frost protection setting

Danfoss Aero® 015G4623



Setting position

❄ 1 2 3 4

7 14 17 20 23 °C

Room temperature

❄ = Frost protection setting

Danfoss Aero® 015G4596



Setting position

2 3 4 5

17 20 23 26 °C

Room temperature

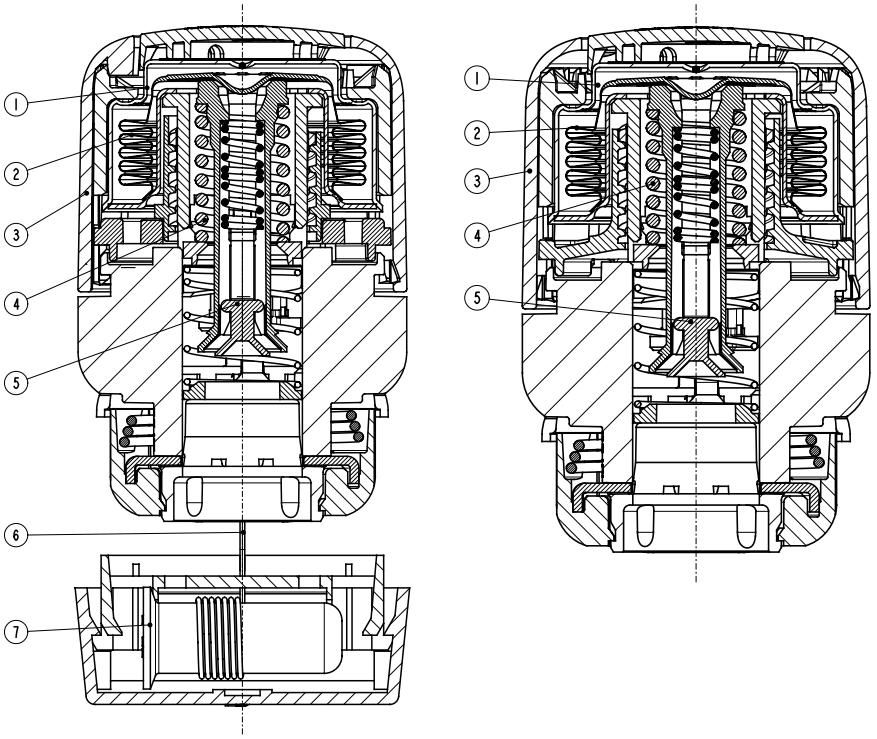
Product details

General data

Type	Sensor	Response time	Hysteresis (C)	Water temperature influence (W)	Control Accuracy (CA)
Aero RA	Built-in	10 mins	0.40 K	0.45 K	0.2 K
Aero RA	Remote	10 mins	0.40 K	0.20 K	0.2 K

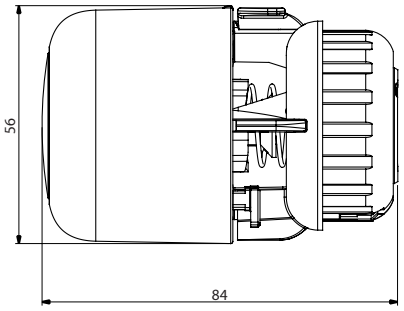
Design

1. Actuator
2. Gas filled bellow
3. Setting handle
4. Setting spring
5. Pressure spindle
6. Capillary tube
7. Remote sensor

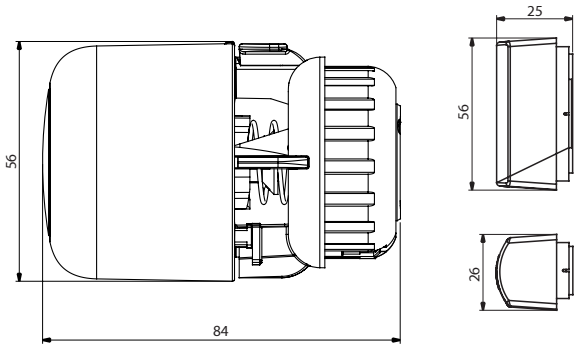


Dimensions

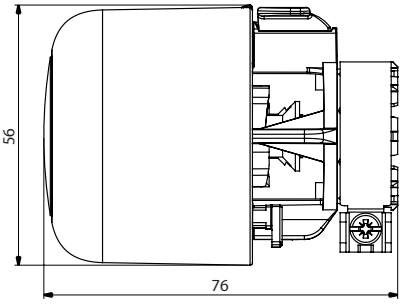
Danfoss Aero® RA



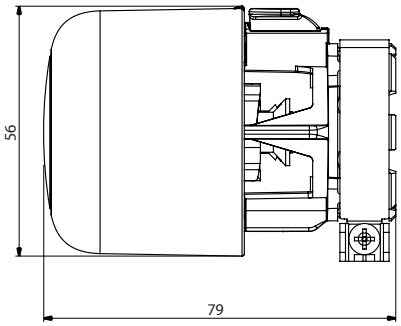
Danfoss Aero® RA with remote sensor



Danfoss Aero® RA/VL



Danfoss Aero® RA/V

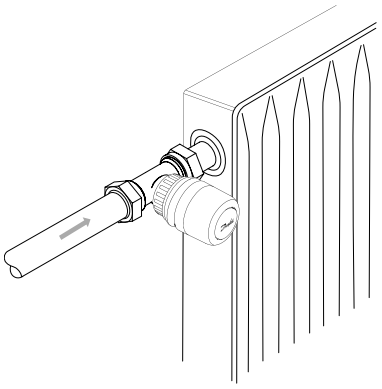


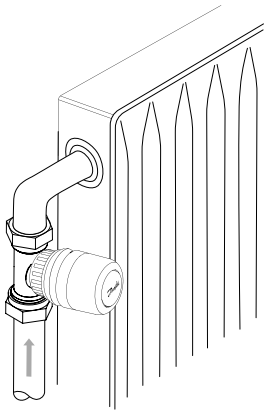
Installation

The thermostatic sensor should be selected on the basis of the following criteria:
The thermostat must always be able to register the temperature of the ambient air.

Radiator thermostats with built-in sensors

These should always be fitted horizontally so that the ambient air can pass freely over the sensor. Danfoss does not recommend the fitting of a built-in sensor in vertical position because heat effect from the valve body and possibly surface pipes will cause incorrect operation of the thermostat.

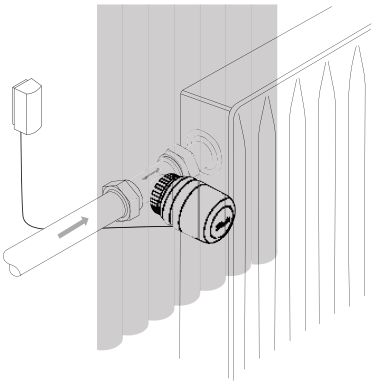


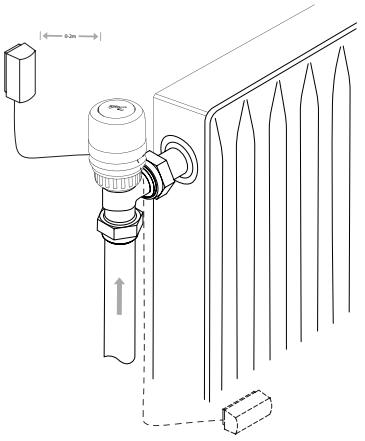


Radiator thermostats with remote sensor

These should be used when:

- Curtains cover the thermostat
- Thermostat is affected by surface pipes
- Thermostat is affected by draught
- It is necessary to mount the thermostat in vertical position if there are adjacent obstructions.





The remote sensor must be mounted on the wall, away from curtains, or on the skirting board beneath the radiator if free of surface pipes.
All remote sensors are now supplied with ultra-thin capillary tube. Simply pull out the length required (2 m maximum) and fix using clips provided or a special tacker gun.

Certificates, declarations and approvals

Approval type	Title	Issuer	Approval topic
Energy Performance Certificate	TÜV 268608738 30	TÜV Rheinland - Technischer ÜberwachungsVerein	
Energy Performance Certificate	TÜV 268608738 10	TÜV Rheinland - Technischer ÜberwachungsVerein	
Manufacturing Permission	DNV C606800 rev. 0	DNV	
Manufacturer's Declaration	Danfoss MD ID365946894767-0701	Danfoss	EU RoHS
Export Control Declaration	Radiator sensors	Danfoss	
Manufacturing Permission	DIN CERTCO 011-6T0049	TÜV Rheinland - Technischer ÜberwachungsVerein	Compliance misc. Standards
EU Declaration	PL03_Packaging_EU DoC	Danfoss	Packaging
Manufacturer's Declaration	Declaration of Energy Classes (BACS) - EN ISO 52120-1 and EN ISO 16484-4	Danfoss	Compliance misc. Standards

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.



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