ENGINEERING
TOMORROW

Data Sheet

Danfoss AVEO® Tamperproof thermostatic sensors series

Application





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

The tamperproof version of Danfoss Aveo® thermostat is used for room temperature control in public buildings, e.g. government offices, hospitals, schools, etc.

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

The Danfoss Aveo® thermostat is installed onto a radiator valve. The combination of the thermostat and radiator valve, controls the individual room temperature at a given setpoint by adjusting the flow of hot water or low pressure steam through the radiator.

The tamperproof version of Danfoss Aveo® thermostat is applicable to all types of water-based heating systems.

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

Danfoss Aveo® series includes:

- Tamperproof thermostats with built-in or remote sensor for radiator valves and radiators with integrated valves, type Danfoss RA
- Variants with connection for radiator valves and radiators with integrated valves, type Danfoss RA

Features:

- Gas technology - fastest and most precise temperature control
- Highest-class Control Accuracy (CA 0.2 K) per amended EN215 standard
- Robust design, dedicated for industrial, commercial and public buildings
- Facilities for limiting and locking temperature set-point
- Frost protection setting
- Theft protected

Quality

011

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

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

Datasheet Danfoss Aveo® Thermostatic sensors series

Ordering and Specification

Type	Model	Sensor	Cap. tube	Set point range	Connection	Zero blocking	Limiter pins	EN215 Certified	Code no.
Aveo RA	Tamperproof	Built-in		44 - 82F (7 - 28 C)	RA		✓	✓	**015G4240**
Aveo RA	Tamperproof	Remote	0-6ft (0-2m)	44 - 82F (7 - 28 C)	RA		✓	✓	**015G4042**

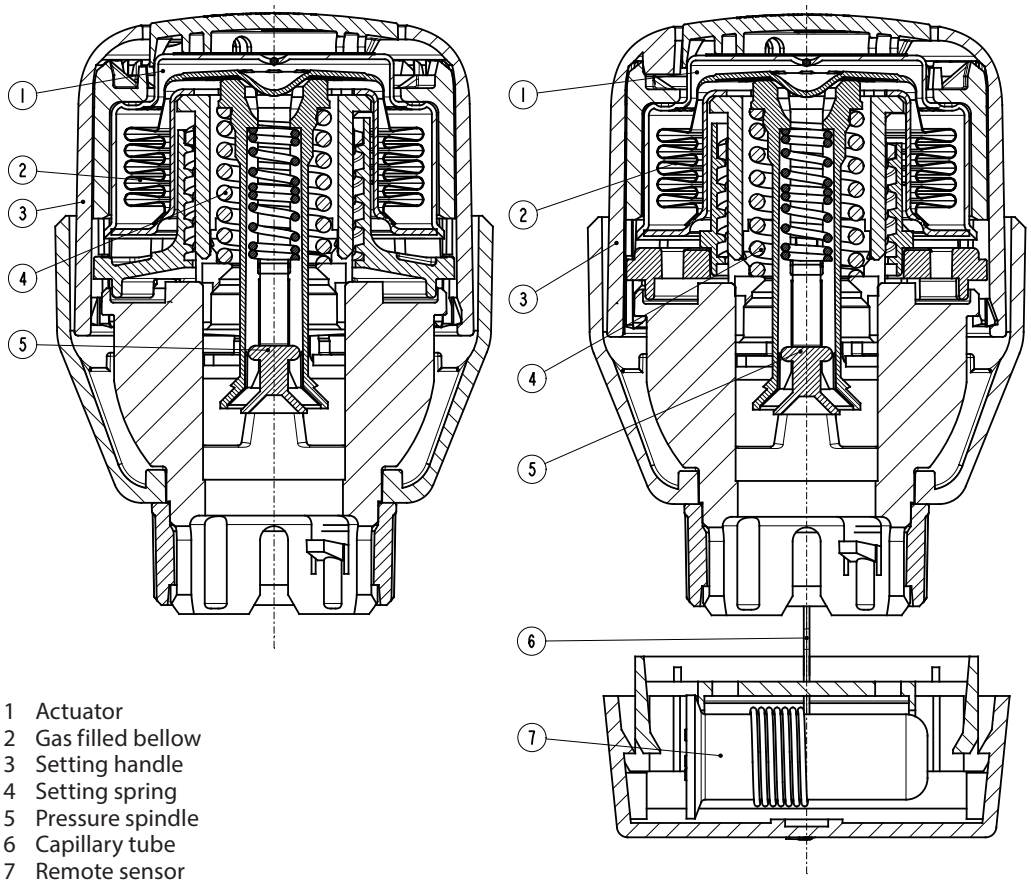
Accessories

Accessories		Code no.
	Limiting pins for tamperproof sensors (30 pcs.	**013G1237**
	Anti-theft plugs (50 pcs.)	**013G1232**
	Toolkit comprising Allen key & locking pin tool	**013G1236**
	Coverplate for scale, white (20 pcs.)	**015G4952**

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Construction



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

Operating Principle

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.

The thermostatic sensor controls the amount of supply which flows into the radiator to meet what is required to maintain the room temperature on the set level.

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

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Setting the temperature

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 Aveo® thermostats are carried out using the limiter pins placed at the back of the sensor.

The procedure is described in the instruction.

Danfoss Aveo® Tamperproof



Setting position

❄	1	2 • •	3 • •	4	5	
45	57	63	68	73	79	°F
7	14	17	20	23	26	°C

Room temperature

❄ = Frost protection setting

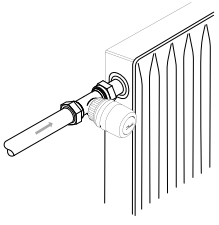
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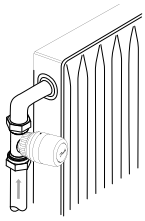
Choose the right sensor

The thermostatic sensor should be selected on the basis of the following criteria:

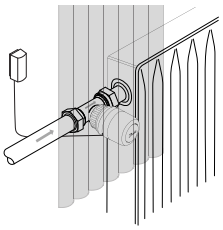
The thermostat must always be able to register the temperature of the ambient air.

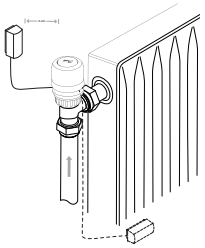
Radiator thermostats with built-in sensors
These should always be fitted horizontally so that the ambient air can pass freely over the sensor. Danfoss does not recommend the fitting of a built-in sensor in vertical position because heat effect from the valve body and possibly surface pipes will cause 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 draft
- It is necessary to mount the thermostat in vertical position if there are adjacent obstructions.





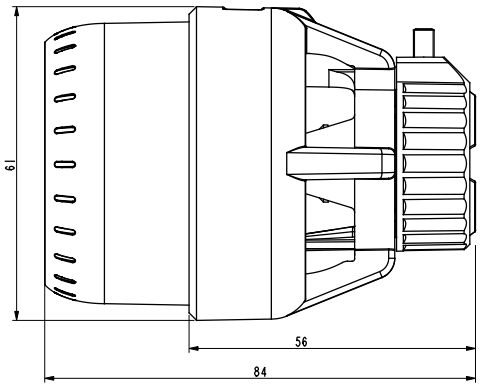
The remote sensor must be mounted on the wall, away from curtains, or on the skirting board beneath the radiator if free of surface pipes.

All remote sensors are now supplied with ultra-thin capillary tube. Simply pull out the length required (6 ft (2 m) maximum) and fix using clips provided or a special tacker gun.

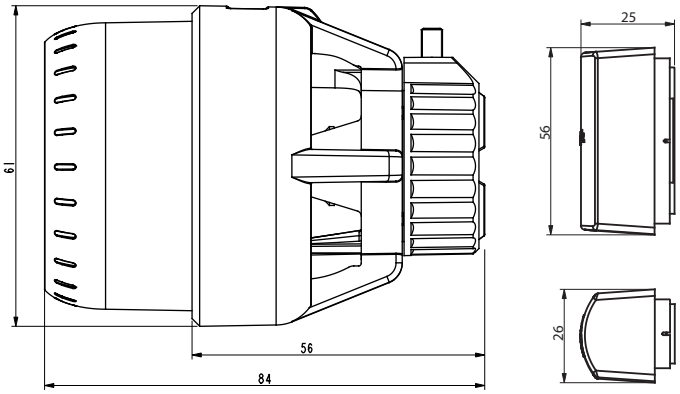
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Dimensions

Danfoss Aveo® RA
Tamperproof



Danfoss Aveo® RA
Tamperproof with remote sensor



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