

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 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
- Robust design, dedicated for industrial, commercial and public buildings
- Facilities for limiting and locking temperature set-point
- Frost protection setting
- Theft protected

Quality



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 BVC (Bureau Veritas Certification) against ISO 9001 and ISO 14001.

Datasheet

Danfoss Aveo® Thermostatic sensors series

Technical data

Type	Sensor	Response time	Hysteresis (C)	Water temperature influence (W)	Control Accuracy (CA)
Aveo RA	Built-in	12 mins	0.40 K	0.45 K	0.2 K
Aveo RA	Remote	12 mins	0.40 K	0.20 K	0.2 K

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		7-28°C	RA		✓	✓	015G4040
Aveo RA	Tamperproof	Remote	0-2m	7-26°C	RA		✓	✓	015G4042
Aveo RA	Tamperproof	Built-in		7-28°C	RA		✓		015G4240

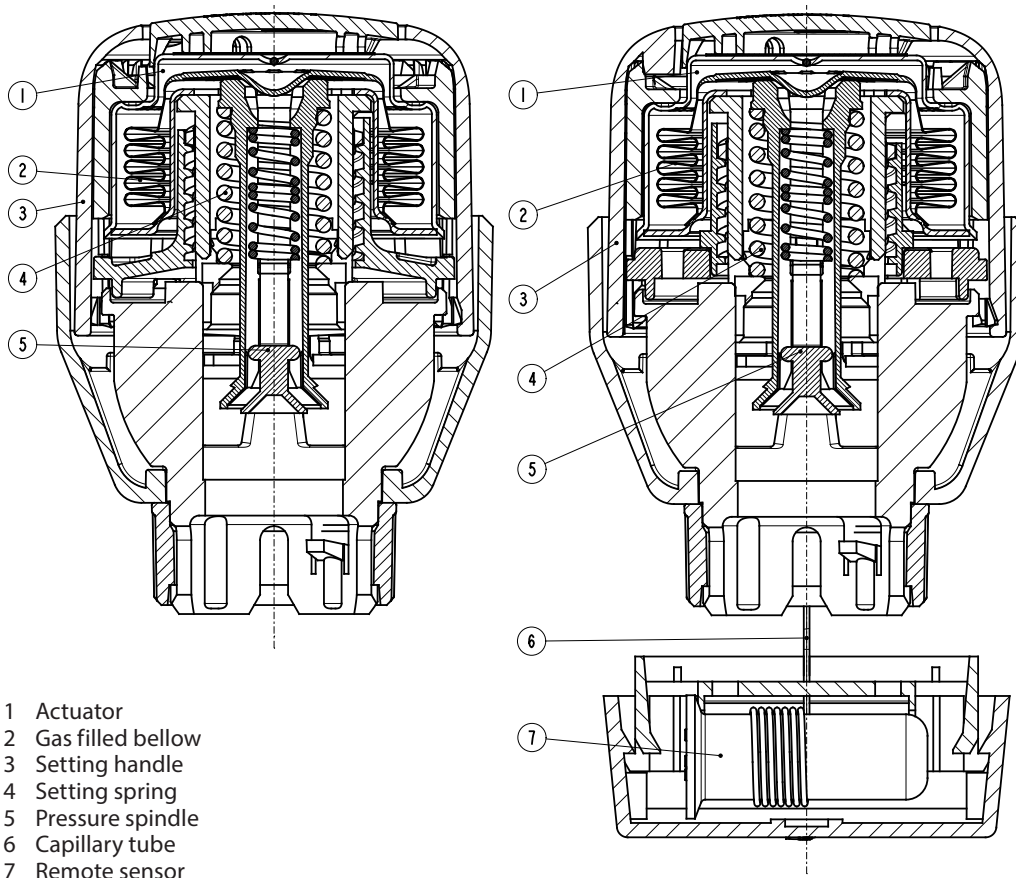
Accessories

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

Datasheet

Danfoss Aveo® Thermostatic sensors series

Construction



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 water which flows into radiator to the suitable flow level that 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.

Datasheet

Danfoss Aveo® Thermostatic sensors series

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
7	14	17			20			23	26 °C

Room temperature

❄ = Frost protection setting

Datasheet

Danfoss Aveo® Thermostatic sensors series

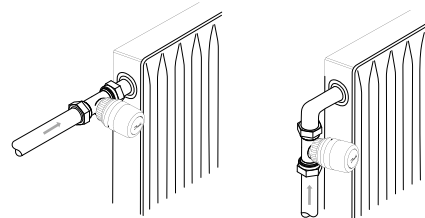
Choose the right sensor

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

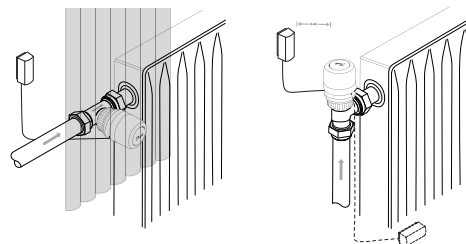
These should be used when:

- Curtains cover the thermostat
- Thermostat is affected by surface pipes
- Thermostat is affected by 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.

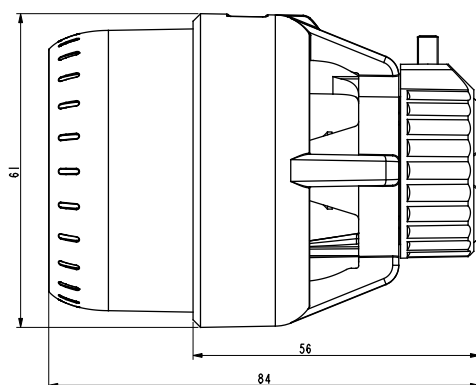


Datasheet

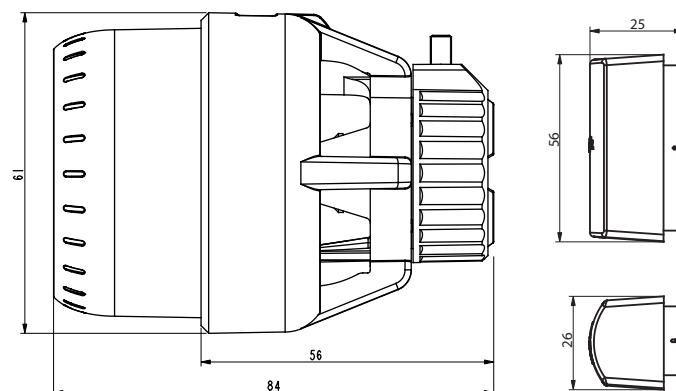
Danfoss Aveo® Thermostatic sensors series

Dimensions

Danfoss Aveo® RA
Tamperproof



Danfoss Aveo® RA
Tamperproof with remote sensor



Danfoss A/S

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