

## Data Sheet

# FEV-Z Climate Sensors for AB-QM Automatic Flow Limiter

### Product



*FEV-Z for AB-QM automatic flow limiter - with integrated sensor*

The FEV-Z climate sensor is a proportional controller which opens or closes an AB-QM automatic flow limiter valve as a function of the temperature deviation.

The FEV-Z is to be applied in climate systems with i.e. ceiling-, floor- or radiator heating.

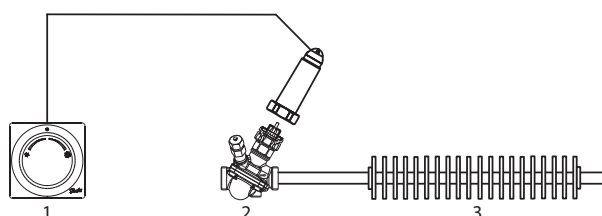
The FEV-Z climate sensor should be mounted on an internal wall at a height of approximately 1.5 meter in such a way that the room temperature can be measured accurately.

### Ordering and Specifications

Type	Description	Setting range	Code no.
FEV-Z	Climate sensor with adapter for AB-QM automatic flow limiter, 8 m capillary tube	17-27 °C	<b>013G5458</b>

### Application

*Heating: Floor-, ceiling-, or radiator heating*



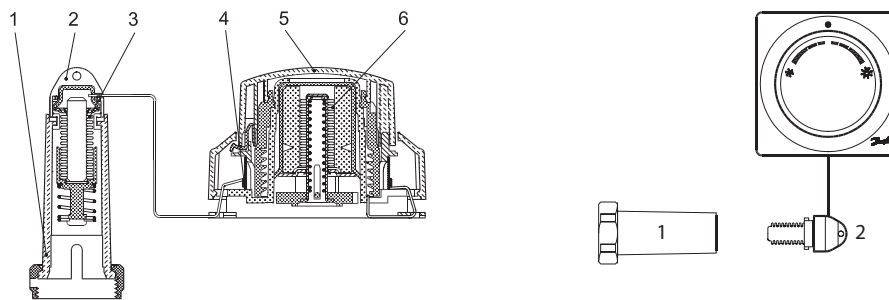
1. FEV-Z
2. AB-QM
3. Heating circuit

### Design

The FEV-Z sensor is equipped with a direct acting valve controller that opens the valve when the temperature drops below the set temperature.

FEV-Z has a valve adapter especially designed for use with Danfoss AB-QM automatic flow limiters.

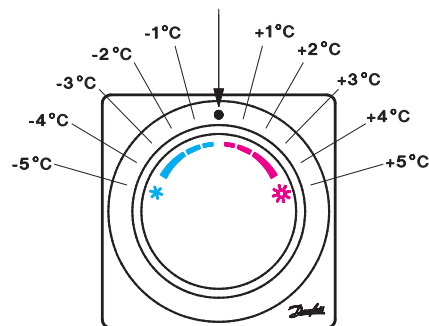
If the set temperature is equal to or higher than the room temperature the valve is open.



- 1. Valve adapter (heating)
- 2. Actuator
- 3. Adjustment bellows
- 4. Capillary reel
- 5. Remote temperature adjuster
- 6. Bellows

**Temperature Setting**

Comfort temperature ~ 22 °C at  $X_p = 0 K$



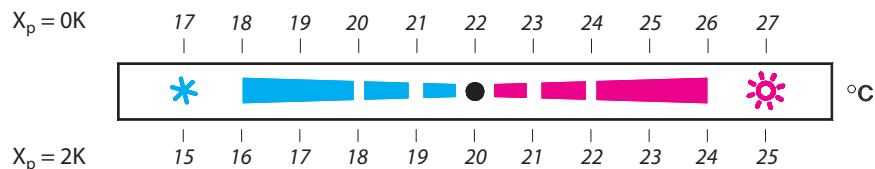
The FEV-Z sensor has been developed for heating regulation of water-based systems.

The FEV-Z sensor is based on the self-acting principle. The liquid-filled sensors control the valves via capillaries and adapters.

The scale shows the approximate set-point offset from the comfort temperature which is approximately 22 °C at  $X_p = 0 K$ .

**Temperature Control Through Heating with FEV-Z**

Control area of FEK sensor with RA-C valve

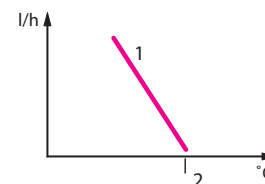


When the knob has been set in the middle position the valve will open at temperatures lower than 22 °C.

A setting in the red zone means the valve will open at a higher room temperature.

A setting in the blue zone means the room temperature will be kept at a value lower than 22 °C.

Heating with FEV-Z sensor



- 1. Waterflow, heating
- 2. Set point on knob

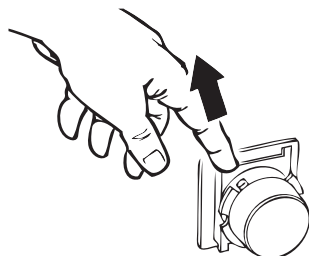
<i>Flow</i>				
Valve size	P-band [K]			
	1	2	3	4
DN 10	30 l/h	60 l/h	90 l/h	120 l/h
DN 15 (low-flow)	30 l/h	60 l/h	90 l/h	120 l/h
DN 15	50 l/h	100 l/h	150 l/h	200 l/h
DN 20	100 l/h	200 l/h	300 l/h	400 l/h

**Limiting the Set Temperature of FEV-Z Sensors**

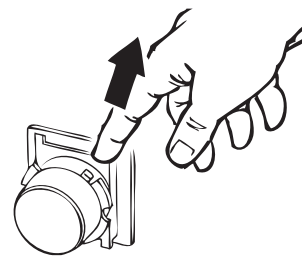
The set temperature of the remote temperature adjuster depends on the sensor type and the valves, which are used with the sensors.

It is easy to limit or lock the set temperature by means of the built-in locking/limiting device.

*Minimum limitation of temperature area*

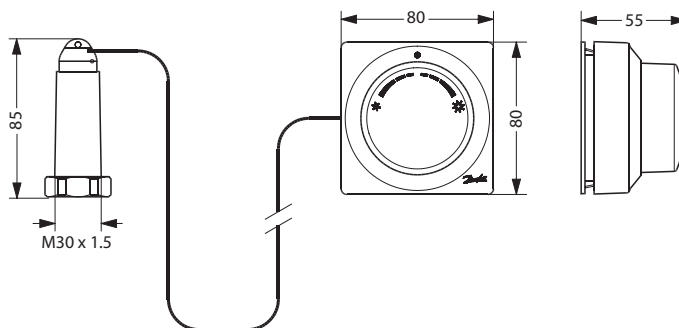


*Maximum limitation of temperature area*



**Dimensions**

*FEV-Z*



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