

## SAF 25 SUN COMPENSATOR - SOLAR SENSOR

### PRODUCT DATA



### APPLICATION

The SAF 25 is an active sensor with standard output signal (0...10 V). The heating consumption of a room depends largely on the outside temperature. This relationship is taken into consideration by the weather-responsive supply temperature controller when regulating the heat supply.

In addition, the heating consumption depends on solar radiation. On bright days, the indoors are also heated by the sun, thereby making it possible to reduce heating and energy. It is therefore recommended that you separate the heating circuit of a building into north and south zones in order to take into consideration the effect of the sun on the south side when heating the building.

As the outside temperature sensor AF 20 can measure only the temperature, it is necessary to employ the SAF 25 solar sensor to register solar radiation and compensate for it.

The heating supply temperature will be reduced to compensate for increasing solar radiation according to the measurements of the SAF 25 solar sensor.

The SAF 25 contains two temperature sensors to register solar radiation. The temperature sensor (3) measures the ambient temperature and the solar sensor (4) measures the radiation from the sun. The difference between the two temperatures represents the additional heating of the building by the sun.

### DIMENSIONS

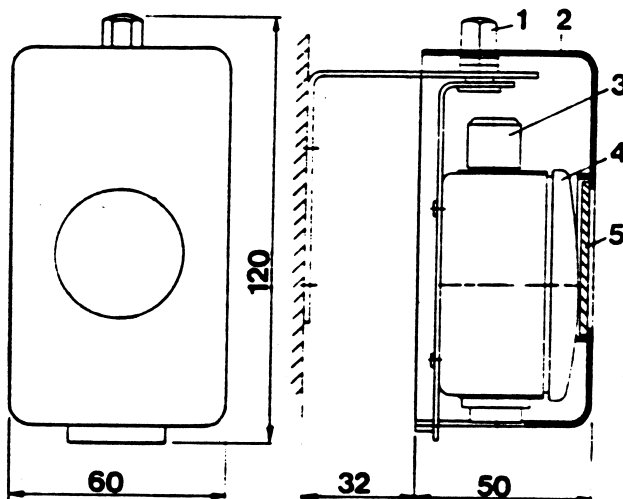


Fig. 1 Dimensions (mm)

### TYPE

SAF25

### MOUNTING

The SAF 25 sensor should be mounted so as to measure the same solar radiation as that of the room to be controlled. Therefore, for sun compensation, a separate sensor has to be installed for each control loop.

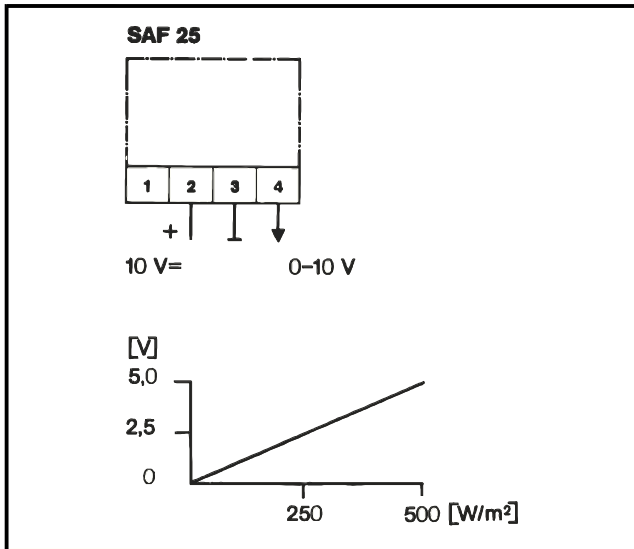
## ELECTRICAL CONNECTION

To access electrical connections, unscrew the nut (1) and take off the cover (2). Then unscrew the lid.

**NOTE:** 5...9 mm cable must be used to ensure the IP34 protection standard.

### WARNING

**The sensor in the lid is connected to the circuit board via two flexible wires. This connection must not be severed.**



Connect + 10 V from the controller with which the sensor is connected to terminal 2, with the return at terminal 3. Terminal 4 is the sensor output and is connected to the appropriate controller input.

## TESTING

Both sensors can be tested by measuring the resistance:  
Solar sensor on terminals 1 – 2  
Temperature sensor on terminals 1 – 3

The sensors must be disconnected from the controller and protected from the sun's rays before measuring the resistance.

Take care when measuring, as the solar sensors may be warm from the sun.

# Honeywell

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