



FUNCTION

KSC is an electronic CO_2 and temperature sensor which is used to control the ventilation requirement and heating/cooling of premises. KSC 1 has an integrated display that shows the current CO_2 and temperature values.

QUICK FACTS

- CO₂ and temperature sensor for airing-cooling-heating
- Also available for duct installation
- Measurement range 0 2000 ppm CO₂
- Integrated display for CO₂ and temperature values
- Has three outputs for various applications
- As an extra option there is a LONTALK[®] connection for communication with a master system or room regulator
- Also available in a simpler version with CO₂ only and without display, KSC 0 designed for the e.r.i.c. system



Figure 1. Placement of the sensor and room unit KSC.



Registered design. The company reserves the right to make design changes without prior notice.

KSCb

DESIGN

KSC is a carbon dioxide sensor of the IR-type configured with an analogue 0-10 V DC output signal proportional to the CO₂-content between 0-2000 ppm. Changes to the measurement range are possible using a computer connection or integrated push buttons. The sensor also features an integrated thermistor for temperature measuring, whose analogue signal can be combined with the CO₂-signal. Normally only the CO₂ -signal is used in the e.r.i.c. system. The relay output should only be connected to a 24 V AC supply that closes at CO₂ > 900 ppm and opens at CO₂ < 800 ppm.

KSC also has an output for heating via radiators. KSC is also available in a simpler version, type KSC 0, for CO_2 measurements only. KSC is also available in a version with LONTALK[®] communications.

MATERIALS AND SURFACE TREATMENT

Enclosure of light beige plastic.

INSTALLATION (See figure 1)

KSC is ideally installed between 1.5 to 2 m above the floor on an optional non sunlit wall in the room. KSC 2, which is intended for duct installation, is fitted in the exhaust air duct as close to the room as possible.

COMMISSIONING

KSC 1 and 2 have pushbuttons that permit adjustment of the preset set values for temperature and CO_2 connected to OUT 1, 2 and 4. By using a special cable to connect to a computer running UIP software, all the set values can be adjusted and checked graphically. KSC 0 has fixed set values that cannot be changed.

MAINTENANCE

Dirty products may only be cleaned by wiping or vacuum cleaning. Further maintenance is not generally needed.

DECLARATIONS

The product is CE marked.

CE declaration and *Environmental Product Declaration* are available from our website.

CONNECTION

KSC is connected to a 24 V AC supply and is fuse protected with max 6 A. All other connections are made according to the wiring diagram for the product that KSC is to be connected to, see KCD, KCW, KRF or VAR. The outputs can be loaded with several actuators under the condition that the resulting load resistance is \geq 5kW.



Figure 2. Wiring diagram KSC.

Electrical data

Supply voltage	24V ±20% AC/DC
Power consumption	3VA
Ambient air tempera- ture	0°C -+50°CC
Reaction time	2 min.
Humidity	0-95% RH (not condensing)
Enclosure class room installation	IP 20
Enclosure class duct installation	IP 65
Load on OUT1-4	>5kΩ
KSC 1 and 2	
OUT1 0-10V DC	400-1000 ppm and p-band 23-25°C
OUT2 0-10V DC	0-2000 ppm
OUT4 heating control 0-10V DC	p-band 19-21°C
Relay	24 V AC max 0.5 A
KSC 0	
OUT1 0-10V DC	0-2000 ppm
OUT2 2-10V DC	0-2000 ppm

Technical data

Diagram 1-3 shows the signal from temp and CO_2 outputs, OUT 1 and 2. On OUT 4 p-band 19-21° applies.

Diagrams 1 and 2

Diagrams 1 and 2 show the actual value, the largest signal is the one placed on OUT 1, not applicable to KSC 0.



Diagram 3

Diagram 3 shows the CO_2 value, in the 0-2000 ppm range, for the output that is normally used in the e.r.i.c. system. For KSC 1 and KSC 2 OUT 2. For KSC 0 OUT 1.



DIMENSIONS



Figure 3. Dimensions.

ORDER KEY

Product designation

Carbon dioxide KSCb -a Model: 0 =room installation without display

1 = room installation

2 = duct installation

LONTALK[®] -design specified in clear text.

SPECIFICATION EXAMPLE

Swegons electronic carbon dioxide sensor type KSCb with following functions:

- CO₂-measurement
- Temperature measurement
- Airing heating cooling regulation
- Integrated display
- LONTALK[®] communications

Type: KSCb 1

xx items