

KNX Combi-Presence Detector 360° [SCN-KP360K3xx.03]

The MDT Combi-Presence Detector 360° is designed for ceiling installation in an installation box. Movements are detected in a diameter of up to 11 m, presence in a diameter of up to 5 m. The indoor environment is monitored with additional sensors for temperature, humidity, CO₂ and VOC mixed gas concentration. The quality of the air can be displayed directly on the presence detector using an air quality status indication light and RGB LEDs or output via objects.



SCN-KP360K301.03

Light channels

Three individual light channels can be configured. Each channel can be assigned 1 - 3 sensors. The follow-up times for day and night, the trigger and presence sensitivity as well as the lock and unlock behaviour can be set individually per channel.

HVAC channel

Compared to the light channels, the separate HVAC channel (heating, ventilation, air conditioning) has adjustable observation windows that can be used to monitor the presence in the room. For example, to control the ventilation of a room.

Alarm channel

The alarm channel has a separate sensitivity setting and is used to detect motion in the event of absence. Monitoring can be activated by object.

Fully automatic, half automatic, manual mode

Fully automatic: The presence detector switches on when motion is detected and switches off again after the end of presence and the set follow-up time. Half automatic: The light must be switched on manually via an object. Regardless of the operating mode, extensive manual operation is possible at any time via the “External button short” and “External button long” objects.

Integrated white LED night light

The integrated white LED night light can be switched automatically via the “day/night” object, at night when motion is detected in a defined light channel, or via an external object.

Separate output objects for day and night

With separate output objects, it is possible to switch or dim different lighting during the day and at night without the use of external logic.

Brightness sensor

With the help of the integrated brightness sensor, different switch-on thresholds can be configured for day and night.

Constant light control

The constant light control dims up to 3 light groups. External influences such as the sunlight or other light sources can therefore be intelligently compensated for. The brightness in the room remains constant and the function helps to save energy.

Scenes

8 scenes are available for the presence detector. Different functions for different light channels can be assigned to each scene. For example, a single scene can be used to lock light channel 1, unlock light channel 2 and set light channel 3 to manual mode.

Logic

Four AND, OR, XOR logics can be activated. Each logic can be linked with up to two internal and up to four external logic objects. Switching commands, scenes, values or 2 bit forced guidance objects can be sent as output objects.

Room climate sensors and controller

In addition to CO₂ and VOC, the Combi-Presence Detector also measures the room temperature and relative humidity. These measured values can be used for internal temperature and air quality control.

Air quality traffic light

The output of the air quality traffic light can be set as a [1 Bit] level, scene, RGB or HSV object. For example, the lighting colour can change automatically as a reminder to ventilate the room. The CO₂ or VOC value can be used as the input variable. The threshold values of the air quality traffic light are adjustable in the unit [ppm] “parts per million” - or in the case of VOCs, alternatively as [IAQ] “Indoor Air Quality” Index. The hysteresis between the traffic light levels can be set in [%], [ppm] or [IAQ]. The IAQ index from 0 up to 500 provides general information about the quality of indoor air, which has an impact on people’s well-being.

RGB LEDs

The RGB LEDs can indicate the status of the air quality traffic light directly on the device. Alternatively, the LEDs can be switched via external objects or signal the motion detection and blocking behaviour of the presence detector.

Air quality control

The air quality control can be activated as a step controller (bit-, binary-, byte-coded) or as PI control. The actual value can be either the CO₂ or the VOC value - in each case in combination with the relative humidity. Up to 10 external sensors can be integrated into the control. The air quality control can be customised to your own requirements, for example the hysteresis, the reset time and the proportional coefficient can be set for PI control. The setpoints or ventilation levels can be different for day and night. The control can be overridden at any time via a lock object.

Room temperature controller with temperature sensor

The setpoints for “Comfort”, “Standby” and “Night” can be configured independently of the “Basic comfort” setpoint. This ensures a high level of compatibility with many visualisations. The setpoint shift can be set classically via 1 Bit (step), 1 byte (counting pulses) and via 2 bytes (temperature difference and absolute values). This also ensures a high level of compatibility with a wide range of visualisations. Set setpoints and the operating mode can be saved and restored in the event of a bus voltage failure.

Lock heating/cooling mode when windows are open

If, for example, a window is opened for ventilation in winter, the controller locks the heating mode and switches to frost protection mode. The heating mode is reactivated as soon as the window is closed. Heat protection is activated in cooling mode.

Reference control via outdoor temperature

In cooling mode, it is possible to adjust the setpoint via the outdoor temperature. This raises the setpoint value linearly in order to limit the temperature differences between the outdoor and indoor temperatures.

Limiting the flow temperature

If the flow temperature is measured with an external temperature sensor and linked by object, the maximum flow temperature can be limited.

Additional level

To shorten the heating phases, the temperature controller has an additional level - either as 2-point control or as PWM (switching PI control).

Plain text diagnosis

The plain text diagnosis outputs the current status of the temperature controller via a 14 byte object. Errors can be located very quickly, which makes commissioning much easier for the system integrator.

Updateable via DCA app

If necessary, the device can be updated using the MDT update tool (DCA). The download is available free of charge at www.mdt.de and www.knx.org.

Long Frame Support

The device supports “long frames” (longer telegrams). These contain more user data per telegram, which significantly reduces the programming time.