

LOGIC MODULE EX-13

For lighting and ventilation control

Installation instructions

Order. no. 13164

1. Description



Lighting control in one room

EX-13 is a logic module for differentiated control of lighting using SRN-2000 EF presence detectors. In **one room**, the ventilation and the lighting can be controlled in four different levels/groups. With the EX-13 complete lighting can also be switched on and the fans stopped in the event of a fire alarm or burglary alarm.

Lighting control in two rooms

The EX-13 can also be set to control **two separate rooms**, each with a presence detector. In each room two lighting levels/groups can be handled. In divisible rooms (e.g. gymnastic halls

with folding partitions) a magnetic contact can switch between joint or individual function in the two halves of the room. Each lighting group can be set for **automatic** or **manual** switch-on or for **external control**. A **photo cell** can be connected which automatically **blocks** switch-on of the basic light if the natural light is sufficient.

When the presence ceases the lighting is automatically switched off after the set time delay (set in the detector). The lighting can also be switched on and off manually.

Ventilation

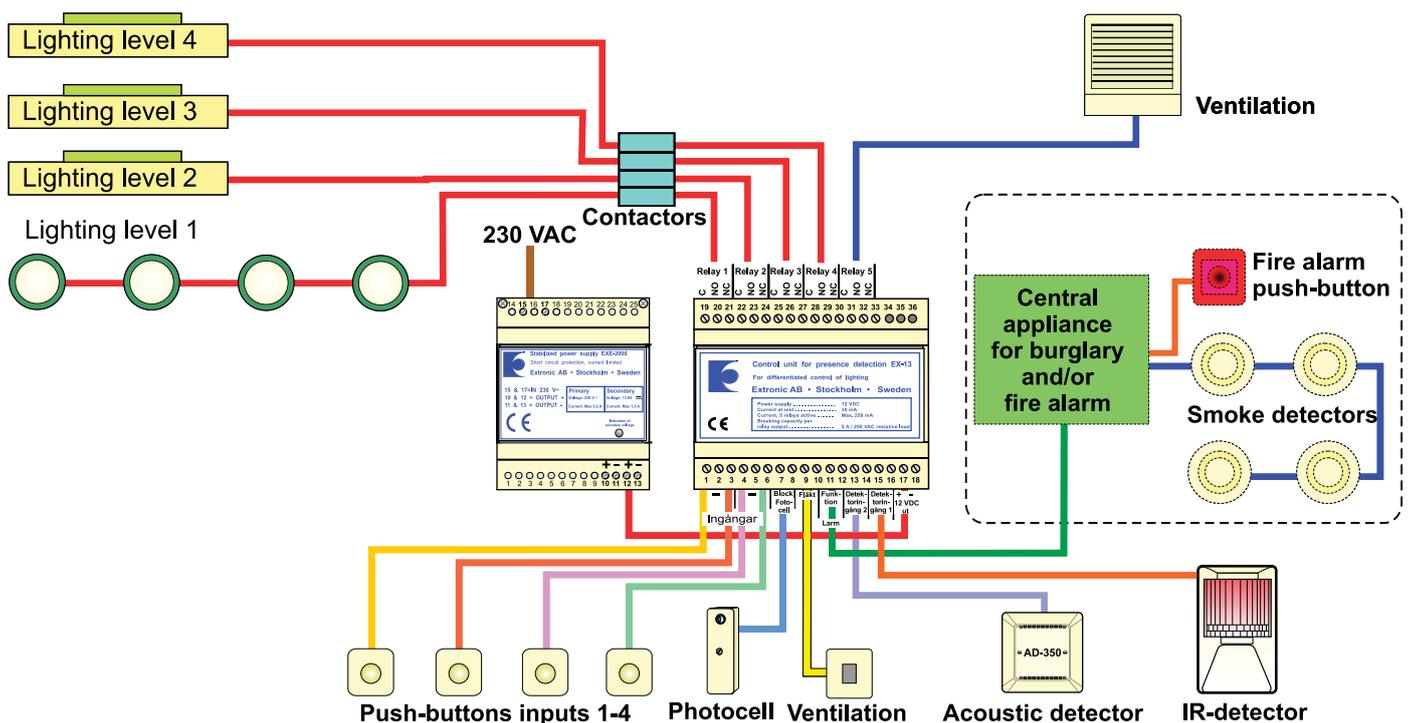
The ventilation is controlled automatically via a separate "Delay Out" output. A settable turn-on delay prevents the ventilation from starting in the event of a brief presence. When the presence ceases the fans run for a set period of turn-off delay so that the outward ventilation of the room is guaranteed. The ventilation can also be started manually using an impulse push-button, but it cannot be turned off manually.

5th lighting group

The "Delay Out" output can also be used for a 5th lighting group with automatic switch-on, or to completely turn off the lighting in applications using the LS-2 level switch after the set turn-off delay.

All settings are simply performed using straps, and the function is indicated with LEDs at the inputs and outputs.

Use separate contactor for connection of fluorescent lights and large inductive loads.

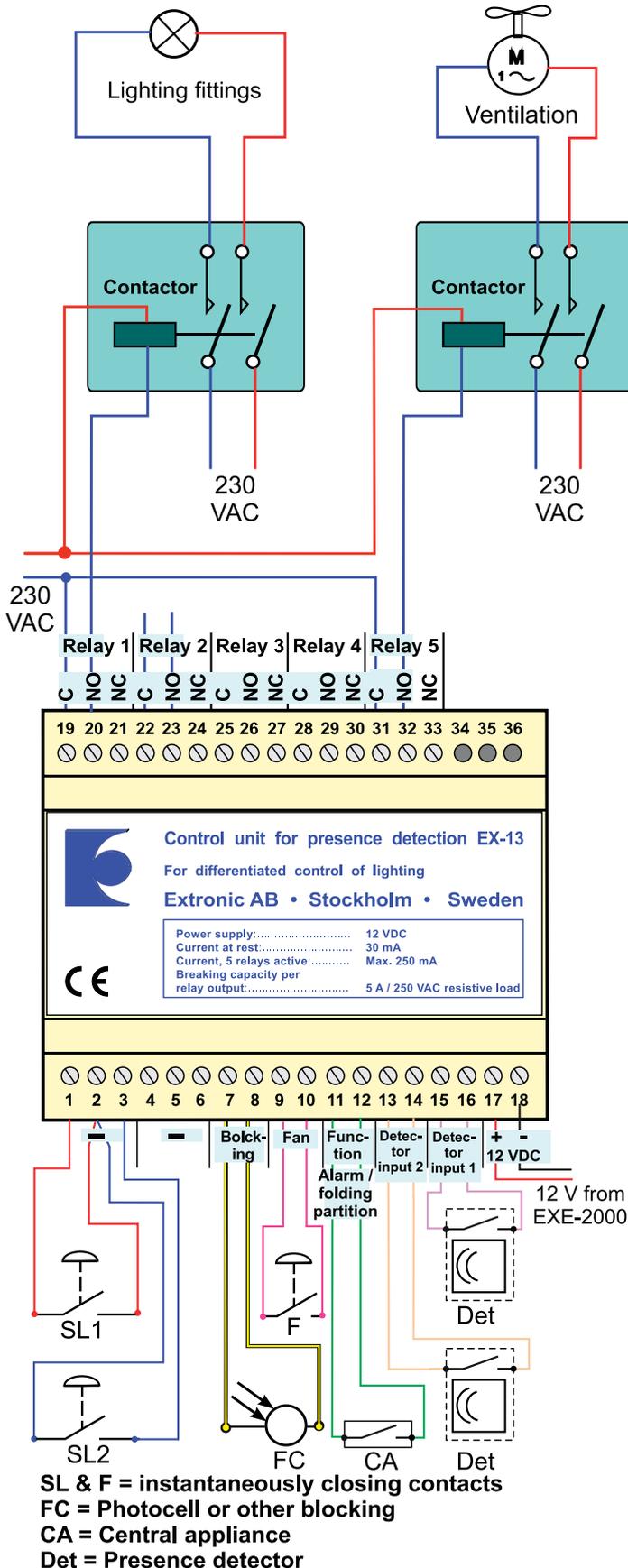


2. Mounting - connection

The EX-13 is mounted on a DIN bar in a standard encapsulation.

The connection is set up in accordance with the illustration below and the following description.

Use separate contactor for connection of fluorescent lights and large inductive loads.



EX-13inkE.cdr

Inputs 1 - 4 (contact units 1-6): Instantaneously closing contacts which switch the lighting on and off are connected to these.

NB: Several instantaneously closing contacts can be connected to each input in parallel.

A photocell with closing contact (order no. 13100) can be connected to the blocking input (Start Block).

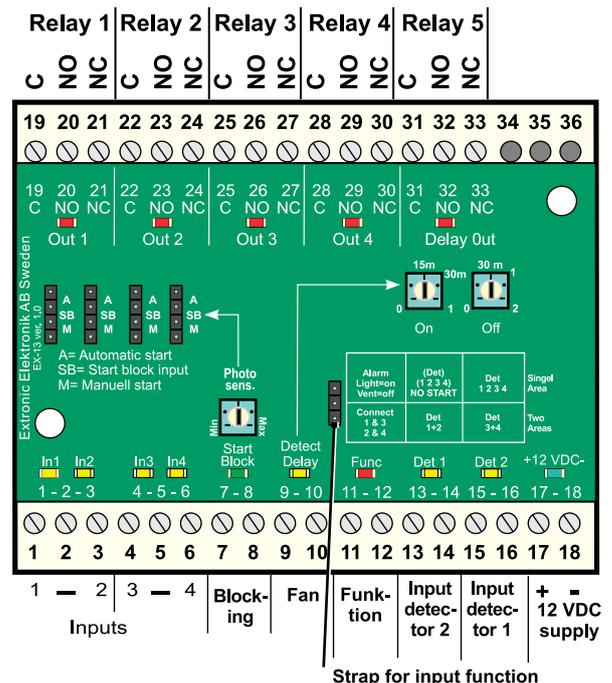
Fan input (Detect Delay): An instantaneously closing contact can be connected to this for manual starting of the ventilation fan. NB: The ventilation cannot be switched off manually.

Function input (Func): A central appliance for burglary and/or fire alarm with closing function can be connected to this. The "input function" strap must be in the "single area" position. In the event of an alarm full lighting is switched on and the ventilation fans are switched off. See also "3. Setting", item 3. A closing contact can be connected to the function input (Func), and in the "Two Areas" function position it can be used to connect inputs 1 and 3 as well as 2 and 4, so that the lighting in both rooms can be controlled from one contact (input 1 or 3, or 2 or 4) (usable, for example, in gymnastics halls with folding partitions).

Detector input 1 (contact units 15-16): a presence detector with closing function is connected to this. In function position "Two Areas" it controls the lighting which is connected to channels 3 and 4. In function position "Single Area" it controls all lighting which is connected to channels 1-4.

Detector input 2 (contact units 13-14): a presence detector with closing function is connected to this. In function position "Two Areas" it controls the lighting which is connected to channels 1 and 2. In function position "Single Area" the lighting is not switched on by the connected detector, but lighting which is on is kept switched on. (Usable, for example, for connection of acoustic auxiliary detector AD-350).

12 VDC: Voltage feed, e.g. from EXE-2000, is connected to this.



3. Setting

Setting of EX-13 for desired function is performed using straps and potentiometers (under the lid of the encapsulation) as follows:

1. The input function is selected by means of a strap. When EX-13 is to be used for lighting control in one room one selects “single area”, or in two separate rooms one selects “two areas” and two presence detectors.

In the “single area” position one main detector must be connected to detector input 1. In the event of detection using this detector, the lighting is switched on. If a detector (IR or acoustic detector) is also connected to detector input 2, it does not switch on the lighting in the event of detection, but lighting which is already on is kept switched on for as long as detection takes place.

In the “single area” position the “function” input is also affected by the position of the strap. A burglary alarm or fire alarm (closing output) can be connected to the function input. In the event of an alarm, all lighting is then switched on and the ventilation is switched off (output 5). See also “3. Setting”, item 3.

In the “two areas” position, two separate rooms can be controlled individually by two detectors.

If an EX-13 is used in a sports hall with a folding partition, a breaking magnetic contact can be connected to the “function” input and can detect whether the partition is open or closed. If the partition is open (magnetic contact closed) the lighting is switched on in both rooms even if only one detector detects presence.

Without a strap, EX-13 can be used for control of the lighting and the ventilation in divided rooms where a magnetic contact detects a folding partition’s position. If the strap is absent the lighting can be switched off and on individually (in accordance with the outputs’ programming) in the halves of the room even when the partition is open. If the partition is closed the control functions separately for each half of the room.

2. Relay outputs 1-4 are controlled individually using four straps. Each output can be programmed in three ways as follows:

- A =** Automatic start; the lighting is switched on automatically in the event of detection.
- SB =** Blocking (Start Block); the lighting is blocked by the blocking input, e.g. a photocell with closing contact function. If the input is not blocked the lighting is switched on automatically upon entry into the room.
- M =** Manual, the lighting is never switched on automatically. Switch-on occurs with connected instantaneously closing contact.

Without a strap there is a fourth function, “buy time”, with the following function: The lighting is switched on manually and stays on until presence is detected. When detection ceases the lighting is switched off after the delay which is set in the detector.

With outputs 1-4, the lighting can be switched on and off manually using instantaneously closing contacts connected to each input.

3. Relay output 5 (Delay out)

Output 5 is for ventilation or lighting control and has two time functions which are set using two potentiometers.

Setting is performed by the relevant potentiometer being set to the requisite delay. “On” is turn-on delay and “Off” is turn-off delay.

The ventilation can also be started manually with an instantaneously closing contact connected to the “Detect delay” input (fan).

NB: The ventilation cannot be switched off manually.

Switch-off delay for the ventilation:

To avoid start-up of the ventilation taking place in the event of brief presence in the room there is a delay time which can be set to between 0 and 60 minutes. The output is not activated until the presence detector has detected constant presence for the entire delay period.

Turn-on delay for lighting:

When an alarm is connected or when the “Delay Out” output is used for control of the lighting (e.g. in applications with LS-2), the “ON” potentiometer must be set to zero.

Turn-off delay:

To guarantee outward ventilation of the room after a prolonged presence, a turn-off delay of between 0 and 2 hours can be set.

4. Photocell

If a photocell (order no. 13100) is connected to the “Block” input to block switch-on in the event of daylight, the sensitivity can be set using the “Photocell Sens” potentiometer. For increased sensitivity the potentiometer should be turned clockwise. Increased sensitivity means that less powerful light is needed for blocking to occur.

4. Technical specification

Spänning:	12 VDC
Current:	30 mA at rest 250 mA max, all relays active
Ström aktiva reläer:	250 mA @13,8V
Resistive load:	Max 5 A/relay, resistive load.
Dimensions:	105 x 90 x 75 mm (6 modules) Standard encapsulation for mounting on DIN bar.