

Contact Closure & Analogue Input Information



- Use Helvar 440, 444 & 942
- Latching Contact
- Momentary Contact
- Variable Analogue with 942 Only
- Input Allows Third Party Interfacing

Further Reading:

Data Sheet	7860042
	7860072
	7860089
Installation Sheet	7860007
	7860051
	7860135

Overview

Contact closure is the normal term used to describe a way to interface standard switches, relays or PIR's into a lighting control system. The contact closure itself is typically voltage free and requires a latched or momentary action of the switch to trigger an event within the control system. The event could be the recall of a specific level, scene, or conditional statement.

Probable scenarios could involve the security alarm system closing a relay on detection of intruders that would subsequently drive all lighting to full output and lock-out the control plate functions. This could be used to further close a number of motor relays within the system that then operate security shutters.

Analogue control is used to describe a way of interfacing with an external source such as a temperature sensor, photocell, or wind speed sensor. The input would typically be a variable 0-10VDC control signal, and used to trigger an action, that could be the direct drive of the artificial lighting or a change in thresholds that recalls a scene or conditional statement.

Actions may involve switching external lighting on or off based on a threshold detected by the photocell and its relationship to the available daylight.

Considerations

The main consideration is location of the interface unit and associated cable runs. A maximum distance from "switch" to interface should be 50 metres (15 centimetres when using the Mini Input Unit (444)). This is to ensure reliable detection of the control input, and subsequent system action.

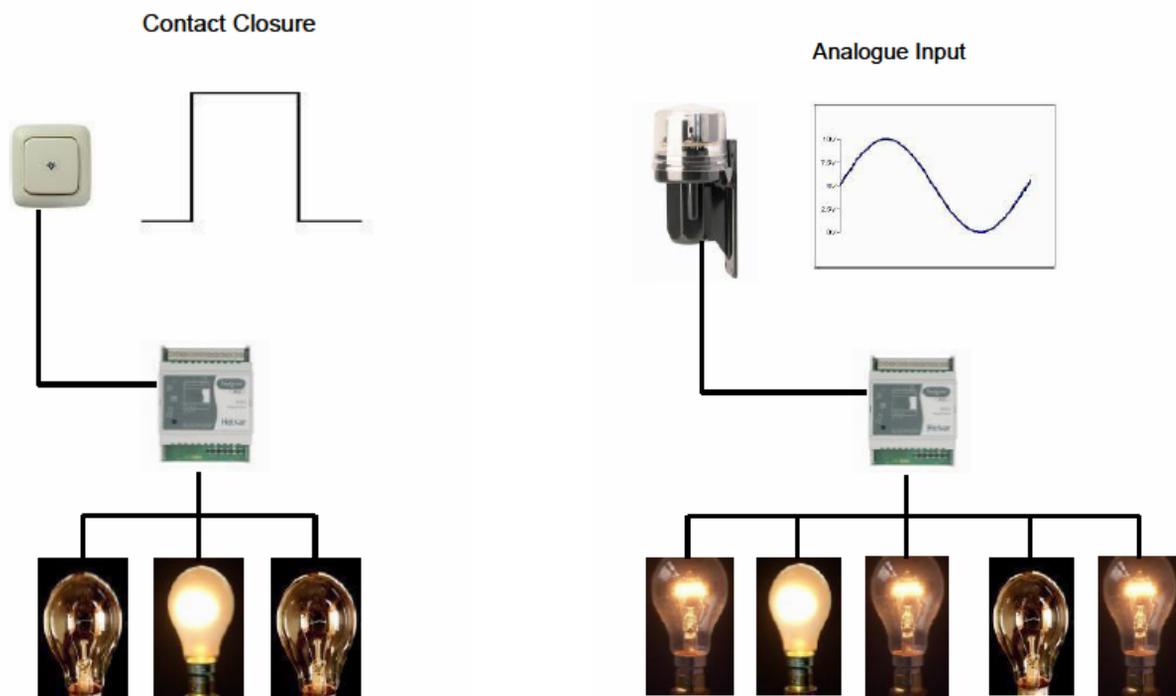
With analogue control signals, the maximum distance from the sensor to interface is again 50 metres. However, the concern here is voltage drop of the 0-10VDC signal, so particular attention should be given to the cable cross sectional area and input impedance. A minimum of 0.5mm² should therefore be used with a maximum size of 4.0mm².

For the analogue control an external power source must be used, as this is not provided from the unit. A suitable device is the Helvar 402 Power Supply Unit.

In both cases a 50mS response or de-bounce period is used for activation of the input, a shorter time will result in the input signal being missed and no subsequent action being carried out.

Exact functionality is determined by the desired end effect and is generally not limited by the product or by the programming capabilities within the system.

Control Flow



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