



SYNERGYR[®]

Control Module

AEK84

Electronic control unit for the control of electrothermal actuators by means of low-voltage control signals.

Use

The control module is a component of the SYNERGYR control and billing system. It is required in connection with the

- WRI80 control and heat meter interface, or
- WRV84... or WRV85... control and heat cost allocation valve

For the field of use of the SYNERGYR[®] system, refer to Data Sheets N2800 to N2803 (System Overview).

Function

The control module actuates a changeover contact depending on the DC 0 V / DC 12 V low-voltage control signal delivered by the WRI80 control and heat meter interface or the WRV84... / WRV85... control and heat cost allocation valve. The changeover contact controls the electrothermal actuator of the zone valve which ensures individual room temperature control during occupancy periods. When using the WRI80, the changeover contact can also be used for the control of an apartment pump.

Ordering

When ordering, please give type reference **AEK84**.

Equipment combinations

Control of the zone valve with WRV84..., WRV85... or WRI80 requires an AEK84 control module. If an apartment pump shall be controlled via the control output of the WRI80, a control module is required also.

Technical design

The low-voltage control signal at the input terminals R1–MD operates a changeover contact with the output terminals L / Y2 / Y3.

- When there is no voltage present at the input (DC 0 V), the contact for the electrothermal actuator or apartment pump is in position Y3
- When the voltage of DC 12 V is fed to the input, the contact for the electrothermal actuator or apartment pump is in position Y2

Mechanical design

The control module consists of a base, which carries the electronic components, and a cover. The base is suitable for wall mounting with the help of screws, or snaps on DIN mounting rails.

For wiring, both the rear and the underside of the module are provided with knockout holes for cable entry glands PG11 or rubber grommets.

The printed circuit board with the electronic components also carries the connection terminals. The terminals for the input signal are separated from the terminals of the changeover contact in compliance with the directives for extra low-voltage.

Engineering notes

The local regulations for electrical installations must be observed.

The operating voltage for AC 24 V actuators must not be drawn from the AC 24 V power supply of the SYNERGYR® building bus.

Mounting notes

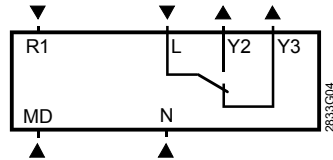
When choosing the mounting location, the environmental conditions must be observed. The control module is designed for mounting on a

- flat surface such as a wall, inside a control panel, or similar
- DIN rail

Technical data

General unit data	Switching capacity of changeover contact	
	Nominal voltage	AC 24...230 V
	Nominal current	0.02...2 (2) A
	Control voltage	DC 0 V / DC 12 V
	Perm. ambient temperature	
	Transport and storage	–25...+65 °C
	Operation	0...50 °C
	Length of control lead to the actuator	max. 2.5 m
Weight	0.20 kg	
Safety data	Degree of protection on a flat, vertical wall	IP54 to EN 60529
	Safety class	II to EN 60730
Standards	Product standard	EN 60730-1
	CE conformity to Low voltage directive	2006/95/EC

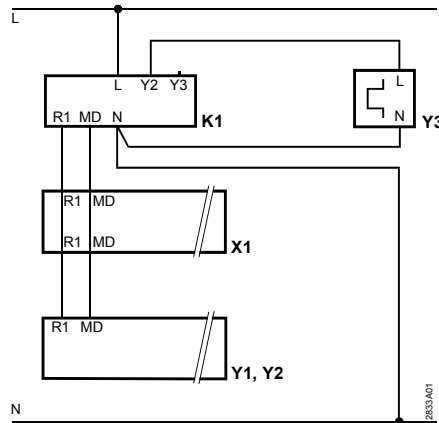
Connection terminals



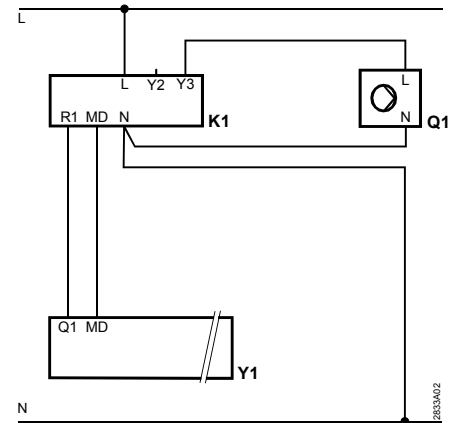
- MD Ground control signal
- R1 Control signal
- Y2 Switching contact (R1 = DC 12 V)
- Y3 Switching contact (R1 = DC 0 V)
- L Live conductor
- N Neutral conductor

Connection diagram

Actuator:

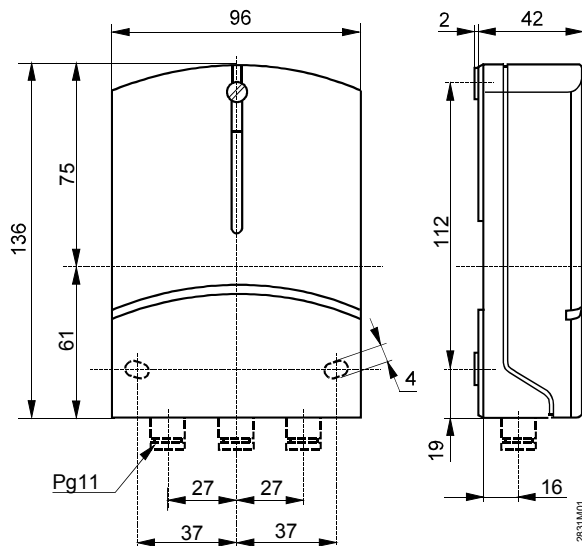


Apartment pump:



- K1 Control module AEK84
- X1 Conduit box ALW84
- Y1 Control and heat meter interface WRI80
- Y2 Control and heat cost allocation valve WRV84... / WRV85...
- Y3 Electrothermal actuator ST...21 / ST...71
- Q1 Apartment pump

Dimensions



Dimensions in mm