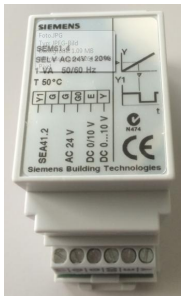
Signal converter SEM61.4



Input: **continuous analog signals DC 0… 10 V, or two-position signals DC 0/10 V**

Output: **pulse/pause two-position signals AC 24 V**

Use

The signal converter is used in HVAC plants for the control of heating elements

It converts DC 0…10 V or DC 0/ 10 V output signals (e.g. from a controller) to AC 24 V pulse/ pause control signals for current valves.

Ordering

When ordering, please give name and type reference: signal converter **SEM61.4**.

Equipment combinations

The input of the signal converter can be connected to any type of control unit operating on AC 24 V and delivering continuous output signals of DC 0… 10 V or DC 0/10 V.

The output of the signal converter can be connected to the following type of current valve:

Name	Type reference	Data sheet
Current valve	**SEA41.2**	4936

Mechanical design

The signal converter consists of a two-sectional plastic casing. The base carries the printed circuit board and the terminal block. The connection terminals are easily accessible from the front. If required, they can be protected by a cover (refer to “Accessories”)

At the rear of the base, there is a snap-on facility for fitting the signal converter to DIN mounting rails.

The casing snaps on the base. The front of the casing carries the type field, the connection diagram and the function diagram.

Accessory (optional)

Name	Type reference
Terminal cover (two pieces)	**ARG81.1**

Engineering notes

To generate the operating voltage, a transformer for safety extra low voltage (SELV) with separate windings and 100% duty is required. When sizing it, the signal converter's power consumption must be taken into consideration.

Terminal G0 of the signal delivering device (e.g. controller) and terminal g0 of the signal converter must be interconnected via the common system neutral (SN) (refer to "Connection diagram").

The permissible line lengths between the controller and the signal converter must be observed (refer to "Technical data").

Up to 20 current valves SEA31.2 can be connected to one signal converter.

Mounting and installation notes

Mounting location: on a wall or in a control panel.
Mounting method: the signal converter snaps on DIN mounting rails.

If used in a dirty or dust environment, the terminal cover **ARG81.1** should be fitted (refer to "Accessory").

The local regulations for electrical installation must be complied with.

Disposal

The devices are considered electronics devices for disposal in terms of European Directive 2012/19/EU and may not be disposed of as domestic waste.

- Dispose of the device via the channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Warranty

Technical data on specific applications are valid only together with Siemens products listed under "Equipment combinations". Siemens rejects any and all warranties in the event that third-party products are used.

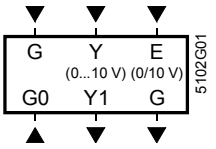
Technical Data

Operating voltage	AC 24 V ±20 % (SELV)
Frequency	50/60 Hz
Power consumption	1 VA
External supply line protection (EU)	Fuse slow max. 10 A or Circuit breaker max. 13 A Characteristic B, C, D according to EN 60898 or Power source with current limitation of max. 10 A
Input signals	
Terminal Y	DC 0...10 V, ±0,1 mA
Terminal E	DC 0/10 V, ±0,3 mA
Switching threshold	DC 8,5 V
Output signal (Terminal Y1)	AC 24 V, max. 0,5 A
Pulse/pause cycle time	35 s
Perm. line length (terminals E and Y)	
Copper-cable ∅ 0,6 mm	40 m
Copper-cable 1,0 mm^2	130 m
Copper-cable 1,5 mm^2	200 m
Copper-cable 2,5 mm^2	300 m
Connection terminals for	1 x 2,5 mm^2
Degree of protection	
Protection class	III according to EN 60 730-1
Protection degree of housing	
without terminal cover	IP 20 according to EN 60 529
with terminal cover	IP 40 according to EN 60 529
Environmental conditions	
Operation	to IEC 721-3-3
Climatic conditions	Klasse 3K5
Temperature	−5...+50 °C
Humidity (non-condensing)	5...95 % r. F.
Transport	nach IEC 721-3-2
Climatic conditions	Klasse 2K3
Temperature	−25...+70 °C
Humidity	<95 % r. F.
Mechanical conditions	class 2M2
Directives and Standards	
Product standard	EN 60730-1 Automatic electrical controls for household and similar use
Electromagnetic compatibility (Applications)	For use in residential, commerce, light-industrial and industrial environments
EU Conformity (CE)	CM2T5102xx *)
EAC conformity	Eurasia conformity
Weight (excl. packing)	ca. 0,065 kg

*) The documents can be downloaded from http://siemens.com/bt/download.

Diagrams

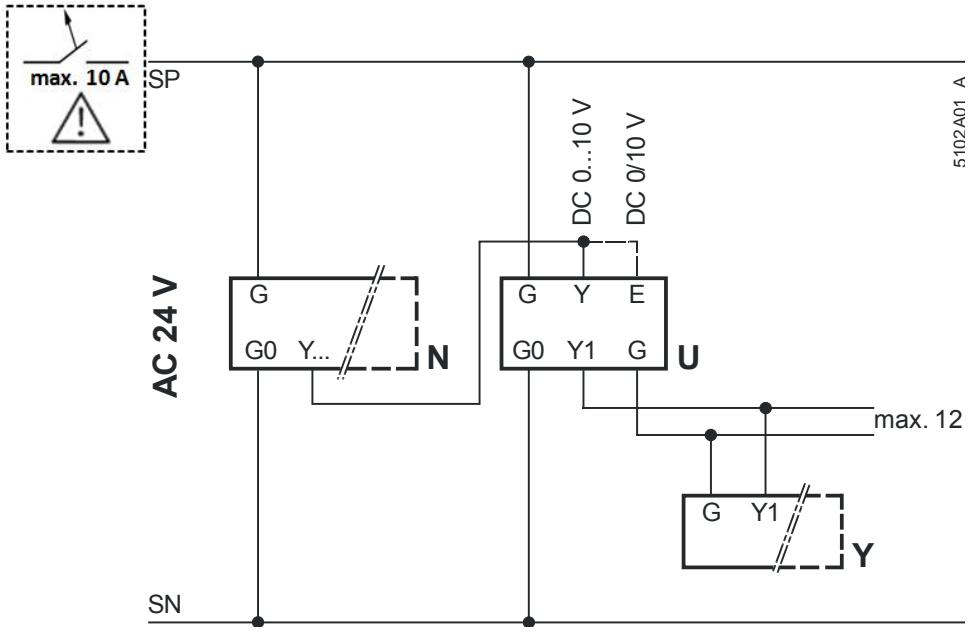
Connection terminals



Legend

G, G0	System voltage (SELV) AC 24 V
Y	Analog signal input DC 0...10 V
E	Digital signal input DC 0/10 V
Y1	Pulse/pause signal output AC 24 V

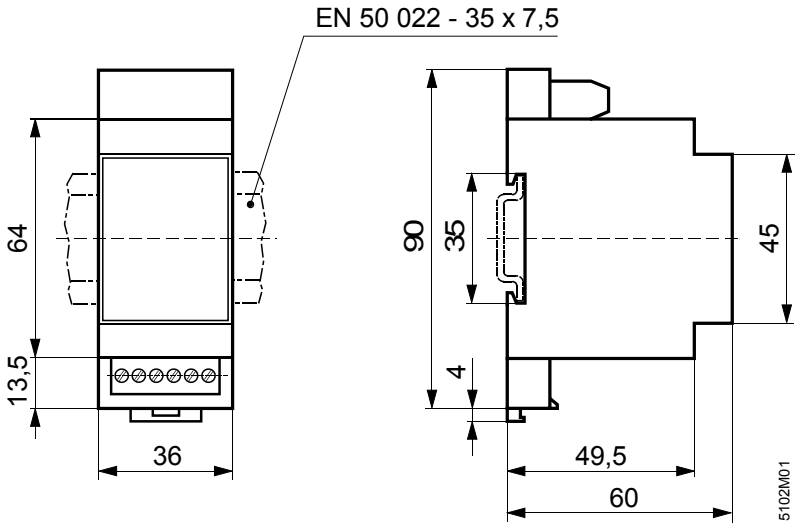
Connection diagram



Legend

N	Controller (RWF61...; RWI65..., RCE84... etc.)
U	Signal converter SEM61.4
Y	Current valve SEA41.2

Dimensions



Dimensions in mm

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