

Interface

SEZ81.9



Interface between 3-point controllers and modulating magnetic valves

- **Input: 3-point AC 24 V with run time of 0.5 ... 5 minutes**
- **Output: DC 0 ...10 V or DC 0 ... 20 V phase cut**
- **Operating range 40 ... 80 % or 0 ...100 %**
- **Inputs and outputs short-circuit-proof and protected against polarity reversal**

Use

The interface is used to drive modulating magnetic valves via the output signal from a 3-point controller in controlled systems where the valve positioning time is not critical (e.g. when modernising a heating system which incorporates 3-point controllers).

Function

The 3-point output signal from the controller is converted by the SEZ81.9 interface into a proportional DC 0 ... 20 V phase cut or DC 0 ...10 V signal.

The interface requires an operating voltage of AC 24 V.

All terminal connections are short-circuit-proof and protected against polarity reversal.

Signal run time

The maximum running time of the 3-point signal (0.5 ... 5 minutes) can be selected on the interface module. The running time setting is set externally by adjusting a rotary switch on the interface housing. This switch is adjacent to the output terminals and is operated with a screwdriver. The output signal is proportional to the actual running time, based on the maximum running time setting.

The intensity of the LED display indicates the level of the output signal.

Operating range

- For magnetic valves without position-control, the operating range is 40 ... 80 % of the positioning signal. This range is factory-set via switch S1.
- For position-controlled magnetic valves or actuators, the operating range can be set with switch S1 to match the positioning range from 0 ...100 %.

Ordering

When ordering, please specify the quantity, product name and type code.

Example: 2 Interfaces, type SEZ81.9

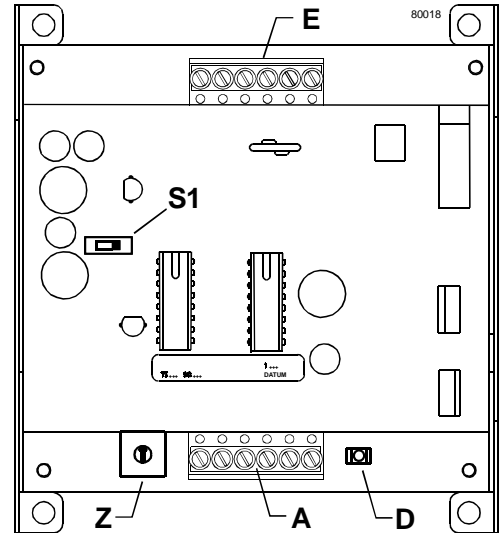
Mechanical design



The interface comprises a two-part metal housing consisting of a base and cover and a printed circuit board.

The printed circuit board accommodates the elements for adjustment and display and the connection terminals.

The rotary switch for setting the run time, and the LED output signal indicator are fitted externally on the housing cover.

Switch S1 for the operating range is located under the cover.



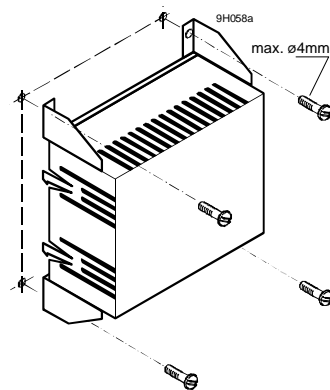
- A Output terminals
- E Input terminals
- D Output signal LED
- S1 Operating range 40 ... 80 %
Operating range 0 ...100 % 
- Z Running time setting 0.5 ... 5 minutes 

Mounting notes

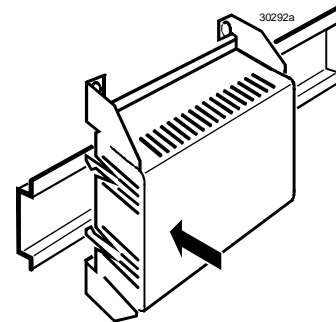
The interface can be fixed with four screws to a flat surface (e.g. the base plate of a control panel) or mounted on a DIN / EN rail.

- The interface can be mounted in any orientation
- The connection terminals must be freely accessible
- To dissipate the heat generated while the interface is in operation, adequate air circulation must be ensured

Surface mounting



Rail mounting



Technical data

Power supply	Operating voltage	AC 24 V ± 20 %, low voltage SELV
	Frequency	50 Hz
	Power consumption	
	– Without connected field devices	2 VA
	– With connected field devices	Max. 45 VA
Input	3-point	
	Contact voltage	AC 24 V
	Contact current	Max. 5 mA
	Running time	0.5 ... 5 minutes
Outputs	DC 0 ... 20 V phase cut:	
	Maximum power	40 VA
	Max. output voltage	DC 20 V phase cut
	DC 0 ... 10 V:	
	Min. load impedance	5 kOhms
	Max. output voltage	DC 11 V
Connections	Connection terminals	Screw terminals for max. 2 x 1.5mm ²
Weight and dimensions	Weight (including packaging)	0.36 kg
	Dimensions	See "Dimensions" diagram
Safety	Protection standard	IP20 to IEC529
Ambient conditions	Operation	To IEC 721-3-3
	– Climatic conditions	Class 3K5
	– Ambient temperature	0 ... 50 °C
	– Humidity	Max. 85 % rh
	Transport	To IEC 721-3-2
	– Climatic conditions	Class 2K3
	– Ambient temperature	– 25 ... 65 °C
	– Humidity	Max. 95 % rh
Conformity	Meets the requirements for CE marking:	
	EMC Directive	89/336/EWG
	Low Voltage Directive	73/23/EWG

Connection terminals

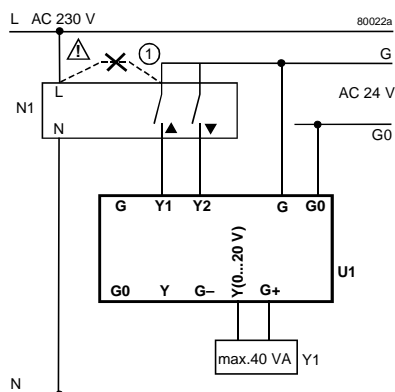
Input side

80020			
	G0	System neutral	
	G	System potential	AC 24 V
	Y2	Control signal "Close"	AC 24 V
	Y1	Control signal "Open"	AC 24 V
	G	System potential	AC 24 V

Output side

80021			
	G0	System neutral	
	Y	Signal	DC 0 ... 10 V
	G-	Negative supply (to phase cut)	
0... 20 V	Y	Control signal	DC 0 ... 20 V phase cut
	G+	Positive supply (to phase cut)	

Connection diagrams

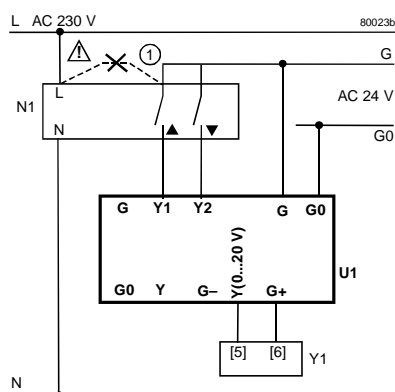


N1: Controller, e.g. SIGMAGYR

① Remove wire bridge

U1: **SEZ81.9 interface**

Y1: Magnetic valve without positioning control, max. 40 VA (e.g. M3P50GX with ZM110)

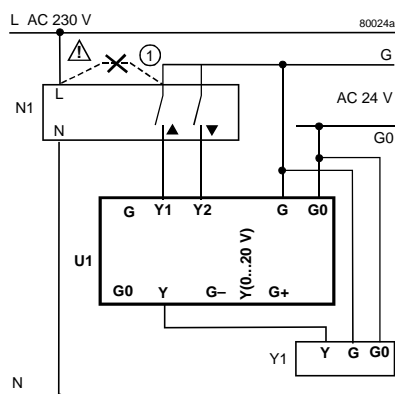


N1: Controller, e.g. SIGMAGYR

① Remove wire bridge

U1: **SEZ81.9 interface**

Y1: Magnetic valve without positioning control, max. 40 VA (e.g. M3P50F/A with ZM100/A)
Caution: Terminals [5] and [6] are NOT interchangeable.



N1: Controller, e.g. SIGMAGYR

① Remove wire bridge

U1: **SEZ81.9 interface**

Y1: DC 0 ...10 V controlled device or magnetic valve above 40 W, (e.g. M3P80F/A with ZM200/A).

Caution: In addition, the operating voltage for the valve must be re-routed, and terminals [5] and [6] must not be used.

Dimensions

All dimensions in mm

