



SEZ91.6

Interfaces

SEZ91.6 SEZ91.PU-K4

Interface between phase cut controllers and valves or actuators

- SEZ91.6 input: DC 0 ... 20 V phase cut
- SEZ91.PU-K4 input: Signal from PU-K4 / RDN2 / RDE2
- SEZ91.6: Two operating ranges, for magnetic valves and damper actuators
- DC 0 ...10 V output
- Inputs and outputs short-circuit-proof and protected against polarity reversal

Use

SEZ91.6

The interface is used when operating DC 0 ...10 V valves or damper actuators (e.g. magnetic valves or OpenAir damper actuators) in conjunction with controllers with a DC 0 ... 20 V phase cut output signal.



Caution

The SEZ91.6 interface is **NOT suitable** for use in systems incorporating the PU-K4 positioning potentiometer and/or any RDN2 or RDE2 controllers.

SEZ91.PU-K4

The interface is used when operating DC 0 ...10 V damper actuators (e.g. OpenAir actuators) in conjunction with controllers with a DC 0 ... 20 V phase cut output signal **and an additional PU-K4**.

The SEZ92.PU-K4 interface **must** be used in systems incorporating the PU-K4 positioning potentiometer and/or any RDN2 or RDE2 controllers.

- The SEZ91... interfaces are used in retrofit projects.
- An operating voltage of AC 24 V is required for the interface.
- All terminal connections are short-circuit-proof and protected against polarity reversal.

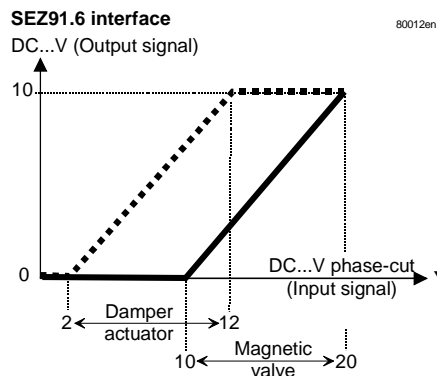
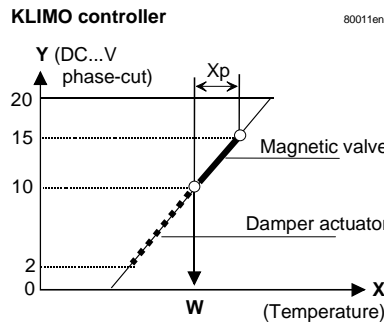
SEZ91.6

The SEZ91.6 is used as an interface between existing **phase-cut controllers** (e.g. KLIMO) and controlled devices with a standard DC 0 ... 10 V signal.

The proportional DC 0 ... 20 V phase-cut signal from **the controller** is converted into a DC 0..10 V signal.

When used in conjunction with **magnetic valves**, the KLIMO controller has an operating range of DC 10 ... 15 V phase-cut. In conjunction with **damper actuators**, the operating range is DC 2 ... 10 V phase cut.

These two differing operating ranges are selected via the two separate input terminals "Y-Valve" and "Y-Damper actuator", eliminating the need to modify the controller parameters. The principle is the same for the position-controlled magnetic valves.



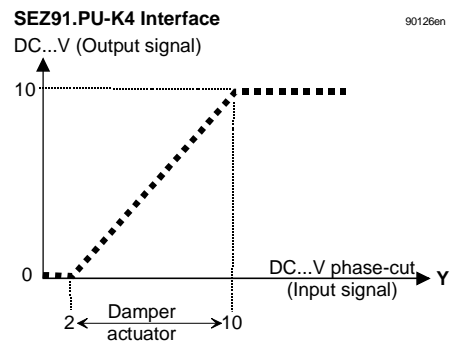
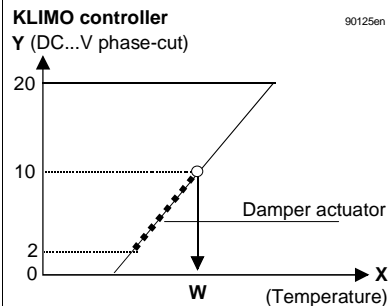
The effective operating range of the SEZ91.6 interface represents a slight adjustment in relation to the KLIMO controller data, but this does not affect the correct functioning of any of the devices involved.

SEZ91.PU-K4

The SEZ91.PU-K4 is used as an interface between existing **phase-cut controllers with a PU-K4** (e.g. KLIMO) and controlled devices with a standard DC 0..10 V signal.

The proportional output signal of **the PU-K4** is converted into a DC 0..10 V signal.

When used in conjunction **with damper actuators**, the KLIMO controller has an operating range of DC 2 ... 10 V phase cut.



Ordering

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

Example: 3 interfaces, type SEZ91.6

Mechanical design

- The plastic housing accommodates the printed circuit board and the terminal connections.
- The housing is sealed with a shrink-on sleeve.
- The SEZ91.6 has a **white** type-code label.
- The SEZ91.PU-K4 type-code label is **blue**.

SEZ91.6 only

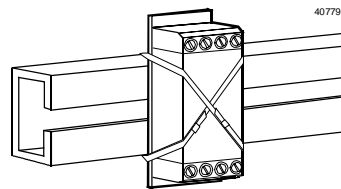
The two different operating ranges are selected by connection to the relevant input terminal.

Mounting

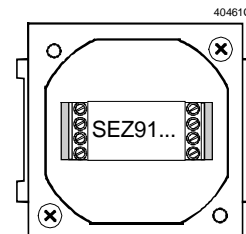
Provided the interface is mounted in a dry environment, it can be located wherever there is sufficient space and in any orientation

- In the control panel on DIN rails or in the trunking
- Unit-mounted
- In ceiling voids
- In remote distributor boxes

Mounting on DIN rails



Mounting in distributor boxes



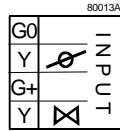
Technical data

Supply voltage (output side)	Operating voltage	AC 24 V \pm 20 %, Low voltage, SELV
	– Frequency	50 / 60 Hz
	Power consumption excluding field devices	0.5 VA
Inputs SEZ91.6	DC 0 ... 20 V phase cut for magnetic valves	
	– Load impedance	2 kOhm
	– Max. voltage (phase cut)	DC 30 V
	– Operating range	DC 10 ... 20 V phase cut
	DC 0 ... 20 V phase cut for damper actuators	
	– Load impedance	2 kOhm
	– Max. voltage (phase cut)	DC 30 V
	– Operating range	DC 2 ... 12 V phase cut
	SEZ91.PU-K4	Modified phase cut signal
– Load impedance		100 kOhm
– Max. voltage (phase cut)		DC 30 V
– Operating range		DC 2 ... 10 V phase cut from controller
Outputs	DC 0 ... 10 V	
	– Min. load impedance	5 kOhm
	– Max. output voltage	DC 12 V
Connections	Connection terminals	Screw terminals for max. 2 x 1.5 mm ²
Weight / Dimensions	Weight (including packaging)	0.06 kg
	Dimensions (L x W x H)	57 x 22 x 18 mm
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
	Safety	Protection standard
Conformity	Meets the requirements for CE marking:	
	EMC Directive	89/336/EEC
	Low Voltage Directive	73/23/EEC

Connection terminals

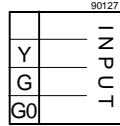
Input side

SEZ91.6



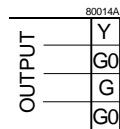
System neutral
Control signal DC 0 ... 20 V phase cut for damper actuators
Control signal "Plus" (for phase cut, 100 Hz half-wave)
Control signal DC 0 ... 20 V phase cut for magnetic valves

SEZ91.PU-K4



Control signal from PU-K4 / RDN2 / RDE2
System voltage AC 24 V
System neutral

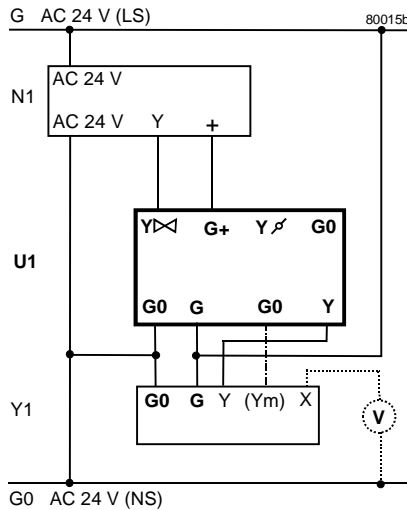
Output side



Control signal, DC 0 ... 10 V
System neutral
System voltage AC 24 V
System neutral

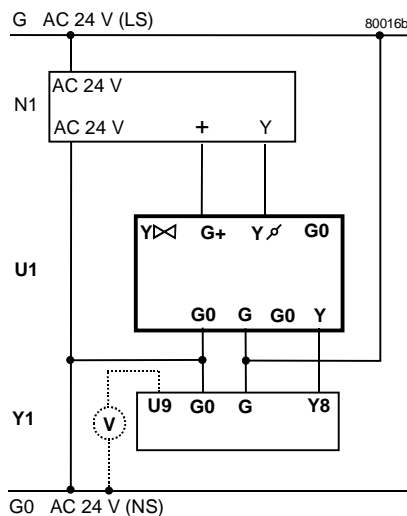
Connection diagrams SEZ91.6

SEZ91.6 interface



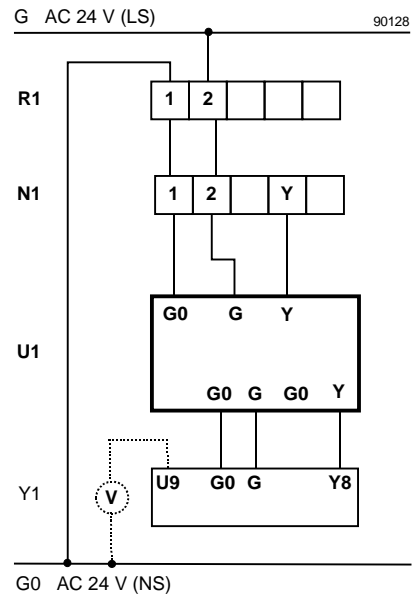
N1 Controller, e.g. KLIMO RDK99
U1 **SEZ91.6 interface**
Y1 Magnetic valve,
e.g. MX...461..., M2H...FY
V Position feedback

G0 – (Ym) recommended for MX...461...



N1 Controller, e.g. KLIMO RDK99
U1 **SEZ91.6 interface**
Y1 OpenAir damper actuator:
e.g. GBB161.1E
V Position feedback

Interface SEZ91.PU-K4



- R1 RDK... controller
- N1 Positioning unit
- PU-K4 : Y = connector 4
- RDN2 or RDE2 : Y = connector 10
- U1 **SEZ91.PU-K4 interface**
- Y1 OpenAir damper actuator:
e.g. GBB161.1E
- V Position feedback

Dimensions

All dimensions in mm

