Universal signal converter WZ109RE2H

- For current and voltage signals, potentiometers, Pt100, Pt1000, Pt500, Ni100, KTY81/84, NTC and thermocouples type J, K, R, S, T, E, B and N
- Galvanic 3-way isolation, test voltage 1.5 kV (50 Hz, 1 minute)
- Converts the input signals into a 0/4 - 20 mA, 0/2 - 10 V or 0/1 - 5 V signal
- Power supply via 85 - 265 VAC/DC
- Simple commissioning possible via DIP switch

https://www.wachendorff-prozesstechnik.de/en/WZ109RE2H

Description

The WZ109RE2H universal signal converter converts current/voltage signals, signals from temperature sensors as well as resistance signals and potentiometer signals into a standard current or voltage signal. The output signal is linearly proportional to the input. With the additional input/output, an alarm value can be output or several WZ109RE2H can be operated in multiplex mode on a PLC. The device is fully set via DIP switches, software on the PC or via the TEST4 calibration device and is immediately ready for operation. For mounting, the WZ109RE2H is simply snapped onto a DIN rail.

Product details

Channels	1 input: Voltage: from -20 VDC to +20 VDC, max. resolution 15 bit. Current: -20 mA to 20 mA, max. resolution 1µA. Temperature-dependent resistors: Pt100, Pt500, Pt1000, Ni100. 3- and 4-wire, max. resolution 0.1°C. Thermocouples: type S, T, J, N, K, E, R, B. Resolution 2.5 µV. Potentiometer: 500 Ohm to 10 kOhm. Rheostat: end scale min. 500 Ohm, max. 25 kOhm. Output: Voltage range: 0 VDC to 10 VDC, 10 VDC to 0 VDC, 0/1 VDC to 5 VDC, 5 VDC to 1/0 VDC Current range: 0/4 mA to 20 mA, 20 mA to 0/4 mA
Alarm output/ strobe input	1 relay output as NC contact, 1 A @ 30 VDC/AC, can alternatively be used as strobe input with contact input.
Burden	V > 2 KOhm, A < 600 Ohm
Resolution	11 to 15 bits depending on the setting
Accuracy	between +/- 0.1 % and +/- 0.5 % depending on the range
Linearity	0.02 % to 0.1 % depending on the setting
Temperature coefficient	0,01 % / °K
Response time	35 ms
Setting	DIP switch or via the setup software
Scaling	Linear, square root determination
Filter	Switchable filter
Error signaling	LED, fault / settings
Configuration via DIP switch:	• Input type • Start value and end value of the selected signal • Output type
Configuration via mobile device WTEST400:	• Scaling, filter • Sensor break detection • Analog output value in case of error • Interference frequency suppression (50 Hz to 60 Hz) • Sampling rate/resolution • Pt100 measurement via 2-, 3- or 4-wire • Alarm value setting • Strobe input configuration
Configuration via EASY SETUP software:	• Scaling, filter • Sensor break detection • Analog output value in case of error • Interference frequency suppression (50 Hz to 60 Hz) • Sampling rate/resolution • Ptxxxx Measurement via 2-, 3- or 4-wire • Alarm value setting • Strobe input configuration
Safety:	EN61010-1:2013-10
EMC:	EN61000-6-2:2006-10 EN61000-4-4:2013-01 EN61000-6-4:2007-11 + A1:2013-01 EN61000-4-5:2015-05 EN61000-4-2:2011-04 EN61000-4-6:2014-09 EN61000-4-3:2007-04 + A1:2009-01 + A2:2011-01 EN61000-4-11:2006-02
Assembly	35 mm DIN rail
Ambient conditions	Working temperature: -10 to +60 °C Storage temperature: -20 to +70 °C Humidity: 30 to 90 % non-condensing
Dimensions (WxHxD)	17.5 mm x 112 mm x 100 mm
Manufacturer:	Seneca s.r.l.

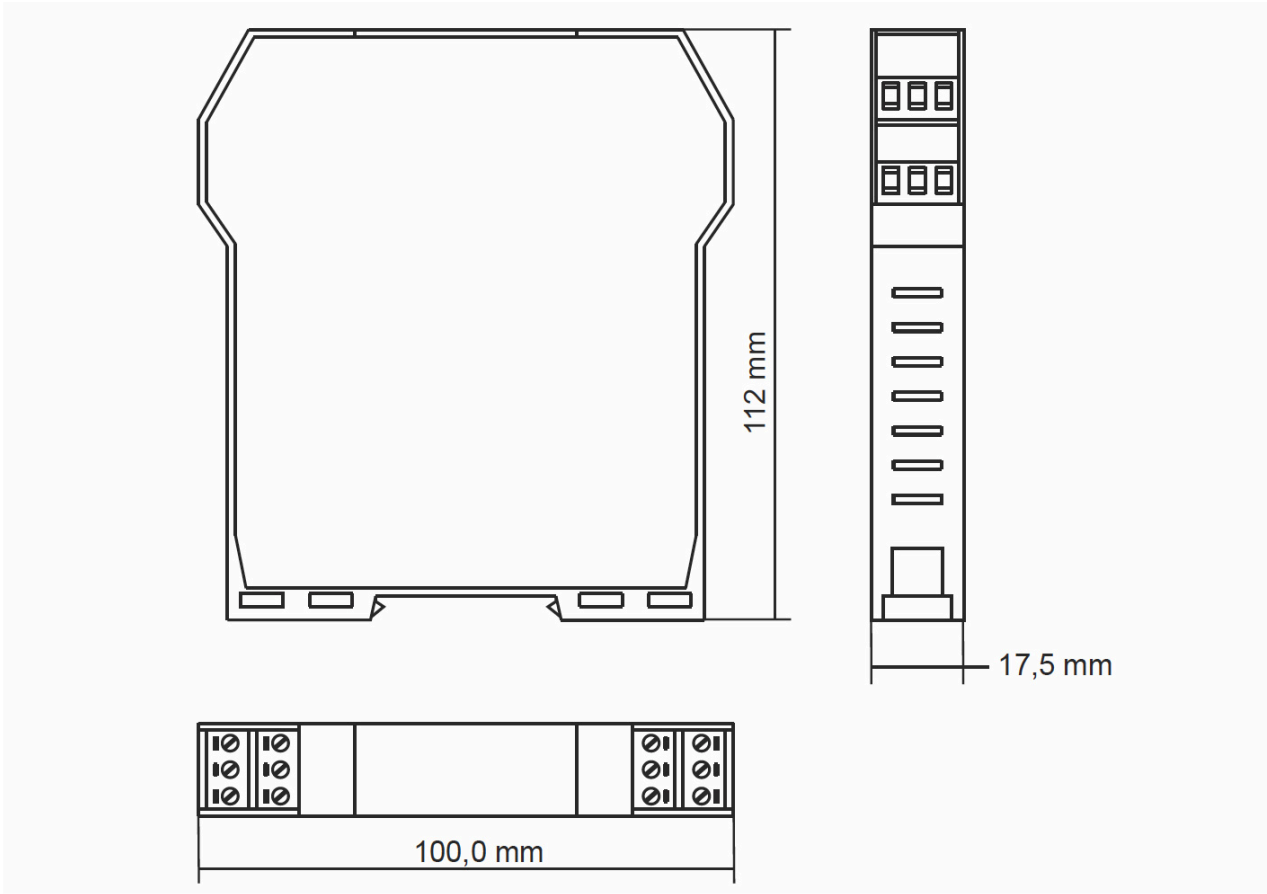
Products Order no.

WZ109RE2H	Universal regulator / supply: 85 VAC/ VDC - 265 VAC/VDC

Accessories Order no.	
WZPM1601	Programming cable
WTEST400	Calibrator/measuring device

Drawings

Dimensions:



Drawings

Adjustable input ranges:

		Spannung		Widerstand / Regler		Strom		Potentiometer	
		Von..	Bis..	Von..	Bis..	Von..	Bis..	Von..	Bis..
	1	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
	2	0 V	100 mV	0 Ω	1 kΩ	0 mA	1 mA	0 %	40 %
	3	400 mV	200 mV	0.5 kΩ	2 kΩ	1 mA	2 mA	10 %	50 %
	4	1 V	500 mV	1 kΩ	3 kΩ	4 mA	3 mA	20 %	60 %
	5	2 V	1 V	2 kΩ	5 kΩ	-1 mA	4 mA	30 %	70 %
	6	-5 V	5 V	5 kΩ	10 kΩ	-5 mA	5 mA	40 %	80 %
	7	-10 V	10 V	10 kΩ	15 kΩ	-10 mA	10 mA	50 %	90 %
	8	-20 V	20 V	15 kΩ	25 kΩ	-20 mA	20 mA	60 %	100 %

		Ni100 (RTD)		Pt100 (RTD)		Pt500 (RTD)		Pt1000 (RTD)	
		START	END	START	END	START	END	START	END
	1	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
	2	-50 °C	20 °C	-200°C	50°C	-200 °C	0 °C	-200 °C	0 °C
	3	-30 °C	40 °C	-100°C	100°C	-100 °C	50 °C	-100 °C	50 °C
	4	-20 °C	50 °C	-50°C	200°C	-50 °C	100 °C	-50 °C	100 °C
	5	0 °C	80 °C	0°C	300°C	0 °C	150 °C	0 °C	150 °C
	6	20 °C	100°C	50°C	400°C	50 °C	200 °C	50 °C	200 °C
	7	30 °C	150 °C	100°C	500°C	100 °C	300 °C	100 °C	300 °C
	8	50 °C	200 °C	200°C	600°C	150 °C	400 °C	200 °C	400 °C

		Thermoelement J		Thermoelement K		Thermoelement R		Thermoelement S	
		START	END	START	END	START	END	START	END
	1	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
	2	-200 °C	100 °C	-200 °C	200 °C	0 °C	400 °C	0 °C	400 °C
	3	-100 °C	200 °C	-100 °C	400 °C	100 °C	600 °C	100 °C	600 °C
	4	0 °C	300 °C	0 °C	600 °C	200 °C	800 °C	200 °C	800 °C
	5	100 °C	400 °C	100 °C	800 °C	300 °C	1000 °C	300 °C	1000 °C
	6	200 °C	500 °C	200 °C	1000 °C	400 °C	1200 °C	400 °C	1200 °C
	7	300 °C	800 °C	300 °C	1200 °C	600 °C	1400 °C	600 °C	1400 °C
	8	500 °C	1000 °C	500 °C	1300 °C	800 °C	1750 °C	800 °C	1750 °C

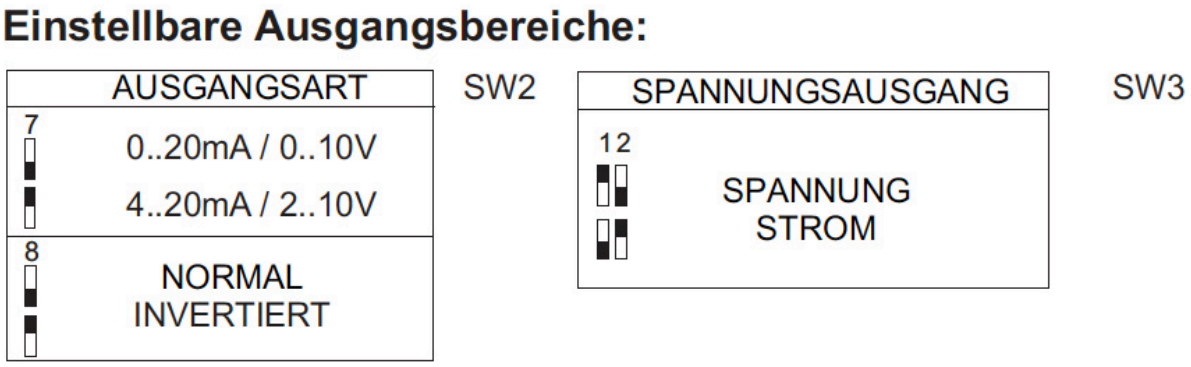
		Thermoelement T		Thermoelement B		Thermoelement E		Thermoelement N	
		START	END	START	END	START	END	START	END
	1	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
	2	-200 °C	50 °C	0 °C	500 °C	-200 °C	50 °C	-200 °C	200 °C
	3	-100 °C	100 °C	500 °C	600 °C	-100 °C	100 °C	-100 °C	400 °C
	4	-50 °C	150 °C	600 °C	800 °C	0 °C	200 °C	0 °C	600 °C
	5	0 °C	200 °C	700 °C	1000 °C	100 °C	300 °C	100 °C	800 °C
	6	50 °C	250 °C	800 °C	1200 °C	150 °C	400 °C	200 °C	1000 °C
	7	100 °C	300 °C	1000 °C	1500 °C	200 °C	600 °C	300 °C	1200 °C
	8	150 °C	400 °C	1200 °C	1800 °C	400 °C	800 °C	500 °C	1300 °C

(*) START oder END, die im Speicher mittels PC oder Programmiertasten eingerichtet wurden

Einstellbare Eingangsbereiche

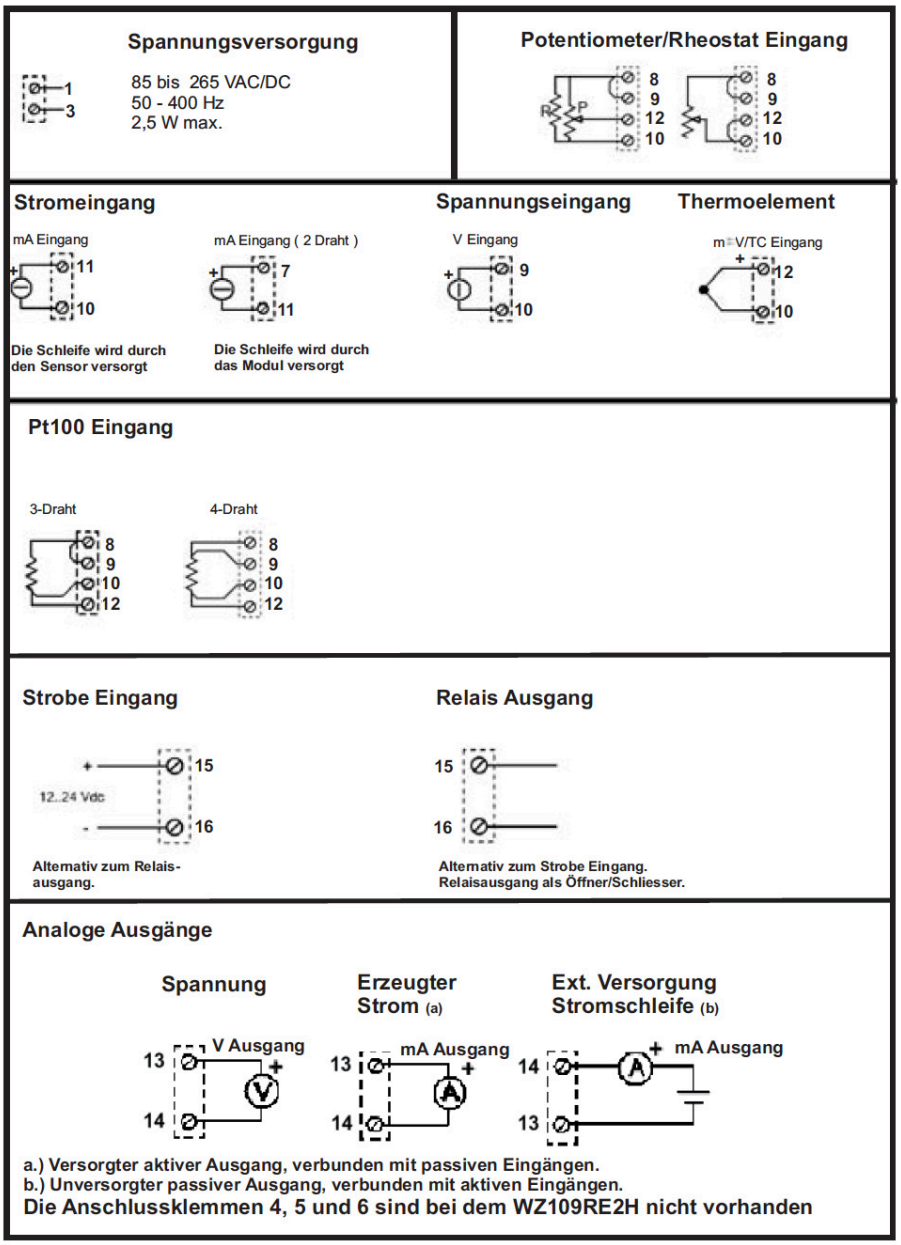
Drawings

Adjustable output ranges:



Drawings

Connections:

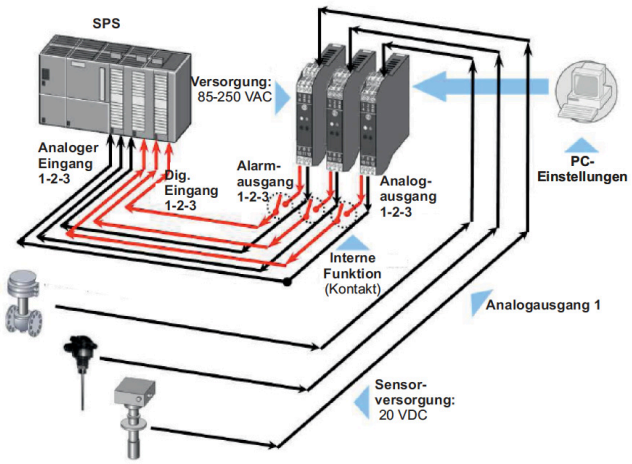


Drawings

Application examples:

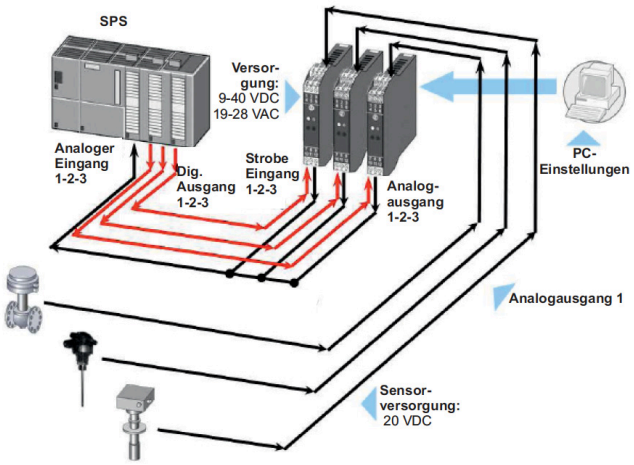
Anwendungsbeispiele:

1. Betrieb mit Alarmausgängen



Vorteil: Der WZ109RE2H kann einen Alarmwert überwachen und über ein Relais ausgeben. Der Alarmwert kann von 0 bis 100% des universellen Eingangswerts eingestellt werden.

2. Multiplexbetrieb an einer SPS



Vorteil: Nur ein analoger Eingang an der SPS ist erforderlich, um das analoge Ausgangssignal von mehreren WZ109RE2H zu erfassen.

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