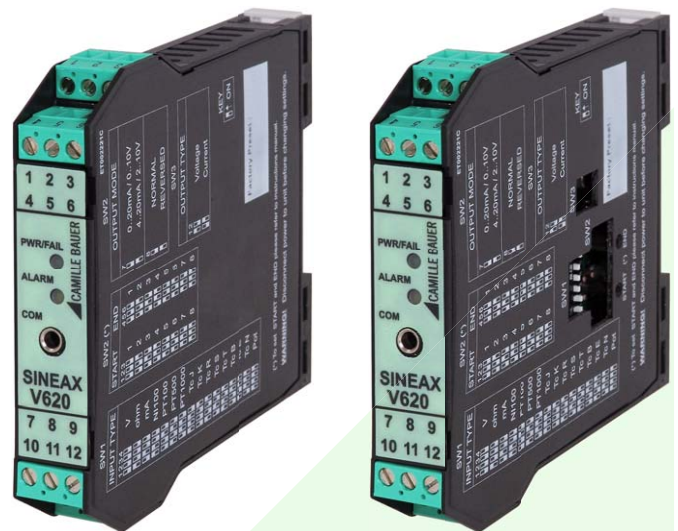# SINEAX V620
Universal Converter

Universal converter for mA, V, TC, RTD, Ω

CE

Features / Benefits

- Input: Voltage, current, RTD, TC, NTC, potentiometer, rheostat
- Strobe: Input (control analog output)
- Output: Current, voltage, relay (SPST)
- Resolution: Programmable from 11 to 15 bit + sign
- Accuracy: 0.1%
- Response time: 35 ms (11 bit + sign)
- Isolation: 1.500 V AC at 3 ways
- Power supply: 10 … 40 V DC, 19 … 28 V AC

General Data

Power supply	10 … 40 V DC, 19 … 28 V AC
Consumption	Max. 2.5 W; 1.6 W at 24 V DC (20 mA output)
Isolation	1.500 V AC at 3 ways
Input protection	Against pulse overvoltages 400 W/ms
Output/Supply protection	Against pulse overvoltages 400 W/ms
DIP switch configuration	Input type, start-end, output mode (zero elevation, scale inversion), output type (mA, V)
Software configuration	Start-end scale, root extraction, burn-out, etc.
Status indicators (LED)	Power supply, out scale, error, alarm
Operating temperature	– 10 … + 60 °C
Humidity	Up to 90% at 40 °C non condensing
Memory	EEPROM for all setup data; retention time: 40 years

Accu-racy	V	mA	Ω	Ni100	Pt100	Pt500	Pt1000	KTY81	KTY84	TC J	TC K	TC R	TC S	TC T	TC B	TC E	TC N	Vout
Cali-bration									0.1%									0.3%
Thermal drift									0.01% / °K									
Linearity	0.05%	0.05%			0.02% (>0°C); 0.05%						0.2 °C	0.2 °C	0.5 °C	0.5 °C		1.5 °C	0.2 °C	0.2 °C	0.01%
EMI	< 1%	< 1%									< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Con-formity									CE									

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Input Data

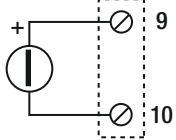|	
Voltage input	9 bipolar ranges from 75 mV to 20 V, input impedance 1 MΩ, max. resolution 15 bit + sign
Current input	Bipolar ranges up to 20 mA, input impedance 50 Ω, max. resolution 1 µA
RTD input	Pt100, Pt500, Pt1000, Ni100, KTY81, KTY84 und NTC, 3 or 4 wires connection, excitation current 0.65 mA, resolution 0.1 °C, RTD or cable interruption automatic detection. Resistive value for NTC: < 25 kΩ, KTY81, KTY84 and NTC settable only by software
TC input	TCJ, K, R, S, T, B, E, N, resolution: 2.5 µV, TC interruption automatic detection, input impedance > 5 MΩ
Potentiometer input	Excitation voltage 300 mV, input impedance > 5 MΩ, potentiometer range from 500 Ω to 10 kΩ (with parallel resistor 500 Ω)
Rheostat input	End scale min. 500 Ω, max. 25 kΩ
Strobe input	Alternative to relay output
Response time	35 ms (11 bit + sign) … 140 ms (15 bit + sign)

Output Data
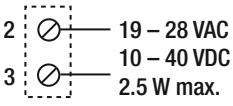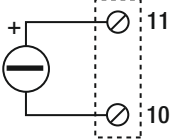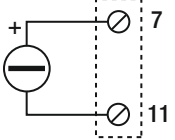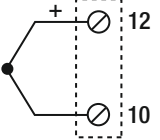
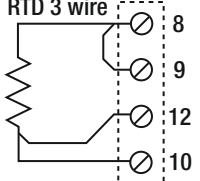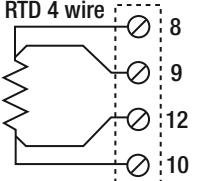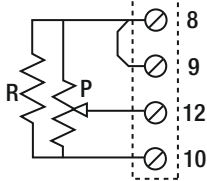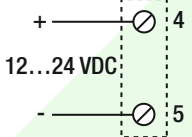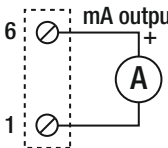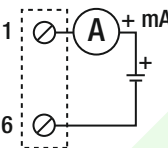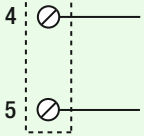|	
Current output	0 … 20 / 4 … 20 mA, max. load resistance: 600 Ω
Voltage output	0 … 5 / 0 … 10 / 1 … 5 / 2 … 10 V, min. load resistance: 2 kΩ
Relay output	Alternative to strobe input NC relay contact, NO in case of alarm
Resolution	2.5 µA / 1.25 mV
Output retransmission	Isolated analog output, current / voltage output Supplied active output connected to passive inputs

Order Codes
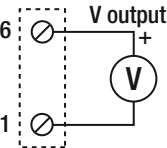
Description	Code
Open cover for DIP-switch Power supply 10 … 40 V DC, 19 … 28 V AC	**162 834**
Closed cover (DIP-switch inside) Power supply 10 … 40 V DC, 19 … 28 V AC	**163 171**
Accessories: PC configuration cable	**163 121**

Electrical connections

Power supply	Current input		Voltage input	Thermocouple input
2 — 19 – 28 VAC 3 — 10 – 40 VDC 2.5 W max.	**mA input** + 11 10 The loop is powered by the sensor	**mA input (2 wires)** + 7 11 The loop is powered by the module	**V input** + 9 10	**mV/TC input** + 12 10

Thermoresistance input		Potentiometer / Rheostat input		Strobe input
RTD 3 wire 8 9 12 10	**RTD 4 wire** 8 9 12 10	**R** **P** 8 9 12 10	8 9 12 10	+ 4 12…24 VDC - 5 Alternative to relay output

Retransmitted output			Relay output
V output 6 + 1 (V) Voltage	**mA output** 6 + 1 (A) Current (supplied active output connected to passive inputs)	**+ mA output** 1 (A) + 6 External power supply current	4 5 Enabled alternatively to strobe input. Alarm NO / NC contact relay

Configuration

1. DIP-switch

- Input type
- Zero and Span
- Output type
- Scale inversion
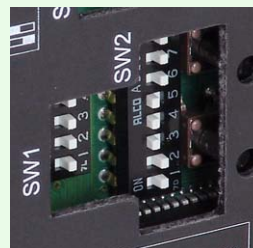
2. Handheld

- Min./max. range scale; digital filter; square root extraction
- Open and short circuit supervision
- Analog scale; error analog output value
- Rejection frequency (50 … 60 Hz)
- Sampling time / Resolution
- Measure 2, 3, 4 wires for RTD
- Relay alarm control, strobe configuration

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3. Software

- Min./max. range scale; digital filter; square root extraction
- Open and short circuit supervision
- Analog scale; error analog output value
- Frequency filter (50 … 60 Hz)
- Sampling time / Resolution
- Measure 3, 4 wires for RTD
- Relay alarm control, strobe configuration
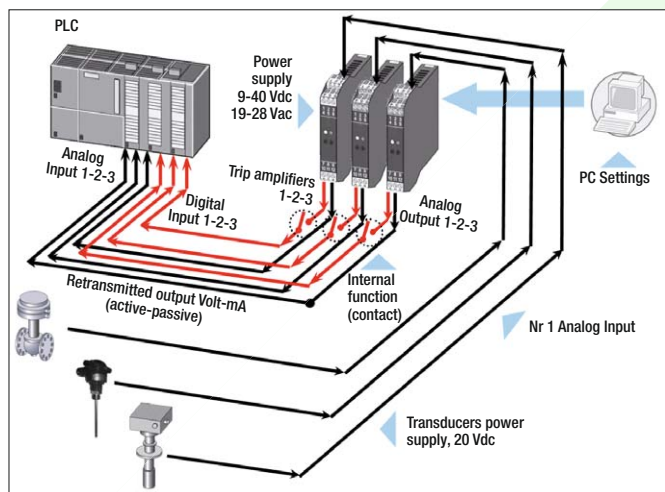
Application examples
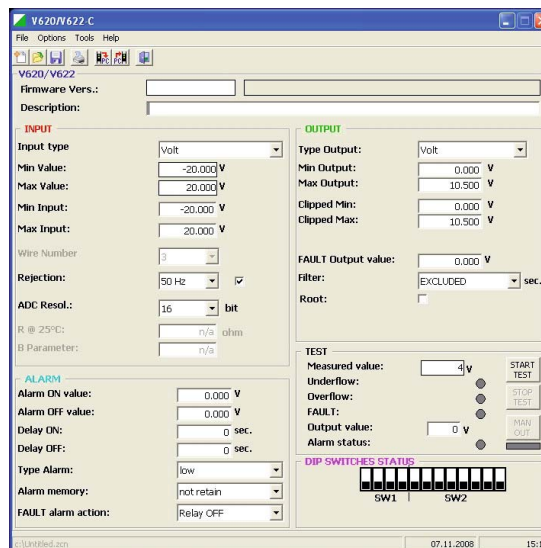
Multiplexer
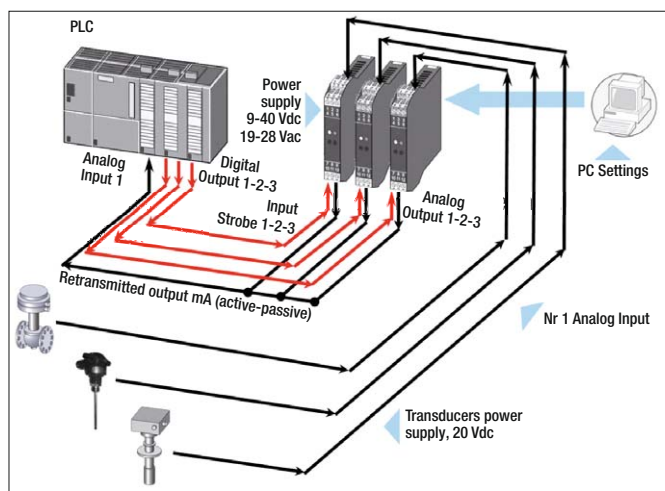
Advantage:
Just 1 analog input (PLC) is able to read signals outcoming from several SINEAX V620.
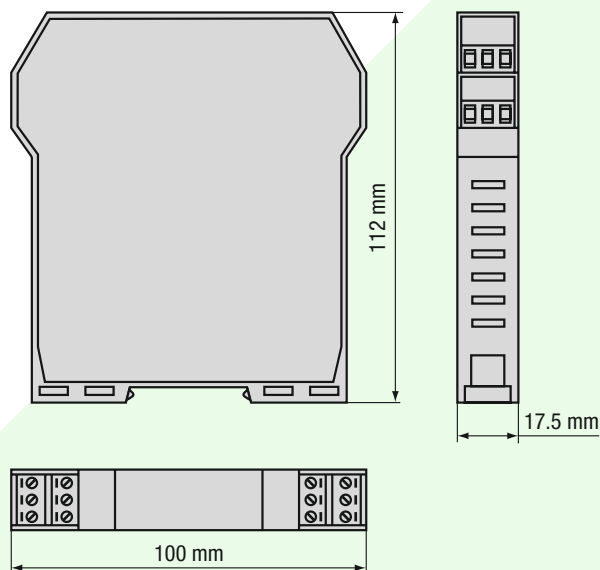
Trip amplifier

Advantage:
SINEAX V620 can handle also threshold by a relay settable on 0 … 100% of universal input value.

Dimensional drawing

112 mm

17.5 mm

100 mm

CAMILLE BAUER

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