

# K-LINE **K109TC**

Thermocouple Converter

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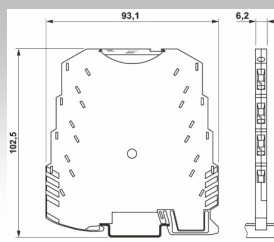
Temperature converters



- ▶ INPUT: Thermocouples types: J, K, E, N, S, R, B, T with zero and span configurable by dip-switch
- ▶ OUTPUT: N.1 channel current 0/4..20, 20..4/0 mA or voltage 0..5/10, 10..0, 1..5 Vdc  
N.1 solid state relay (SSR) for thermostat / alarm function
- ▶ Galvanic isolation @ 3-way
- ▶ Spring-cage terminal block and/or DIN bus connection system
- ▶ Power bridging terminal - DIN rail bus connector
- ▶ Tiny dimensions (102,5 x 93,1 x 6,2 mm)
- ▶ Resolution @ 14 bit
- ▶ Precision class 0.1%

## TECHNICAL DATA

### K109TC – Thermocouple Converter



### ORDER CODES

<b>K109TC</b>	Thermocouple converter
<b>Accessories</b>	
<b>K-BUS</b>	Expandable power supply connector
<b>K-SUPPLY</b>	Power Supply module with surge protection

### GENERAL FEATURES

<b>Power supply</b>	19,2...30 Vdc
<b>Channels</b>	N.1
<b>Accuracy</b>	Class: 0,1% Cold junction error: 1,5°C Max
<b>Status indicators</b>	- Fault - State of the auxiliary output
<b>Galvanic Isolation</b>	Power supply // input // output at 1500 Vac, digital
<b>Hot swapping</b>	Yes
<b>Power consumption</b>	500 mW
<b>A/D Converter</b>	14 bit
<b>Current output protection</b>	Approximately 25 mA
<b>Security output</b>	- 102.5% of full scale value, in case of over-range - 105% of full scale value in case of improper functioning
<b>Humidity</b>	30..90% at +40°C (not condensing)

<b>Design</b>	Terminal housing for mounting on 35 mm DIN 46277
<b>Filter rejection</b>	50-60 Hz (settable)
<b>DIP Switch</b>	- Inputs signal setup - Output signal setup
<b>Processing</b>	Floating point 32 bit
<b>Dimensions</b>	6,2 x 93,1 x 102,5 mm (w x h x d)
<b>Weight</b>	50 g
<b>Operating temperature</b>	-20...+65 °C
<b>Connections</b>	Plug-in screw clamp terminal blocks, wires up to 2.5 mm <sup>2</sup>
<b>IP Protection</b>	IP 20
<b>Standards</b>	EN50081-2 EN50082-2 EN61010-1 EN60742
<b>Approvals</b>	CE, UL-CSA

### INPUT

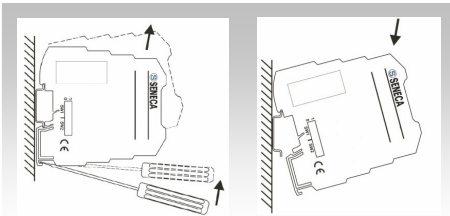
**Thermocouples** types: J, K, E, N, S, R, B, T  
Tables: EN60584-1 (ITS-90)  
Lower span: 100 °C  
Impedance: 10 MOhm

### OUTPUT

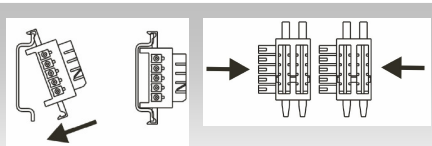
**Current:** 0..20 mA, 4..20 mA, 20..0 mA and 20..4 mA  
Higher load resistance: 500 Ohm  
**Voltage:** 0.5 Vdc, 1.5 Vdc, 0..10 Vdc and 10..0 Vdc  
Lower load resistance: 2 KOhm  
**Static output:** Applicable Voltage 24 Vac nominal  
Current: 60 mA Max

### DIMENSIONS AND INSTALLATION

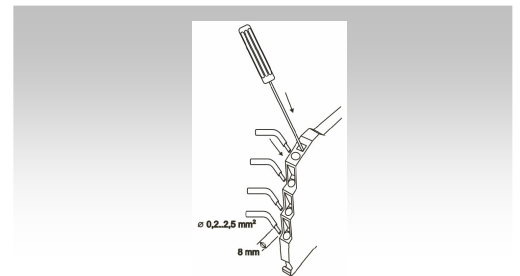
#### Inserting / Extracting module on DIN guide



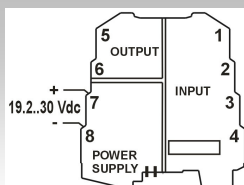
#### Expandable connector K-BUS



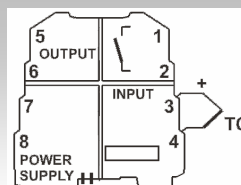
#### Cage clamp connection



#### Power supply



#### Input



#### Output

