Product information

Electronic devices

Conversion of KTY84- into PT1000- sensor signal

Typ: CONV DIN

Pt / KTY Converter

- Basic information

The discontinuation of the KTY84 and KTY83 sensor types and an increasing use of Pt1000 sensors leads to lack of KTY sensor signal processing units. The converter allows the use of a KTY84 sensor in conjunction with evaluation electronics suitable only for Pt1000 sensors. Old equipment with KTY sensors can be easily connected to newer control units.

- Application

Operation of motors, generators or other thermally sensitive devices equipped with KTY sensors by modern control units which expect Pt1000 sensors at the input.

- General function

The converter evaluates the resistance of a KTY84 and provides the corresponding resistance of a Pt1000 sensor. When connected to a KTY84, the converter replaces a Pt1000 sensor..

- Advantage

No need to change a motor or other equipment containing a KTY sensor when replacing the control unit.

Connection of devices with different sensors to one control unit is possible.

Spare parts with KTY-sensors can be used in newer systems.

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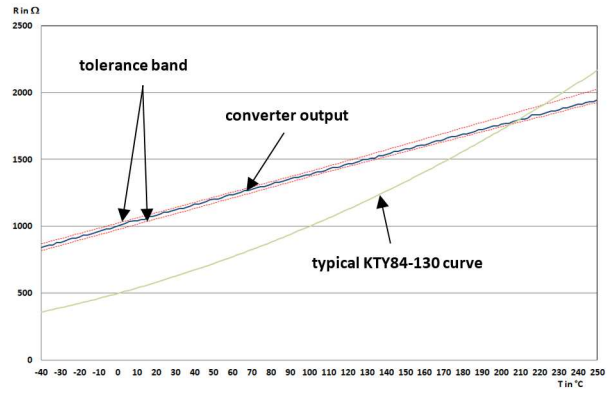

Figure 1

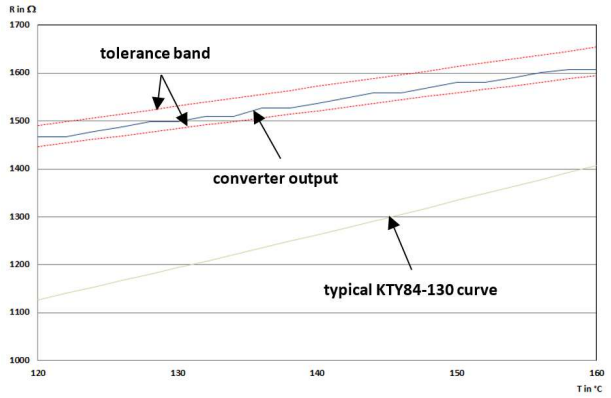

Figure 2

- Converter output vs. measured temperature

Figure 1 shows the R vs. T diagram over the entire measurement range.

- Blue: Typical converter output corresponding to the Pt1000 characteristic curve
- Green: Typical KTY84-130 characteristic curve according to the NXP datasheet
- Red: Allowable tolerance band of the converter output corresponding to the typical KTY84 tolerance band according to the NXP datasheet

Figure 2 shows an enlarged view of resistance vs. temperature curves from Figure 1. The ripples in the converter output curve result from the internal discrete resolution of the output IC, which is approx. 10 Ω

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Electrical data

Input:	1 sensor KTY84-xxx
Output:	Pt1000
Power supply:	24V (22 Vdc – 26 Vdc) (with galvanic isolation) Test voltage 1kv
Terminals:	DC+ / DC-
Power consumption:	< 1VA
ambient temperature:	0 ... 60°C
storage temperature:	-40°C ... +75°C
temperature measurement range:	-40°C ... +270°C

Additional functions

wire break or short circuit:	red LED
module online:	green LED
Sensor IN	
Typ. measurement current:	<1mA
Terminal:	KTY+ / KTY-
Sensor OUT	
Max. current:	10mA
Terminal:	Pt+ / Pt-

Terminals NC not connected.

Mechanical data

housing:	Plastic blue
material:	Polyamide
dimensions:	width x height x dept. 22,5mm x 107mm x 99 mm
mounting:	DIN-rail TS 35
protection class (device):	IP 20
connection:	screw terminal pitch 5mm max. 2,5mm²
order code:	page5

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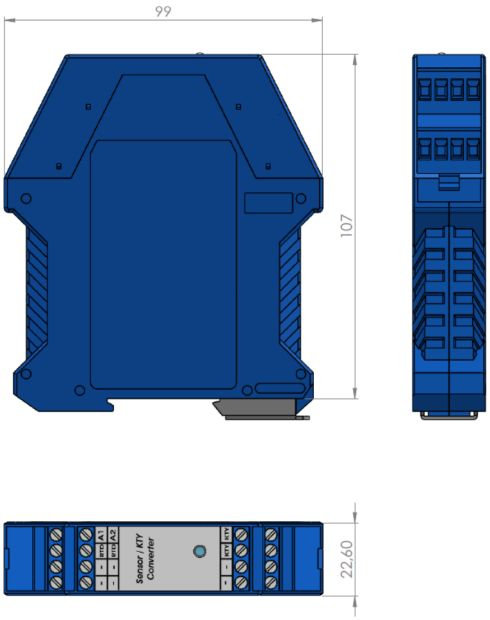
Conversion of KTY84- into PT1000- sensor signal

Typ: CONV DIN

- Technical data

Dimensions:



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Typ: CONV DIN

Order code:

Product Name	Voltage	Sensor IN	Sensor OUT	Dimension	part number
CONV-DIN-KTY84-Pt1000	24V DC	KTY84-130, KTY84-150	Pt1000	107mm*99mm*22,5 mm	005593

Other KTY sensors on request

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