MUK temperature transmitter for Pt100

- 4..20 mA measuring transducer for Pt100 sensors
- connection in 2-, 3- or 4-wire technology
- precision < 0,25 °C
- correction of the actual value
- automatic/configurable cable resistance compensation (2-wire)
- sensor error detection
- programmable linearization, absorption, information of condition and serial number
- PC datalogging
- excellent temperature stability

description

The MUK 2201 is a programmable 2-wire measuring transducer for pt100 detectors. The power supply occurs about the 4...20 mA bow.

For the resistance measurement the connection in 2-, 3- or 4-conductor technology is possible. At the 2-wire connection an automatic compensation of the cable resistance is possible.

With the help of a PC and the flex-program based on Windows the configuration of the following parameters is possible via the 4...20 mA bow:
TAG-no., number of wires, cable resistance, error detection level, effective range, absorption, offset and status indication.

The flex-program provides the connection of a data reading registration at the display, which allows the user to guard the measuring results.

The MUK 2201 is embedded with silicone. Thereby the measuring transducer can be used in humid environments.

The MUK 2201, fitting into the DIN B housing, has a 6 mm center hole for quick sensor replacement. The spring loaded mounting screws ensure a safe fastening.

seli GmbH Automatisierungstechnik • Dieselstraße 13 • 48485 Neuenkirchen • Tel. 05973 / 9474-0 • Fax 05973 / 9474-74 • E-Mail Zentrale@seli.de • Internet http://www.seli.de

technical facts

input

precision	
effective range <=250°C	< 0,25 °C
effective range > 250°C	0,1 % of the range
measuring cyclus	< 0,7 sec.
Pt100 standard	IEC/DIN/EN 60 751-2
measuring power Pt100	0,3 mA, constant current
type of sensor	2-, 3- or 4-wire
eff. range underflow	< -225 °C
eff. range overflow	> 875 °C
error detection delay	< 10 sec.
compensation for cable error	< 0,02 °C/Ohm (3-wire)
cable resistance	max. 20Ohm/wire
effective range	-200...850 °C
unit of measurement	°C or °F
min. span	25 K
overvoltage protection	+/- 35 V DC
line frequency suppression	50...60 Hz
resolution	14 bit
repeatability	< 0,1 °C
offset adjustment	max. +/- 10 °C

output

signal range	4...20 mA, 2-wire
precision	< 0,1 % of the signal range
auxiliary power	8...35 V DC
ripple immunity	3 V rms
max. burdon	RL <=(VCC-8)/23 [kOhm]
signal overflow/ underflow	23 mA/3,5 mA
absorption	0...30 sec.
protection	protection against incorrect polarity
resolution	12 bit

environmental conditions

operating temperature	-40...85 °C
humidity	< 98 % RH, cond. (IEC 68-2-6)
vibrations	GL, test 2 (IEC 68-2-6)
endurance test	IEC 770 6.3.2

EMV facts

immunity	fulfill EN 50082-2
emission	fulfill EN 50081-1

mechanical facts

dimensions	44 x 19 mm
type of protection	box: IP40 clamps: IP00

further facts

temperature influence	typ. 0,003 % per °C max. 0,01 % per °C
power-on time	10 sec.

test conditions

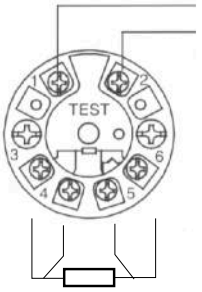
configuration	0...100 °C
operating temperature	23 °C +/- 2 °C
operating voltage	24 V DC

facts of order

MUK 2201

2201	0001	construction of standard

wiring diagram



2-wire clamp (3 + 6)
3-wire clamp (3/4 + 6)
4-wire clamp (3/4 + 5/6)

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