



Head Mounted Temperature Transmitters



measuring
•
monitoring
•
analysing

- Accurate measurements
- Voltage linear or temperature linear
- Easy to connect and install
- Large centre bore
- Sensor failure monitoring
- High load capacitance



T2

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Model:
TUM-K

Description

Transmitters for head mounting convert the temperature-dependant change in voltage of thermocouples and the temperature-dependant change in resistance of resistance thermometers to a linear standard current signal. The transmitter for top mounting is a two-wire transmitter with 4 - 20 mA output. Transmission is absolutely noise-free even over long distances.

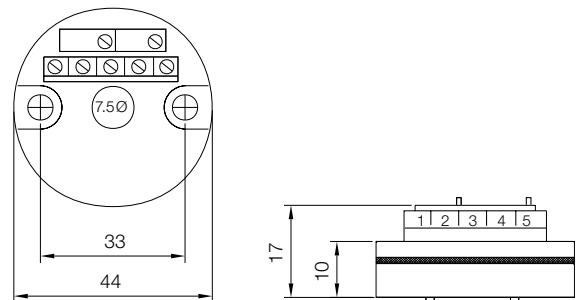
The transmitter is designed for the connection head according to DIN 43 729, form B or larger. The transducers can be mounted and calibrated in the connection head when ordering a suitable sensor, see temperature detectors with connection head.

Standard version

Settings are made with solder pads and potentiometers.

Dimensions in mm

Model	Input	Output
TUM-KW	Pt 100	Temperature linear
TUM-KT	Thermocouple J, L, T, K or N	Voltage linear

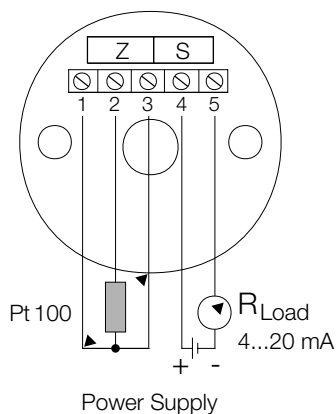


Option: Factory setting. Please specify special data in writing.

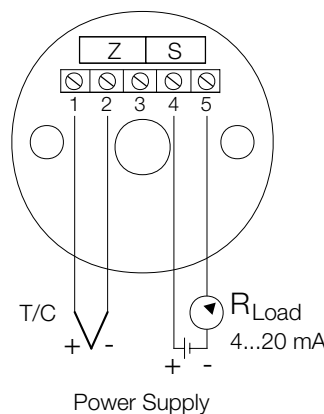
Technical Details

Model	TUM-KW	TUM-KT
Input	Pt 100 ($\alpha=0.00385$) 3-wire connection	Thermocouples J, L, T, K or N
Settings	-50 ... +550 °C	Measuring ranges: -5 ... +55 mV
Zero-point	-50 ... +50 °C	$\pm 10\%$ of measuring span
Measuring span, selectable	50 ... 500 °C	10 ... 50 mV
Measuring span, fine adjustment	$\pm 10\%$	$\pm 10\%$
Supply, reverse polarity protected	6.5 ... 32 V _{DC} (not electrically isolated)	6.5 ... 32 V _{DC} (not electrically isolated)
Output	4 ... 20 mA	4 ... 20 mA
Linearity	Temperature linear	Voltage linear
Sensor failure monitoring, selectable	Max. approx. 25 mA, Min. approx. 3 mA	Max. approx. 25 mA, Min. approx. 3 mA
Current limiting	approx. 25 mA	approx. 25 mA
Maximum load	700 Ω at 24 V _{DC} , 25 mA	700 Ω at 24 V _{DC} , 25 mA
Long-term stability	$\pm 0.1\%$ of measuring span/year	$\pm 0.1\%$ of measuring span/year
Connection (wire or stranded cable)	≤ 2.5 mm ²	≤ 2.5 mm ²
Protection, housing/terminals	IP 20 / IP 10	IP 20 / IP 10

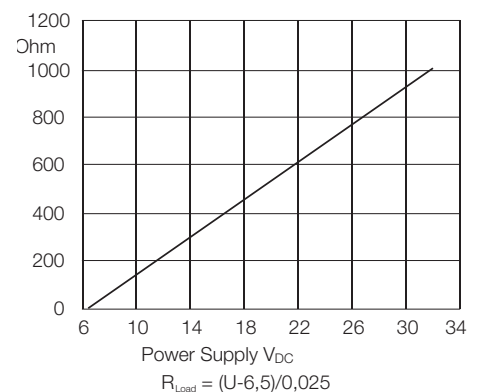
Wiring diagrams TUM-KW



Wiring diagrams TUM-KT



Load diagram

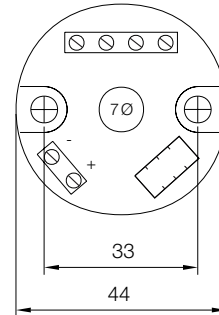


T2

Programmable version

for industrial applications.
 A device for resistance thermometers and thermocouples, thus reduced inventory costs.
 Configuration in seconds with a Windows-based, user-friendly software without need for external supply for transmitter.

Dimensions in mm



Model	Input	Output
TUM-KP	Pt 100 Thermocouples	Temperature linear

Accessories

TUM-KP01	Software with cable
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Option: Factory setting. Please specify special data in writing.

Technical Details

Model	TUM-KP
Input	Pt 100, IEC751, $\alpha = 0.00385$, 3-wire connection, -200...+1000°C D100. (Pt 100 acc.to JIS1604, $\alpha = 0.003916$), 3-wire connection, -200...+1000°C, Thermocouple Type AE W5%Rh-W26% -10...2300°C Type N NiCrSi-NiSi -270...1300°C Type B PtRh30%-PtRh6% 0...1800°C Type R Pt13%Rh-Pt -50...1750°C Type E NiCr-CuNi -200...1000°C Type S Pt10Rh-Pt -50...1750°C Type J Fe-CuNi -200...1000°C Type T Cu-CuNi -200...400°C Type K NiCr-Ni -200...1350°C Type U Cu-CuNi -200...600°C Type L Fe-CuNi -200...900°C
Adjustment	Minimum input range
Zero-point	any value within the range limits
Minimum input range	Thermocouples 2 mV; Pt 100 10°C
Supply, reverse polarity protected	8...36 V _{DC} (electrically isolated)
Output	4...20 mA
Linearity	Temperature linear
Sensor failure monitoring, selectable	Minimum/Maximum
Minimum output signal	(measurement/fault) 3.8 mA / 3.5 mA
Maximum output signal	(measurement/fault) 20.5 mA / 21.6 mA
Maximum load	700 Ω at 24 V _{DC} , 22 mA
Long-term stability	±0.2% of measuring span/year
Operating temperature	-40...+85°C
Storage temperature	-40...+85°C
Connection (wire or stranded cable)	≤ 1.5 mm ²
Protection, housing/terminals	IP 50 / IP 10

Wiring diagrams

