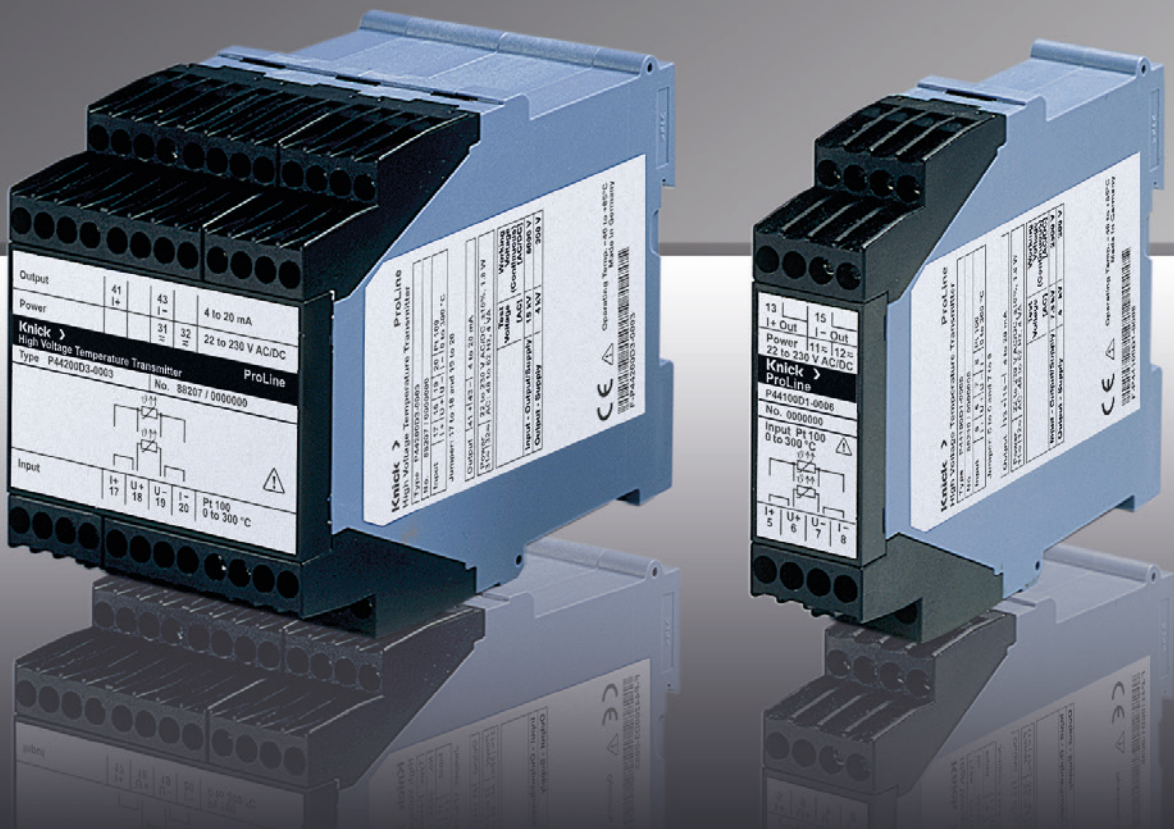


**Pt100 Transmitter for  
High Voltage Applications**

**ProLine P 44000**





# ProLine P 44000

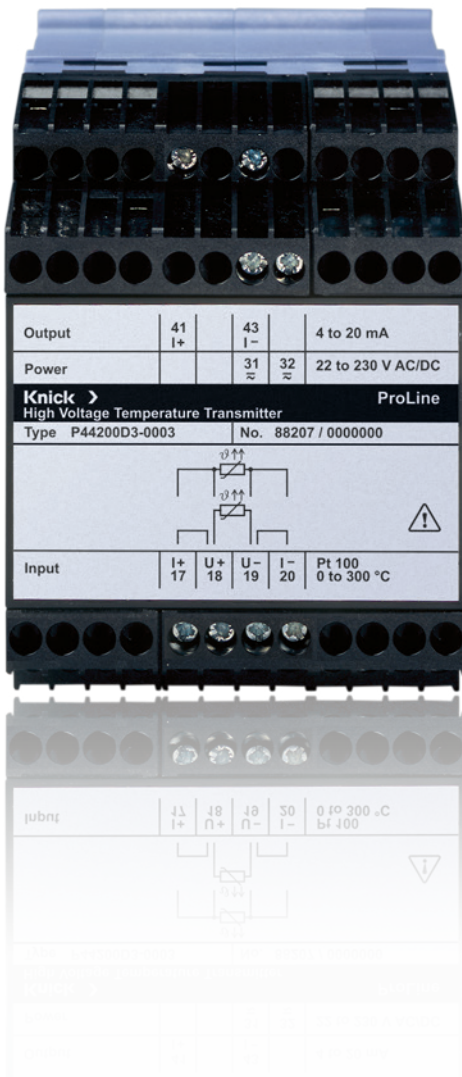
## Precise Temperature Measurement at High Voltage Potentials up to 6 kV

When temperatures are to be measured using Pt100 resistance thermometers in high-voltage environments, standard temperature transmitters are often unsuitable due to their insufficient insulation.

Resistance thermometers can be insulated against high voltage. In practice, however, the available installation space is often too small. Moreover, the insulation is weakened by thermal and mechanical aging.

For temperature measurement on power electronics components, maximum safety is therefore provided by high-voltage resistant galvanic isolation.

A typical application is the monitoring of the winding temperature of electric motors, generators or transformers.



### The Solution: Pt100 Transmitter With 6 kV AC/DC Basic Insulation

The new ProLine P 44000 transmitter for high-voltage applications converts the resistance of a 2- or 4-wire Pt100 resistance thermometer into a 4 to 20 mA signal with high accuracy and short delay times.

The output signal is galvanically isolated from the input signal and the voltage supply. The isolation is designed for working voltages of up to 6 kV AC/DC. During routine testing, the test voltage is 15 kV AC.

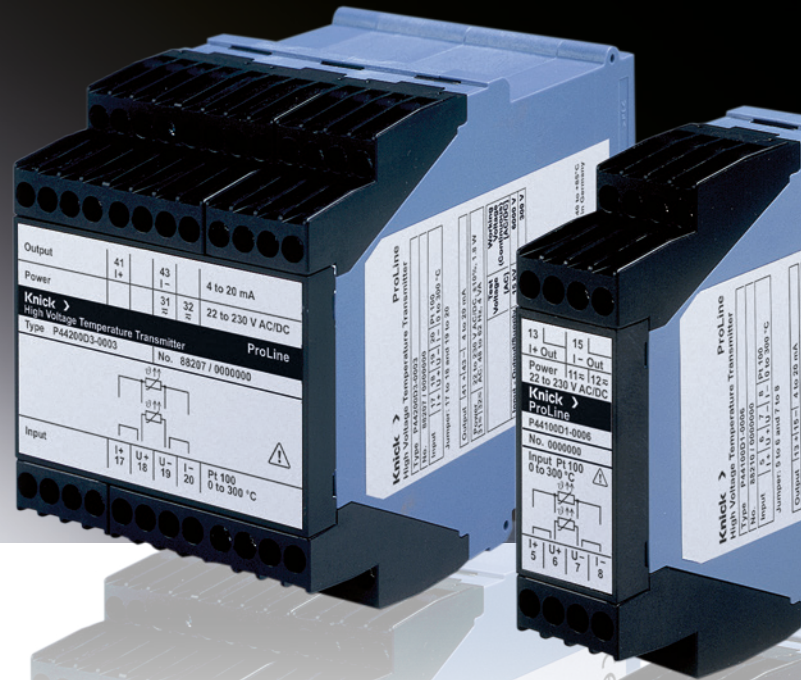
Vacuum encapsulation protects the circuit against environmental influences and ensures that the extraordinary isolation properties are maintained.

The product line covers the standard ranges of 0 to 150 °C, 0 to 200 °C and 0 to 300 °C. The transmitters are available in 67.5 and 22.5 mm modular housings to suit different requirements.

### ProLine P 44000 – At One Glance

- Transmitter for Pt100 temperature sensors, 2- or 4-wire connection
- Fixed range models for 0 to 150 °C, 0 to 200 °C and 0 to 300 °C input ranges
- Impressed output current of 4 to 20 mA
- Compact 67.5 and 22.5 mm modular housings based on proven VariTrans technology
- High isolation up to 6 kV AC/DC basic insulation and up to 2.5 kV AC/DC reinforced insulation with overvoltage category III and pollution degree 2 according to EN 50178 (input against output and power supply)
- 22.5 mm housing for less demanding isolation requirements up to 2 kV AC/DC (basic insulation)
- Low measurement error of just  $\pm 1$  K (typically  $\pm 0.5$  K) and short  $T_{90}$  delay time of 100 ms
- VariPower broad-range power supply for 20 ... 253 V AC/DC ensures safe operation even with unstable power grids
- Resistant to environmental influences through vacuum encapsulation
- Suitable for extreme environments: ambient temperature during operation  $-40 \dots +85^\circ\text{C}$

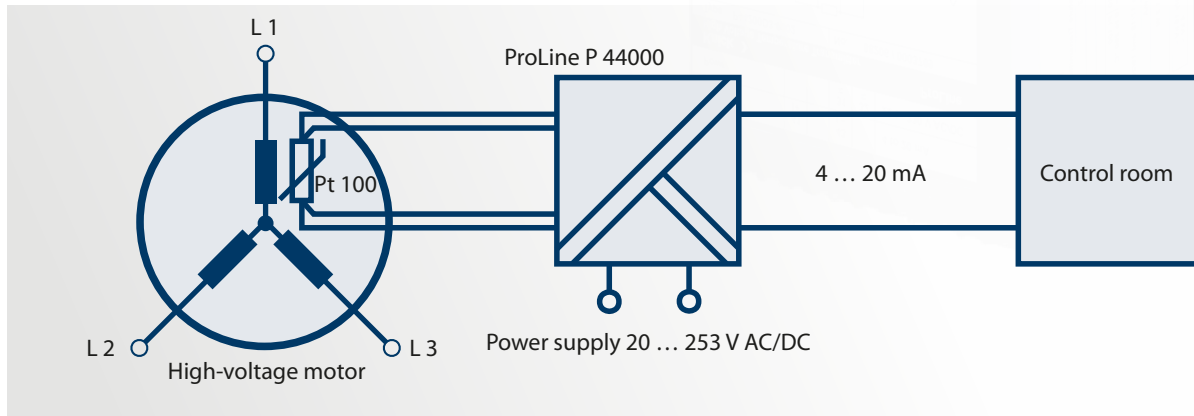
# Pt100 Transmitter for High Voltage Applications



### Typical Application:

Monitoring the winding temperature of high-voltage motors  
Galvanic isolation of the slot RTD using ProLine P 44000:

- Protects the operators
- Prevents damage to the equipment
- Interference-free transmission of 4 to 20 mA signals to the control room – even with long cables



### ProLine: You won't find anything better

ProLine stands for top-of-the-range signal conditioners and transmitters. Each component will stand up to any competition: regarding conditioning, conversion or amplification of signals, as well as transmission characteristics, versatility, usability and energy efficiency.

Due to their well-established reliability, ProLine products are used in industrial measurement and control systems around the world. Requiring few components, their intelligent circuits enable excellent reliability ratings. A five-year warranty is therefore a matter of course for all ProLine products.



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#### Interface Technology

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