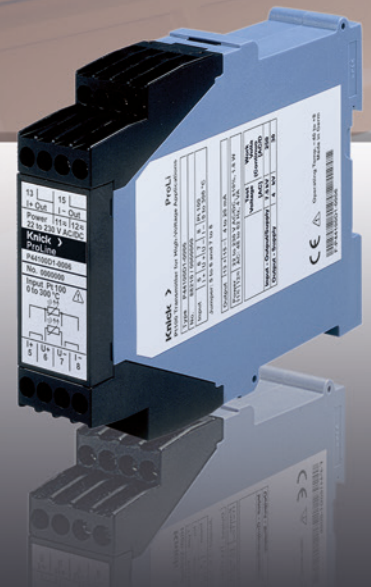
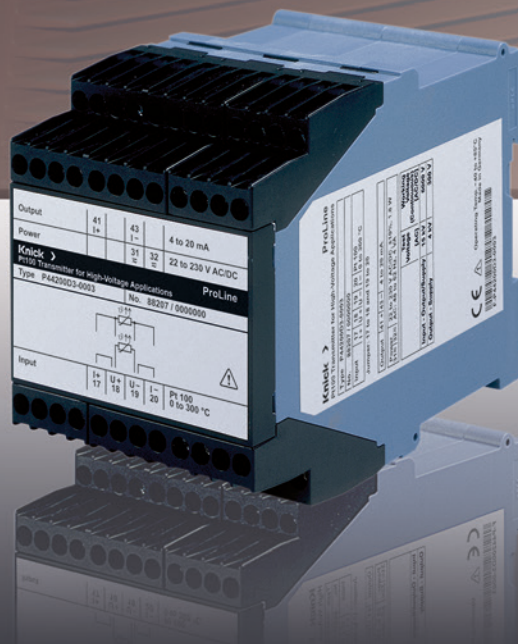


Temperature Transmitters for
Working Voltages up to 6.6 kV

ProLine P 44000 for Monitoring of High-Voltage Motors

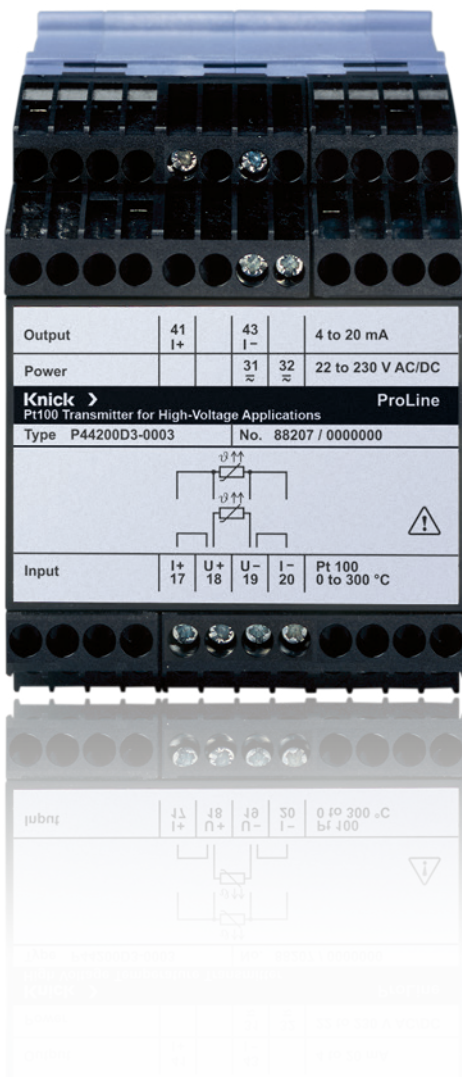


Safe Motor Monitoring with High-Isolation Pt100 Transmitters

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

The slot thermometers in high-voltage motors can be insulated against high voltage. In practice, however, the restricted installation space makes it difficult to achieve insulation conforming to standards. Moreover, during years of operation the insulation is weakened by thermal and mechanical aging.

Maximum safety is achieved by high-voltage resistant galvanic isolation in the temperature transmitter. It provides protection for downstream equipment and personnel.



The Solution: Pt100 Transmitters with 6.6 kV AC/DC Basic Insulation

The new ProLine P 44000 transmitters for temperature monitoring of high-voltage motors convert the resistance of a 2-, 3- or 4-wire Pt100 resistance thermometer into a 4 to 20 mA signal with high accuracy and short delay times.

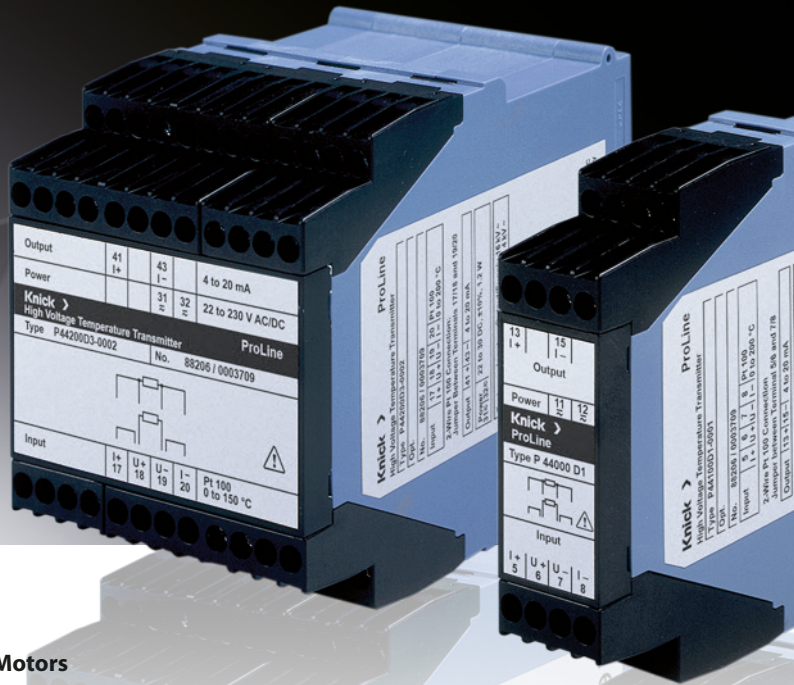
The output signal is galvanically isolated from the input signal and the voltage supply. The isolation is designed for working voltages of up to 6.6 kV AC/DC. During routine testing, the test voltage is 15 kV AC. Vacuum encapsulation protects the circuit against environmental influences and ensures that 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

- Transmitters for monitoring high-voltage motors with Pt100 temperature detectors, 2-, 3- or 4-wire connection
- Fixed range models for the input ranges: 0 ... 150 °C, 0 ... 200 °C and 0 ... 300 °C
- Impressed output current of 4 ... 20 mA
- Compact 67.5 and 22.5 mm modular housings based on proven VariTrans technology
- High isolation up to 6.6 kV AC/DC basic 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 ± 1 K (typically ± 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 $-40 \dots +85^\circ\text{C}$

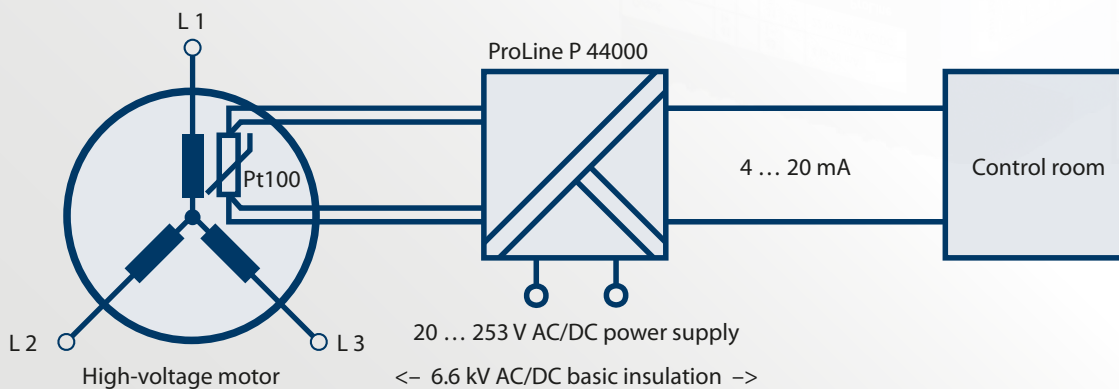
Temperature Monitoring of High-Voltage Motors



Monitoring the Winding Temperature of High-Voltage Motors

High-voltage resistant 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





Interface Technology

Indicators

Process Analytics

Portables

Laboratory

Sensors

Fittings

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GmbH & Co. KG

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