

# Compensating and Extension **Cables** for thermocouples and RTC



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# COMPENSATING AND EXTENSION CABLES

## Overall view

### Compensating and extension cables for thermocouples

- PVC insulated compensating and extension cables



- Screened PVC insulated compensating and extension cables



- Multi-pair PVC insulated compensating and extension cables



- Besilen® insulated compensating and extension cables



- Screened Besilen® insulated compensating and extension cables



- Fibre-glass insulated compensating and extension cables



- FEP insulated compensating and extension cables



- Halogen-free SABIX® insulated compensating and extension cables



### Extension cables for thermocouples FE-CuNi and NiCr-Ni

- Fibre-glass insulated extension cables

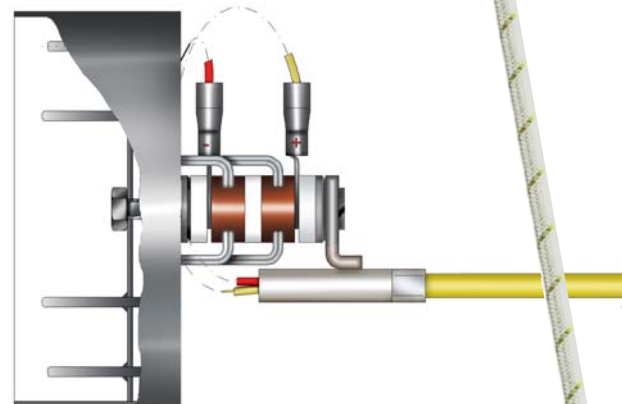
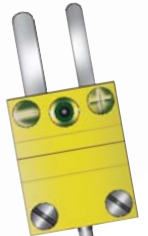


- PFA insulated extension cables



### Connection cables for resistance thermometers

- PFA insulated connection cables



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## Applications

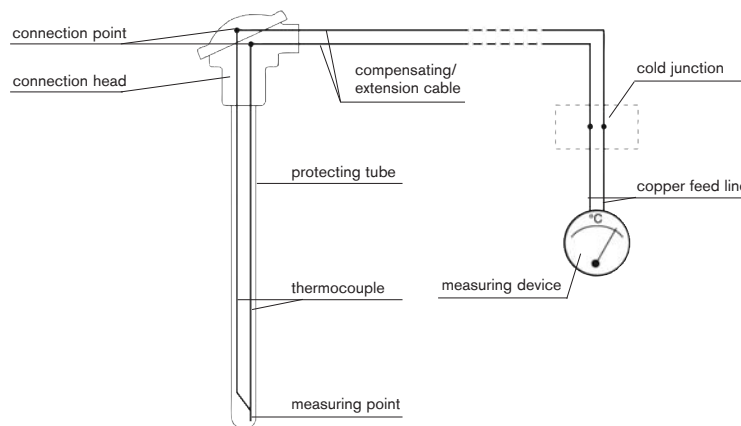
### ■ General Information

Temperature is an important factor in many areas concerning the environment, scientific research and production. It is a thermodynamic variable that defines the heat content of a material. Material strength changes with alternating temperature. As a consequence, the characteristics of materials have to be examined at different temperatures. To obtain a temperature value, defined temperature parameters are used. Here the parameters can be defined, for example, as the freezing and boiling points of water.

For temperature measurement temperature dependent characteristics of materials have to be taken into account. These include such things as thermal expansion (expansion thermometer), the dependence of the electric resistance on metallic conductors (electrical thermometer) and electromotive force (thermocouple) etc.. A temperature measuring device with a thermocouple as a data indicator tends to consist of the thermometer itself with a measuring point, an extension cable, a cold junction with a specified constant temperature and a voltmeter.

The value of the electromotive force (EMF) produced by the thermocouple is determined by the difference between the measuring temperature and the so-called free ends of the thermocouple which are mounted in the connection head. As the connection head is usually relatively close to the measuring point, it is frequently exposed to temperature fluctuations. For this reason, a connection cable with the same thermo-electric properties as the thermocouple is used between the thermocouple and the cold junction.

**This link-up provides the compensating/extension cable.**



### ■ Sketch

### ■ Possible Dimensions

**24 AWG / 2c**  
2 x 0,22 mm<sup>2</sup>

**22 AWG / 2c**  
2 x 0,34 mm<sup>2</sup>

**20 AWG / 2c**  
2 x 0,50 mm<sup>2</sup>

**19 AWG / 2c**  
2 x 0,75 mm<sup>2</sup>

### ■ Color Code

We manufacture in according to following color codes:

ANSI MC 96.1



DIN IEC 584



Other color codes are possible on request.