Temperature measurement general

Thermocouples and resistance thermometers

We offer a large range of temperature sensor products.
The most common types are both ***DNV*** and ***LR*** approved and have undergone proving and tested for years.
The dimensions of most of these items can be changed upon the request of the customer, and they can be equipped with the customary measuring elements.
We can also manufacture special sensors on a short-notice order basis and based on your drawings.

The types and designs mentioned above are protective fittings that support the actual measuring resistance or the thermal element.
Basically, it is possible to install all customary elements, such as:
Fe-CuNi Type J; NiCr-Ni Type K; PtRh-Pt Type S;
Pt 100; Pt 500; Pt 1000; Ni 100; Ni 1000
Also, it is possible to accommodate several elements within one fitting.

Type K thermocouples are supplied in tolerance class 1 according to DIN EN60584,
Permissible limit deviation:
in the temperature range from -40°C to 375°C limit deviation +/- 1.5 ° C
in the temperature range from 375°C to 1000°C limit deviation 0.004 * t

Type J thermocouples are supplied in tolerance class 2 according to DIN EN60584,
Permissible limit deviation:
in the temperature range from -40°C to 333°C limit deviation +/- 2.5°C
in the temperature range from 375°C to 750°C limit deviation 0.0075 * t

Pt100 measuring resistors are supplied in class B or AA according to DIN EN60751.
Permissible limit deviation class B: +/- 0.3 ° C at 0 ° C.
Permissible limit deviation class AA: +/- 0.1 ° C at 0 ° C.

The sensors can be provided with an integrated line or with a connector head.
The resistance thermometers are manufactured in 2-wire, 3-wire and 4-wire technology.

The max. temperature for the thermocouples Type J is 600°C and for Type K 800°C, in special cases even 1200°C are possible.
With resistance thermometers there are the following limit temperature ranges:
100°C; 200°C; 400°C; 600°C

Temperature sensors with protection tube are available separately as *PROTECTION TUBE* and *GAUGE SLIDE*.
Some sensors with connection head can be manufactured with replaceable gauge slides; then they are also separately listed as *EMPTY TUBE* and *GAUGE SLIDE*.

For sensors with clamping fitting or sensors with fixed-mounted line, it is necessary to designate the screw, the type and the length of the line separately.

Orders

Here, we need the following details:
Type of construction, dimensions, element, temperature range, the medium to be measured.
Moreover:
for sensors with integrated lines - the type of line and the length of line
for sensors with clamping fitting - the type of screw / the thread

All sensors manufactured by us will obtain a type designation, an article number and an order-related