

Mineral Insulated Thermocouples

bendable, flexible resistant to vibrations, for hard to reach places

Limatherm Mineral Insulated Thermocouple Sensors are

- highly resistant to vibrations and shock
- easily bendable and formable in any direction with no risk of short-circuiting their electrodes
- suitable for inaccessible sites in small elements
- used for units with small diameters and low thermal inertia
- applied in the chemical, petro chemical, heavy power, civil and industrial sector
- available for corrosive aggressive media, (isolated junction, special sheath)



Specifications

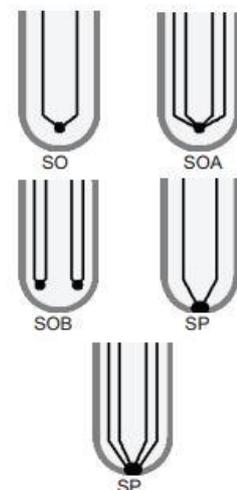
- temperature range up to 1335°C
- sensing element TC J, K, N, (also RTD Pt100 available)
- sheath material: INCONEL 600, OMEGALAND XL, steel 1.4571
- sheath diameter: 1; 1.5; 2; 3; 4; 5; 6; 8 mm (standard 6 mm)
- sheath length: any
- high resistance to harsh conditions
- various design versions



Operating Principle

A mineral insulated thermocouple sensor is manufactured in the form of thin tube/probe called mantle. Inside this tube, there are two (2) or four (4) thermoelectrodes; all the thermoelectrodes' ends are tightly welded together, thus, forming a measuring junction; the thermoelectrodes inside the tubes are placed in an insulating envelope made of a highly compressed insulating material, for example, magnesium oxide. The measuring junction may be either isolated/separated from the mineral insulated (SO type) or connected with it, i.e. earthed (SP type); in the case of double, thermocouples, the measuring junctions of the two thermocouples, which are isolated/separated from the mantle, can be either connected with each other (SOA type) or isolated/separated from each other (SOB type).

Thermocouple hot junction types



[PDF datasheet XLPTTK/XLPTTN up to 1335°C](#)