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DOCUMENT

TRU-938

Isotech

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Thermocouple Referencing Techniques

Isotech has a world leading range of thermocouple referencing equipment. From laboratory models for standard thermocouples through to large scale installations used in power stations, aeronautical, industrial and research institutes.

Types of Equipment

Automatic Ice Point

The junctions are maintained at a fixed temperature of 0°C

Features

- Provides 0°C reference as adopted by thermocouple tables
- Reference from one to a 100 Junctions
- Will reference any type or combination of thermocouple types
- Can be bench or rack mounted.

Constant Temperature Ovens

The junctions are maintained at a fixed temperature typically in the range 40 to 75°C

Features

- The junctions are maintained at a fixed elevated temperature.
- Reference up to 100 Junctions
- Will reference any type or combination of thermocouple types
- Can be provided as bench, rack mounted or in a weatherproof wall mounting case to IP66

Isothermal Systems

The junctions are not maintained at a fixed temperature, but are held in a thermal reservoir with an output signal which is fed to the instrumentation system.

Features

- The junctions float at ambient temperature in an isothermal block - no loading errors
- Can be fully passive with no power requirement
- Will reference any type or combination of thermocouple types
- Can be provided as bench, rack mounted or in a weatherproof wall mounting case to IP66

Types of Housing

Bench Mounting

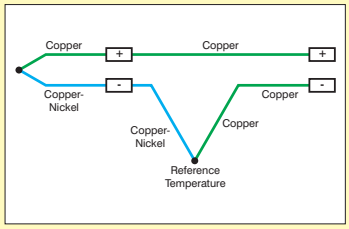
Wall Mounted

Rack Mounted

Types of Junction

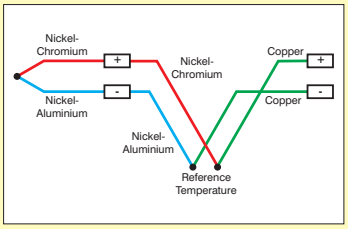
Single Junction

This is particularly useful with Type T thermocouples. With Type T one leg is copper, so only the Copper / Constantan wire needs to be processed thermally.



Double Junction

This is the most commonly used method. The input signal being connected to the "double junction" with the output on copper wires.



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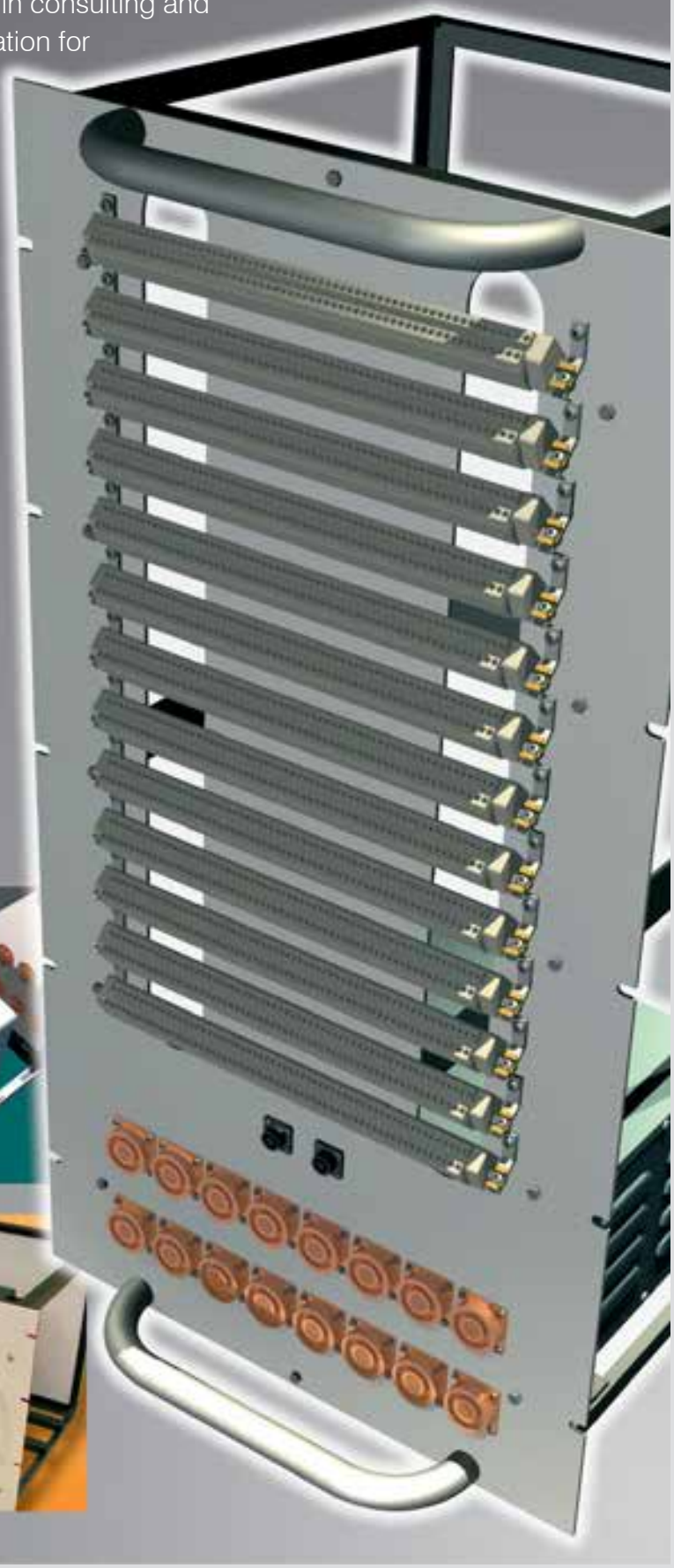
Isotech Custom Engineering

Isotech have more than 30 years experience in consulting and designing referencing systems. With a reputation for outstanding reliability, long term support and excellence Isotech can provide systems from a single, to several thousand junctions.



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