



More than **sensors + automation**



Application

Determining Temperature Difference in Heat and Cold Energy Measurement



JUMO temperature probes – the most effective way of acquiring the temperature difference when measuring heat or cold energy

Cold and heat energy measurement – the proven and highly successful method of measuring the emitted energy from heat exchangers or heating systems. In this field JUMO has developed special, high-quality sensors with which the temperature difference can be measured reliably and easily.

How you can measure the energy consumption thanks to exact temperature measurement

The temperature probes for cold and heat energy measurement acquire the most important measurand in heat energy measurement: the temperature difference. For this purpose they are equipped with a precise sensor that has long-term stability to help ensure maximum precision.

JUMO offers temperature probes that correctly acquire the temperature even when the immersion depth is small – such as in pipelines with a 12 mm diameter. To measure the temperature difference between flow and return of the heating system within the specified tolerances according to the international standard EN 1434 the two temperature probes that are required for this task must be metrologically coordinated with one another.

Why you can rely on your measured values thanks to JUMO

JUMO develops the temperature probes so that they surpass the standard requirements. The compliance with tolerances in temperature difference measurement absolutely requires pairing of probes that are compatible with one another. For this purpose each temperature probe is calibrated at three temperatures. Based on the individual characteristic line that is calculated from this procedure the matching temperature probes are selected via a calculation algorithm. Temperature probes that are permanently connected to the calculating engine can also transmit the individual characteristic line for programming the grid map.

To guarantee the metrological features, supervision measures in Europe refer to the European directive MID. That way, only metrologically flawless products are brought to the market. Other than this certification, the operation of an officially recognized test facility for heat also belongs to JUMO's scope of service. The entire probe range is available with MID type examination certificate for heat. This probe range is also available with domestic approval (Germany) for cold or as a combined heat/cold version.

Your benefits in a nutshell:

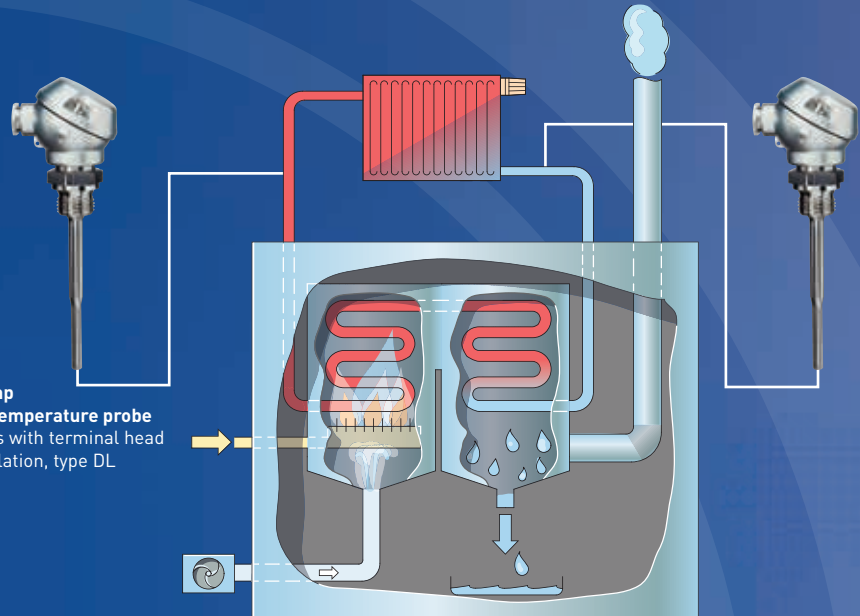
The JUMO solutions that have been especially designed for temperature difference measurement allow you to properly handle all normative requirements: maximum reliability and long-term stability when measuring heat and cold energy.

Your contact

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JUMO HEATtemp
Screw-in RTD temperature probe
 For heat meters with terminal head
 for direct installation, type DL
 Type 902427



JUMO HEATtemp (type 902454, 902464) – Temperature probe with terminal head

- Two types of installation: direct mounting/immersion sleeve
- Advantage of direct mounting: better thermal coupling, thereby quicker response behavior and smaller conduction error
- Advantage of the immersion sleeve: higher pressure resistance (PN 40), no additional shut-off valves required, replacement without emptying the pipeline system
- Special construction for cooling applications with additional cold barrier so that condensate formation in the terminal head is avoided
- Compliance with the requirements of national and international regulations such as EN 1434, AGFW FW202, and AGFW FW 211
- Available as temperature probe for combined heat and cold meters



JUMO HEATtemp (type 902428, 902438) – Temperature probe with connecting cable

- Two types of installation: direct mounting/immersion sleeve
- Advantage of direct mounting: better thermal coupling, quicker response behavior, version in accordance with requirements of EN 1434, AGFW FW202, and FW211
- Immersion sleeve: MID-approved, “short immersion sleeve” as of 28 mm insertion length
- Special construction for cold applications with optimized seal
- JUMO also offers suitable installation locations (e.g. ball valve) for temperature probes



JUMO accessories for temperature probes (type 902440, 902442)

- Ball valves with/without installation location for temperature probes
- Immersion sleeves
- Adapter screw fittings for installation in pipelines
- Screw connections as installation locations for direct mounting





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