



Handling of e2v Pellistor Gas Sensors

e2v technologies

e2v pellistor gas sensors contain elements that are made of thin platinum wire. These elements can be damaged if handled in an inappropriate manner. Damage can result from mechanical shocks such as dropping or shaking, or by direct damage caused to the detecting elements or connecting leads.

Gas sensors can be supplied to the customer either in the form of a certified head or as the pellistor pair. The certified heads are somewhat protected from direct damage to the detecting elements and the connecting pins are robust; as such, they are less liable to be affected by mechanical shock.

However, the pellistor pairs are more susceptible to damage and care needs to be taken when handling them. For example:

- The metal cans surrounding the detecting elements must not be cut or otherwise deformed. This can affect the flow of gas to the sensor and hence its response. In the case of the certified head, the area of the sinter must not be blocked by liquids, greases or solids.
- The detecting beads must not be touched or moved by direct contact. This may affect the sensor zero (by changing the heat loss from the bead and hence its resistance) and also the net responses to gas (by affecting the temperature or catalytic area of the bead). As received, open can beads are protected with a plastic cap. This should be retained until the beads are ready to be inserted into the certified head.
- The metal connecting legs or leads must not be repeatedly bent (in the case of solid legs) or cut/trimmed in the case of braided legs. This can cause a loss of connection to the bead.
- Care must be taken not to drop or expose the sensors to excessive vibration. These can cause zero drift or total sensor failure due to breakage of the wire or bead. Pellistor pairs in particular should be kept in their immediate packing until ready for use.
- Sensors should not be exposed to chemicals (such as acids) that can attack the sensor materials or be retained and poison the sensor when it is subsequently switched on.
- Sensors should ideally be stored in non-condensing environments, at room temperatures and protected from dust exposure.

NOTE: Any damage to the sensor after receipt from e2v caused by mishandling resulting in the sensor becoming inoperable or failing to meet the published specification will invalidate the warranty.

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