

Electronic Turbine Meter TERZ 94



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1. Method of operation

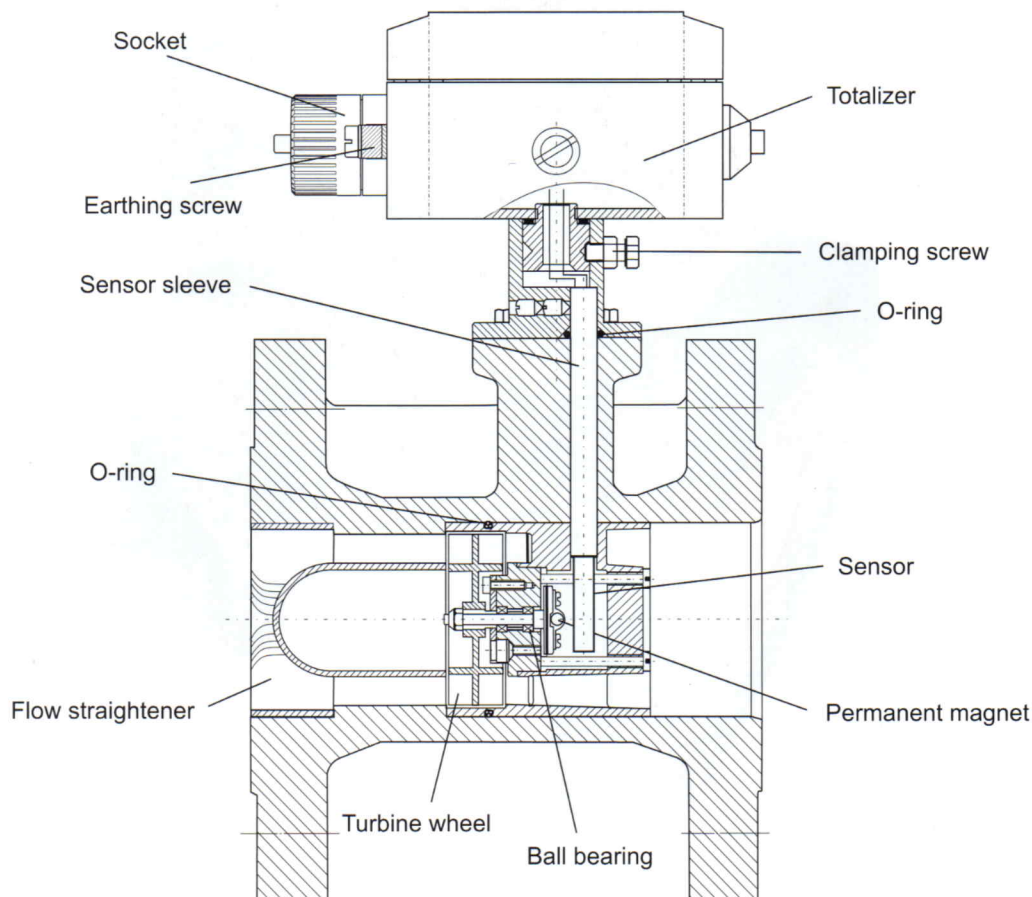
The TERZ 94 electronic turbine meter is a flow meter which directly measures the flow rate of gases at measurement conditions. The flow rate measured and the volume are displayed on an electronic totalizer.

The operating principle of the meter is based on velocity measurement using a turbine wheel. The gas flow passes the ring-shaped inlet section of the flow straightener and reaches the coaxially mounted turbine wheel, whose speed is proportional to the mean velocity of the gas flow within the scope of the measuring range.

The speed of the turbine wheel is recorded inductively using non-contact measurement by a pulse-wire sensor and a permanent magnet. Due to the fact that the signal frequency is directly picked up at the turbine wheel, the meter is also suitable for control applications.

2. Construction

The electronic turbine meters form a series of uniform construction. Each meter consists of four structural units (see drawing). An aerodynamic flow straightener fitted into the meter case constricts the effective cross section of the pipe to form a ring-shaped cross-sectional area and substantially eliminates turbulence. This increases the velocity of the flowing gas. The shaft mounted with ball bearings carries the turbine wheel on the one side and a permanent magnet rotating before the sensor on the other. The duct of the sensor sleeve towards the unpressurized section of the electronic totalizer is sealed off by a pressure-tight O-ring. By means of the clamping screw, the electronic totalizer can be fixed in the most favourable position for taking readings.



3. Types of gases

The TERZ 94 standard design is suitable for all gases complying with DVGW Code of Practice G260. The materials used are appropriate for gases and fuel gases, such as natural gas, refinery gas, liquid gases and their mixtures, nitrogen, CO₂ (dry), air and all

inert gases.

For corrosive and chemical gases, there are special designs available with PTFE lining, special material, special lubrication, etc.

