

Gas Density Controller for SF₆ and other gases

The installation and operation and the maintenance of an SF₆ gas-insulated high-voltage switchgear component, must be performed by certified specialized personnel and in observation of the regulations applicable for high-voltage switchgear installations and equipment.

This instructions only constitute a description of the component, and provide information on the operation. They do not substitute either for appropriate specialized personal nor the applicable regulations.

The operator of the installation is responsible for the employment of adequately trained specialized personnel, as well as for the adherence to all applicable regulations.

Function

The Gas Density Controllers monitor the gas density of the SF₆ gas insulated switchgear an the outdoor circuit breakers. When the density drops below the adjusted values (warning, alarm, blocking) the microswitch contacts, which are independent of one another, close. The gas density of the part of the SF₆ installation to be monitored is compared with the density of the same gas in a reference chamber of the Density Monitor.

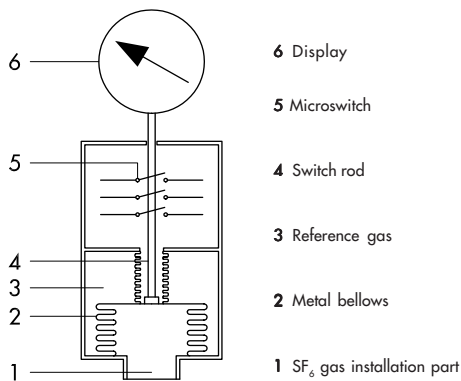


Fig. 1. Construction

The construction of the Trafag density monitor is shown in Figure 1:
The gas to be monitored by the switch unit is contained in the internal chamber (1) of the metal bellows (2), and the remaining chamber (3) is filled with the reference gas (nominal isolation density of the switch unit). If the density of the gas in the circuit breaker changes, the switch lever (4) moves in respect to the reference condition in a positive or negative direction to either open or close the circuit (5). Up to four galvanic isolated switch circuits can be integrated into one unit.

The density monitors are filled at the works of Trafag to the customer's density specification.

The units can also be optionally equipped with a density indicator (6). The green/red zone indicate the density trend. In the case of an indicating density monitor the scale dividing point (green/red) is adjusted to the lowest switching point, i.e. the indicator is located at the dividing point between the green and red indicating zones.



Maintenance

Trafag Density Monitors require no maintenance. A set point control check is, however, recommended at 5-year intervals:

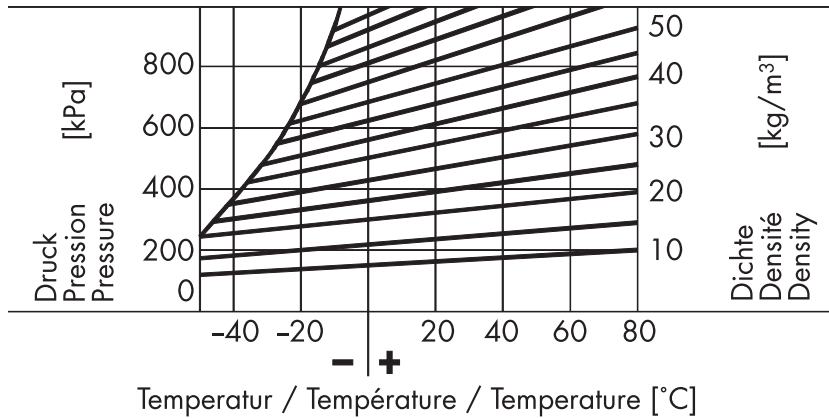
See special instructions of the installation operator.

Attention:

Since without the appropriate equipment (computer controlled environmental chamber) adjustment of the gas density controller microswitches in the field or at the site is very difficult, the adjustments should be done by the manufacturer only.

Trafag refuses all warranty and liability claims for instruments having been opened, adjusted or reset by a third party.

Isochores (Vapour pressure diagram, lines equal to gas density SF_6)



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We reserve the right to make alternations as technical progress may warrant.

