THE WIEGAND-SENSOR

Premium quality in detail

For many years now, reed switches have proved to be extremely reliable elements to generate low-frequency pulses in gas metering devices. However, there are occasions, albeit rather seldom, where the switches fail because the switch has been jolted or the contacts have stuck together inside the reed pipe.

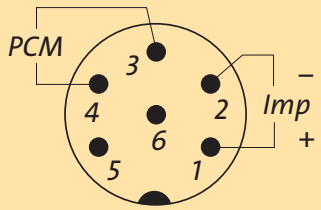
Premium alternative for low-frequency pulses

This error becomes apparent when, having transmitted the pulses to a volume corrector, the original mechanical meter reading is different from the reading in the electronic volume corrector. An error in the display may also occur when pulses are generated even if there is in fact no gas in the pipe or when the gas volume is "breathing". This error is caused by the fact that the magnet on the last roll of the counter is near the reed switch and any forward or backward movement activates the switch. As a result, the electronic volume corrector registers volumes which have not actually flowed through the meter. These faults are, as already mentioned, really quite rare, otherwise the reed switch would not be so widely used and accepted.

Of course, the best way to reproduce the original meter reading in the volume corrector is by using the encoder-index. But also with the low frequency pulser, premium solutions are available. Nevertheless, there are some requirements and applications which call for this last little bit of uncertainty to be eliminated. To meet the highest standards of reliability, ELSTER can now offer, as an alternative to the standard pulsers IN-S10 to IN-S12, the Wiegand low-frequency pulser, the IN-W11. Wiegand sensors are free from mechanical wear and tear. They make use of the characteristics of specially-treated magnetic wires. When a magnetic field is suddenly switched from one direction to the opposite, a voltage pulse is generated in an induction coil. This switch in direction is activated by two small permanent magnets in the S1 index (or in the S1D double index in the case of rotary meters). The IN-W11 Wiegand sensor needs the two magnets, unlike the reed switch, which operates with only one magnet.

Further user-friendly features of the Wiegand sensors include the two-wire system and the fact that no external power supply is necessary, as is also the case with the reed switches. The Wiegand sensor is certified for use in explosive areas in accordance with ATEX and can be used in temperatures between -40 °C and +60 °C. The pulse width is always greater than 50 ms and, therefore, guarantees that there are no problems when the pulses are processed in volume correctors or data loggers. The IN-W11 is connected to the S1 or S1D indexes, if they are equipped with two magnets, and also has, once again just like the reed switch, a PCM switch monitoring any interruption in the operation.

Pin assignment IN-W11



Have you got any special requirements when it comes to generating low-frequency pulses? ELSTER can offer you alternatives to the standard solutions. Why not try them out?

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