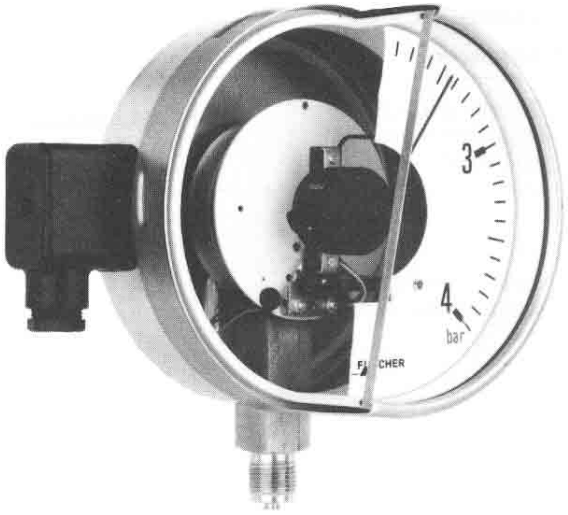
Integrated Resistance-Type Remote Sensor KE 07



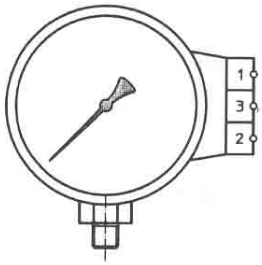
Uses

Resistance-type remote sensors are built into mechanical pointer-type measuring instruments when cost-effective, noise-free measured value detection is required for long-distance transmission in addition to the local display.

Structure and function

The angle measured by the measuring instrument is transferred from the measuring instrument pointer and the drive shaft of a 270° rotary potentiometer via a mechanical coupler. The wiper pick-off making contact with the potentiometer resistor winding is gold-plated to guarantee high contact stability and low contact resistance. The effects of the resistance-type remote sensor on the measuring system are low due to the low friction of the drive shaft bearings and the high-quality materials used for the resistor winding and because the slow-action contacts only require low levels of contact force.

Electrical connection via cable box



Start: blue
Middle: yellow
End: red

Technical Data

Resistance values	5 – 100 – 5 ohms 10 – 200 – 10 ohms
Linearity	+/–0.2% excl. resistance value stepping
Resistor tolerance	+/–1%
Characteristic resistance curve	linear
Measuring accuracy	in worst case: **measuring instrument accuracy** + linearity of remote sensor + resistor tolerance
Resistor design	series resistor – variable resistor – series resistor
Angle of rotation	270°, 10° short circuit paths at start and end
Transmission angle	270°
Max. operating voltage	60 V
Max. slow-action contact current	100 mA
Electrical connection	via cable connection box mounted on side of measuring instrument casing

Materials

Slow-action contacts	gold-plated
Resistor winding	precious metal-plated
Casing	anodized aluminium, black

Note on use

If the resistance-type remote sensor is only ever moved in a very small range, there is a danger that its reliability may be impaired over a long period of time owing to dirt collection and deposits on the other parts of the winding. In such cases, capacitive angle-of-rotation transducers should be used.