



KSR TEH... - Transmitter 4-20 mA (HART®)



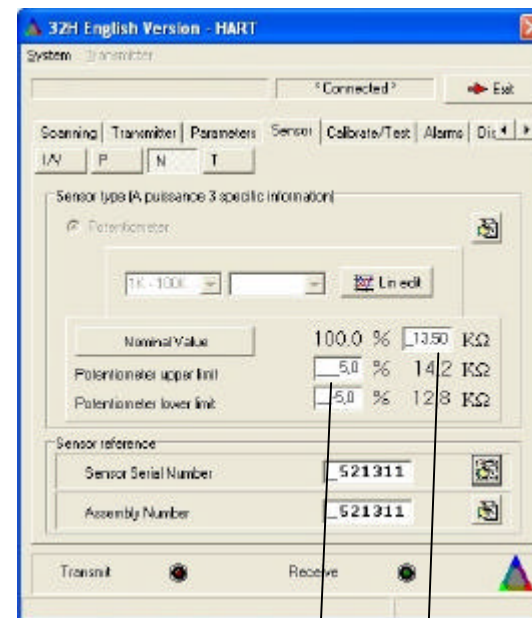
The KSR two-wire head-mounted transmitter Type TEH converts a resistance input signal to a linear or linearised output signal. The transmitter can be configured, read and monitored via its HART communications port. The analogue signal is overlaid with a sinus signal (effective value = 0) in such a way, that the analogue signal is not disturbed. An outstanding characteristic of the TEH is the integrated **Sensor - Diagnostic** feature - 'malfunction control of the measuring chain'

Properties of the Sensor - Diagnostic

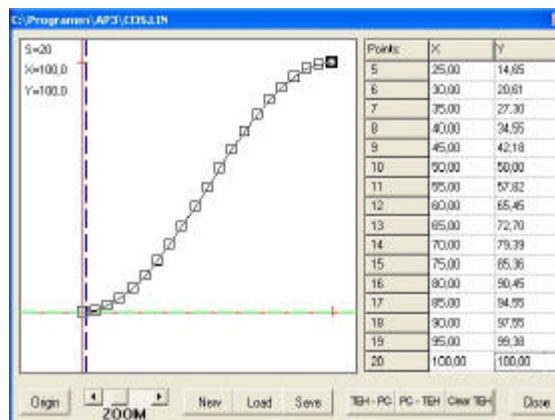
Measuring chain malfunctions, such as contact damages, short circuits, breaks in cable/measuring chain – or interference from additional magnetic fields result in a change to the nominal resistance value. This is what the TEH uses for self-diagnosis purposes. The nominal resistance is monitored and if a variation exceeding a pre-set percentage-value is detected a failure alarm is generated. The failure signal can be set to either 3.8 mA or 22 mA depending on user requirements.

Advantages of the Sensor - Diagnostic

- No interference through the presence of an externally added magnetic field
- Contact breakage and contact 'permanently closed' monitoring
- Measuring chain and wire-break monitoring
- Adjustable failure alarm signal



Difference of the Overall resistance
 Overall resistance



Linearisation – Curve

The output signal of the TEH is programmable via a linearization curve of up to 34 set points. This function does for example allow the read out of a level volume of a horizontal cylinder via a 4-20mA instrument. Without the programmed linearisation the output signal would be proportional to the height of the vessel only – not the volume.