

DATA SHEET

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KFA20

innovative TDR sensor with ultra-rapid probe for continuous load measurement and point load detection in bulk solids, with analog and switching output

MEASUREMENT PRINCIPLE

KFA20 uses TDR (Time Domain Reflectometry) technology. Its energy, high-frequency electromagnetic impulses, generated in the sensor's circuit, are propagated along the probe which is immersed in the bulk solids to be measured. When these impulses hit the surface of the solids, part of the impulses energy is reflected back as the probe is the circuitry affects their velocities. The load then is the time difference between the impulses sent and the impulses reflected. The sensor can output the measured load as a continuous measurement feeding through its analog output, or it can convert the values into freely programmable switching output signals. TDR sensors are also known as fluidized bed or fluidized flow meters (FFM).

APPLICATION AREA

The innovative TDR technology enables stress, pressure and highly reliable continuous load measurement as well as point load detection in almost every bulk solid - independent of changing process conditions such as density, conductivity, temperature, pressure, moisture and load. KFA20 has proven its measurement capabilities: it can be mounted in small tanks as well as large silos, tall and narrow hoppers and it measures granular mass with difficult load geometries or close to stirring structures.

ADVANTAGES

- Unmatched price-performance ratio
- Proven continuous load measurement and reliable point load detection combined in one device
- Complete galvanic isolation of device electronics from its surroundings and the tank potential (no problems with electrochemical corrosion protection)
- Highly robust measurement due to its wire design and innovative signal analysis and disturbance signal suppression