



## Microwave Sensors for Concrete

### Type 6P

**Microwave Sensor for Pan Mixers, Conical Mixers, Single and Twin-Shaft Mixers**



Measurement Frequency: 300-500 MHz  
Measurement Area: All consistency areas  
Temperature Area: 0 to + 60 °C  
Output: 0-20 mA, 0-10 V DC  
Power Supply: 18-24 V DC

Size of Sensor:  
Diameter 105 mm, length 100 mm

Size of Mounting Attachment:  
Diameter 150 mm, height 35 mm

### Typ 8 / Typ 8K

**Microwave Sensor for Mixers with Rotating Mixing Pan Type 8**



Measurement Frequency: 300-500 MHz  
Measurement Area: All consistency areas  
Temperature Area: 0 to + 60 °C  
Output: 0-20 mA, 0-10 V DC  
Power Supply: 18-24 V DC

Size of Sensor:  
Typ 8: WHD 180mm x 180mm x 52mm  
Typ 8K: WHD 98mm x 145mm x 46mm

Length of Mounting Attachment:  
700mm, 900mm, 1,200mm

### Characteristics of the Bikotronic Microwave Sensors for Concrete:

- Wear plate which can be easily exchanged by the customer, it is not necessary to exchange the complete sensor (type 6P)
- Extremely wear-resistant ceramic plate, 10 mm (= 3/8") thick over the whole surface
- Suitable sensors for all types of mixers
- Temperature stable electronics from 0 to 60°C
- Absolute linearity which makes it possible to measure precisely the moisture content of very dry concrete as well as very wet concrete
- The sensors have been developed in cooperation with the chair for high frequency engineering of the technical faculty of the Christian-Albrecht-University in Kiel. The measurement accuracy of the Bikotronic microwave sensors in the laboratory is better than 0.1%.
- The sensor uses the high-frequency method to determine the moisture content in the concrete. Here, the dielectric constant of water ( $\epsilon = 80$ ) is compared with that of the material. This measuring result is converted by the analyzing electronics and the moisture content is output as a percentage.

## Microwave Sensors for Sand / Aggregates

### **MS 150 / MS 150 K** **Microwave Pipe Sensor** **Moisture Measurement in the Silo**

Output: 0-20 mA  
Power Supply: 15- 24 V DC  
Range of Moisture: 0 - 18 % (depending on the material)  
Measuring Accuracy: +/- 0,3 % (depending on the material)

#### Dimensions Sensor

MS 150: Diameter 55 mm, length 670 mm  
MS 150 K: Diameter 55 mm, length 400 mm

#### Dimensions Mounting Attachment

WHD 130 x 120 x 140 mm



### **MB 110 / MB 110 K** **Microwave Belt Sensor** **Moisture Measurement on a Conveyor Belt**

Output: 0-20 mA, 0-10 V DV  
Power Supply: 1 5-24 V DC  
Range of Moisture: 0 - 20 % (depending on the material)  
Measuring Accuracy: +/- 0,3 % (depending on the material)

#### Dimensions Sensor

MB 110: Length 360 mm  
MB 110 K: Length 260 mm

Height of material on the belt: at least 60 mm

For particularly abrasive materials, the microwave sensor MB 100 / MB 110 K is available as carbide-tipped version. Furthermore, it is possible to integrate a temperature measurement into the sensor.

