



Temperature measurement system - for rotating concrete mixers

- ▶ **Wireless signal transmission**
- ▶ **Robust enclosure**
- ▶ **Fast response**
- ▶ **High accuracy**



Description

The robust temperature system PAAB PWTT-CM allows continuous control of the temperature inside the concrete mixer during the mixing process.

PAAB PWTT-CM is developed for measuring temperature inside the rotating mixer and wireless send the signal to a receiver. The system consists of a stainless steel flange with temperature sensor, battery powered transmitter and mains powered receiver.

The flange is mounted on the wall inside the concrete mixer. For mounting, a 22 mm hole is drilled through the wall and liner. The temperature sensor is mounted in the flange with heat transfer compound and is connected to the transmitter which is mounted on the outside of the concrete mixer. The signal is transferred wireless to the receiver.

In the receiver, the temperature signal is converted to an analogue 4-20 mA signal corresponding to 0-80° C (other ranges on request). The output signal from the receiver can then be connected to a control system at the plant.

The receiver also got an alarm output for low battery level.



Transmitter

The transmitter consist of two robust aluminium enclosures, one for transmitter and antenna and one for the batteries. Lifetime for the batteries are more than one year at transmitting interval 2 seconds.



Receiver

The receiver is built in a plastic box which shall be wall mounted close to the transmitter. The receiver can handle transmitting distance more than 150 m from the transmitter in open area. Before final mounting it is recommended to check the receiving signal as walls and metal reduces the signal.

Measuring flange

The flange is mounted on the wall inside the concrete mixer. For mounting, a 22 mm hole is drilled through the wall and liner. The temperature sensor is mounted in the flange with heat transfer compound and is connected to the transmitter which is mounted on the outside of the concrete mixer.





Technical specification

Transmitter

Temperature sensor	TC type J
Cable length sensor	1 meter
Measuring range	0-80° C, others ranges on request
Accuracy	+/- 0,1%
Radio frequency	868,4 MHz
Transmitting interval	2 seconds, other intervals on request
Transmitting range	More than 150 m in open area
Power supply	4 x 3.6V Lithium battery
Lifetime battery	More than 1 year @ 2 sec transmitting interval
Temperature range	-30 to 85° C
Material enclosure	Aluminium
Dimensions enclosure	354 x 81 x 57 mm (L x W x H)
Protection class	IP 66/67/68 (EN60529)

Receiver

Output signal	4-20 mA
Power supply	110 - 240 VAC
Alarm output	Relay N.O., max 3 A @ 230 V
Temperature range	-20 till 50° C
Material enclosure	ABS plastic
Dimensions enclosure	250 x 160 x 150 mm (L x W x H)
Protection class	IP 66/67 (EN 60529)

