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Products & Applications

TT mini S

frequency measuring device

Operating instructions

optibelt
Power Transmission

Drive solutions with Optibelt

optibelt TT mini S

optibelt
Power Transmission

The **optibelt *TT mini S*** frequency measuring device is used to establish the tension of transmission belts by means of frequency measuring.

Operating instructions

1 Switch on the **TT mini S** by pushing the on/ac-button. On the display appears an **A** for „active", immediately afterwards the device is ready for measuring (the display now shows a **m**).

2 Vibrate the tensioned belt either by finger or by using an appropriate tool. Hold the measuring head over the belt to be measured.

3 Given a constant frequency the measurement starts with a measuring result. The start is being displayed by a LCD. After the measuring evaluation, the result is displayed in Hertz, the **m** fades. Next to the **A** a number of **1** to **4** is displayed. This number represents the number of successful measuring cycles. If 2 to 4 measurements are necessary, a statistical value is being calculated. If an **E** is displayed behind the number, one of the measuring results was outside the range of tolerance. In case the display shows **1** or **E** it is recommended that the measurement is being repeated by pressing again the on/ac-button.

4 The measuring frequency [Hz] is to be compared with the nominal value [Hz]. Decrease or increase the belt tension, depending on the measuring result, up to set the value. The conversion of the measuring frequency f [Hz] into static belt tension T [N] is done with the following formulae:

$$T = 4 \cdot k \cdot l^2 \cdot f^2$$

T = static belt tension	[N]	l = span length	[m]
k = weight per metre	[kg/m]	f = frequency	[Hz]

The tension value and weight per metre can be gathered from the Optibelt CAP drive design calculation and the Optibelt documentation respectively.

5 The **TT mini S** can be switched off by pressing the off-button. Furthermore, an automatic cut off takes place after a few minutes.

Technical Data

Measuring range:
10-600 Hz

Measuring accuracy:
10-400 Hz ± 1 %
> 400 Hz ± 2 %

Sensor:
Acoustical with electronic background fade-out

Power supply:
2 batteries Micro (AAA-cells)

Verification:
CE acceptance
Factory calibration

Safety advice!

Before the start of measurement, the drive motor must be switched off, thus ensuring that neither the drive nor the driven shaft can start rotating. All the corresponding safety measures must be strictly complied with!