

TM-NANO belt tension measuring device



The correct pre-tension force has a significant influence on the operating behaviour and lifetime of the entire belt drive. It is one of the very few measurement variables that can be set by the operator himself. That's why it is highly recommended to set and check the pre-tension force of the belt with the TM-NANO belt tension measuring device.

The TM-NANO measuring device allows quick and easy measuring of the belt pre-tension. It is all electronic and equipped with cutting-edge microprocessor technology. This guarantees easy handling and highest measuring accuracy. Measuring is possible for all v-belts, timing-belts and flat belts in the frequency range from 10 to 600 Hz.

Due to the acoustic measurement principle the type, colour and composition of the belts does not influence the measurement results.

The principle of forced vibration applies. If a pulse is transmitted to the belt, it vibrates at first with all types of oscillations, while the high frequency oscillations are damping faster than the fundamental oscillation.

The frequency of the fundamental oscillation is directly proportional to the pre-tension force. This means that the higher the frequency, the higher the pre-tension force on the belt.

Features

- Measuring range from 10 to 600 Hz
- External transmitter including an extension cord
- 90° adapter for measurements even in the most inaccessible areas
- Leather belt pouch for easy and safe storage within the workshop area

Benefits

- Easy handling and highest measuring accuracy and repeatability
- Contactless acoustic measurement (including electronic noise suppression)
- Measurement of all belt types possible
- Small and compact

Contact

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Specifications

Article number	09 1831 2210
Measuring range	10 to 600 Hz
Measuring accuracy	10 to 400 Hz $\pm 1\%$ > 400 Hz $\pm 2\%$
Resolution	10 to 99,9 Hz: 0,1 Hz > 100 Hz: 1 Hz
Measuring method	Contactless acoustic measurement (including electronic noise suppression)
Power supply	2 x 1,5V Micro (AAA cells)
Operating time	> 48h continuous measurement (depending on the quality of the used batteries)
Power consumption	Max. 12mA
Display	LCD two-line, 2 x 8 characters
Dimensions	Ca. 80mm x 50mm x 28mm
Weight	Ca. 100g (including batteries)

Reference

The device is calibrated during the final inspection. Usually there is no requirement for any additional calibrations. In case of further mandatory calibrations due to internal guidelines we offer a so called manufacturer's calibration.

Here the device is checked by means of defined measuring points within the measuring range. The results are confirmed in a calibration record.

- The TM-NANO measuring device is not approved respectively certified to be used within potentially explosive application areas.
- Do not drop the device. Shocks of any kind can cause damages.
- Do not allow water, solvents or other fluids to come into contact with the device. Also please do not use any volatile solvents for cleaning.
- Protect the device against dust and contamination.
- Do not expose the device to high temperatures or direct sunlight (for example storage in a car).



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