

KURZANLEITUNG TT LINIE

QUICK REFERENCE GUIDE TT LINE



Frequenz-Messbereich

f: 1-600 Hz

Frequency measuring range

f: 1-600 Hz



TT

TT DATA

TT RFID

SICHERHEITSHINWEISE SAFETY INSTRUCTIONS

Vor Beginn der Wartungs- und Einrichtarbeiten ist zu gewährleisten, dass sich alle Maschinenkomponenten in einer Sicherheitsposition befinden und diese während der Wartungs- und Einrichtarbeiten nicht verändert werden kann.

DIE SICHERHEITSEMPFEHLUNGEN DES MASCHINENHERSTELLERS SIND ZU BEACHTEN!

Before beginning of any maintenance- and setting-up work, make sure that all machine components are in a safety position and that they cannot be changed during maintenance- and setting-up work.

THE SAFETY INSTRUCTIONS OF THE MACHINE MANUFACTURER MUST BE OBSERVED!

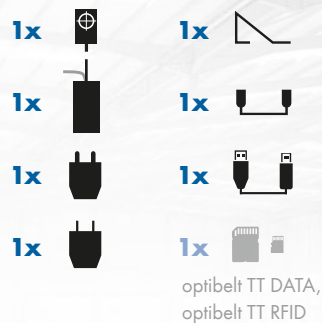
SICHERHEITSHINWEISE SAFETY INSTRUCTIONS



INHALT CONTENT



Bedienungsanleitung siehe: www.optibelt.com
Reference Guide see: www.optibelt.com



1. ON: 1 s
2. OFF: 3 s
3. DISPLAY RESET: 0.1 s
4. AUTO STANDBY: 30 s
5. RESTART: SHAKE TT
6. DISPLAY RESET
7. AUTO OFF: 5 min

USB 5V

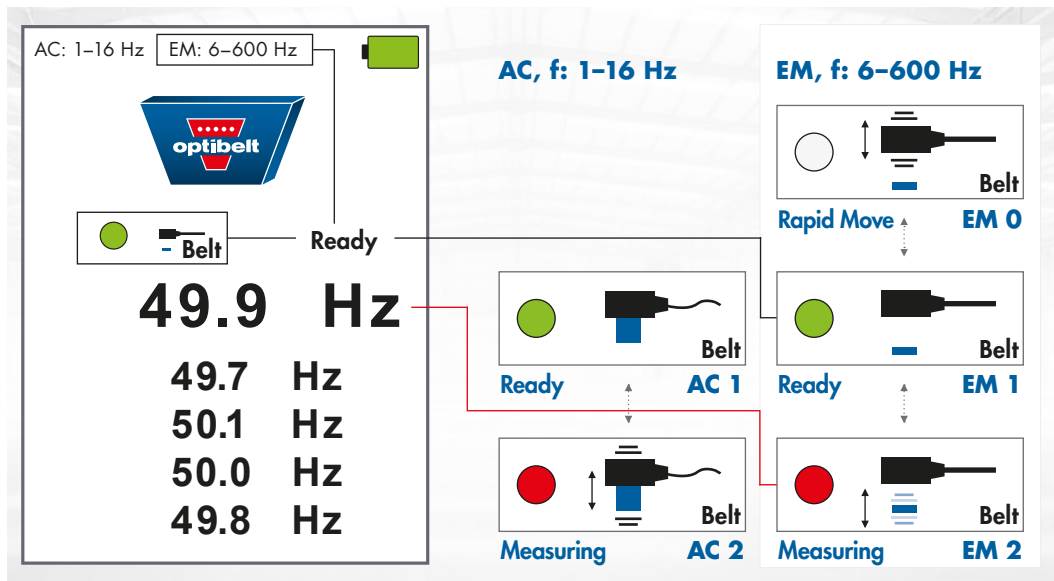
220/230V 110V

optibelt TT

USB

BILDSCHIRME & MESSMETHODEN, AC / EM

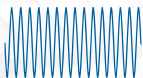
DISPLAYS & MEASUREMENT METHODS, AC / EM



EM-MESSUNG, f: 6-600 Hz, ELEKTROMAGNETISCH, NICHT SICHTBAR

EM MEASUREMENT, f: 6-600 Hz, ELECTROMAGNETICAL, NOT VISIBLE

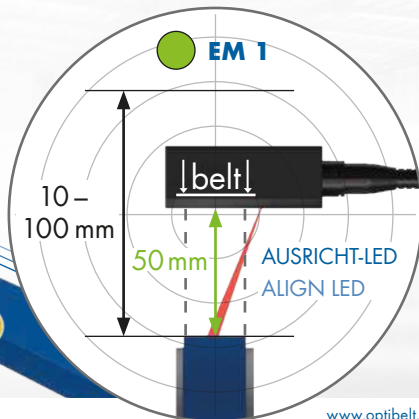
● EM 2



Messfehler: $\leq \pm 1\%$
Measuring fault: $\leq \pm 1\%$

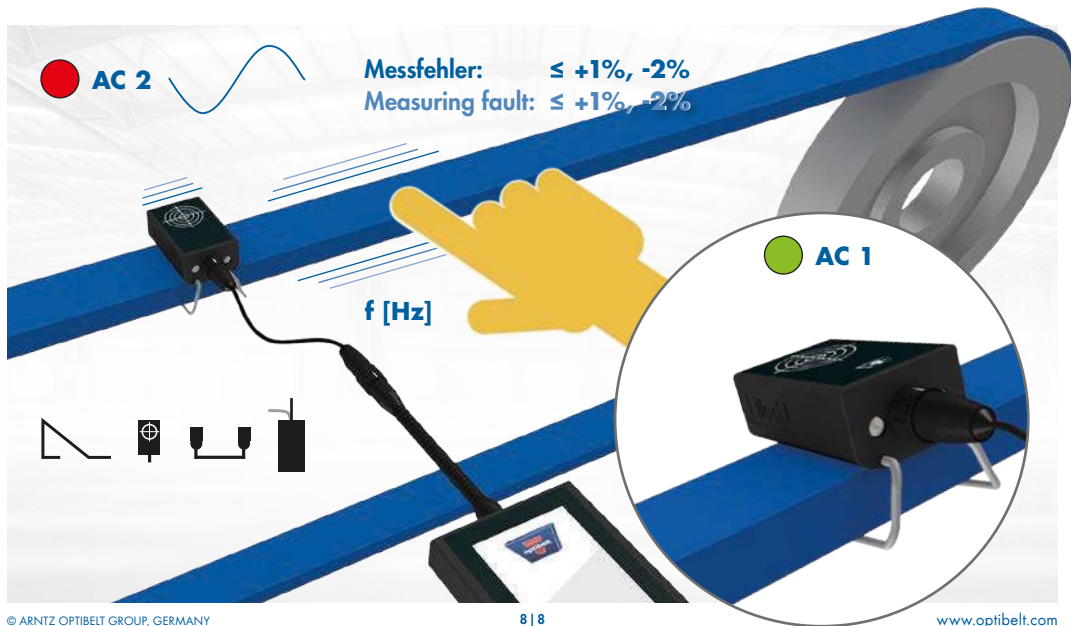


f [Hz]



AC-MESSUNG, f: 1-16 Hz, BESCHLEUNIGUNG

AC MEASUREMENT, f: 1-16 Hz, ACCELERATION



optibelt LASER POINTER



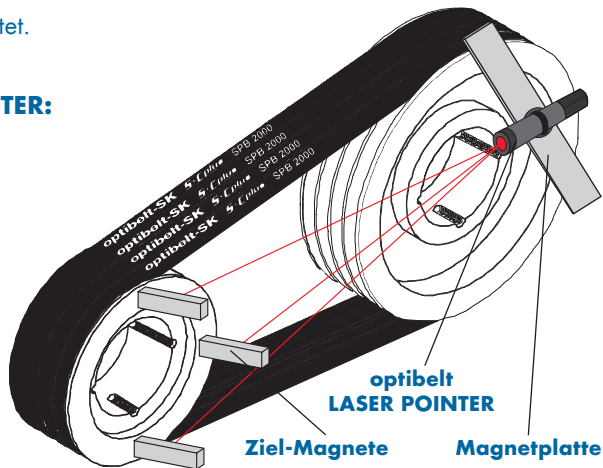
optibelt LASER POINTER

Der **optibelt LASER POINTER** erleichtert das Ausrichten von Riemenantrieben.

Die Riemenscheiben werden über die Stirn- bzw. Seitenflächen zueinander ausgerichtet.

VORTEILE DES **optibelt LASER POINTER**:

1. Schnelle und einfache Anwendung für Riemenantriebe
2. Laserleistung 5 mW
3. Exakt ausgerichtete Linienprojektion
4. Messungen von Parallel- und Winkerversatz
5. Höhere Betriebssicherheit der Antriebe
6. Zeitsparende und genaue Messmethode



optibelt LASER POINTER



RIEMENSCHLEIBENAUSRICHTUNG

3 Ziel-Magnete an der Stirnseite der Riemenscheibe bei ca. 0°, 90° und 270° anbringen.

optibelt LASER POINTER

an der Stirnseite der Gegen-scheibe befestigen; ggf. Magnetplatte verwenden (Achtung: Laserliniendifferenz).

optibelt LASER POINTER

einschalten und auf die Ziel-Magnete richten.

Bei nichtmagnetischen Scheiben kräftiges doppel-seitiges Klebeband benutzen.

Die genaue Ausrichtung des Antriebes (horizontal und vertikal) ist gegeben, wenn alle 3 Ziel-Magnete den Laserstrahl an der gleichen Markierung anzeigen.

Ggf. Antrieb ausrichten und erneut kontrollieren.

TECHNISCHE DATEN

Laser:	Klasse I M EN 60825-1
Ausgangsleistung:	< 5 mW
Wellenlänge des Lasers:	635 nm
Messgenauigkeit:	< 0,5 mrad Planparallelität zur Magnetfläche
Gehäuse:	Messing, vernickelt
Stromversorgung:	1,5 V AA Batterie-Zelle

CE-GEPRÜFT

ACHTUNG:



Nicht in den Laserstrahl sehen! Magnetfelder beachten! • Unfallverhütungsvorschriften nach BGV-B2 beachten!

Nicht in explosionsgefährdeten Bereichen verwenden! • Achtung, bitte vor Feuchtigkeit schützen!

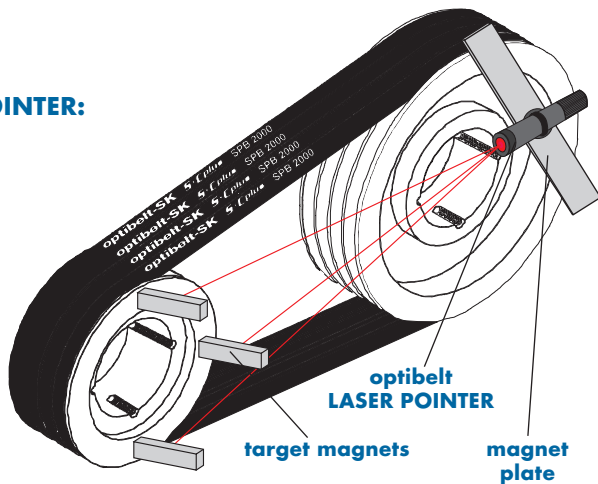
optibelt LASER POINTER

The **optibelt LASER POINTER** makes it easier to adjust belt drives.

The belt pulleys are adjusted to each other via their front or side faces, respectively.

BENEFITS OF THE optibelt LASER POINTER:

1. Fast and easy use for belt drives
2. Laser output power 5 mW
3. Exactly aligned line projection
4. Measuring of parallel and angular misalignment
5. Higher operational reliability of the drives
6. Time-saving and precise measuring method



optibelt LASER POINTER



SPECIFICATIONS

laser:	class I M EN 60825-1
output power:	< 5 mW
wavelength:	635 nm
measure accuracy:	< 0.5 mrad parallelism to magnet face
case:	brass, nickered
power sources:	1.5 V AA-battery

BELT ALIGNMENT

Put the 3 target magnets on the side of the pulley in the position $\approx 0^\circ$, 90° and 270° .

Fix the **optibelt LASER POINTER** at the side of the other pulley, use magnet plate, if necessary (caution, laserline-difference).

Switch on the **optibelt LASER POINTER** and align it to the target magnets.

At non-magnetic pulley use strong double-sided sticky tape.

The alignment of the belt drive (horizontal and vertical) is correct if the laser beam at all 3 target magnets is on the same marking.

If necessary, align the belt drive and check it again.

CE-VERIFIED



ATTENTION:

Don't look into the laser beam!
Please take notice of magnetic fields!

Take note for safety regulation BGV-B2! Don't use it in explosive areas!
Please keep dry!

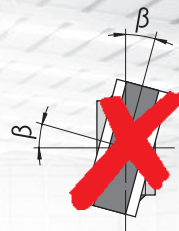
FEHLERQUELLEN: SOURCES OF ERROR:



Axialer Versatz der Scheiben
Axial misalignment of pulleys



Horizontale Winkelabweichung
der Achsen
Horizontal angle deviation of
the shafts



Vertikale Winkelabweichung
der Achsen
Vertical angle deviation of
the shafts

Optibelt GmbH

Postfach 10 01 32

37669 Hörter

GERMANY

T +49 5271 621

F +49 5271 976200

E info@optibelt.com

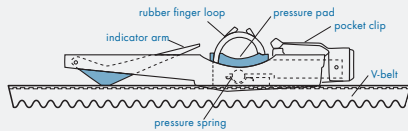
www.optibelt.com



OPTIKRIK TENSION GAUGES FOR OPTIBELT V-BELTS AND RIBBED BELTS

This simplified method for static tension measuring should be used for installation and maintenance tensioning of the belt when the important technical data is unavailable and the optimum tension cannot be calculated. This method requires only knowledge of the small pulley diameter and the belt section and construction. The gauges may also be used to set tensions when the optimum tension has been calculated from known technical data.

OPTIBELT TENSION GAUGES – INSTRUCTIONS FOR USE –



Tension Gauges:

OPTIKRIK 0	range: 70 - 150 N
OPTIKRIK I	range: 150 - 600 N
OPTIKRIK II	range: 500 - 1400 N
OPTIKRIK III	range: 1300 - 3100 N



1. Select the gauge appropriate to the belt section and construction being tensioned. See notes below the simplified tensioning table.
2. The illustration above (A, B or C) shows three ways to hold the gauge so that pressure is applied to the pad only.
3. Position the gauge on one of the belts on the drive in the middle of an accessible span length. Take care to ensure that the gauge is only in contact with one of the belts, and that the indicator arm is pushed down into the gauge body. Align the gauge so that its body is parallel with the sides of the belt.
4. Push down on the pressure pad slowly and firmly with **one** finger in one of the ways illustrated above (A, B or C). When a "click" is heard and/or felt, stop immediately and remove the gauge carefully to avoid disturbing the indicator arm.
5. Read the gauge to judge the tension as follows and as illustrated in the sketch above.
6. Turn the gauge sideways to ascertain the exact point where the top surface of the indicator arm crosses the scale.
7. Mark this point mentally or with a thumbnail and turn the gauge to read the scale.
8. Check the tension found against the simplified tensioning table or the calculated tension. Tighten or slacken the belt, if necessary.

TENSION VALUES – INDUSTRIAL V-BELTS

Belt section	Diameter of the small pulley [mm]	Static belt tension [N]							
		Standard (wrapped)		SUPER X-POWER M=S SUPER TX M=S		SUPER XE-POWER PRO		RED POWER 3	
				Initial installation	Operating after running in	Initial installation	Operating after running in	Initial installation	Operating after running in
SPZ; 3V/9N; XPZ; 3VX/9NX	> 71 ≤ 71	200	150	250	200	300	250	250	200
	> 71 ≤ 90	250	200	300	250	350	300	300	250
	> 90 ≤ 125	350	250	400	300	500	400	400	300
	> 125*								
SPA; XPA	> 100 ≤ 100	350	250	400	300	500	400	400	300
	> 100 ≤ 140	400	300	500	400	600	500	500	400
	> 140 ≤ 200	500	400	600	450	700	550	600	450
	> 200*								
SPB; 5V/15N; XPB; 5VX/15NX	> 160 ≤ 160	650	500	700	550	850	650	700	550
	> 160 ≤ 224	700	550	850	650	1000	800	850	650
	> 224 ≤ 355	900	700	1000	800	1200	950	1000	800
	> 355*								
SPC; XPC	> 250 ≤ 250	1000	800	1400	1100	1700	1300	1400	1100
	> 250 ≤ 355	1400	1100	1600	1200	1900	1550	1600	1200
	> 355 ≤ 560	1800	1400	1900	1500	2300	1800	1900	1500
	> 560*								
Z/10; ZX/X10	> 50 ≤ 50	90	70	120	90	—	—	—	—
	> 50 ≤ 71	120	90	140	110	—	—	—	—
	> 71 ≤ 100	140	110	160	130	—	—	—	—
	> 100*								
A/13; AX/X13	> 80 ≤ 80	150	110	200	150	—	—	—	—
	> 80 ≤ 100	200	150	250	200	—	—	—	—
	> 100 ≤ 132	300	250	400	300	—	—	—	—
	> 132*								
B/17; BX/X17	> 125 ≤ 125	300	250	450	350	—	—	—	—
	> 125 ≤ 160	400	300	500	400	—	—	—	—
	> 160 ≤ 200	500	400	600	450	—	—	—	—
	> 200*								
C/22; CX/X22	> 200 ≤ 200	700	500	800	600	—	—	—	—
	> 200 ≤ 250	800	600	900	700	—	—	—	—
	> 250 ≤ 355	900	700	1000	800	—	—	—	—
	> 355*								
8V		Check of the belt tension with help of the length addition value							

* Tension values for these pulleys and belt types must be calculated, please consult Optibelt.

TENSION VALUES – AUTOMOTIVE INDUSTRY

Belt section	Initial installation	Tension after 30-120 min. running in	Minimum tension
	Static tension [N]	Static tension [N]	Static tension [N]
AVX 10 MARATHON X, MARATHON 2	550 ± 50	350 ± 50	≥ 200
AVX 13 MARATHON X, MARATHON 2	650 ± 50	400 ± 50	≥ 300
KB - 2 AVX 10	1100 ± 50	700 ± 50	≥ 400
KB - 3 AVX 10	1650 ± 50	1050 ± 50	≥ 600
KB - 2 AVX 13	1300 ± 50	800 ± 50	≥ 600
KB - 3 AVX 13	1950 ± 50	1200 ± 50	≥ 900
RB - 3 PK	400 ± 50	250 ± 50	≥ 200
RB - 4 PK	500 ± 50	350 ± 50	≥ 250
RB - 5 PK	600 ± 50	400 ± 50	≥ 300
RB - 6 PK	750 ± 50	500 ± 50	≥ 350

TENSION VALUES – INDUSTRIAL RIBBED BELTS

Belt section	Diameter of the small pulley d _p [mm]	Static tension T _{max} [N]							
		Initial installation	Operating after running in	Initial installation	Operating after running in	Initial installation	Operating after running in	Initial installation	Operating after running in
PH	> 25 ≤ 25	90	70	150	130	250	200	300	250
	> 25 ≤ 71	110	90	200	150	300	250	400	350
	> 71*								
PJ	> 40 ≤ 40	200	150	350	300	500	400	700	550
	> 40 ≤ 80	200	150	400	350	600	500	800	650
	> 80 ≤ 132	250	200	450	350	700	550	900	700
PK	> 63 ≤ 63	300	250	600	450	700	600	900	700
	> 63 ≤ 100	400	300	800	600	1000	700	1200	900
	> 100 ≤ 140	450	350	900	700	1100	800	1300	1000
PL	> 90 ≤ 90	800	600	1000	800	1300	1000	1500	1200
	> 90 ≤ 140	1000	700	1300	1000	1600	1300	1900	1500
	> 140 ≤ 200	1100	800	1400	1100	1900	1400	2100	1600