



FLUKE

Reliability

TECHNICAL DATA

SHAFTALIGN® OS3

Precision shaft alignment for standard jobs



ADAPTIVE ALIGNMENT

Adaptive alignment is a combination of software and hardware evolutions, enabling maintenance and reliability teams to address the full variety of horizontal, angular, and vertical alignment challenges.

With adaptive alignment solutions, work is completed faster, results are superior, and team capabilities are better utilized compared to other market solutions.

SHAFTALIGN® OS3 tool applies powerful precision laser alignment capabilities, including sensALIGN 3 and Active Situational Intelligence, to straightforward alignment jobs on standard machines.

Powerful capabilities and an intuitive design

Without overstressing your budget, SHAFTALIGN® OS3 provides you with an easy to operate tool that delivers highly accurate results for diagnosing alignment issues in machinery such as motors, pumps, blowers, and fans.

SHAFTALIGN® OS3, featuring sensALIGN 3 single-laser technology, is designed for simple alignment challenges in all industrial environments and under all working conditions. The complete system is dustproof and water spray resistant, in accordance with IP 65.

Key benefits at a glance

- **Quick and simple handling**

The intuitive auto-flow feature in SHAFTALIGN® OS3 guides the user step-by-step to enter machine dimensions, measure and obtain results.

- **Can measure in narrow spaces**

Even a rotation angle of less than 70° requires only 3 readings to determine the alignment condition.

- **View all results in a single glance**

All relevant alignment result data is displayed in one screen, including the alignment status evaluation via "Smiley" and LED.



SHAFTALIGN® OS3 is your go-to tool when straightforward, standard alignment jobs need to be done.

A look behind the curtain

Why precision alignment is so crucial:

- Decreased power consumption
- Longer machine lifecycle
- Less vibration leading to less wear
- Lower temperatures on bearing, coupling, and lubrication
- Reduced costs for spare parts storing

The secrets of sensALIGN® 3

- 3-axis HD PSD
- Precision built-in inclinometer using MEMS
- Longer operating time
- Ergonomic design
- Sensor battery status warning
- Bluetooth® communication
- Integrated ambient light compensation
- High-speed CPU / extended memory

SHAFTALIGN® OS3 adapts to all standard machines, including motor-pump assets, blowers, and fans.

ASI – Active Situational Intelligence

Typically when aligning a critical machine, quick work doesn't always mean high accuracy. That's because attempts to be "quick" often erode at quality and accuracy. The result can be errors and failures. But SHAFTALIGN® OS3 is equipped with Active Situational Intelligence (ASI), a groundbreaking problem-solving technology. ASI helps the user avoid mistakes while working quickly to measure and align machines.

SHAFTALIGN® OS3 adapts to almost any asset driven by a rotating shaft.

Need an intelligent and versatile tool for your plant floor? SHAFTALIGN® OS3 can withstand even the most extreme industrial conditions.



Powerful SHAFTALIGN® OS3 features

- Active clock measurement mode**
 Intelligent and precise alignment occurs because of the activated MEMS inclinometer used in this measurement mode. Measurements can be taken at any 3 (or 4) positions and the sensor angular position is automatically considered.
- SWEEP measurement mode (optional)**
 SHAFTALIGN® OS3 takes continuous readings to accurately determine the alignment condition of a shaft rotating at an angle as little as 60°.
- Automatic evaluation of alignment**
 Dynamic tolerances through TolChek® evaluate the alignment condition based upon the machine RPM. The “Smiley” and the LED provide visualization of the alignment condition and a live update status during machine correction.
- Live Move**
 Both horizontal and vertical coupling and foot results are automatically calculated. The machine graphics show the direction and the correction value of feet to be moved. During Live Move, SHAFTALIGN® OS3 continuously measures the corrections. The monitored changes are displayed live on the screen.

Want to learn more? Contact us at PRUFTECHNIK.com and we will get back to you promptly.



SHAFTALIGN® OS3 device

General specifications		
CPU	Processor Memory	Intel XScale PXA270 running at 520 MHz 64 MB RAM, 64 MB Flash
Display	Type	TFT, transmissive (sunlight-readable), 65 535 colours, backlit LED Integrated light sensor for automated adjustment of the brightness to the display according to the lighting conditions hence extending battery life
	Resolution	320 x 240 Pixel
	Dimensions	89 mm [3,5"] diagonal
Keyboard elements	Navigation cursor cross with up, clear and menu keys; Alphanumeric keyboard with dimensions, measure and results, soft foot and move hard keys	
	LED indicators	Multicolour LED for laser status and alignment condition Multicolour LED for battery status
Power supply	Disposable batteries*	5 x 1.5 V IEC LR6 ("AA") with typical operating time of 9 hours (based upon an operating cycle of 33% measurement, 33% computation and 33% 'sleep' mode)
	Integrated Lithium-ion rechargeable battery*	7.4 V / 2.6 Ah (for optional computer) with typical operating time of 17 hours (based upon an operating cycle of 33% measurement, 33% computation and 33% 'sleep' mode) *The computer is available with either disposable or rechargeable batteries.
External interface		USB host & USB slave Integrated Bluetooth® wireless communication Class 1, transmitting power 100mW RS232 (serial) for transducer AC adapter/charger socket
Environmental protection	IP 65 Relative humidity	Dustproof and water spray resistant, shockproof 10% to 90%
Temperature range	Operation Storage	-10°C to 50°C [14°F to 122°F] -20°C to 60°C [-4°F to 140°F]
Dimensions		Approx. 220 x 165 x 45 mm [8.7" x 6.5 x 1.8"]
Weight		742 g [1.64 lb]
CE conformity		EC guidelines for electric devices (73/23/EEC) and those relating to electromagnetic compatibility (2004/108/EC) are fulfilled
Carrying case	Standard	HPX® Harz, drop tested (2 m / 6 1/2 ft.)
	Dimensions Weight	Approx. 551 x 358 x 226 mm (21 11/16" x 14 3/32" x 8 29/32") including all standard parts: approx. 5.8 kg [12.8 lb]
FCC compliance		Requirements fulfilled (refer to the provided document 'Safety and general information')

PRUFTECHNIK Dieter Busch GmbH
Oskar-Messter-Str. 19-21
85737 Ismaning, Germany
Phone: +49 89 99616-0
www.pruftechnik.com

©2020 Fluke Reliability
Specifications subject to change without notice.
DOC 21.402.EN

Modification of this document is not permitted without written permission from Fluke Reliability.



OS3 Transducer

General specifications		
Measurement principle:		Coaxial, reflected laser beam
Measurement area		unlimited, dynamically extendible
Resolution		1 µm (0.04 mil) and angular 10 µRad
Accuracy (avg)		> 98%
Measurement rate		approx. 20 Hz
Laser	Type:	Semiconductor laser diode
	Wave length:	630 - 680 nm (red, visible)
	Beam power:	< 1 mW
Laser class	Beam divergence:	< 0.3mrad
		Class 2 according to IEC 60825-1:2014 The laser complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007. Safety precaution: Do not look into laser beam
Inclinometer	Measurement range:	0° to 360°
	Resolution:	0,1°
CE conformity	Inclinometer error:	± 0,30% full scale
		Refer to the CE compliance certificate in www.pruftechnik.com
Temperature range	Operation	-10°C to 55°C [14°F to 131°F]
	Storage	-20°C to 80°C [-4°F to 176°F]
Environmental protection	IP 65 Relative humidity	Dustproof and water spray resistant, shockproof 10% to 90%
Ambient light protection		Optical and active electronic digital compensation
Dimensions		Approx. 107 x 70 x 49 mm (4 1/4" x 2 3/4" x 2")
Weight		Approx. 177 g (6 1/2 oz.)

Reflector

General specifications		
Type		90° roof prism; Accuracy (avg): > 99%
Environmental protection	IP 67	Submersible
Temperature range	Storage temperature	-20°C to 80°C [-4°F to 176°F]
	Operating temperature	-20°C to 60°C [-4°F to 140°F]
Dimensions		approx. 100 x 41 x 35 mm [4" x 1 5/8" x 1 3/8"]
Weight		approx. 65 g [2 1/2 oz.]

Bluetooth® module

General specifications		
Communication		Integrated Bluetooth® wireless communication, Class 1, transmission power 100mW
LED indicators		1 LED for wireless communication, 3 LEDs for battery status
Power supply		Batteries 2 x 1.5 V IEC LR6 ("AA")
Temperature range	Operating time	17 hours typical use (based upon an operating cycle of 50% measurement, 50% standby)
	Operating temperature	-10°C to 50°C [14°F to 122°F]
Environmental protection	IP 65 Relative humidity	Dustproof and water spray resistant, shockproof 10% to 90%
Dimensions		Approx. 81 x 41 x 34 mm [3 1/8" x 1 11/16" x 1 5/16"]
Weight		Approx. 133 g [4.7 oz.] including batteries and cable
CE conformity		Refer to the CE compliance certificate in www.pruftechnik.com