TECHNICAL DATA

FLUKE Reliability

OPTALIGN® touch

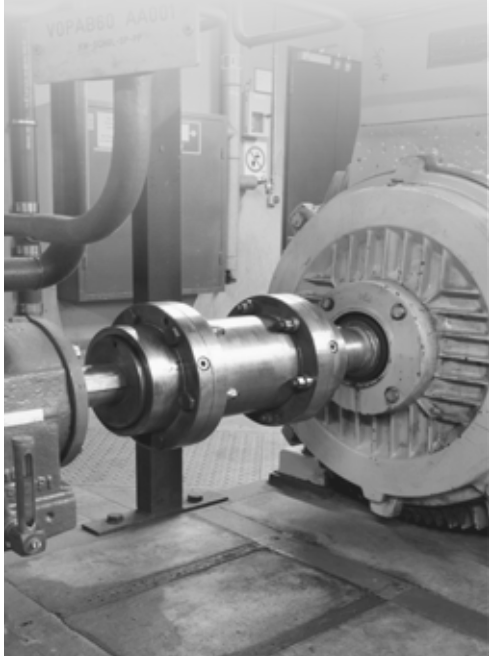
Setting the benchmark for solving common alignment problems

PRÜFTECHNIK

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.

OPTALIGN® touch sets the benchmark on standard machine routines by featuring a powerful set of features delivering new levels of accuracy, speed, and elimination of human errors.



Introducing OPTALIGN® touch

OPTALIGN® touch was designed by some of the world's leading alignment experts to solve problems in the easiest way possible. Featuring the unique sensALIGN® 5 laser and sensor heads, it enables powerful, fast, and efficient alignment on rotatable shafts and machines.

Designed for standard machines and everyday tasks, OPTALIGN® touch combines hardware, software, and WiFi connectivity to deliver precise alignment data via the cloud. Its intuitively guided user interface can be operated by almost anyone – users just need to follow the three steps of shaft alignment: dimensions, measure, and result.

You can upgrade OPTALIGN® touch by simply adding sensALIGN® 7 laser and sensor heads to receive the unlimited power of PRUFTECHNIK's adaptive alignment world.

Key benefits at a glance

- **Work faster without sacrificing accuracy**
  With intuitive setup and data acquisition and an easy-to-use handheld device, even complex alignment jobs can be done quickly with no loss in accuracy and precision.
- **Leverage advanced laser shaft alignment capabilities**
  The powerful hardware and software features in the OPTALIGN® touch simplify the way you perform mounting, measuring, and shimming. With mistake-correcting capabilities, this tool adapts to both the alignment challenge and experience level of the user.
- **Transfer data to and from the cloud**
  Send and receive alignment data from and to the ARC 4.0 PC software via an integrated WiFi connection. Monitor and trend your data for analysis and action.

OPTALIGN® touch is pioneering adaptive alignment and setting a new benchmark.

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

Profit from ASI – Active Situational Intelligence

OPTALIGN® touch offers different measuring modes to align coupled and uncoupled shafts. It adapts to the user's experience and skill level as well as to the alignment challenge for virtually any industrial asset. Check out these features:

- **Continuous Sweep**
  Rotate the coupled shaft with laser and sensor heads mounted. Measurements are taken continuously over the coupling rotated angle. Intelligence inside OPTALIGN® touch calculates the misalignment which has to be corrected.

- **Pass Mode**
  This unique mode is for measuring uncoupled shafts. The laser and sensor simply have to rotate past one another to measure their positions.

- **Multipoint Mode**
  The measurement mode is for machines with sleeve bearings and can be utilized on both coupled and uncoupled shafts.

Simultaneous Live Move – an unbeatable benefit

Simultaneous Live Move, another strong problem-solving feature, allows the user to survey the physical alignment corrections in real time in both vertical and horizontal directions. No matter what measuring mode used or in what angle or direction the laser and sensor heads come to stop, leave them mounted as they shim and adjust the machine as proposed by the device.

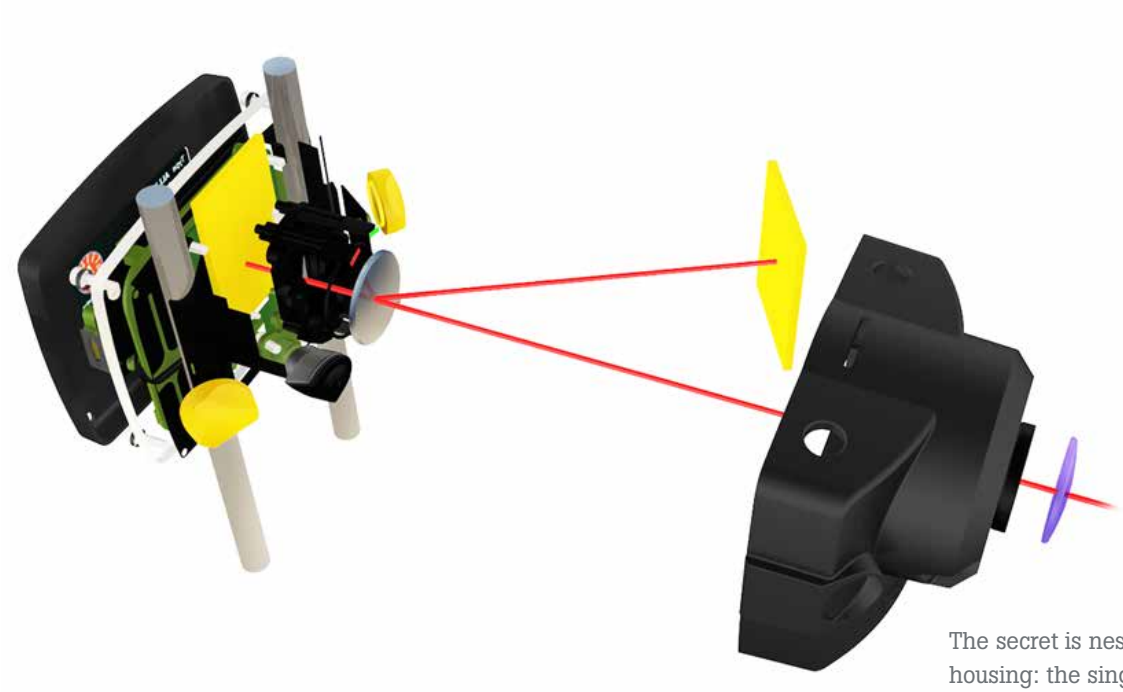
- Monitor the alignment process in real time on the handheld device display
- See the physical alignment result immediately
- Colored tolerance smiley faces show the degree of alignment quality
- Quickly re-measure to confirm the alignment result

Single Laser Technology – the key to precision alignment:

The sensALIGN® Series technology, based on the inherent PRUFTECHNIK single-laser technology, provides precise measurement results and the easiest mounting and measuring in the field. sensALIGN® 5 sensor includes two HD position sensitive detectors (PSD) and MEMS inclinometers. These combined with detector extension capability (InfiniRange) make it possible to measure and document the initial alignment condition, no matter how serious the misalignment. Furthermore, this technology allows the simultaneous monitoring of the machine corrections in both vertical and horizontal directions, starting from any angular position where the sensor comes to stop.

OPTALIGN® touch adapts to almost any asset driven by a rotating shaft.

Need a highly intelligent and versatile tool for your plant floor? Contact us at PRUFTECHNIK.com and we will get back to you promptly.



The secret is nested in the sensor housing: the single laser beam is split into two, hitting two different detectors with an unvariable distance.

FLUKE
Reliability

OPTALIGN® touch device

General specifications		
CPU	Processor	1.0 GHz quad core ARM® Cortex-A9
	Memory	2 GB RAM, 1 GB Internal Flash, 32 GB SD-Card Memory
Display	Technology	Projective capacitive multi-touch screen
	Type	Transmissive (sunlight-readable) backlit TFT color graphic display Optically bonded, protective industrial display, integrated light sensor for automated adjustment of the brightness to the display
	Resolution	800 x 480 Pixel
	Dimensions	178 mm (7") diagonal
LED indicators		3 LEDs for battery status, 1 LED for WiFi communication
Power supply	Operating time	12 hours typical use (based upon an operating cycle of 25% measurement, 25% computation, 50% 'sleep' mode)
	Battery	Lithium-ion rechargeable battery 3.6 V / 80 Wh
	AC adapter/ charger	12 V / 36 W; standard barrel connector (5.5 x 2.1 x 11 mm)
External interface		USB host for memory stick
		USB slave for PC communication, charging (5 V DC / 1.5 A) RS-232 (serial) for sensor, RS-485 (serial) for sensor
		I-Data for sensor
		Integrated Bluetooth® wireless communication (covers direct line of sight distances of up to 30 m / 100 ft depending on the prevailing environmental conditions)
		Integrated Wireless LAN IEEE 802.11 b/g/n up to 72.2 Mbps (depending on configuration)
		Integrated RFID with read and write capabilities (depending on con-figuration)
Environmental protection	IP 65	(dustproof and water jets resistant) as defined in regulation DIN EN 60529 (VDE 0470-1), shockproof
	Relative humidity	10% to 90%
Drop test		1 m (3 1/4 ft)
Temperature range	Operation	0°C to 40°C (32°F to 104°F)
	Charging	0°C to 40°C (32°F to 104°F)
	Storage	-10°C to 50°C (14°F to 122°F)
Dimensions		Approx. 273 x 181 x 56 mm (10 3/4" x 7 1/8" x 2 3/16")
Weight		Approx. 1.88 kg (4.1 lbs)
Camera		5 MP built-in (depending on configuration)
LEDs:		Risk Group 1 according to IEC 62471:2006
CE conformity		Refer to the CE compliance certificate in www.pruftechnik.com
Carrying case	Standard	HPX® Harz, drop tested (2 m / 6 1/2 ft.)
	Dimensions	Approx. 551 x 358 x 226 mm (21 11/16" x 14 3/32" x 8 29/32")
	Weight	Including all standard parts - Approx. 11 kg (24.3 lb)
FCC compliance		Requirements fulfilled (refer to the provided document 'Safety and general information')

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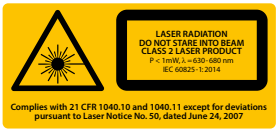

sensALIGN® 5 sensor

General specifications		
Type	5-axis sensor:	2 planes (4 displacement axes and angle)
	Measurement area:	unlimited, dynamically extendible
	Resolution:	1 µm (0.04 mil) and angular 10 µRad
	Accuracy (avg):	> 98%
	Measurement rate:	approx. 20 Hz
Inclinometer error		0.3% full scale
Inclinometer resolution		0.1°
LED indicators		1 LED for laser adjustment and battery status
		1 LED for Bluetooth® communication
Power supply	Battery:	Lithium-Ion rechargeable battery 3.7 V / 5 Wh
	Operating time:	10 hours (continuous use)
	Charging time:	Using charger – 2.5 h for up to 90%; 3.5 h for up to 100%; Using USB port – 3 h for up to 90%; 4 h for up to 100%
External interface		Integrated Bluetooth 4.1 Smart Ready wireless communication USB 2.0 Full Speed
Environmental protection	IP 65	dustproof and water jets resistant, shockproof
	Relative humidity	10% to 90%
Ambient light protection		Yes
Temperature range	Operation	-10°C to 50°C (14°F to 122°F)
	Charging	0°C to 40°C (32°F to 104°F)
	Storage	-20°C to 60°C (-4°F to 140°F)
Dimensions		Approx. 105 x 74 x 58 mm (4 9/64" x 2 29/32" x 2 1/4")
Weight		Approx. 235 g (8 1/3 oz.)
CE conformity		Refer to the CE compliance certificate in www.pruftechnik.com

sensALIGN® 5 laser

General specifications		
Type		Semiconductor laser diode
Beam power		< 1mW
Inclinometer error		0.3% full scale
Inclinometer resolution		0.1°
Beam divergence		0.3 mrad
Wavelength		630 – 680 nm (red, visible)
Laser class		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
Power supply	Batteries	2 x 1.5 V IEC LR6 ("AA")
	Operating time:	180 hours
Protection	IP 65	dustproof and water jets resistant, shockproof
	Relative humidity	10% to 90%
Temperature range	Operation:	-10 °C to 50 °C (14 °F to 122 °F)
	Storage:	-20 °C to 60 °C (-4 °F to 140 °F)
Dimensions		Approx. 105 x 74 x 47 mm (4 9/64" x 2 29/32" x 1 27/32")
Weight		Approx. 225 g (7 15/16 oz.)
CE conformity		Refer to the CE compliance certificate in www.pruftechnik.com