

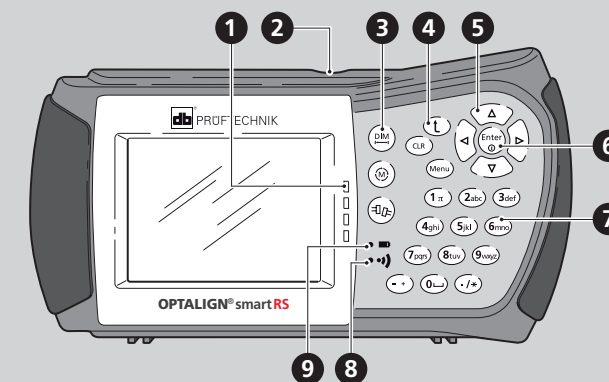
# OPTALIGN® smart RS

## Pocket guide




## Know the system

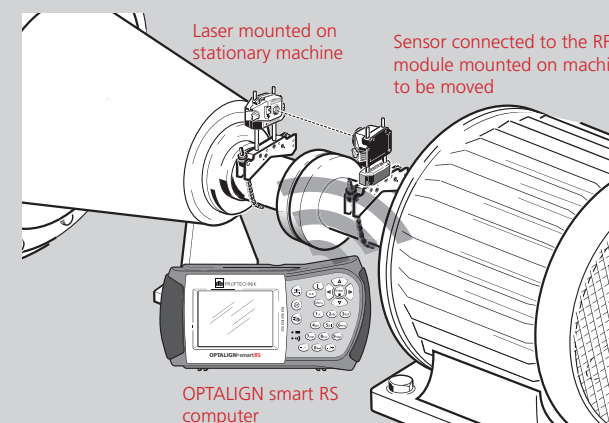
The main operating keys are the oval-shaped data entry keys, the round function keys, the 4-way navigation keys, an On/Off/Enter key, an up key, a clear key and a menu key.



- 1 Alignment condition LEDs
- 2 USB port / Sensor socket / Charger socket
- 3 Function keys
- 4 Up/Clear/Menu keys
- 5 Navigation keys
- 6 On/Off/Enter key
- 7 Data entry keys
- 8 Wireless communication indicator LED
- 9 Battery status LED

## Mount system and switch on

Switch on the instrument by pressing . The system beeps followed by the flashing of an alignment condition LED. Shortly afterwards, the machine dimensions screen appears.



## Safety notes

- ▶ OPTALIGN smart RS is to be used in industrial environments only for shaft alignment. Care must be taken to ensure that the instrument is not subjected to mechanical knocks. It must be operated only by properly trained personnel. No liability will be assumed when components or operating procedures as described in this guide are not used as indicated or are altered without permission of the manufacturer.

## Laser safety

- ▶ Do not look directly into the laser beam at any time.
- ▶ Do not insert any optical devices into the beam path.
- ▶ The red LED on the front of the laser illuminates whenever the laser beam is emitted.



## Notes regarding data storage

- ▶ As with any data processing software, data may be lost or altered under certain circumstances. PRÜFTECHNIK strongly recommends that you keep a backup or printed record of all important data.
- ▶ PRÜFTECHNIK assumes no liability for data lost or altered as a result of improper use, repairs, defects, battery replacement/ failures or any other cause.
- ▶ PRÜFTECHNIK assumes no responsibility, directly or indirectly, for financial losses or claims from third parties resulting from the use of this product and any of its functions, such as loss or alteration of stored data.


## Service and care

- ▶ The calibration accuracy of the sensor should be checked every two years as indicated by the coloured date wheel label on the back of the sensor.





## General information

- ▶ Contents subject to change without further notice, particularly in the interest of further technical development

## Configuration

The context menu can be accessed from any screen by pressing . The menu items displayed are relevant to the screen selected. Use the navigation keys to highlight the desired menu items. The context menu item 'Configuration' is used to access the "Configuration" screen where the individual screen icons are used to configure device, regional and shaft settings, as well as licensing applications and features.



OPTALIGN smart RS uses the ROTALIGN sensor measurement principle as default. A default measurement mode may be set using the 'Configuration' subset menu item 'Default settings'. In 'Default settings' select the item 'Default mode' then press  to reveal the three available measurement modes – Sweep, Multipoint and Static modes. Use / to highlight desired measurement mode then confirm selection by pressing . Note that this change of measurement mode is effective only after restarting the system.

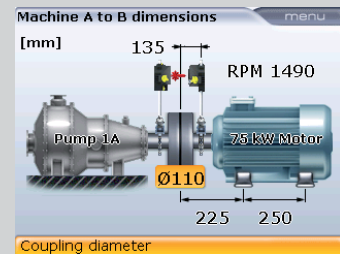
## Contact

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## Enter dimensions

DIM

Use the data entry keys to directly enter all missing dimensions. The editing box appears as soon as a data entry key is pressed. Confirm entry by pressing  $\text{Enter}$ . The highlight box moves to the next dimension.



### Dimensions to be entered include:

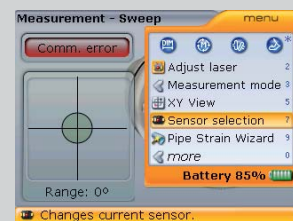
- ▶ Sensor-to-coupling centre
- ▶ Coupling diameter (default is 100 mm)
- ▶ RPM (default is 1500)
- ▶ Coupling centre-to-front foot (right machine)
- ▶ Front foot-to-back foot (right machine)

The coupling diameter and RPM default values are user settable in 'Configuration'/'Shaft settings'.

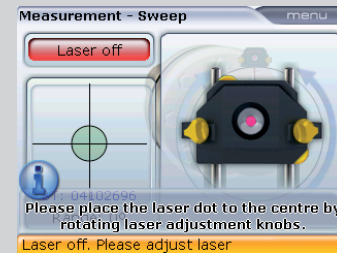
## Wireless measurement

M

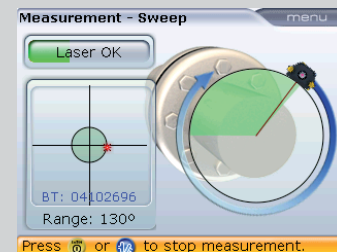
Press  $\text{Menu}$  to access the "Measurement" screen. While in "Measurement" screen, press  $\text{Menu}$  then use  $\Delta/\nabla$  to highlight 'Sensor selection'. Press  $\text{Enter}$  to confirm selection. From the selection window that appears, use  $\Delta/\nabla$  to highlight 'Scan' then press  $\text{Enter}$  to scan RF modules within the neighbourhood.



Once detected, the RF module is selected automatically.



Now switch the laser on and adjust beam onto sensor dust cap centre by repositioning the components vertically and horizontally. Remove sensor dust cap and centre the laser dot on target using the two fine adjustment thumbwheels. The system computer blue LED lights up and the green LED on the sensor blinks slowly. If using continuous sweep mode and auto sweep is on [set under shaft settings], measurement is automatically initiated when the shafts are rotated. If auto sweep is set off, press  $\text{Enter}$  to initiate continuous sweep mode. Minimum measurement rotation of 60° is required.



Press  $\text{Enter}$  to finish measurement.

## Results

Press  $\text{Menu}$  to view alignment results.



- 1 Vertical coupling results
- 2 Horizontal coupling results
- 3 Vertical feet position
- 4 Horizontal feet position
- 5 Alignment quality tolerance symbol
- 6 Target specifications selected

The "all-in-one-results" screen is only displayed if the shaft setting "all-in-one-results" is set on. Individual vertical and horizontal results views are accessed by pressing  $\Delta/\nabla/\Delta/\nabla$ .

Coupling results are given in form of gap and offset. Gap is positive when open at top or side away from viewer. Offset is positive when right coupling is higher or away from viewer.

The results show the feet position relative to the stationary machine centerline. Positive values indicate that right machine is upwards or away from viewer. Negative values indicate that right machine is downwards or towards the viewer. The alignment condition is indicated by both the tolerance symbol (smiley) and the corresponding lit system LED.

- 😊 ▶ A happy smiley (with blue LED lit): values within excellent tolerances
- OK ▶ An "OK" icon (with green LED lit): values in acceptable tolerances
- 😞 ▶ A sad smiley (with red LED lit): values out of tolerance

## Move

Live Move can be performed, with the laser and sensor at any position, in both horizontal and vertical directions. From the results screen press  $\text{Menu}$  and select 'Move' from the context menu. If Live Move is initiated from the "all-in-one" results screen or the horizontal results screen, the prompted Move direction will be **Horizontal**. **Vertical** Move direction may be prompted by initiating Live Move in the vertical results screen. If laser beam is centred Move starts automatically. If not centred, use the context menu item 'XY view' to position the laser dots into the circles, then press  $\text{Enter}$ .

Loosen base bolts and move machine following the bold yellow correction arrows and the alignment values in real-time on the display.



If desired you may toggle between the Horizontal and Vertical Move directions using  $\Delta/\nabla$ .

Having performed Live Move in the **Horizontal** (or **Vertical**) direction, use the Live Move context menu item 'Change view' to select the next direction. Alternatively, you may use  $\Delta/\nabla$  to toggle between the two Move directions.



After carrying out the machine corrections, tighten anchor bolts and check alignment by taking another set of measurements and viewing results. If within tolerance (indicated by an 'OK' icon or a happy face smiley), then machines are aligned.

## Soft foot

Soft foot can be checked at any time from the context menu which is accessed by pressing  $\text{Menu}$ . Use the navigation keys to select  $\Delta/\nabla$  then press  $\text{Enter}$  to start the soft foot mode. The system automatically selects the moveable machine for measurement. If laser is centred, press  $\text{Enter}$  then proceed to measure soft foot. If the beam is however, not centred, press  $\text{Menu}$  then use the context menu item 'XY view' to centre the laser beam. After centring the beam, press  $\text{Enter}$  to return to the soft foot screen, then press  $\text{Enter}$  to measure highlighted foot. Loosen the anchor bolt and wait until the readings settle then press  $\text{Enter}$ . Tighten the foot bolt. Use the navigation keys to select the next machine foot, and repeat the above procedure for all feet.

