



HEIDENHAIN



Product Information

HR 550 FS

Electronic Handwheel with
Wireless Transmission

March 2015

User-friendly setup with HEIDENHAIN handwheels

Delicate manual traverse

For setup, you can use the direction keys of the machine operating panel to move the machine axes manually or in incremental jog. A simpler and more reliable way, however, is to use the electronic handwheels from HEIDENHAIN. With the portable handwheels you are always close to the action, enjoy a close-up view of the setup process, and can control the infeed responsively and precisely.

The HR 550 with wireless transmission

is exceedingly simple to use: since it communicates with the handwheel holder via radio transmission, your movements are not restricted in any manner, and you can fully concentrate on the action in the machine's working space. The practical HRA 551 handwheel holder is not just a docking station for the handwheel: it also features an integrated charger for the handwheel's battery, so that your HR 550FS is always ready for the next job.

The transmission range is amply dimensioned. If you should nevertheless happen to come near the edge of the transmission area, which is possible with very large machines, the HR 550FS warns you in time with a plainly noticeable vibration alarm.

When the handwheel is in the docking station, contacts on its back ensure uninterrupted operation in the event of unexpected disturbances in the radio field.

System requirements

The HR 550FS can be connected to the following controls:

- TNC 128 As of NC software 771841-02
- TNC 320 As of NC software 340551-06
- TNC 620 as of NC software 81760x-01
- iTNC 530 As of NC software 34049x-06
or 60642x-01
- TNC 640 As of NC software 34059x-02

The connecting and adapter cables are identical with those of the HR 420 and HR 520.

The radio operating conditions of the iTNC 530 Technical Manual apply during operation of the HR 550FS/HRA 551 FS in the appropriate locations.

The HR 550FS electronic handwheel from HEIDENHAIN is available with or without mechanical **detent** with 100 steps per revolution. The traverse path per step can be set via parameters. It also features numerous valuable additional functions:

The **handwheel display** consists of a header and six status lines. It displays important machine conditions and information (e.g. position of the selected axis, spindle speed, feed rate, error messages, active basic rotation and tilted working plane) as well as the functions of the five soft keys, which the machine manufacturer can assign as desired. The header provides information on the active radio operation, field strength and the battery's state of charge.

The colored and raised **axis keys** permit traverse of up to six NC axes. In addition, the machine manufacturer can configure an axis key for selection of the so-called "virtual tool axis."

In addition to the soft keys, the machine manufacturer can assign special functions to six **function keys**. They can be illuminated by LEDs. The symbols for the axis designations and the function keys can be exchanged.

The axis feed rate, which is activated when the arrow key is pressed, and the spindle speed can each be set with an **override potentiometer**.

The HR 550FS handwheel features the usual **safety elements** such as an emergency stop button and two permissive buttons. The safety functions of the HR 550FS fulfill the requirements of performance level d, category 3, according to EN ISO 13849-1. In addition, HR 550FS fulfills the requirements of EN 60950.





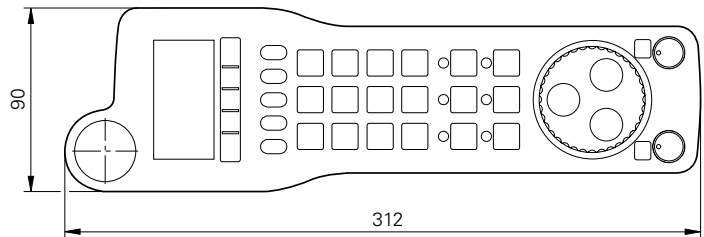
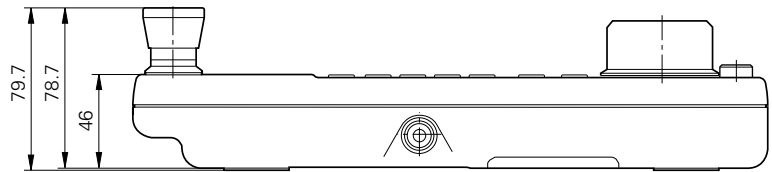
	HR 550 FS
Execution	Handwheel with wireless transmission
Functional safety	For applications up to category 3, PL d according to EN ISO 13849-1: 2008
Display	Monochrome 6-line display (128 x 64 pixels)
Handwheel*	HR 550FS without mechanical detent: ID 598515-xx HR 550FS with mechanical detent: ID 606622-xx
Operating elements	<ul style="list-style-type: none"> • 6 keys for axis selection (symbols can be exchanged) • 6 keys with permanent NC functions • 6 keys with LEDs for free assignment via the PLC (symbols can be exchanged) • 2 override potentiometers for feed rate and spindle speed • 5 soft keys for menu-guided operation
Safety buttons	<ul style="list-style-type: none"> • Emergency stop button (dual-channel) • 2 permissive buttons (dual-channel)
Handwheel holder	HRA 551 FS: ID 731928-xx <ul style="list-style-type: none"> • For docking the HR 550FS on the machine • Integrated charger for HR 550FS • Connections to the control and the machine • Integrated transmitter/receiver unit
Radio transmission	According to EN 300328; EN 301489-1; EN 301489-17; FCC ID: YJKHR550FS
Radio link	<ul style="list-style-type: none"> • 16 channels (ISM; 2.4 GHz) • Transmission range up to 20 m (depending on environment) • Field strength/RF output power ≤ 10 mW/1 MHz (EIRP)
Functions	<ul style="list-style-type: none"> • Display of the field strength • Vibrating alarm upon leaving the transmission area • Battery warning/battery charge indicator
Voltage supply	<i>HR 550FS</i> : via battery pack (included in delivery; replacement ID 623166-xx) <i>HRA 551 FS</i> : by standard connection from the control
Operating time	Continuous duty typically 6 h
Charging process	Automatic when handwheel is in the HRA docking station, duration approx. 2.5 h
Weight	<i>HR 550FS</i> : approx. 1 kg <i>HRA 551 FS</i> : approx. 1 kg

* Please select when ordering

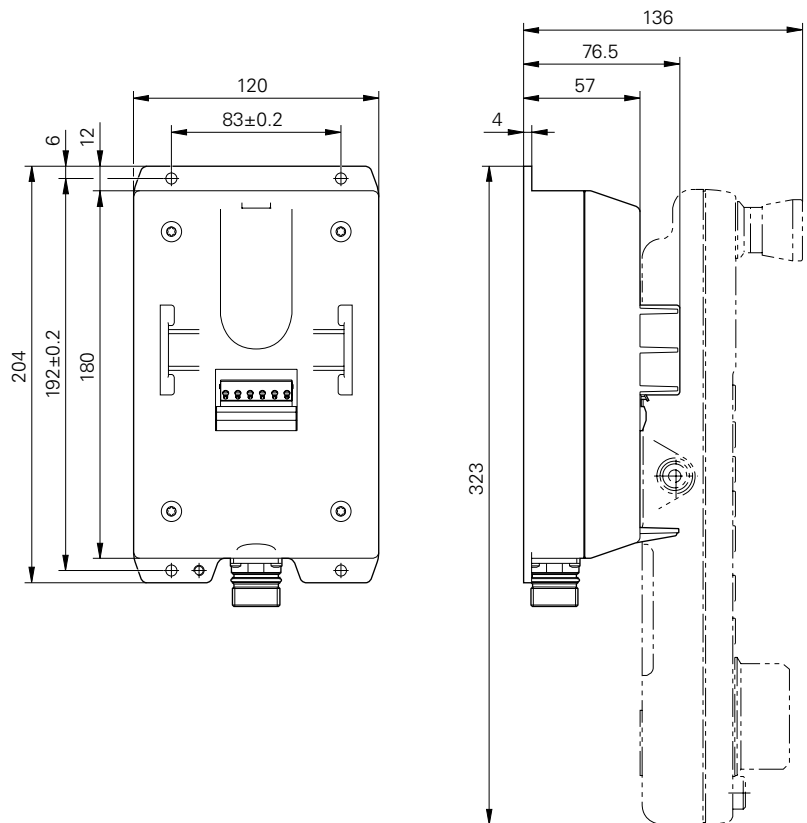
Dimensions



HR 550 FS



HRA 551 FS



mm

 Tolerancing ISO 8015
 ISO 2768 - m H
 < 6 mm: ±0.2 mm

HEIDENHAIN

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For catalogs, brochures and product information sheets, visit us on the Internet at www.heidenhain.de/
 > Documentation and Information

Related documents:

To ensure the correct operation of the handwheel, comply with the requirements described in the Technical Manual and User's Manual of the respective control: