




HYGROPALM HP31/32/GTS

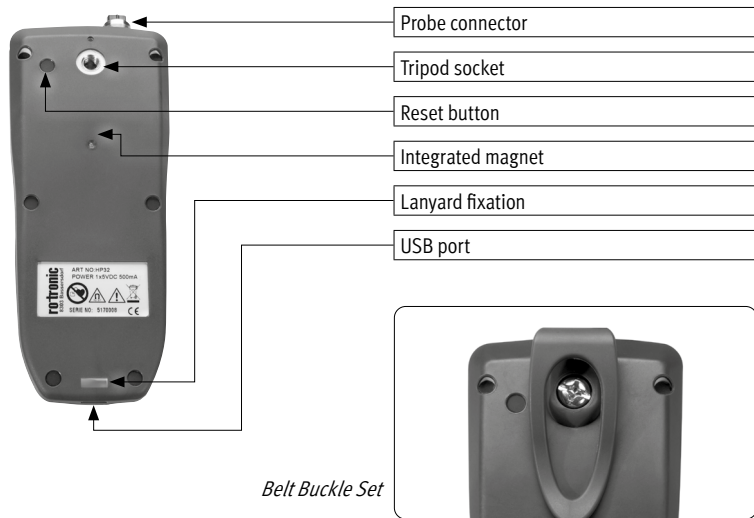
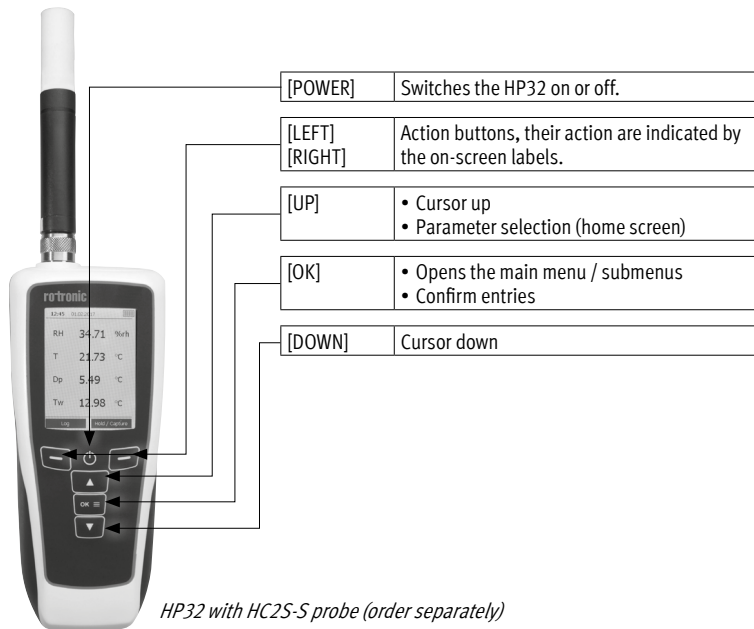
Short Instruction Manual

1 GENERAL DESCRIPTION

The HP3x-Series handheld instrument is a power full, multifunctional device which measures, displays and logs temperature, humidity and calculated parameters. The series consist of three different devices. Ensure devices have the latest compatible firmware.

Order Code	HP31	HP32	HP-GTS
			
Compatible probes	Fixed probe	HC2 and HC2A-S probes. Probes must be ordered separately	Fixed probe

2 DEVICE OVERVIEW



Make sure that the plug head is not plugged in with reversed polarity.



3 GENERAL OPERATION

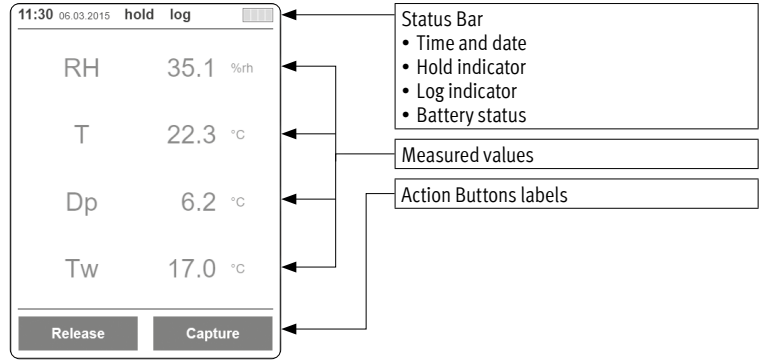
3.1 SOFTWARE HW4 LITE INSTALLATION

Data analysis, and general setting of the device can be easily done with the free HW4 Software. To get the software, download the latest HW4 Software from the Rotronic Homepage. While the software always remains the same, the corresponding key unlocks the desired version. For the free Lite version, no key is needed and up to 3 Rotronic devices can be connected. Probes count as one device.

3.2 BATTERY, STAND-BY AND AUTO SWITCH

The HP3x has an integrated lithium battery. Simply connect the device to an USB port with the delivered cable to charge it. The device has a stand-by and an auto switch off feature. After 5 minutes without user interaction the display is switched off, after 10 minutes the device is switched off to save battery. This feature does not affect data logging operation.

3.3 DISPLAY AND HOME SCREEN



3.4 MASTER RESET

There are a few instances in which the HP3x device may need to be reset. These include the following:

- To restore to factory default settings.
- The HP3x is not functioning properly (value are frozen).

Performing a reset will erase user data. Performing a Master Reset: Press and hold the reset button on the backside of the device with a thin pen or an office clammy for 3 sec.

4 GENERAL SETTINGS

4.1 LANGUAGE

Main menu [OK] → Settings → Language

Available languages: English, Deutsch, Français, Italiano

4.2 DATE/TIME

Main menu [OK] → Settings → Date / Time

The following settings can also be set beside the date and time.

- Date format: DIN, US, ISO
- Time format: 12 h, 24 h

The date and time must be set correctly for proper operation of the device.

Please note that if the battery is completely discharged, the handheld device must be time-chronized again with the HW4.

4.3 UNITS

Main menu [OK] → Settings → Units

Your options are as follow:

- Distance: m, ft
- Temperature: °C, °F
- Pressure: hPa, mmHg
- Weight: kg, lbs

4.4 CALCULATED PSYCHROMETRIC PARAMETERS

Beside relative humidity and temperature, the HP32 can display 2 of the following 10 psychrometric parameters:

- Dew / Frost point (Dp/Fp)
- Wet bulb temperature (Tw)
- Enthalpy (H)
- Vapor concentration (Dv)
- Specific humidity (Q)
- Mixing ration by weight (R)
- Vapor pressure (E)
- Saturation vapor pressure (Ew)
- Saturation vapor density (SVD)

Select the parameters that you want to log and/or see on the home screen within:

Main menu [OK] → Settings → Displayed calculated parameters

i You can change the order of values on the home screen by [UP] on the home screen.

i You can change the atmospheric pressure constant used in calculations in:

Main menu → Settings → Atmospheric pressure

5 SAVING DATA

5.1 HOLD/CAPTURE AND SPOT MEASUREMENTS

Freeze the displayed values on the home screen by pressing the [Hold/Capture] action button on the home screen. Those values can then be:

- Saved as a spot measurement with [Capture]
- Released again with [Release]

5.2 DATA LOGGING

Program or start the automatic logging at regular interval with the [Log] action button. Define the storage location, the interval and, if you want, a start and stop time, then start the logging operation by pressing the [Start] action button.

i Your device will be automatically switched on at the given start time to start the logging.

! The main menu is not accessible while data logging is active. Spot measurements are, however, still possible.

! You must name storage locations before use. Simply use the [Rename] action button when selecting a storage location to assign it a name.

6 VIEWING SAVED DATA

6.1 SPOT MEASUREMENTS

Review the spot measurements by selecting their storage location within:

Main Menu [OK] → Memory – Capture

6.2 LOGGED DATA

i Review the logged data by selecting its storage location within:

Main Menu [OK] → Memory – Log

Switch between graphic displays and MIN / MAX / AVG values of the 4 parameters with [UP] and [DOWN].

7 ALARM

i Set up upper, lower limits as well as hysteresis for every displayed parameter in:

Main Menu [OK] → Alarms

Broken alarm limits are shown in red on the home screen.

To enable an acoustic signal for an alarm:

Main Menu [OK] → Settings → Buzzer

8 ADJUSTMENT

The HP3X has a humidity and temperature adjustment function so that you can adjust directly with the handheld instrument. The instrument can make a 1-point adjustment for temperature and a 1-point or 3-point adjustment for humidity.

Main Menu [OK] → Adjustment

Select Humidity or Temperature with the arrow keys and confirm with OK.

Example of sequence for 3-point humidity adjustment:

Reference value 1 10 %rh

Reference value 2 35 %rh

Reference value 3 80 %rh

The value of the reference can be entered with the keypad. The attached probe shows the current measured value. After entering the first reference value (10 %rh), press OK to confirm “Save & Continue” and enter the next reference value (35 %rh).

When all three reference values have been entered, press OK to confirm “Save & Continue” again and adjustment is finished. The last adjustment date is now listed under Adjustment.

9 TECHNICAL DATA

	HP31	HP32	HP-GTS
Compatible probes	Fixed	HC2 and HC2A-S probes. Probes must be ordered separately	Fixed
Application range	-10...60 °C 0...100 %rh (non-cond.)		
Probe application range	-10...60 °C	Depends on probe for example HC2A-S ±0.8 %rH / ±0.1 °C	-10...60 °C
Accuracy @ 23 °C	±2 %rh / ±0.3 °C		±2 %rh / ±0.3 °C
Functions	Spot measurements / Interval logging MIN / MAX / AVG / MKT		
Logging interval	1 s...24 h		
Memory capacity	8 x 8000 data points		
Psychrometric calculations	Dew / Frost point (Dp /Fp) Wet bulb temperature (Tw) Enthalpy (H) Vapor concentration (Dv) Specific humidity (Q) Mixing ratio by weight (R) Vapor pressure (E) Saturation vapor pressure (Ew) Saturation vapor density (SVD)		
Display refresh rate	1 s (typical)		
Integrated Battery	48 h – Logging every 30 s, screen off 10 h – Screen always on (typical)		
PC Interface	Micro-USB port, HW4 compatible		
Housing Material	ABS, TPR		
IP Protection	IP65		
Dimension	160 x 63 x 30 mm		
Weight	185 g		

10 DELIVERED

- HygroPalm HP-31/32/GTS
- Soft case
- Micro-USB service cable (AC0006)
- Belt buckle set, lanyard and certificate