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## RCT basic PT Wireless Solution

/// Data Sheet

More features, more flexibility – wireless and secure

The RCT basic PT Wireless Solution expands the trusted RCT basic with additional features for wireless temperature and pH measurement. The system combines precise measurement technology with enhanced security and maximum flexibility in everyday laboratory work.

Wireless data transmission

The USB WD wireless dongle included in the scope of delivery enables the wireless transmission of measurement data. The central system component is the PT Wireless Sensor, also included, which transmits temperature data wirelessly to



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the RCT basic.

A pH electrode can optionally be connected to the PT Wireless via a BNC connector. In this configuration, the RCT basic becomes a pH meter:

The pH value can be displayed directly on the screen – without the need for an additional external measuring device.

Another advantage of the wireless sensor technology:

No cables are required on the temperature sensor – damaged or burnt sensor cables are a thing of the past.

Alternatively, the Wireless Dongle USB WD also allows connection to the IKA 'Lab Assistant' app for visualising measurement data.

Increased safety through dual temperature measurement

In combination with the wired temperature sensor PT 1000.60, which is also included in the scope of delivery, two temperatures can be measured simultaneously:

- PT 1000.60 (wired): Monitoring and limiting the temperature of a heat transfer medium, e.g. synthesis block, oil, water or sand bath
- PT Wireless: Temperature control directly within the reaction medium

This configuration enhances the safety of the experiment, particularly in the event of glass breakage.

The RCT basic automatically displays both temperatures side by side on the screen.

Complete solution including mounting hardware

All the necessary mounting hardware is included in the scope of delivery to ensure secure and flexible positioning of the wireless sensor (stand, support rod and boss head clamp).

Scope of delivery

- RCT basic
- IKAFLON® 30 Magnetic stirring bar
- IKAFLON® 40 Magnetic stirring bar
- PT wireless Wireless Sensor
- USB WD
- H 16 V Support rod
- PT 1000.60 Temperature sensor, stainless steel
- H 44 Boss head clamp
- H 38 Holding rod
- Screw driver (use for safety circuit)



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## Technical Data

|                                                                                                                      |                                        |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Number of stirring positions                                                                                         | 1                                      |
| Stirring quantity max. per stirring position (H <sub>2</sub> O) [l]                                                  | 20                                     |
| Maximum load [kg]                                                                                                    | 25                                     |
| Motor rating output [W]                                                                                              | 9                                      |
| Motor principle                                                                                                      | Brushless DC                           |
| Direction of rotation                                                                                                | right                                  |
| Speed display set-value                                                                                              | LED                                    |
| Speed display actual-value                                                                                           | LED                                    |
| Speed adjustment                                                                                                     | Control knob (Rotating / Pressing)     |
| Speed range [rpm]                                                                                                    | 50 - 1500                              |
| Setting accuracy speed [rpm]                                                                                         | 10                                     |
| Stirring bar length [mm]                                                                                             | 20 - 80                                |
| Self-heating of the set-up plate by max. stirring (RT:22°C/duration:1h) [K]                                          | +12                                    |
| Heat output [W]                                                                                                      | 800                                    |
| Temperature display set-value                                                                                        | LED                                    |
| Temperature display actual-value                                                                                     | LED                                    |
| Temperature unit                                                                                                     | °C                                     |
| Heating temperature range [°C]                                                                                       | Room temp. + device self heating - 310 |
| Heat control                                                                                                         | Control knob (Rotating / Pressing)     |
| Display resolution [K]                                                                                               | 0.1                                    |
| Temperature setting range [°C]                                                                                       | 0 - 310                                |
| Temperature setting resolution of heating plate [K]                                                                  | 1                                      |
| Connection for ext. temperature sensor                                                                               | PT1000, ETS-D5, ETS-D7, PT wireless    |
| Temperature setting resolution of medium [K]                                                                         | 1                                      |
| Operating temperature min. (with external cooling) [°C]                                                              | -20                                    |
| Adjustable safety circuit [°C]                                                                                       | 50 - 360                               |
| Set-up plate material                                                                                                | Aluminium alloy                        |
| Set-up plate dimensions [mm]                                                                                         | Ø 135                                  |
| Automatic reverse rotation                                                                                           | optional (with IKA HUB)                |
| Intermittent mode                                                                                                    | optional (with IKA HUB)                |
| Timer                                                                                                                | yes                                    |
| Timer display                                                                                                        | LED                                    |
| Time setting min. [s]                                                                                                | 1                                      |
| Time setting max. [min]                                                                                              | 5999                                   |
| pH measurement                                                                                                       | optional (with ETS-D7, PT wireless)    |
| Programs                                                                                                             | optional (with IKA HUB)                |
| Sensor in medium detection                                                                                           | yes                                    |
| Temperature measure range PT1000 [°C]                                                                                | -20 - 310                              |
| PT 1000 deviation;DIN EN 60751 Kl. A [K]                                                                             | ≤ ± (0.15 +0.002x t )                  |
| Speed deviation (no load,nominal voltage, at 1500rpm + 25 °C) [%]                                                    | ±2                                     |
| Heating rate (1l H <sub>2</sub> O in H1500) [K/min]                                                                  | 9                                      |
| Heat control accuracy of heating plate centre without vessel (at 100°C) [K]                                          | ±5                                     |
| Heat control accuracy with ext. PT1000 (500ml H <sub>2</sub> O in 600ml beaker,40mm stirring bar,600rpm,50°C) [K]    | ±0.5                                   |
| Heat control accuracy with ETS-D5 (500ml H <sub>2</sub> O in 600ml beaker,40mm stirring bar,600rpm,50°C) [K]         | ±0.5                                   |
| Heat control accuracy with ETS-D7 (500ml H <sub>2</sub> O in 600ml beaker, 40mm stirring bar, 600rpm, 50°C) [K]      | ±0.2                                   |
| Heat control accuracy with PT wireless (500ml H <sub>2</sub> O in 600ml beaker, 40mm stirring bar, 600rpm, 50°C) [K] | ±0.2                                   |
| Dimensions (W x H x D) [mm]                                                                                          | 160 x 100 x 200                        |
| Weight [kg]                                                                                                          | 2.3                                    |



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|                                            |                   |
|--------------------------------------------|-------------------|
| Permissible ambient temperature [°C]       | 5 - 40            |
| Permissible relative humidity [%]          | 80                |
| Protection class according to DIN EN 60529 | IP 54             |
| RS 232 interface                           | yes               |
| USB interface                              | USB-C             |
| WPAN interface                             | optional (USB WD) |
| Voltage [V]                                | 220 - 230         |
| Frequency [Hz]                             | 50/60             |
| Power input [W]                            | 820               |
| Power input standby [W]                    | 0.45              |