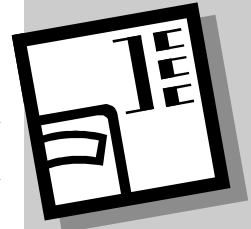
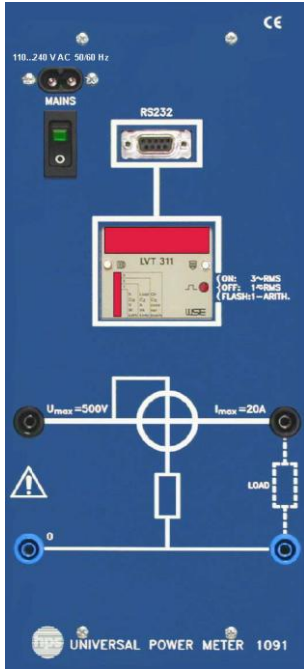


Universal Power Meter



Type 1091

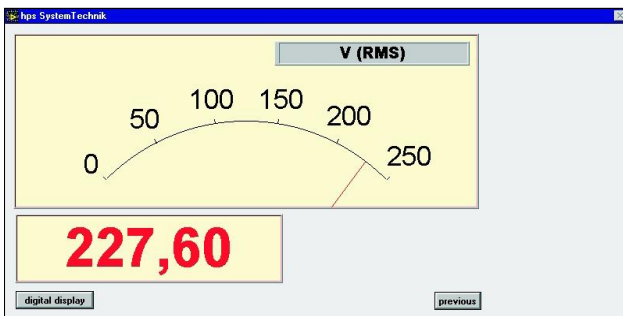


Type 1091

- Universal meter for measuring power, $\cos \phi$, energy, voltage and current
- Used in single-phase and three-phase networks
- Switchable between TRMS and arithmetic measurement
- With 6-digit, seven-segment display
- Additional Min and Max value measurement
- With RS 232 interface
- For use as a demonstration meter in combination with the visualisation software

With the Universal Power Meter, hps SystemTechnik offers a digital meter for a very wide range of applications.

The device has a 6-digit, seven-segment display and an RS 232 interface.



Large-size display of a measuring value (analog)



Data logger with three channels

Available accessory:

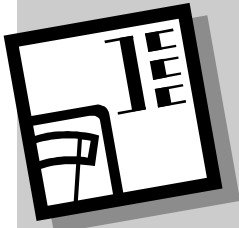
Visualisation software (Type 1091.2)

- Simultaneous display of up to 4 analog and digital measuring values
- Large-size display of 1 measuring value (analog or digital)
- Switchable between arithmetic measurement and TRMS
- Data logger for long-time measurement
- Y/t recording of up to three data logger channels
- Measuring values can be saved in a file for later processing, e. g. in MS Excel

Power is supplied to the Universal Power Meter by a built-in power supply unit. In the event of a mains power failure the measuring values are saved in a non-volatile measuring value memory.

A fixed factor of 3.0 can be activated by the device parameter „Phase factor“ for calculating the power and energy values for single-phase measurements in the three-phase network on symmetrical load, e. g. in electric machines.

The Universal Power Meter also measures the Min and Max values of the operating modes W, VA, var, V, A and $\cos \phi$.



Type 1091

Accessories Recommended

- Visualisation software: Type 1091.2-EVGB
Hardware requirements:
IBM-compatible PC with CPU: 80386/40 MHz and higher,
working memory: 8 MB RAM, 5 MB free hard disk
space,
operating system: Windows 3.x / 95 / 98, monitor and
graphic card (VGA), mouse, free serial interface
- Additional requirements: connecting lead RS 232 between
PC and Universal Power Meter, e. g. hps Type 9102.50
(9-pin, length 2 m)

Subject to technical modification.

Universal Power Meter

Technical Data

Measuring ranges

- Voltage/Current: 0 ... 500 V/0 ... 20 A
- Power factor (cos ϕ): 0 ... 1
- Active power: 0 ... 10 kW (single-phase)
0 ... 30 kW (three-phase)
- Apparent power: 0 ... 10 kVA (single-phase)
0 ... 30 kVA (three-phase)
- Reactive power: 0 ... 10 kvar (single-phase)
0 ... 30 kvar (three-phase)
- Active energy: 0 ... 999999 kWh
- Apparent energy: 0 ... 999999 kVAh
- Reactive energy: 0 ... 999999 kvarh
- Active resistance: 0 ... 999999
- Apparent resistance: 0 ... 999999
- Reactive resistance: 0 ... 999999
- Measuring time: 0 ... 999999 h

Measuring errors

- Voltage and current measuring: $\pm 1.0\%$, ± 1 digit
- Power measuring: $\pm 1.0\%$, ± 5 digits

Serial interface (RS 232)

- Electrically isolated, bi-directional,
baud rate: 1200, 2400, 4800 or 9600 baud,
1 start bit, 8 data bits, 1 stop bit, no parity

Mains connection

- 220 ... 240 V, 50 ... 60 Hz, approx. 4 VA

Mechanical Data

The front panel of the Universal Power Meter is made of 5 mm thick laminate, matt blue in colour with white engraving representing the built-in function groups.

The rear of the Board is protected with a grey plastic cover. Its shape allows the Board to be placed at an ergonomically favourable angle for example on a table.

To conduct the experiments, the Universal Power Meter can be placed on a table or suspended in an hps bench rack for demonstration purposes.

Dimensions / weight

- 133 x 297 x 95 mm (w x h x d) / weight: approx. 0.9 kg