

PC ELECTRONIC BOARD with PC-connection

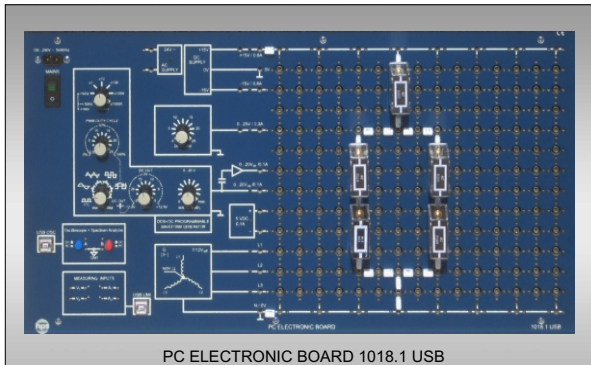
NEW!
 • PWM Output
 • DC Offset Output
 • optional:
 USB-Oszilloscop

PC ELECTRONIC BOARD

1018.1 USB

PC ELECTRONIC BOARD (Type 1018.1 USB)

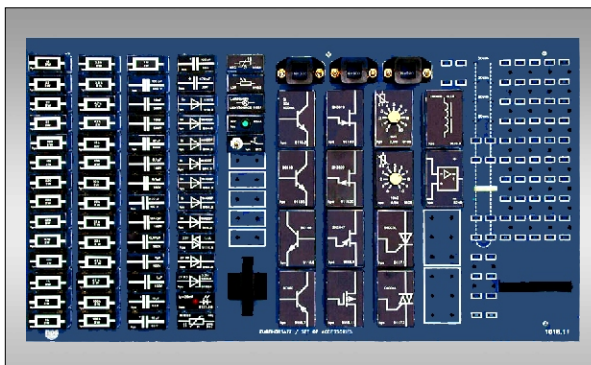
With USB-interface (incl. operators software) and the option to upgrade the PC ELECTRONIC BOARD with the measuring interface and USB-Oszilloscop



- Universal training and instruction system for the principles of electrical engineering / electronics / analog technology
- With integrated DC, AC and three-phase current sources as well as a function generator
- Function generator, DC and three-phase current sources short-circuit proof and LED-monitored
- The out signals of the voltage generator can be adjusted with a PC via built-in USB-connection and the operators software. These signals can be simultaneously projected with a beamer
- Clear storage of accessories on a separate imprinted Board
- Detailed experiment instructions with solutions

- Useable with or without a PC
- If the measuring interface incl. measuring software (1018.4) is used, there are two inputs for current and two inputs for voltage available.
- Optional: 2-channel USB-Oszilloscop with FFT Software

PC (not supplied) to control the PC ELECTRONIC BOARD (if the unit is upgraded Measuring interface and the measuring software 1018.4)



Set of Accessories (Type 1018.11) incl. Storage board

With the PC ELECTRONIC BOARD hps SystemTechnik offers a universal training and instruction system perfectly suitable for conducting following experiments:

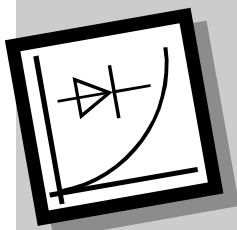
- DC, AC and three-phase current technology
- Characteristics of diodes and transistors
- Characteristics of thyristors and triacs
- Amplifier circuits
- Oscillator circuits
- Modulators and demodulators
- Multivibrators
- Power supply circuits
- Switched power supplies and DC voltage converters
- Power electronic circuits

The PC ELECTRONIC BOARD is equipped, in addition to the power supplies required for conducting the experiments, with a large jack field for setting up experiments with plug-in components. On this jack field, 4 mm jacks are arranged in a 19 mm grid. Each of them is surrounded by and electrically connected to four 2 mm jacks.

When setting up a circuit, the individual groups of jacks are connected by connecting plugs or leads and by the plug-in components given by the circuit. On this jack field 4 mm safety connecting leads with fixed isolated sleeves are useable.

With the optional measuring interface incl. measuring software (1018.4) the measured data are easily shown on a PC-monitor.

With the optional USB-Oszilloscop (1018.5) you can view all signals time or frequency based.



PC ELECTRONIC BOARD

1018.1 USB

To conduct the experiments, the PC ELECTRONIC BOARD is placed on a table or suspended in an hps rack for demonstration purposes.

A Board is provided for storing the plug-in components. The Board is printed with the relevant circuit symbols, allowing simple, clear storage.

The PC ELECTRONIC BOARD is also available in a Box (Type 1018.20). In the Box version the Set of Accessories is screwed into the lid of the Box.

The individual electrical components are connected through 2 mm and 4 mm jacks and plugs.

Accessories Required

- Set of Accessories (Type 1018.11), consisting of: storage board, resistors, capacitors, semiconductors, transformer coils
- Set of Accessories (Type 1018.11.1), consisting of: connecting leads and plugs
- Experiment manuals:
 - Direct Current Technology (Type V 0101 4th Ed.)
 - Alternating Current Technology (Type V 0102 4th Ed.)
 - Semiconductor Components (Type V 0103 4th Ed.)
 - Basic Electronic Circuits (Type V 0104 4th Ed.)

Accessories Recommended (optional):

- Measuring interface (Type 1018.4) incl. measuring software to display measured data on a PC-monitor
- USB-Oszilloscop (Type 1018.5) incl. Software to view signals time or frequency based
- IC BOARD (Type 3530) for additional experiments with commercial components

Technical Data

Mains connection

- Voltage: 230 V AC / 115 V AC (110 V AC)
50 ... 60 Hz; approx. 70 VA

AC and DC voltages

- DC voltage: +15 V ($\pm 5\%$); 800 mA
- 15 V ($\pm 5\%$); 800 mA
+ 5 V; 100 mA
0 ... 25 V; 300 mA
- AC voltage: 24 V AC; max. 100 mA

Function generator

- Sinewave / Squarewave / Triangal:
 - $U_{pp} = 0 \dots 20 \text{ V}; 100 \text{ mA}$
 - $f = 1 \text{ Hz} \dots 250 \text{ kHz}$
 - $R_i = 60 \Omega$
- Squarewave, positive: $U = 5 \text{ V} / \text{TTL}$
- PWM: 10 kHz; Pulse width 0 ... 100 %
- DC Offset: +12 V ... -12 V

Three-phase current generator

- Phase voltage: $7 V_{eff}$
- Line voltage: $12 V_{eff}$
- Line current: max. 50 mA
- Frequency: approx. 50 Hz

The outputs of the function generator, DC and three-phase current sources are short-circuit-proof and LED-monitored.

Mechanical Data

The front panel of the PC ELECTRONIC BOARD is made of 5 mm thick laminate, matt blue in colour with white printing 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.

Dimensions and weights

- PC ELECTRONIC BOARD (Type 1018.1 USB):
532 x 297 x 120 mm (w x h x d), weight: 3.9 kg
- Set of Accessories (Type 1018.11):
532 x 297 x 150 mm (w x h x d), weight: 4,0 kg
- Box version, consisting of:
PC ELECTRONIC BOARD (Type 1018.1 USB),
Set of Accessories (Type 1018.11 and Type 1018.11.1)
and Box (Type 1018.20): 580 x 450 x 200 mm
- total weight: 12 kg

Technical changes without prior notice!