

Teacher's demonstration and measurement trolley for electrical and automation



Workstation Frames		
MOBILELAB4	Mobilelab electric trolley, 4 levels	1 x
Equipment Panels		
DEFAULT_MOBILELAB4	Mobilelab default panel	1 x
Modules		
(1) TLMB12	Constant DC power supply, 2x12/15V,1A; 5/3.3V,3A; 1.5/3/4.5/5/6/9V,1A	1 x
(2) DCAEL303R	Variable DC power supply, 0-30 V, 3 A	1 x
(3) TPS2012B	Digital oscilloscope, 100 MHz, 1 GS/s, 2 isolated channels	1 x

TPS2PBD2	Power bundle for TPS oscilloscope	1 x
TPS2PWR1	Power measurements software for TPS oscilloscope	1 x
(4) ACA505	1 phase variable AC power supply, 0-50 V, 5 A	1 x
(5) AFG1022	Arbitrary function generator, 25 MHz	1 x
HZ16	Test leads for function generator	1 x
(6) USB1BE	USB connection	1 x
(7) USB1BE	USB connection	1 x
(8) STRBOX500	Storage box for the device panel, 500 mm	1 x
(9) ELPSL2	1-phase schuko socket outlets, 2 pcs	1 x
(10) SU1_ADD	1-phase supply unit	1 x
(11) STRBOX500	Storage box for the device panel, 500 mm	1 x
Accessories		
WHL859151	Suspension rail M750, ESD	1 x

MOBILELAB4 Mobilelab trolley

- ESD-painted steel construction
- 4 wheels, diameter 80 mm, two with brakes
- Handle for easy moving of the trolley
- Built-in device panel for integrated electrical equipment
- Device panel is modular: devices can be easily added
- Integrated modules are covered with polyester film to ensure long lifetime for the markings in the front panel
- 4 levels for devices, max. 11 full modules
- 2 pcs sockets at the back
- Perforated upright tubes for fastening accessories to different heights
- Versatile and adjustable accessories enable ergonomic and practical working environment
- Dimensions: 780(W) x 720(D) x 1630(H) mm



TLMB12 Fixed DC power supply

- Linear power supply
- 4 outputs, floating with respect to each other
- Outputs can be connected in series or in parallel
- Output values:
 - Output 1: 1.5 V / 3 V / 4.5 V / 5 V / 6 V / 9 V, 1 A
 - Output 2: 5 V / 3.3 V, 3 A



- Output 3: 12 V / 15 V, 1 A
- Output 4: 12 V / 15 V, 1 A
- Current limitation indicated by a LED
- Ripple: < 10 mVpp
- All outputs are short-circuit protected
- Voltage accuracy better than 100 mV
- Output from 4 mm safety terminals
- Dimensions: 1/2-module, 125(W) x 200(H) mm

DCAEL303R Variable DC power supply

- Output values: 0-30 V, 0-3 A, 90 W
- Linear regulation
- Constant voltage or constant current operation
- Voltage Setting: By coarse and fine controls
- Current Setting: By single logarithmic control
- Independent digital voltage and current meters for each output with 4 digit resolution
- Voltage meter:
 - Resolution: 10 mV
 - Accuracy: 0.3 % of reading \pm 3 digits
- Current Meter:
 - Resolution: 1 mA
 - Accuracy: 0.5 % of reading \pm 3 digits
- Ripple & noise: Typically < 1 mV rms (CV mode, 20 mHz bandwidth)
- Switchable local or remote sensing
- Silent fan-free cooling
- DC output on/off switch
- All outputs are intrinsically short circuit proof, and are protected against external voltages and reverse currents
- Output terminals: Universal 4mm safety binding posts on 19mm (0.75") spacing. Terminals can accept fixed shroud 4 mm plugs, standard 4 mm plugs, fork terminals and bare wires
- Dimensions: 3/4 module, 187,5(W) x 200(H) mm



TPS2012B Digital oscilloscope

- Channels: 2
- Bandwidth: 100 MHz
- Sample rate: 1 GS/s on all channels
- Record length: 2500 on all channels
- Vertical resolution: 8 bits
- Vertical sensitivity: 2 mV to 5 V/div
- Time base range (s/div): 5 ns to 50 s/div
- Fully isolated and floating channels, plus isolated external trigger
- Optional power application software offers the broadest range of power measurements at its price point
- FFT standard on all models
- Advanced triggers to quickly capture the event of interest
- Easily operate the oscilloscope with traditional, analog-style knobs and multi-language user interface
- Simplify setup and operation with autoset menu, autorange,



waveform and setup memories, and built-in, context-sensitive help

- Adjust the oscilloscope to your operating environment with backlit menu buttons/display and brightness/contrast controls
- 11 automatic measurements
- Connectivity: RS-232 (USB adapter), Centronics, CompactFlash
- Dimensions: 1½-module, 375(W) x 200(H) mm
- Standard accessories: TPP0101 100 MHz, 10x passive probes (one per channel), battery, user manual, OpenChoice PC communication software, traceable certificate of calibration - NIM/NIS

TPS2PBND2 Power bundle for TPS oscilloscope

- Power Measurement Bundle: TPS2PWR1 Module and Four P5122 Probes
- Software features
 - Power Measurements - True real power in watts, reactive power in VAR, power factor, crest factor, RMS measurements, frequency measurements
 - Cursors - dv/dt and di/dt
 - Phase Angles - CH1 and CH2, CH2 and CH3 (four-channel scopes only), CH1 and CH3 (four-channel scopes only)
 - Harmonics Measurements - Up to the 50th harmonic, THD, individual harmonic levels display, individual harmonic phase to fundamental, RMS values
 - Switching-loss Measurements - Turn-on loss, turn-off loss, conduction loss, total switch loss

TPS2PWR1 Power measurement software for TPS oscilloscope

- Software features
 - Power Measurements - True real power in watts, reactive power in VAR, power factor, crest factor, RMS measurements, frequency measurements
 - Cursors - dv/dt and di/dt
 - Phase Angles - CH1 and CH2, CH2 and CH3 (four-channel scopes only), CH1 and CH3 (four-channel scopes only)
 - Harmonics Measurements - Up to the 50th harmonic, THD, individual harmonic levels display, individual harmonic phase to fundamental, RMS values
 - Switching-loss Measurements - Turn-on loss, turn-off loss, conduction loss, total switch loss

ACA505 1 phase variable AC power supply

- Variable transformer 0-50 V, 5 A AC
- Galvanic isolation
- Overload protection
- Output: 4 mm safety terminals
- Digital meters for output voltage and current
- Voltage measuring: 0-10 V AC, best resolution 1 mV and 10-50 VAC 10 mV, accuracy 1 %
- Current measuring: 0-5 A AC, best resolution 10 mA, accuracy 1 %
- Main switch with indicator light
- Dimensions: 1 module, 250(W) x 200(H) mm



AFG1022 Arbitrary function generator

- Dual-channel, 25 MHz sine waveforms, 12.5 MHz square waveforms
- 14 bits, 125 MS/s arbitrary waveforms with 8 k points record length
- Display: 3.95-inch, resolution 480 by 320, colors 65,536
- Waveforms Sine, Square, Pulse, Ramp, Noise, and 45 frequently used arbitrary waveforms
- Amplitude 1 mVp-p to 10 Vp-p into 50 Ω loads
- Continuous, sweeping, burst, and modulation modes (AM, FM, PM, ASK, FSK, PSK, PWM)
- Frequency setting resolution: 1 μ Hz or 12 digits
- Arbitrary waveform vertical resolution: 14 bits
- 64-MByte internal non-volatile memory for arbitrary waveform storage
- Standard USB host/device for memory expansion and remote control
- Free ArbExpress makes user defined waveforms editing extremely easy through an external USB memory stick
- Standard accessories: Safety and Compliance Instructions, Documentation CD, Certificate of calibration; USB cable x 1, Type A to Type B, BNC cable x 2, Fuse, cartridge (5 x 20 mm, 0.5 A, 250V, time-delay) Fuse, cartridge (5 x 20 mm, 1 A, 250 V, time-delay)
- Dimensions: full module, 250(W) x 200(H) mm



HZ16 Test leads for function generator

- Silicone-test lead with BNC plug to miniature clamp probe

USB1BE USB connection

- USB connection between a laptop computer and a panel device
- Type B connector at the front panel
- Dimensions: ¼-module, 62.5(H) x 200(H) mm



STRBOX500 Storage box

- Integrated storage box for the device panel
- Powder-painted steel frame
- Suitable for storing training sets, test leads etc.
- Internal dimensions: 480(W) x 380(D) x 180(H) mm



ELPSL2 1-phase socket outlets

- 2 pcs earthed schuko socket outlets
- Dimensions: ¼-module, 62.5(W) x 200(H) mm



SU1 1-phase supply unit

- Main switch for the whole workstation with START position
- Green indicator light
- Integrated emergency switch, reset from the main switch
- Automatic restart prevention system e.g. after power failure
- 16 A thermal overload protector
- Fault current protection 0.03 A for all devices connected to the supply unit
- Earth terminal screw
- Outlets for the device modules
- Dimensions: ½-module, 125(W) x 200(H) mm



STRBOX500 Storage box

- Integrated storage box for the device panel
- Powder-painted steel frame
- Suitable for storing training sets, test leads etc.
- Internal dimensions: 480(W) x 380(D) x 180(H) mm



WHL859151 Suspension rail

- ESD powder painted steel construction
- Fixed to perforated back panel
- Width 742 mm



WEL806207 or WEL806211 Pick-up box

- Plastic pick-up box
- ESD protected
- Max. 7 pcs for WHL859151 suspension rail
- Dimensions: 105(W) x 165(D) x 75(H) mm WEL806207, 99(W) x 160(D) x 70(H) (WEL806211)