

HELP6L20D



Workstation Frames		
HELP6L20D	Help6 motorized multifunction workstation, 2000x1125 mm with double panel	1 x
Equipment Panels		
DEFAULT_HELP6L20D	Default panel for HELP620D model	1 x
Power Supply Units		
(S1) SU3	3-phase supply unit	1 x
Modules		
(1) ELPSL2	1-phase schuko socket outlets, 2 pcs	1 x

(2) HELP6CB	HELP6 LAN module box	1 x
(3) TBS1052C	Digital oscilloscope, 50 MHz, 1 GS/s, 2 channels, education model	1 x
(4) FGTG330	Function generator, 3 MHz	1 x
(5) DYM410	Digital multimeter 3 3/4 digit	1 x
(6) TLMB12	Constant DC power supply, 2x12/15V,1A; 5/3.3V,3A; 1.5/3/4.5/5/6/9V,1A	1 x
(7) DCAEL303R	Variable DC power supply, 0-30 V, 3 A	1 x
(8) SSLF2900	Soldering station 100 W	1 x
(9) ELPSL2	1-phase schuko socket outlets, 2 pcs	1 x
(10) SU1_ADD	1-phase supply unit	1 x
(11) ELPSL2	1-phase schuko socket outlets, 2 pcs	1 x
(12) STRBOX250	Storage box for the device panel, 250 mm	1 x
(13) ACA505	1 phase variable AC power supply, 0-50 V, 5 A	1 x
(14) FLUKE117	Digital multimeter	1 x
(15) ACF40016G	3-phase AC connection, 230/400 V, 16 A	1 x
(16) PM3A	3 phase power analyzer accessory	1 x
(17) ACA4002	3 phase AC power supply, 0-400 V, 2 A	1 x
(18) ELPSL2	1-phase schuko socket outlets, 2 pcs	1 x
Accessories		
FT91015699_	Fume extractor	1 x

HELP6L20D Motorized multifunction workstation

- Multipurpose construction: electric workstation and theory desk in one solution
- Construction includes a fixed table section (2000 x 600 mm) in the front and a motorized panel section (2000 x 525 mm) in the rear
- Motorized panel section includes a built-in device panel for integrated electrical equipment
 - Device panel is modular: devices can be added later on. Integrated modules are covered with polyester film to ensure long lifetime for the markings in the front panel
- Motorized panel equipped with fast, silent and service free



- electric motors for moving panel up / down
- Motorized panels can be used in three positions: down (flat work surface), middle (1 device panel available), up (2 device panels available)
- While panel is down, devices and equipment are safe from unauthorized use
- Panel can be driven either using a manual controller, or using laboratory control software
- Safety switch between the motorized panel and workstation frame for finger protection
- Workstation body made of ESD painted steel
- L-shaped ergonomic legs in the front
- Table tops with laminate surface, durable rounded plastic edges, colour light speckled grey
- Load capacity for workstation: 250 kg
- Adjustment screws to eliminate the roughness of the floor
- Can be connected to LAN and used with TLC software
- Total dimensions: 2000(W) x 1125(D) mm

SU3 3-phase supply unit

- Operating voltage: 400 V \pm 10 % AC, 50-60 Hz
- Main switch for the workstation with START position
- Green indicator lights
- Integrated emergency switch, reset from main switch
- Automatic restart prevention system e.g. after power failure
- Protection circuit for missing phase / wrong phase order
- 16A thermal overload protector for each phase
- 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



ELPSL2 1-phase socket outlets

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



TBS1052C Digital storage oscilloscope

- Bandwidth: 50 MHz
- 2 channels
- Sample rate (each channel): 1 GS/s
- Record length (each channel): 20 k points
- Vertical resolution: 8 bits
- Vertical sensitivity: 1 mV - 10 V / DIV
- Time base range (s/div): 2 ns - 100 s



- 7 inch WVGA (800X480) Active TFT Color Display
- 32 automated measurements
- Dual window FFT, simultaneously monitors both the time and frequency domains
- Integrated Courseware feature: Lab content can be loaded directly onto the oscilloscope, Students can review lab content, perform step-by-step instructions, record lab results and create lab reports all on the scope
- Dual channel frequency counter
- Zoom Function
- Advanced triggers including pulse and line-selectable video triggers
- Autoset and signal auto-ranging
- Autoset enable/disable feature with password protection
- USB 2.0 host port on the front panel for quick and easy data storage
- USB 2.0 device port on rear panel for easy connection to a PC
- Multiple language user interface
- Dimensions: 1 ¾ module, 437.5(W) x 200(H) mm
- Standard accessories: passive probes (one per channel), OpenChoice software, Traceable certificate of calibration - NIM/NIST, CD including: Courseware Editor software, Example Courseware labs, oscilloscope tutorials

FGTG330 Function generator

- 0.03 Hz to 3 MHz frequency range
- Waveforms: sine, square, triangle, DC, symmetry
- Simultaneous display of frequency & amplitude, 4 digit resolution
- External 7 digit 120MHz frequency counter
- Very high waveform quality at all frequencies & levels
- 2mV to 20V pk-pk from 50 Ω or 600 Ω
- Auxiliary TTL/CMOS output
- Variable symmetry with constant frequency
- Variable DC offset with zero detent
- 1000:1 frequency change by vernier or sweep voltage
- Precision internal linear or logarithmic sweep
- Internal or external amplitude modulation
- Attenuator Ranges: 0dB, -20dB, -40dB, -60dB
- Input voltage: 110-120 V / 220-240 V AC, 50/60 Hz
- Standard accessories: power cord, instruction manual
- Dimensions: 1 ¼ module, 312.5(W) X 200(H) mm



DYM410 Digital multimeter

- 3 ¾ digit display 3999 steps
- Basic accuracy $\pm 0,5\%$ + 2 digits
- Diode measurement and continuity testing
- Hold measurement .
- Relative measurement
- Duty cycle (%) measurement
- Temperature measurement with K type Thermocouple



- Backlit Facility
- Equipped with power supply
- Fuse at the front panel
- Standard accessories: manual, cable set
- Dimensions: ½-module, 125(W) x 200(H) mm

DC voltage

Range	100 μ V...1000 V
Best resolution	0.001 mV
Best accuracy	$\pm(0.5 \% + 2 \text{ digits})$

AC voltage

Range	100 μ V..1000 V
Best resolution	0.001 mV
Best accuracy	$\pm(1 \% + 5 \text{ digits})$

DC current

Range	10 μ A...10 A
Best resolution	0.01 μ A
Best accuracy	$\pm(0.8 \% + 2 \text{ digits})$

AC current

Range	10 μ A...10 A
Best resolution	0.01 μ A
Best accuracy	$\pm(1 \% + 5 \text{ digits})$

Resistance

Range	100 m Ω ...40 M Ω
Best resolution	0,01 Ω
Best accuracy	$\pm(0.8 \% + 2 \text{ digits})$

Capacitance

Range	1 pF...200 μ F
Best resolution	0.001nF
Best accuracy	$\pm(0,5 \% + 3 \text{ digits})$

Frequency

Range	1 Hz...500 kHz
Best resolution	0.001 Hz
Best accuracy	$\pm(0.2 \% + 2 \text{ digits})$

Temperature

Range	0...+1300 $^{\circ}$ C
Best resolution	1 $^{\circ}$ C
Best accuracy	$\pm(2 \% + 3 \text{ digits})$

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: $\frac{3}{4}$ module, 187,5(W) x 200(H) mm



SSLF2900 Soldering station

- Especially designed for lead-free soldering
- Power: 100 W
- \pm 3°C temperature stability
- Temperature adjustable 100-500°C (
- 32 VAC hi-recovery nichrome heating
- Auto power down after 15 minutes of idling
- 45 second ramp time to max temp setting
- LCD display which shows the temperature set and the current temperature (in °C)
- High quality housing ESD Safe Replaceable Soldering iron with a plug (detachable from base station)
- Pre-setting function for 3 temperatures
- Control Panel:



- All controls operate are on the LCD display screen
- Includes soldering station, soldering iron and stand for the iron
- Standard tip: SDK601
- Dimensions: ¼-module, 187.5(W) x 200(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



ELPSL2 1-phase socket outlets

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



STRBOX250 Storage box

- Integrated storage box for the device panel
- Powder-painted steel frame
- Suitable for storing training sets, test leads etc.
- Internal dimensions: 235(W) x 380(D) x 180(H) mm



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



FLUKE117 Digital multimeter

- AutoVolt automatic AC/DC voltage selection
- LoZ: helps prevent false readings due to ghost voltage
- Large white LED backlight to work in poorly lit areas
- True-rms for accurate measurements on non-linear loads
- Measures 20 A (30 seconds momentary; 10 A continuous)
- Resistance, continuity, frequency and capacitance
- Min/Max/Average to record signal fluctuations
- CAT III 600 V safety rated
- Dimensions: ½-module, 125(W) x 200(H) mm



DC voltage

Max. range	600 V
Best resolution	1 mV
Best accuracy	±0.5 % + 2 digits

AC voltage

Max. range	600 mV
Best resolution	1 mV
Best accuracy	±1.0 % + 3 digits

DC current

Max. range	10 A
Best resolution	1 mA
Best accuracy	±1.0 % + 3 digits

AC current

Max. range	10 A
Best resolution	0.01 A
Best accuracy	±1.5 % + 3 digits

Resistance

Max. range	40 MΩ
Best resolution	0.1 Ω
Best accuracy	±0.9 % + 1 digit

Capacitance

Max. range	10000 μF
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Best resolution 1 nF
 Best accuracy $\pm 1.9\% + 2$ digits

Frequency

Max. range 50 kHz
 Best resolution 0.01 Hz
 Best accuracy $\pm 0.1\% + 2$ digit

ACF40016G 3-phase AC connection

- Two safety earthed AC outputs:
 - Output 1: Socket, 230 / 400 V AC, 16 A, 3L+N+PE, 6H, red
 - Output 2: 4 mm safety terminals, 230 / 400 V AC, 16 A, 3L+N+PE
- Main switch / output selection switch, one output active at a time
- Analog ammeters 0-16 A for L1, L2, L3
- Thermal / magnetic circuit breaker, 16 A
- Dimensions: 1 module, 250(W) x 200(H) mm



PM3A 3 phase power analyzer accessory

The PM3A power analyzer is a multi-purpose measurement accessory for testing and analyzing 3 and 1 phase devices.

The device is easy to use, It's pre-connected to the output of the power supply and only select the desired measurement quantities.

The most common measurement quantities can be stored in shortcuts.

Power analyzer with 85 different measurement parameters and 28 measurement views

Measurements

- AC voltage 100VLL-600VLL(57VLN-346VLN).
- AC current 0-25A
- Frequency. 45-66Hz

Measurement accuracy.

- Voltage 0.5% of measuring range.
 - Power 0.5%
 - Frequency 0.2%
 - Active energy 0,5%
 - Reactive power 1%
 - Virtual power 0,5%
 - Power factor/phase angle 3%
 - THD 3%
- TRMS 3 harmonic analysis
 - Energy counter



- Phase angles display
- Graphical power display
- Large backlighted LCD display
- Dimensions: ¾-module, 187.5(W) x 200(H) mm
- Different versions of PM3A
- **PM3A** Power analyzer for 3-phase up to 25 A current
- **PM3AB** Power analyzer for 1- and 3-phase using less than 5 A current
- **PM3A1** Power analyzer for 1-phase up to 25 A current
- **SULOCK** Electricity locking unit

ACA4002 3 phase AC power supply

- Galvanic isolation
 - Output: 0-400 V, 2 A (4 mm safety terminals)
- Analog voltage measurement (L1-N)
- Thermal / magnetic circuit breaker
- Dimensions: 1 ¼ -module, 312.5(W) x 200(H) mm
- Options
 - ACM3VVVA analogue voltage meters 0 - 400 V
 - ACM3V20AA 3 pcs analog ammeters 0-2 A
 - PM3AB Power analyzer for 1- and 3-phase using less than 5 A current



ELPSL2 1-phase socket outlets

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



FT91015699 Fume extractor

- Fume extraction unit for 1 workplace
- Fine dust pre-filter can be separately changed without having to change the main filter
- Active carbon foam for effective gas filtration
- Portable fume extraction unit, for placement under or next to the bench
- Quick and easy filter replacement
- Longer service life due to exceptionally large filter surface of 2,4m²
- Variable speed setting
- Automated filter change notification system
- Exceptionally long service life due to maintenance free brushless EC turbine
- Quick, simple and user-friendly installation with Easy-Click System
- ESD safe



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- Low noise level: max 50 dB(A) at 1 m
 - Suction capacity: 190 m³/h
 - Voltage: 220-240 V (50/60 Hz)
 - Dimensions: 355(W) x 333(D) x 455(H) mm
 - Includes filter unit, stop valve with bench mounting brackets, 3 m extraction hose (ø 60 mm), 1 m extraction arm (ø 60 mm), funnel nose