

STEM WORKSTATION

STEM Workstation serie is designed for need of technology training. There are power supplies, soldering stations, multimeters and all necessary sockets and data connections ready to use. BASIC20 panels are easy to fit on any table frame (also on customer's own tables). Twin tables belong also to our product range. Economical choice for STEM, electrical engineering, automation, physics and basic electronics laboratories.

Modular panel

Modular panel with high-level safety systems as standard



Table frame construction

Strong steel frame with height adjustment

Compatibility

BASIC20 panel compatible with all workstation models

Highlights



TWIN table

BASIC20 PANEL

The panel is a very compact unit with only 215 mm depth and height. This leaves more space on the table top for working.

The panel can be equipped with basic instruments and connections such as:

- Supply units 1- and 3-phase
- Sockets and safety terminal outputs
- Adjustable and fixed AC and DC power supplies
- Compressed air and data connections
- Multimeters
- Soldering stations

Modular construction not only makes it easy to customise the panel according to customer needs, but also gives the possibility to add new modules in the future.



Connections on the back side of the panel



ECONOMICAL LABORATORY



Laboratory for STEM, electrical engineering, automation, physics and basic electronics.

Available three different type of tables in the BASIC20-serie:

BASIC20 low model is preferred to have direct view forward (see layout 2).

BASIC20 Tower model is usually placed against a wall and TWIN model is a good solution in the middle of the workshop (see layout 1).

Workstations can be connected electrically in series with socket under the panel.

Electric and network cables run safely behind /under the panel.

Manual key locking for electricity is available.

BASIC20 laboratories can be connected to the network and teachers can control laboratory with mobile devices or PCs.



STEM workstation



Layout 1



Layout 2



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DISTRIBUTOR:

BASIC20 workstation

TABBL, EP20L



TABBL, EP20L



2 x TABBL, 2 x EP20L + EPTWIN

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The BASIC20 serie consists of own 150 mm high device modules, see page 4.

• Workstation frame

- ESD-painted stable steel frame
- Table top with laminate surface, durable rounded plastic edges, colour light speckled grey
- Optional ESD-table top
- Stepless height adjustment: 650-900 mm
- Load capacity 300 kg, evenly loaded

• Device panel

- Device panel for integrated electrical instruments
- Structure of the panel made of ESD-painted steel
- Compact design, depth and height only 215 mm
- Panel equipped with modular device system: devices can be easily added.
- Device panel is tilted to offer best usability
- Installed on table top - compatible with all table frame models

Workstation frames, standard table top	Workstation frames, ESD table top	Table top size, W x D (mm)
TABBL15	ETABBL15	1500 x 700
TABBL18	ETABBL18	1800 x 700
TABBL20	ETABBL20	2000 x 700
Table tops available also with 900 mm depth		

Panels	Panel dimensions, W x D x H (mm)
EP20L15	1500 x 215 x 215
EP20L18	1800 x 215 x 215
EP20L20	2000 x 215 x 215

Options	Description
PANSOCKETLEU	2 x 2 pcs schuko sockets under device panel
PANSOCKETLUK	2 x 2 pcs UK sockets under device panel
PANSOCKETLUS	2 x 2 pcs US sockets under device panel
EPTWIN15	Assembling serie for connecting 2 pcs EP20L15
EPTWIN18	Assembling serie for connecting 2 pcs EP20L18
EPTWIN20	Assembling serie for connecting 2 pcs EP20L20

EP15SU1

1 phase supply unit

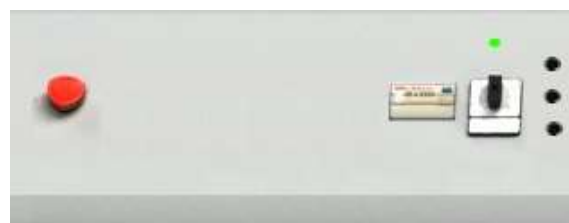
- Main switch for the workstation with START-position
- Green indicator light
- Integrated emergency switch, reset from the main switch
- Automatic restart prevention system e.g. after power failure
- Fault current protection (30 mA) for all devices connected to the supply unit
- Outlets for the device modules
- Dimensions: 300(W) x 150(H) mm
- Options: **EP15LOCK** Electricity locking module



EP15SU3

3 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
- Fault current protection (30 mA) for all devices connected to the supply unit
- Thermal overload protectors
- Outlets for the device modules
- Dimensions: 400(W) x 150(H) mm
- Options: **EP15LOCK** Electricity locking module



EP15NET

Supply unit control module

- Enables remote control for electricity in the workbench (requires TLC software)
- Features:
 - Connection permission for power
 - Power off control
 - Power on/off status information
- Key switch for bypassing software control
- Ethernet connection
- Dimensions 1005(W) x 150(H) mm
- Options: **EP15LOCKNET** Electricity locking module
 - Enables electronic remote control of table groups with EP15NET



EP15LOCK

Electricity locking module

- Electricity locking with key
- Enables electronic locking of one or a group of tables
- Dimensions: 100(W) x 150(H) mm
- Option:
 - Serialization for locks



EP15xx

Socket outlets

- Standard models:
 - **EP15SCHUKO2** 2 x schuko sockets
 - **EP152GB** 2 x UK-sockets
 - **EP152US** 2 x US-sockets
 - **EP15CEE3** 3-phase socket; CEE, 16 A
- Other socket models also available
- Dimensions: 100(W) x 150(H) mm



EP15DPANEL

USB and Ethernet connections

- **EP15DPANEL** Connection panel max. 4 connections
 - **DETH** RJ45 connection
 - **DUSBA** USB connection, type A
 - **DUSBB** USB connection, type B
 - **DUSB2** 2 x USB charger, type A, 5 V, 2.1 A
- Dimensions: 100(W) x 150(H) mm



EP15PS3

Safety sockets

- 3 phase safety socket output
- 4 mm safety connectors
- 3L+N+PE
- Dimensions: 100(W) x 150(H) mm



EP15PO2

Compressed air connection

- Compressed air connection, 10 bar, 2 outputs
- Output equipped with snap-on connectors
- Dimensions: 100(W) x 150(H) mm



EP15POA

Adjustable compressed air supply

- Adjustable output pressure 0.5-10 bar
- Meter for output pressure
- Output equipped with snap-on connectors
- Dimensions: 200(W) x 150(H) mm



EP15DCA305PS

Adjustable DC power supply

- Output values: 0-30 V, 0-5 A
- Short-circuit protected
- Stepless adjustment for voltage output
- Stepless adjustment for current limitation
- Measurement of current and voltage
- Output from 4 mm safety terminals
- Dimensions: 250(W) x 150(H) mm



EP15DCF242

Fixed DC power supply

- Output values: 24 V, 2 A
- Output floating
- Ripple: < 50 mVpp
- Short-circuit protected
- Current limitation indicated by a LED
- Voltage accuracy better than 100 mV
- Output from 4 mm safety terminals
- Dimensions: 100(W) x 150(H) mm



EP15DCF123

Fixed DC power supply

- Output values: 12 V, 3 A
- Output floating
- Ripple: < 50 mVpp
- Short-circuit protected
- Current limitation indicated by a LED
- Voltage accuracy better than 100 mV
- Output from 4 mm safety terminals
- Dimensions: 100(W) x 150(H) mm



EP15DCF3355

Fixed DC power supply

- Output values: 3.3 V, 5 A + 5 V, 5A
- Output floating
- Ripple: < 50 mVpp
- Short-circuit protected
- Current limitation indicated by a LED
- Voltage accuracy better than 100 mV
- Output from 4 mm safety terminals
- Dimensions: 200(W) x 150(H) mm



EP20ACF2302

Isolated 1 phase AC connection

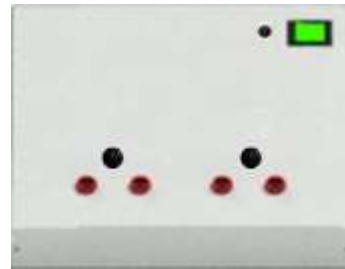
- Galvanically isolated AC output
- Output values: 230 V, 2 A, max. 500 VA
- Overload protectors for primary / secondary circuits
- Dimensions: 200(W) x 150(H) mm
- Options:
 - **ACFSOCKETUK** UK socket for AC outlet
 - **ACFSOCKETUS** US-socket for AC outlet



EP15ACF242

Fixed AC power supply

- Galvanically isolated AC outputs
- Output values: 2x24 V, 2 A
- Overload protectors for primary / secondary circuits
- Dimensions: 200(W) x 150(H) mm



EP15ACF714

Fixed AC power supply

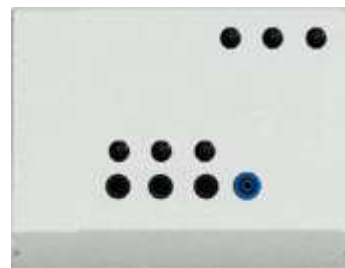
- Galvanically isolated AC outputs
- Output values: 2x14 V/1A, 7 V/2A
- Overload protectors for primary / secondary circuits
- Dimensions: 200(W) x 150(H) mm



EP15ACF421

3 phase AC connection

- Galvanically isolated 3 phase AC output
- Output: 24/42 VAC, 1 A
- Overload protectors for primary / secondary circuits
- Dimensions: 200(W) x 150(H) mm



EP20ACA505

1 phase variable AC power supply

- Variable transformer 0-50 V, 5 A AC, 250 VA
- 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: 300(W) x 150(H) mm



EP15DYM410

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
- Standard accessories: manual, cable set
- Dimensions: 100(W) x 150(H) mm



	Ranges	Best resolution	Best accuracy, \pm (a % of reading + b digits)
DC voltage	100 μ V - 1000 V	0.001 mV	0.5 % + 2
AC voltage	100 μ V - 1000 V	0.001 mV	1 % + 5
DC current	10 μ A - 10 A	0.01 μ A	0.8 % + 2
AC current	10 μ A - 10 A	0.01 μ A	1 % + 5
Resistance	100 m Ω - 40 M Ω	0.01 Ω	0.8 % + 2
Capacitance	1 pF - 200 μ F	0.001 nF	0.5 % + 3
Frequency	1 Hz - 500 kHz	0.001 Hz	0.2 % + 2
Temperature	0... +1300 $^{\circ}$ C	1 $^{\circ}$ C	2 % + 3

EP15FLUKE117

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
- Equipped with power supply
- Dimensions: 100(W) x 150(H) mm



	Ranges	Max. resolution	Best accuracy, \pm (a % of reading + b digits)
DC voltage	600 V	1 mV	$\pm 0,5\% + 2$
AC voltage	600 V	1 mV	$\pm 1,0\% + 3$
DC current	10 A	1 mA	$\pm 1,0\% + 3$
AC current	10 A	0.01 A	$\pm 1,5\% + 3$
Resistance	40 M Ω	0.1 Ω	$\pm 0,9\% + 1$
Capacitance	10000 μ F	1 nF	$\pm 1,9\% + 2$
Frequency	50 kHz	0.01 Hz	$\pm 0,1\% + 2$

EP20SSLF2900

Soldering station

- Especially designed for lead-free soldering
- Power: 100 W
- $\pm 3^{\circ}\text{C}$ temperature stability
- Temperature adjustable 100-500 $^{\circ}\text{C}$
- 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 $^{\circ}\text{C}$)
- High quality housing ESD Safe Replaceable Soldering iron with a plug (detachable from base station)
- Pre-setting function for 3 temperatures
- All controls operate are on the LCD display screen
- Includes soldering station, soldering iron and stand for the iron
- Standard tip: SDK601
- Dimensions: 200(W) x 150(H) mm
- Options
 - SDKSDSERIE Tip serie, 4 pcs



EP15GAL

Galvanometer

- Quality measurement unit for current
- Mounted separately within the device panel giving easy access for operation and connections
- Connections with 4 mm safety terminals
- Range: -50 μA ...+50 μA
- Display resolution: analogue meter
- Accuracy: $\pm 1.5 \mu\text{A}$
- Dimensions: 100(W) x 150(H) mm



EP15DM

Digital volt- and ammeter

- Digital voltmeter
 - Quality measurement unit for DC voltage
 - Mounted separately within the device panel giving easy access for operation and connections
 - Connections with 4 mm safety terminals
 - Range: 0-20 V
 - Display resolution: 0.01 V
 - Display accuracy: $\pm 0.2 \text{ V}$
- Digital ammeter
 - Quality measurement unit for DC current
 - Mounted separately within the device panel giving easy access for operation and connections
 - Connections with 4 mm safety terminals
 - Range: 0-5 A
 - Display resolution: 0.01 A
 - Accuracy: $\pm 0.02 \text{ A}$
 - Dimensions: 150(W) x 150(H) mm

