

MODULAR TABLETOP POWER SUPPLY UNITS FOR ELECTRIC MEASUREMENTS AND MACHINES

Mod. AMT-1,2,3,4/EV

INTRODUCTION

The modular structure of this "system" of tabletop power supply units meets the requirements of a modern laboratory of electric measurements and of measurements on electric machines. It consists of a basic unit provided with general protections and with emergency stop device that can become a unit outputting AC and DC fixed three-phase/single-phase voltages, or a unit outputting AC and DC variable three-phase/single-phase voltages, or a unit outputting AC and DC variable single-phase extra-low voltage; furthermore this basic unit can be customized on a specific demand of users (fixed and/or variable regulated DC voltages).

This system can be used to equip new laboratories (compatible with "POWER" line) and to update laboratories already existing, but lacking in structures and/or having to comply with safety standards (safe workstation).

All the installed protection devices are automatic. Fuses are not used because they could easily be removed by students. The basic unit is a system that outputs the electric power supply besides including an (optional) three-phase isolation transformer to separate the whole workstation electrically. Superposing the various power supply units will lead to assemble different configurations.



MODULAR TABLETOP POWER SUPPLY UNIT Mod. AMT-1/EV

This is the basic unit for assembling a workstation in the laboratory of general electric measurements and measurements on electric machine.

Power supply unit mod. AMT-1/EV includes the devices of general protection and of emergency stop, besides service sockets for powering electric accessories; it outputs the three-phase and single-phase supply voltages for the expansion units that can be connected.

Furthermore this unit can include a three-phase isolation transformer for the protection system with electric separation of the whole workstation.

TRAINING PROGRAM:

The training program is that of general electric measurements and of measurements on electric machines.

TECHNICAL SPECIFICATIONS:

Mechanical characteristics

Box made of sheet steel, chemically treated and painted with epoxy varnish; silk-screen-printed fore plate of aluminium alloy with flush-mounted handles for transport.

Electric characteristics

- Main control device with high-sensitivity magneto-thermal differential circuit breaker of (A) type, suitable for sinusoidal and unidirectional fault currents with DC offset
- Four-pole magneto-thermal differential circuit breaker for the protection against overcurrents (overload and short-circuit)
- Minimum-voltage release device to avoid any ill-timed restart
- Emergency pushbutton
- 3 universal single-phase (2-pin and UNEL) sockets.

Two three-phase sockets of IEC 309 type (EEC) 400 V / N / PE 16 A and a single-phase socket of IEC 309 type (EEC) 230 V / PE 16 A, available on the rear side, enable to connect the additional units to extend the system.

Dimensions: 525 x 500 x 250

Net weight: 20 kg

(70 kg with three-phase isolation transformer)

OPTIONAL ACCESSORY:

- Three-phase isolation transformer of 230-400 V / 230-400 V 7 kVA

SUGGESTED ADDITIONAL UNITS:

- MODULAR TABLETOP POWER SUPPLY UNIT OF FIXED VOLTAGES mod. AMT-2/EV
- MODULAR TABLETOP POWER SUPPLY UNIT OF VARIABLE VOLTAGES mod. AMT-3/EV
- MODULAR TABLETOP POWER SUPPLY UNIT OF VARIABLE EXTRA-LOW VOLTAGE mod. AMT-4/EV
- TABLE mod. TOP/EV for completing the workstation

POWER SUPPLY:

3 x 400 V / N / PE 50-60 Hz
(3 X 220-230 V, with the optional isolation transformer)
Max. absorption.: 7 kVA

MODULAR TABLETOP POWER SUPPLY UNIT OF FIXED VOLTAGES Mod. AMT-2/EV

This power supply unit is an expansion of unit mod. AMT-1/EV. Its modular structure enables to supply the laboratory of electric measurements and measurements on electric machines with fixed AC and DC single-phase/three-phase voltages, protected against overcurrents and accessible on educational safety terminals of 4 mm.

It is the natural extension of the basic power supply unit from which it receives the supply voltage protected by the high-sensitivity differential circuit breaker and by the emergency stop device.

When used separately, this unit must be connected with a voltage source protected by high-sensitivity differential circuit breaker.

TECHNICAL SPECIFICATIONS:

Mechanical characteristics

Box made of sheet steel, chemically treated and painted with epoxy varnish; silk-screen-printed fore plate of aluminium alloy with flush-mounted handles for transport.

Electric characteristics

- Three-phase autotransformer of 400 / 230 Vac – 220 Vdc
- **Three-phase fixed line 3 x 230 V – 10 A**, protected by magneto-thermal circuit breaker, lamp socket with warning light, safety terminals
- **Three-phase fixed line 3 x 400 V – 5 A**, protected by magneto-thermal circuit breaker, lamp socket with warning light, safety terminals
- **Fixed line of 220 Vdc – 10 A** (three-phase voltage rectified by 6-diode bridge) AC residue of 4.2%; line protected by magneto-thermal circuit breakers, lamp socket with warning light, safety terminals

Dimensions: 525 x 500 x 250

Net weight: 50 kg

POWER SUPPLY:

Coming directly from unit mod. AMT-1/EV,
or 3 x 400 V / N / PE 50-60 Hz, including high-sensitivity differential circuit breaker of (A) type.

MODULAR TABLETOP POWER SUPPLY UNIT OF VARIABLE VOLTAGES Mod. AMT-3/EV

This power supply unit is an expansion of unit mod. AMT-1/EV. Its modular structure enables to supply the laboratory of electric measurements and measurements on electric machines with variable AC and DC single-phase/three-phase voltages, protected against overcurrents and accessible on educational safety terminals of 4 mm.

This unit includes a three-phase voltage regulator and the protection devices against overcurrents. It is the natural extension of the basic power supply unit from which it receives the supply voltage protected by the high-sensitivity differential circuit breaker and by the emergency stop device. When used separately, this unit must be connected with a voltage source protected by high-sensitivity differential circuit breaker.

TECHNICAL SPECIFICATIONS:

Mechanical characteristics

Box made of sheet steel, chemically treated and painted with epoxy varnish; silk-screen-printed fore plate of aluminium alloy with flush-mounted handles for transport.

Electric characteristics

- Three-phase voltage regulator of 5 A, AC/DC selector
- Three-phase variable line of 0-430 V – 5 A (single-phase, 0-250 V), protected by magneto-thermal circuit breaker, digital 3-digit voltmeter with voltmeter switch for phase-phase and phase-neutral connection, safety terminals
- Variable line of 0-500 Vdc – 6 A (three-phase voltage rectified by 6-diode bridge) AC residue of 4.2%; line protected by magneto-thermal circuit breakers, digital 3-digit voltmeter, safety terminals

Dimensions: 525 x 500 x 250

Net weight: 38 kg

POWER SUPPLY:

Coming directly from unit mod. AMT-1/EV, or 3 x 400 V / N / PE 50-60 Hz, including high-sensitivity differential circuit breaker of (A) type.

MODULAR TABLETOP POWER SUPPLY UNIT OF VARIABLE EXTRA-LOW VOLTAGE Mod. AMT-4/EV

This power supply unit is an expansion of unit mod. AMT-1/EV. Its modular structure enables to supply the laboratory of electric measurements and measurements on electric machines with variable AC and DC single-phase/three-phase voltages, protected against overcurrents and accessible on educational safety terminals of 4 mm.

This unit includes a single-phase voltage regulator and the protection devices against overcurrents. It is the natural extension of the basic power supply unit from which it receives the supply voltage protected by the high-sensitivity differential circuit breaker and by the emergency stop device. When used separately, this unit must be connected with a voltage source protected by high-sensitivity differential circuit breaker.

TECHNICAL SPECIFICATIONS:

Mechanical characteristics

Box made of sheet steel, chemically treated and painted with epoxy varnish; silk-screen-printed fore plate of aluminium alloy with flush-mounted handles for transport.

Electric characteristics

- Single-phase voltage regulator of 1.2 A, and safety transformer
- **Variable line of 0-48 V – 4 A**, protected by magneto-thermal circuit breaker, digital 3-digit voltmeter, safety terminals
- **Variable line of 0-48 Vdc – 4 A** (single-phase voltage rectified by 4-diode bridge); line protected by magneto-thermal circuit breakers, digital 3-digit voltmeter, safety terminals

Dimensions: 525 x 500 x 250

Net weight: 25 kg

POWER SUPPLY:

Coming directly from unit mod. AMT-1/EV, or 3 x 400 V / N / PE 50-60 Hz, including high-sensitivity differential circuit breaker of (A) type.