



### Power Supply Module

This comprehensive power supply module is designed to meet a variety of educational and industrial needs. It provides a range of variable and fixed AC/DC output voltages and includes transformers, power meters, and load components. The module is housed in a durable, protective enclosure and adheres to relevant industry standards such as ANSI, IEEE, and IEC.

### Output Voltages

- **Variable AC Outputs:**
  - 3 x 0 - 400 V, 5 A
  - 3 x 0 - 220 V, 8 A or better
- **Fixed AC Outputs:**
  - 3 x 380 V + N, 16 A
  - 3 x 220 V, 8 A or better
- **Single-Phase Fixed AC:**
  - 220 V, 10 A
- **Variable DC Outputs:**
  - 0 - 220 V, 10 A
  - 0 - 220 V, 1 A or better
- **Fixed DC Outputs:**
  - 220 V, 10 A
- **Power Supply:**
  - 3 x 380 V + N, 50Hz

*Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.*



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### Three-Phase Transformer

- **Type:** Column-type with split windings
- **Single-Phase Supply Compatibility:** Yes
- **Rated Power:** Minimum 1 KVA
- **Primary Voltage:** 2x190 V (Phase), 380 V
- **Secondary Voltage:** 2x185 V (Phase) or better, 380 V
- **Frequency:** 50 Hz
- **Insulation Class:** Class B (130°C) or Class F (155°C)
- **Efficiency:** Above 95%
- **Winding Configuration:** Delta-Wye
- **Enclosure:** Protective casing for safety and durability
- **Standards:** Compliant with ANSI, IEEE, or IEC standards

### Single-Phase Transformer

- **Type:** Core-type with split windings (Autotransformer)
- **Rated Power:** Minimum 500 VA
- **Primary Voltage:** 220 V single phase / 380 V three phases
- **Secondary Voltage:** 220 V single phase
- **Autotransformer Voltage:** 220/380 V
- **Frequency:** 50 Hz

### Digital Electric Power Measuring Unit

- **Functionality:**
  - Measurement of DC voltage, current, power, and energy
  - Measurement of AC voltage, current, power, active energy, reactive energy, power factor, and frequency
- **Specifications:**
  - Direct Voltage: Up to 600 V
  - Direct Current: Up to 20 A
  - Alternate Voltage: Up to 700 V
  - Alternate Current: 20 A
  - Power: 9000 W
  - Single-Phase Power Supply: 90-260 V, 50 Hz
  - Communication: RS485 with MODBUS RTU protocol

### Three-Phase Power Meter

- **Functionality:**
  - Measures three-phase RMS, peak values of voltages and currents
  - Measures active and reactive power, active and reactive energy, power factor, THD, and frequency
- **Specifications:**
  - Voltage Rating: 380 V AC
  - Phase: Three

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- Accuracy Class: Class 0.5 for high-precision applications
- Display: LCD or LED for real-time monitoring
- Mounting: Easy installation in electrical panels
- Standards: Compliance with IEC, ANSI, or IEEE
- Input Voltage: Nominal 400 V AC
- Input Current: Minimum 10 A
- Operating Frequency: 45-60 Hz
- Auxiliary Supply: 80-240 V AC, 50 Hz, single-phase from mains
- Communication Interface: Modbus RTU, RS485, Ethernet, or wireless for data logging and remote monitoring

### Digital True RMS Meter

#### ● **Functionality:**

- Automatic scaling for voltage and current measurements in both AC and DC

#### ● **Specifications:**

- Voltage:
  - 0 - 1000 V DC or better
  - 0 - 1000 V AC pp or better
  - 0 - 750 V AC rms or better
- Current:
  - 0 - 20 A DC or better
  - 0 - 28 A AC pp or better
  - 0 - 28 A AC rms or better
- Accuracy:  $\pm 0.75\%$  or better
- Resolution: 16 bits or better
- Refresh Rate: 0.5s or better
- Power Supply: 220 V AC, 50 Hz
- Communication: Modbus (RS485)

### Load Components

#### Capacitive Load

- **Type:** Single or three-phase capacitive step-variable load
- **Max. Power:** 3 x 250 VAR
- **Max. Voltage:** 220/380 V  $\Delta$ /Y
- **Compatibility:** Suitable with power supply and transmission line ratings

#### Resistive Load

- **Type:** Single or three-phase resistive step-variable load
- **Max. Power:** 3 x 350 W
- **Max. Voltage:** 220/380 V  $\Delta$ /Y
- **Compatibility:** Suitable with power supply and transmission line ratings

#### Inductive Load

- **Type:** Single or three-phase inductive step-variable load

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- **Max. Power:** 3 x 250 VAR
- **Max. Voltage:** 220/380 V  $\Delta/Y$
- **Compatibility:** Suitable with power supply and transmission line ratings

#### Additional Components

- **All Measuring Meters:** Rack-mounted for organization and safety
- **Documentation:** Comprehensive teachers and student manuals, including troubleshooting guides for each component

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