

یوپیاس، شیارژر، استابلایزر باتری، ترانسفورماتور

علائم Keys

| Single-phase input and output  | 1:1        | ورودی و خروجی تک فاز   |
|--|------------|--|
| Three-phase input,<br>Single-phase output                              | 3:1        | ورودی ۳ فاز : خروجی تک فاز   |
| Three-phase input and output   | 3:3        | ورودی و خروجی ۳ فاز  |
| Single-phase or three-phase input, single-phase output                 | 1-3:1      | ورودی تک فاز یا ۳ فاز : خروجی تک فاز                                     |
| UPS VFD<br>(Voltage Frequency Dependent)                               | VFD        | یوپیاسهایی که ولتاژ و فرکانس خروجی<br>به ولتاژ و فرکانس ورودی وابسته است |
| UPS Line Interactive<br>(Voltage Independent)                          | VI         | یوپیاسهایی که ولتاژ خروجی<br>مستقل از ولتاژ ورودی است                    |
| UPS Online<br>(Voltage Frequency Independent)                          | VFI        | یوپیاسهایی که ولتاژ و فرکانس خروجی<br>مستقل از ولتاژ و فرکانس ورودی است  |
| Tower  |            | یو پی اس ایستاده   |
| Rack   |            | یو پی اس رک مونت   |
| Rack / Tower   |            | یو پی اس دوگانه: ایستاده / رک مونت                                       |
| Modular system   |            | یو پی اس ماژولار   |
| UPS suitable for<br>home - small office applications                   |            | یو پی اس مناسب منازل و دفاتر کوچک  |
| UPS suitable for<br>datacentre applications                            |            | یو پی اس مناسب دیتا سنتر   |
| UPS suitable for electro-medical applications                          |            | یو پی اس مناسب مصارف بیمارستانی  |
| UPS suitable for industrial applications                               | (m)        | یو پی اس مناسب کارخاتجات صنعتی   |
| UPS suitable for transport<br>applications (railways, airports, naval) |            | یو پی اس مناسب حمل و نقل عمومی<br>(مترو، تجهیزات ریلی و فرودگاهی)        |
| UPS suitable for emergency applications                                | <b>K-1</b> | یو پی اس مناسب مصارف اضطراری   |
|  |            |  |

# AEG

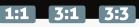
### PROTECTPLUS M600

Flexible, scalable and smart

Modular Power Management for highest efficiency and lowest operating costs















#### It's our business to make your power security easy

UPS systems from AEG Power Solutions ensure the continuous availability of power and safe operations for critical applications in all environments. AEG PS has a proven track record for developing solutions for highly demanding applications in all types of infrastructures. Since its creation more than a century ago, the AEG name has stood for rugged reliability and world-class engineering, including 60 years' experience in UPS. Our customers know that they can rely fully on us for innovative power solutions that protect their people, their investments, their data, and their business. The modular UPS Protectplus M600 ensures a reliable, secure, clean and continuous power supply to all critical applications. It acts as an interface between the mains power supply and the critical load, in the event of poor quality input waveform (such as an under-voltage, over-voltage, input frequency fluctuations, harmonics, spike or power surges) or a complete and potentially damaging power failure.

#### A 30 kVA Power Module

• Isolated airflow with redundant fans

- Independent LCD display for each module
- Autonomous Start-up (independent from the central display)
- Dismountable front panel
- High power density
- Cold start

#### **Features**

- Double Conversion (VFI-SS111-)
- Transformer-less architecture: lower space and weight
- Excellent power capability, up to 900 kVA without additional tools
- 30 kVA hot-swappable power modules for predictive power management and lowest MTTR
- AC/AC Efficiency in double conversion up to 95.5 %
- ECO mode, up to 98.5 % efficiency
- Idle Mode
- Output PF = 0.9
- 10.4" color Touch Screen
- Double doors for back access and easy maintenance
- Intelligent and innovative Self Aging Test
- MoniUPS compatible

# UPS

## Specifications

| MODEL                                       | Protectplus M600                                  | Protectplus M600  | Protectplus M600   |  |  |  |
|---|---|---|--------------------|--|--|--|
| Frame model                                 | Frame 180   | Frame 300   | Frame 600          |  |  |  |
| Maximum capacity (kVA)                      | 180   | 300   | 540 (+ redundancy) |  |  |  |
| Maximum number of power modules connected   | 6   | 10  | 20                 |  |  |  |
| Parallel operation                          | Up to 3 frames                                    | Up to 3 frames  | No                 |  |  |  |
| Dimensions W x D x H (mm)                   | 600 x 1100 x 1600                                 | 600 x 1100 x 2000   | 2000 x 1100 x 2000 |  |  |  |
| Weight (kg)                                 | 165   | 220   | 660                |  |  |  |
| Color of the frame                          | RAL 7021  |   |                    |  |  |  |
| POWER MODULE                                |   |   |                    |  |  |  |
| Nominal power (kVA/kW)                      | 30 / 27   |   |                    |  |  |  |
| Dimensions W x D x H (mm)                   | 460 x 790 x 134                                   |   |                    |  |  |  |
| Weight (kg)                                 | 34  |   |                    |  |  |  |
| INPUT                                       |   |   |                    |  |  |  |
| Phase                                       | 3Ph + N + G                                       |   |                    |  |  |  |
| Nominal Voltage (V)                         | 380 / 400 / 415                                   |   |                    |  |  |  |
| Voltage range (V)                           | 228 to 3  | 304 to 478 V (at full load)<br>228 to 304 V (with load decreasing linearly) |                    |  |  |  |
| Frequency (Hz)                              | 220 to 0  | 50 / 60   |                    |  |  |  |
| Frequency range (Hz)                        |   | 40 / 70   |                    |  |  |  |
| Power Factor                                |   | 0.99  |                    |  |  |  |
| Input THDi                                  |   | <3 % (with linear load)   |                    |  |  |  |
| OUTPUT                                      |   | 10 /0 (With linear load)  |                    |  |  |  |
| Voltage (V)                                 |   | 380 / 400 / 415   |                    |  |  |  |
| Voltage regulation                          | 1.5 %   |   |                    |  |  |  |
| Output THDv                                 |   | <1 % (with linear load)   |                    |  |  |  |
|   |   | <6 % (with non linear load)   |                    |  |  |  |
| Crest Factor                                |   | 3:1   |                    |  |  |  |
| Output PF                                   | 0.9   |   |                    |  |  |  |
| Frequency (Hz)                              | 50 / 60   |   |                    |  |  |  |
| Overload capacity                           | 110 % for 60 min                                  |   |                    |  |  |  |
|   | 125 % for 10 min                                  |   |                    |  |  |  |
|   |   | 150 % for 1 min<br>>150 % for 200 ms  |                    |  |  |  |
| AC/AC efficiency in double conversion (VFI) | Up to 95.5 %                                      |   |                    |  |  |  |
| AC/AC efficiency in ECO mode (VFD)          | Up to 98.5 %                                      |   |                    |  |  |  |
| BATTERY LINE                                | 3p to 70.0 %                                      |   |                    |  |  |  |
| Nominal DC Voltage (VDC)                    | ±240 (with +/N/- connections)                     |   |                    |  |  |  |
| Quantity of lead acid batteries (12 V each) |   | 40 (settable from 36 to 44)   |                    |  |  |  |
| Recharge power                              | 10 %  | 10 % System Power (nominal value);  |                    |  |  |  |
|   |   | Settable: from 0 to 20 % System power                                       |                    |  |  |  |
| Temperature compensation (mV/° C)           | -3.0 (selectable: 0 to -5.0)                      |   |                    |  |  |  |
| USER INTERFACE                              |   |   |                    |  |  |  |
| Display                                     | 10.4" LCD + LED, Color touch screen + Keyboard    |   |                    |  |  |  |
| IP protection degree                        | IP20  |   |                    |  |  |  |
| Standard communication ports                | RS232; RS485, Dry contacts, USB                   |   |                    |  |  |  |
| Optional communication ports                | SNMP, Expansion Dry contact card                  |   |                    |  |  |  |
| ENVIRONMENTAL                               |   |   |                    |  |  |  |
| Operating temperature (° C)                 |   | 0 to 40   |                    |  |  |  |
| Storage temperature (° C)                   | -40 to 70   |   |                    |  |  |  |
| Relative humidity                           | 0 to 95 %   |   |                    |  |  |  |
| Noise at 1 m distance (dB)                  | 65 (with nominal load);<br>62 (with 45 % of load) |   |                    |  |  |  |
| STANDARDS AND CERTIFICATIONS                |   |   |                    |  |  |  |
| Safety                                      | IEC EN 62040-1                                    |   |                    |  |  |  |
| EMC   | IEC EN 62040-2                                    |   |                    |  |  |  |
| Test and Performance                        | IEC EN 62040-3                                    |   |                    |  |  |  |



- Floor 2, No. 3, Moradi Alley, Bani Hashem St., Resalet St, Tehran, Iran
- **2** 021.8846 8400
- **a** 021.2230 8399
- info@aryatec-co.com
- www.aryatec-co.com