ARCHIMOD HE 20 kVA

1. GENERAL SPECIFICATIONS

The Legrand ARCHIMOD HE, model 20, is an UPS on line double conversion with PWM Hi-Frequency technology. It has passing through neutral and Modular Architecture with the possibility to have N+X redundancy. The nominal power is 20 kVA - 20 kW. Batteries are lead acid, sealed, free maintenance, valve regulated, and arranged, inside the UPS or external battery cabinet, in dedicated Drawers, in order to guarantee compact dimensions reducing weights and DC voltage level.

1.1 Modularity
The UPS ARCHIMOD HE 20 has modular architecture, it is composed by identical modules which work in parallel. Modules are:
- Power Modules 6.7 kVA;
- Battery Drawers of seven batteries (9Ah).
These modules are installed inside the UPS and have identical functions.
Power Modules are composed by the following circuits:
- Rectifier/PFC
- Inverter
- Battery Charger
- Command Logic circuit
- Automatic By-pass

Battery drawers contain 7 batteries, and are easy to be move and replace.

1.2 Adaptability
The UPS can be easily configured on site, by the user, to work as three-phase or single phase either in input than output.

1.3 Scalability
The modularity of Archimod HE UPS allows to execute Power and Autonomy upgrade. Thanks to the intelligent Plug N’ Play connection, no HW and SW settings are needed to increase or decrease the power or the autonomy.

1.4 Redundancy
The modularity of the UPS allows the N+X redundant configurations. The Redundancy is achieved using more modules than needed, modules will run in “load sharing”.

1.5 Architecture
The UPS ARCHIMOD HE 20 is three-phase input and output, the architecture is distributed parallel architecture in each phase (there are more modules in the same phase). In case of redundant configuration, whenever one module fails, the other modules in the same phase will guarantee the Energy supply and protection to the load.

The available power in each phase will be always the sum of the power of the modules installed in that phase.

1.6 Bypass
In each Power Module there is a static By-pass system which, in case of overload or other anomaly, automatically transfer the load to the mains.
The UPS has embedded the manual bypass for service and maintenance and it is possible to connect a dedicated bypass input line.

A dedicated software of remote monitoring and management, installed on a PC connected to the UPS, allows to check and set all working parameters of ARCHIMOD HE (the same functions available on the UPS control panel) and, furthermore, to schedule and program computer remote shutdown.

Optional software (UPS SuperviSor) or Net Interface card (CS141 SK) allow the multi server shutdown and UPS remote control on the LAN.

ARCHIMOD HE is controlled by a main microprocessor which works together with microprocessors in each power modules; By display is possible to check all measurements, working parameters and status of the system.

Here follow the measurements and working parameters available on the display:

Input
- Current: RMS value, Peak value, Crest Factor
- Voltage: Ph-N RMS value, Ph-Ph RMS value
- Bypass Line Voltage
- Power: Nominal (VA), Active (W)
- Frequency

Output
- Current: RMS value, Peak value, Crest Factor
- Voltage: Ph-N RMS value, Ph-Ph RMS value
- Power: Nominal (VA), Active (W)
- Frequency

Batteries
- Voltage
- Capacity
- Current
- History data
- Residual Capacity
- Charging status

Misc.
- Internal Temperature
- Fan Speed
- HV DC BUS Voltage

DATA LOG.
- By-pass intervention
- Overheats
- Overloads
- Battery interventions
- Total discharge
- Events (info, warning, critical)
- Alarms
1. GENERAL SPECIFICATIONS (continue)

The UPS allows also the following settings by display:

- **Output**
  - Voltage
  - Frequency
  - Phases configuration
  - DIP Speed
  - ECO Mode

- **Input**
  - Enable freq. synchronizing (PLL)
  - Extended synchronizing range (Extended PLL)

- **BY-PASS**
  - Enabling
  - Forced
  - DIP Speed
  - ECO Mode

- **Batteries**
  - Start up on Battery
  - Threshold value
  - Auto restart
  - Max Time on battery

The UPS ARCHIMOD HE has the CE Mark accordingly with the EU Directives 2006/95, 2004/108 and it comply with following standards:
- EN 62040-1 “General rules for electric safety”
- EN 62040-2 “Electromagnetic compatibility and immunity (EMC)”
- EN 62040-3 “Performances and testing rules”

2. TECHNICAL SPECIFICATIONS

**Output in battery Run (DC-AC)**
- Nominal voltage: 380, 400, 415,3ph+N+PE (220, 230, 240 1ph)
- Nominal power: 20.000 VA
- Active power: 20.000 W
- Voltage variation (static): ±1 %
- Voltage variation (dynamic 0-100%; 100-0%): ±1 %
- THDv on nominal power (linear load): <0.5 %
- THDv on nominal power (not linear load PF=1): <1 %
- Frequency: 50 Hz ± 60 Hz (autossensing or selectable)
- Frequency tolerance: ±1 % free run
- Current Crest Factor: 3:1 according with IEC 62 040-3
- Overload capability:
  - 10 min: 115%
  - 60 sec: 135%

**Battery**
- Type: Lead Acid, sealed, free maintenance VRLA
- Unit Capacity: 9 Ah (12V)
- Nominal UPS Battery Voltage: 252 Volt DC
- Battery charger type: PWM hi efficiency, one in each power module
- Charging Cycle: Smart Change technology
- Max Charging Current: 2.5 A each power module

**Environmental specs**
- Noise level @ 1m: 52 dBA
- Working temperature range: from 0°C to +40°C
- Stock temperature range: from -20°C to +50°C (excluded batteries)
- Humidity range: 0-95% not condensing
- Protection degree: IP21

**Mechanical an Miscellaneous**
- Net Weight without batteries: 205 kg
- Dimensions (WxHxD): 1 x (570 x 2080 x 912) (mm)
- Colour: RAL 7016
- Technology rectifier/booster/inverter: MOSFET/IGBT
- Communication Interface (for each command tunnel): 2 serial port RS232, 1 logic level port, 5 Dry contacts port, 1 slot for SNMP optional interfaces
- Input/Output connections: 3Ph + N + PE
- Number of Command Tunnels: 1
- Number of Installable Power Modules: 3 of 6700 VA
- Standards: EN 62040-1, EN 62040-2, EN 62040-3

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1. The weigh depends by the number of the installed batteries accordingly with the required autonomy.
2. The battery cabinet dimension can change depending battery set accordingly with the required autonomy.