

MODULAR
UPS



The ultimate in clean power

A Group brand | **legrand**

NUMERIC

TRIMOD & ARCHIMOD UPS

Modular Series



On line Double conversion VFI SS 111



Ideal UPS Technology Features Plus

- Redundant N+X.....Business continuity in case of failure.
- Adaptability.....To follow evolution of the load.
- Reliability High MTBF, high Performances
- Flexibility Low MTTR, user friendly, communications





Modular UPS - Advantages

- ✓ Small MTTR
- ✓ Single Person Maintenance
- ✓ Single Screwdriver Service
- ✓ The Module is the only spare part for the whole model family
- ✓ Three independent Single Phases Output
- ✓ Small Power Loss in case of failure
- ✓ Redundancy on modules, phases, control unit
- ✓ Scalability of Power and Back-up time
- ✓ 95% Efficiency not dependant on the load





Further Advantages

- ✓ Input and Output adaptability
- ✓ Battery performance and lifetime optimization
- ✓ Compact Size
- ✓ Advanced Display Settings
- ✓ Advanced Diagnostics and Measurement
- ✓ Easy Installation



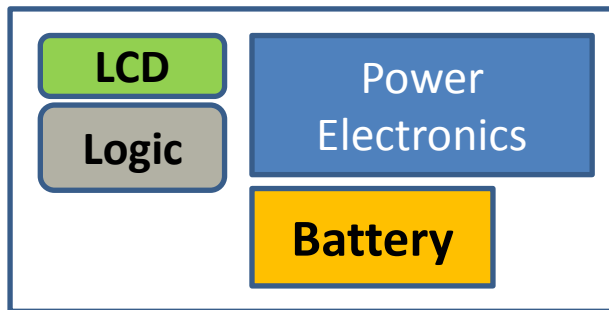
TRIMOD



ARCHIMOD

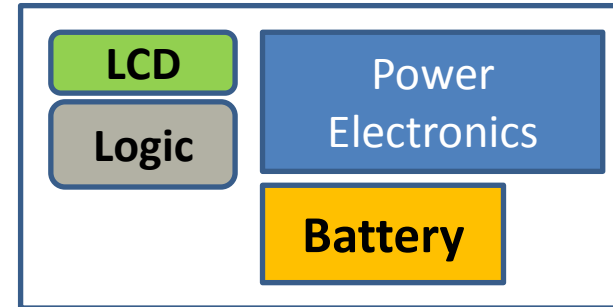
Single, Parallel

Stand Alone

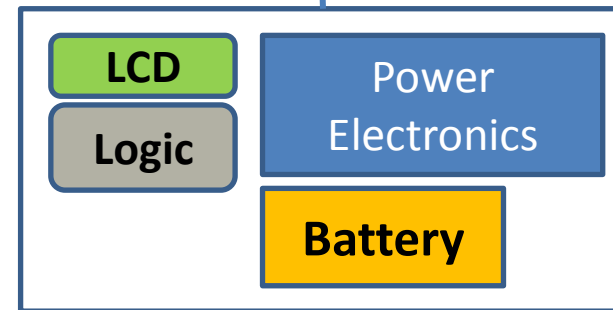


One System

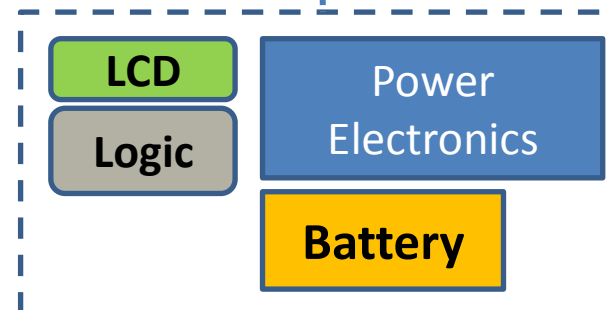
Parallel (DPA)



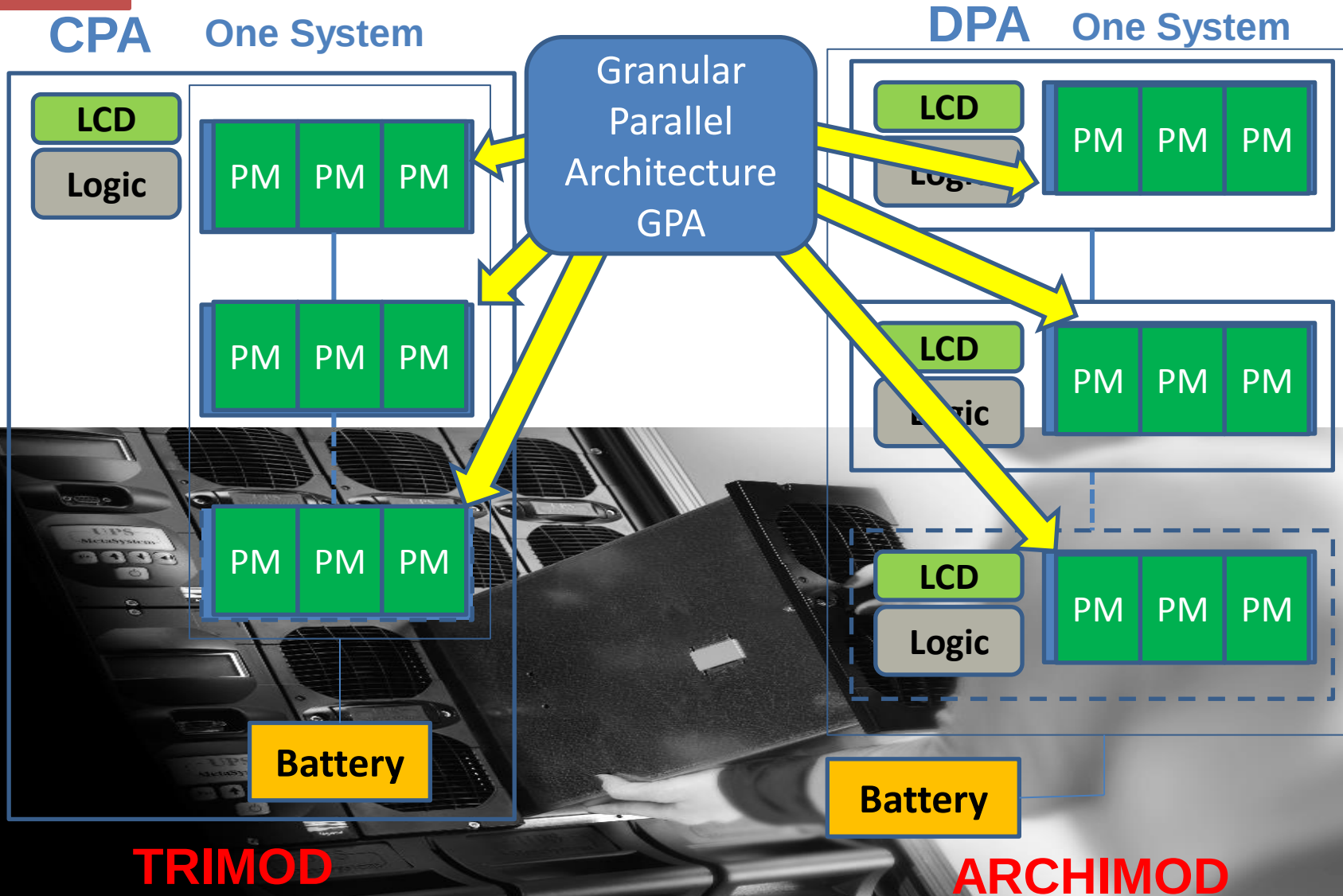
System 1



System 2



System n



Modular UPS - Trimod

Trimod: 10kVA - 60kVA



Power Cabinet

Models:

10 kVA

15 kVA

20 kVA

30 kVA

40 kVA

60 kVA



Power Modules

Modular UPS - Trimod

Three power size: 3.4kVA, 5kVA and 6.7kVA

Power Module Includes :

- Input Rectifier / PFC
- High Voltage DC Bus
- Booster
- Inverter,
- Battery charger
- By-pass
- Logic System

It's a Complete UPS



3.4kVA

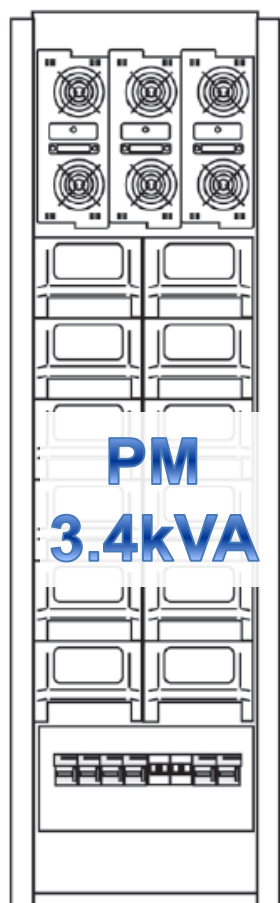


6.7kVA



5kVA

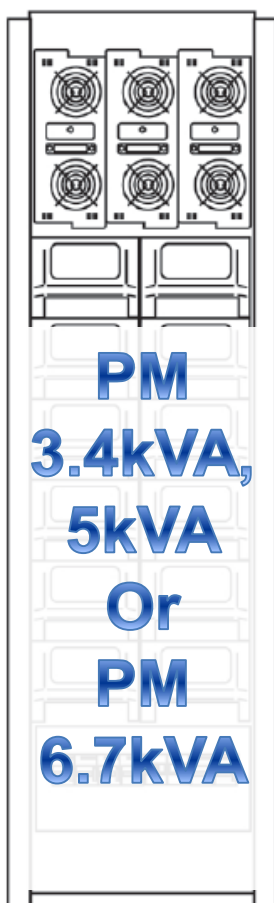
Trimod – Power Cabinets



PM
3.4kVA

3 SLOT
10kVA

3/3, 3/1, 1/1, 1/3



PM
3.4kVA,
5kVA
Or
PM
6.7kVA

3 SLOT
15 – 20 kVA

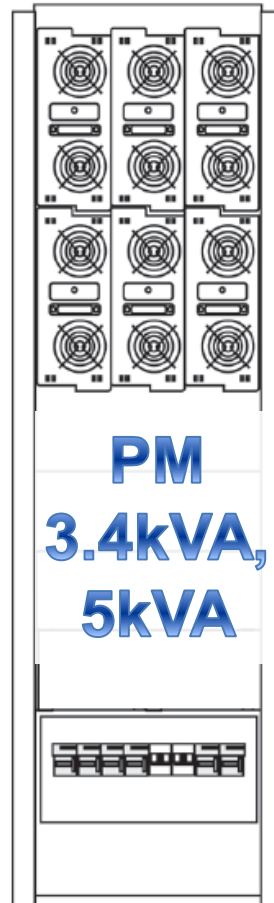
3/3, 3/1, 1/1, 1/3



PM
3,4kVA,
5kVA

6 SLOT
30kVA

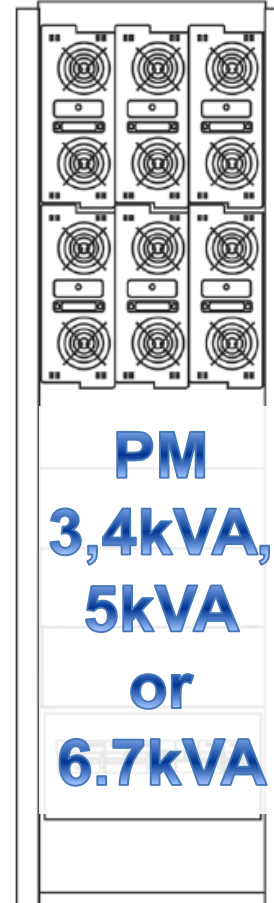
3/3



PM
3.4kVA,
5kVA

6 SLOT
30kVA

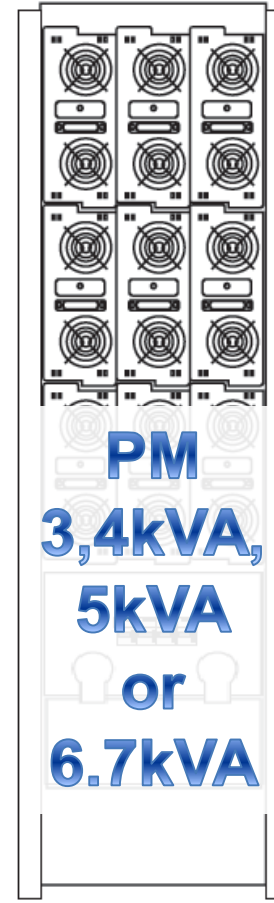
3/3, 3/1, 1/1, 1/3



PM
3,4kVA,
5kVA
or
6.7kVA

6 SLOT
40kVA

3/3



PM
3,4kVA,
5kVA
or
6.7kVA

9 SLOT
60kVA

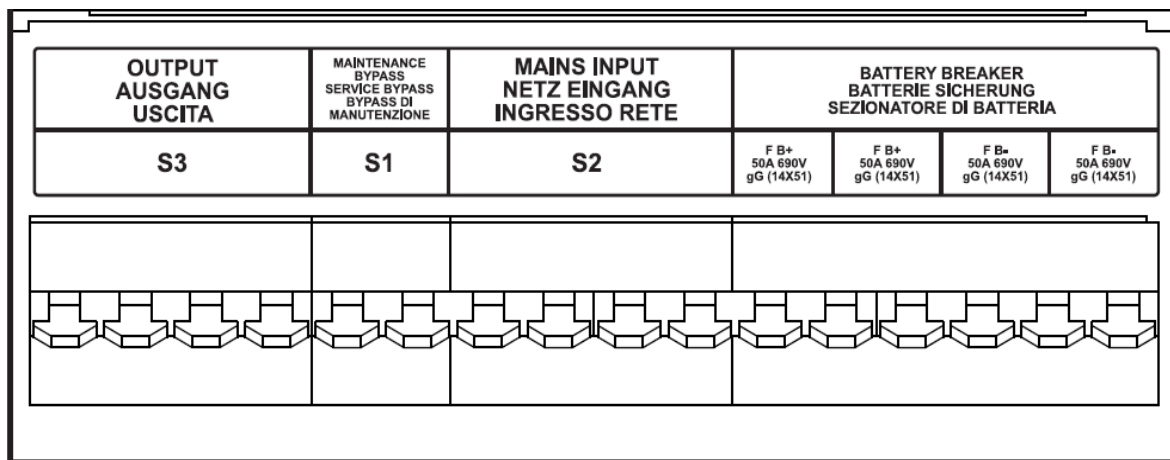
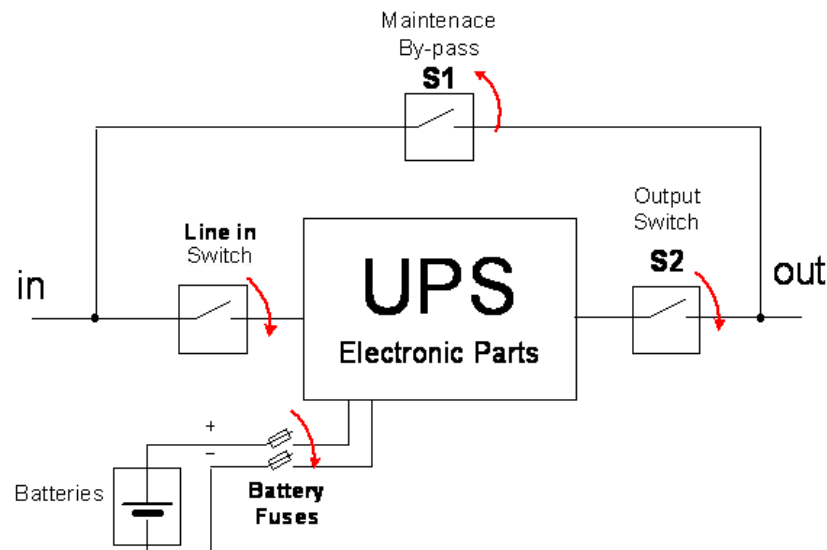
3/3

Distribution & Sectional Panel

Easy to handle with frontal access
Service in safety no load downtime

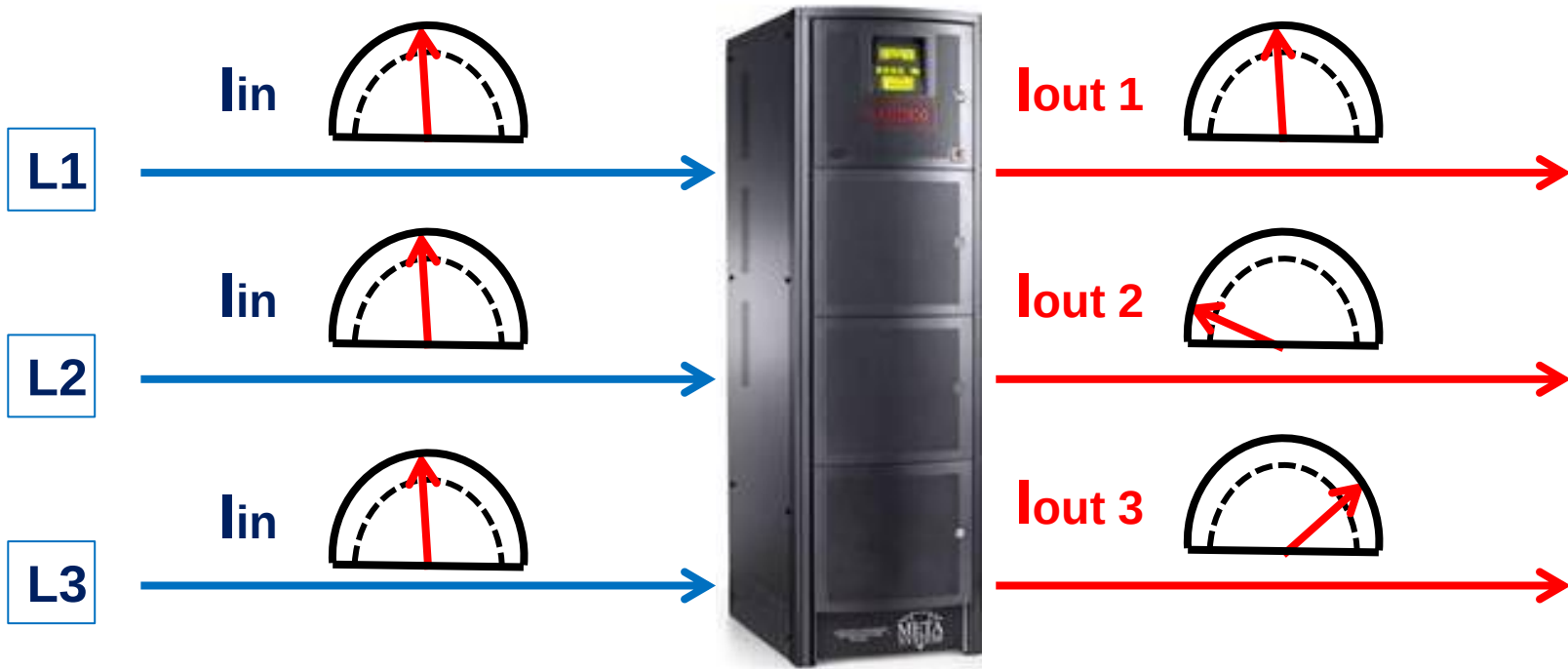
- S2 Line in Switch
- Battery Fuse Holder
- S1: Maintenance Bypass Switch
- S3: Output Switch

All sections to disconnect the UPS from any energy source in same panel.



Adaptability : Input

Balanced absorption vs Unbalanced loads



Flexible Configuration

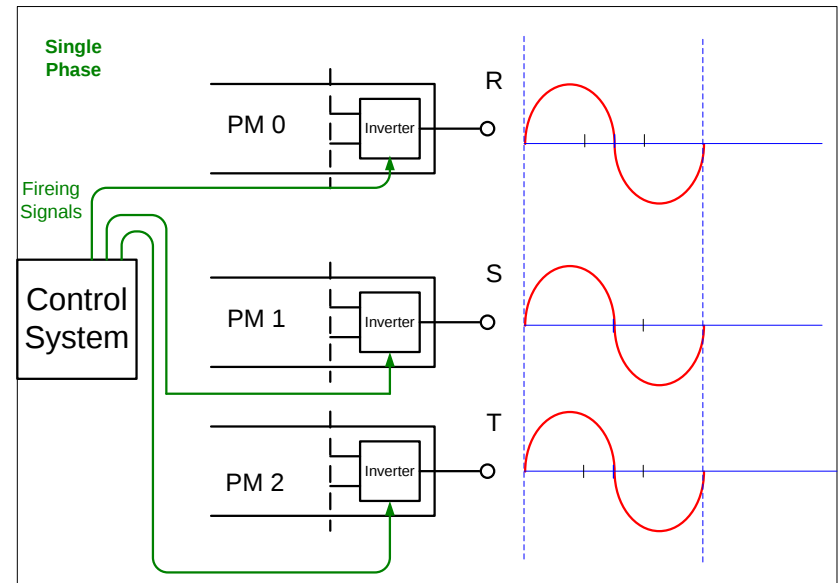
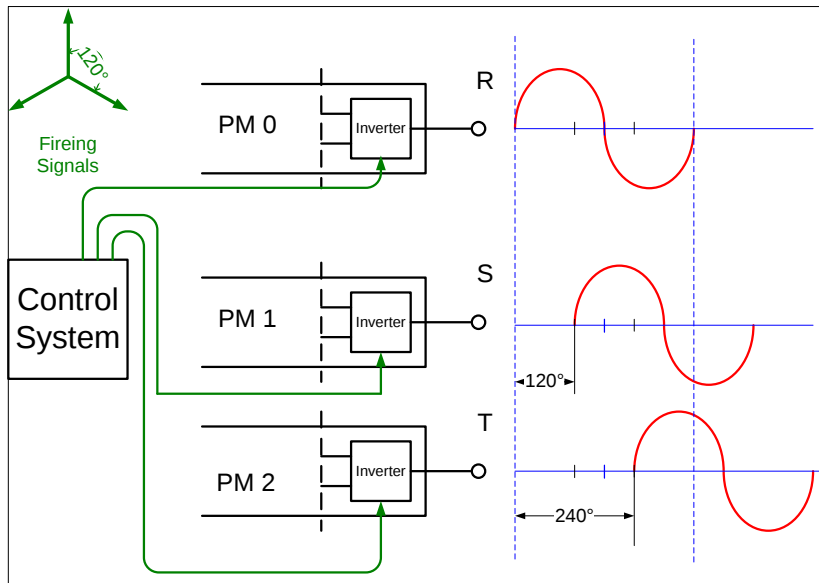
- Easy settings by display
- Max Flexibility



- Three Phase 120°
- One Single phase
- Three independent Single phase

Three phase

Single phase



MODULAR
CONCEPT

Modular UPS - Archimod



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Archimod : 20kVA to 120kVA



6.7kVA

Power Modules



Power Cabinet

Power: 6.7 kVA

Power Module Includes :

- Control logic (microprocessor)
- PFC
- Booster
- Inverter,
- Battery charger
- By-pass



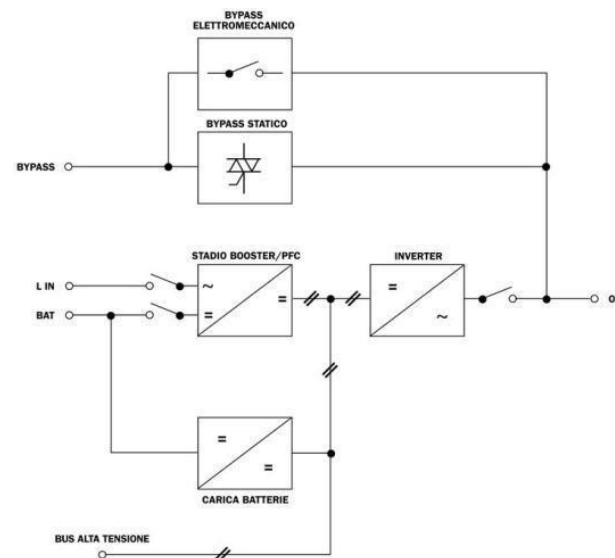
It's a Complete UPS



On the front side:

- ✓ Status light
- ✓ Handle for easy movements
- ✓ Two Controlled Fans

The rack can contain up to 18PMs



CONFIG

Configurations



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1 x Cabinet Inverter 3 slots

20 kVA



1 x Cabinet Inverter 6 slots

40 kVA



1 x Cabinet Inverter 9 slots

60 kVA

CONFIG

Configurations



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1 x Inverter Cabinet 12 slots

80 kVA



1 x Cabinet Inverter 15 slots

100 kVA



1 x Cabinet Inverter 18 slots

120 kVA

SPECIFICATION

Specification Trimod & Archimod

Input

- Input PF: 0.99
- THDi: 3%
- Voltage: 230 +15% -20%
400 +15% -20%
- Frequency: 50/60Hz
+/-2%; +/-14%

Battery

- Charging Current: 2.5A per Module
- 240V DC for Trimod Series
- 252V DC for Archimod Series



5kVA - Charger

Additional Charger as an
option to add 15A to charger

Output

- Voltage tolerance: +/-1%
- THD: <1%
- Current crest factor: 3:1
- Frequency: 50Hz/60Hz <1%
- High dynamic performances on both linear and not linear load variations

Trimod : 42-46dBA @ 1mt

Archimod : 50-65dBA @ 1mt

Efficiency (On Line) up to 95%
Efficiency (Eco Mode) up to 99%

Standards

- EN 62040-1
- EN 62040-2
- EN 62040-3

VFI SS 111

REDUNDANCY

Redundancy- Hot Swap/Plug

System Redundancy on three phase loads

Example: ARCHIMOD 60 kVA on 40 kVA



Modular

Why Modular UPS?



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30kVA

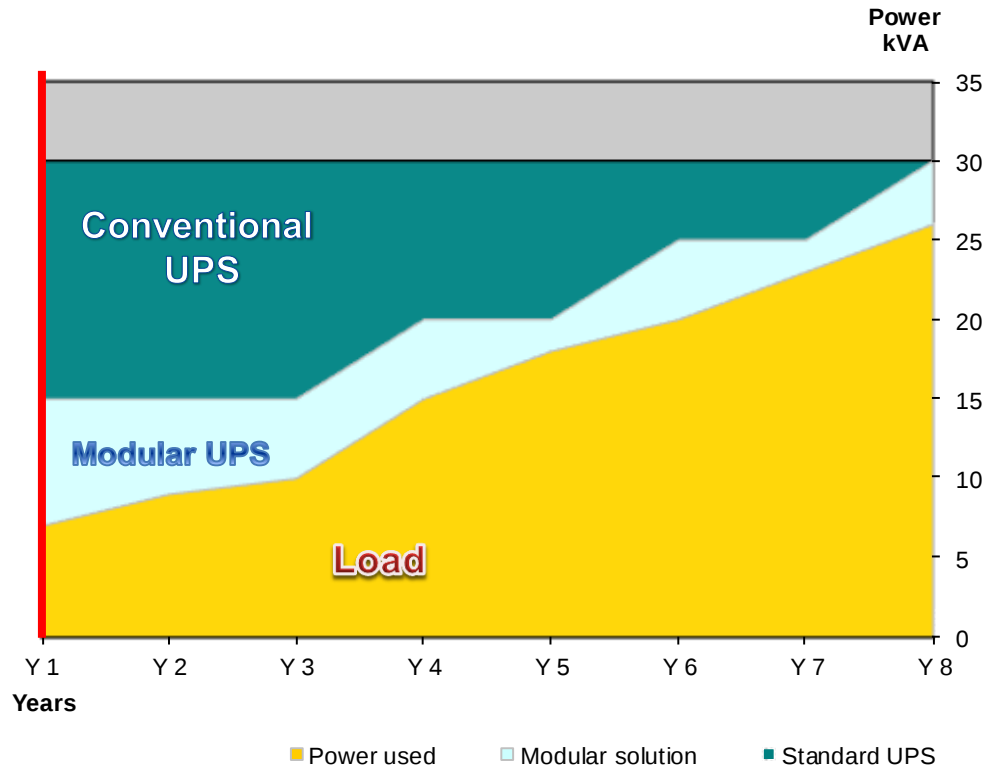
Single Phase output

Savings in Scalability



6 slot cabinet

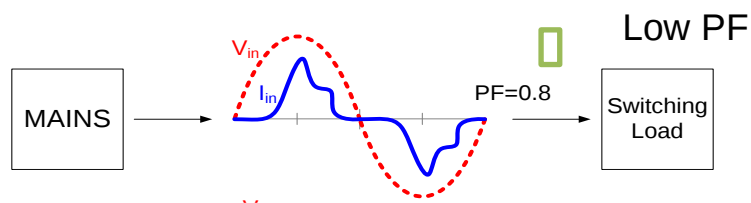
Single Phase output



INPUT FEATURES

Input adaptability: PFC (IGBT based)

Power Factor Correction



No
harmonics



No filters



No
Reactive
power



No
Compensat
or



No
problems
Gen Set



Savings
Energy
Money

OUTPUT FEATURES

Adaptability: Output

Features

High Dynamics Inverter
VFI SS 111

THDv%<1%

Sinewave Voltage quality

Crest Factor 3:1

Current peak capability

Suitability

0-100% Linear /
Non linear load
variations

Coils, Trafo,
Motors

Impulsive loads
(switching loads,
actuators)

INDEPENDENT
DISTRIBUTION

Three Independent Single Phases

Three single phase output to be managed independently

Black Out



More Flexibility



INDEPENDENT
DISTRIBUTION

Three Independent Single Phases

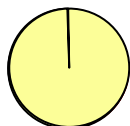
Trimod & Archimod can have

Three single phase output to be managed independently

Black Out



0 min



**Scheduled Phase ShutDown:
Optimised Battery Use**



Controlled Shutdown



SERVICE

Easy and Quik Component Installation and Replacement

- Plug and play technology
- Power Modules automatically detected
- System auto configuring
- NO Further HW and SW settings

Power Module



8 Kg

One Man

Only one tool is needed:
A Screwdriver



BATTERY
CHARGING

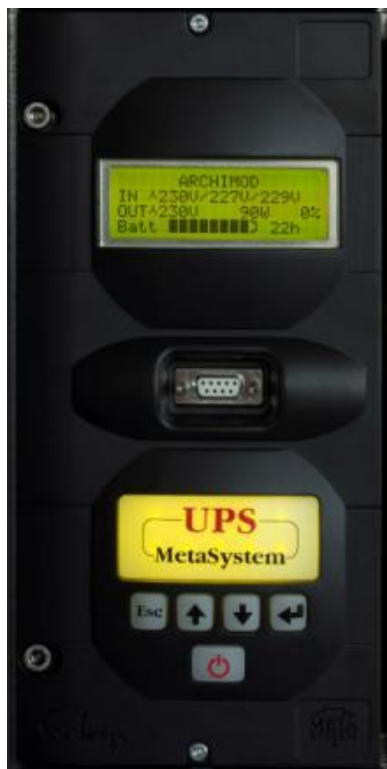
Smart Charging Cycle

Batteries always ready



Batteries not stressed Lifetime increasing

Variable
Dependig by
battery status



- ✓ Complete measures
- ✓ Full parameters monitor and control
- ✓ Advanced features
- ✓ Events, alarms and history data
- ✓ Diagnostics
- ✓ 7 Languages

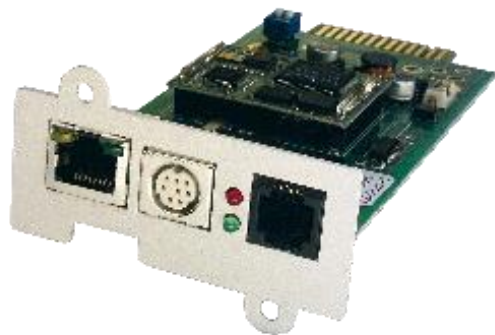
```
Input
Power      1204W
Appear.Power 1207VA
U RMS      220V↓
```

```
Output
Power      951W
Appear.Power 951VA
U RMS      230V↓
```

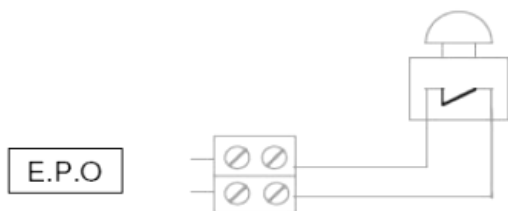
```
Batteries
Usage      0h↑
Cal.       Factory
Ext.KB Units 0KB↓
```

```
Bypass
Forced Mode  ↑
DIP Speed
▶Off-line Mode ↓
```

Full Communication



Net adapter (SNMP) intelligent slot



Emergency Power Off

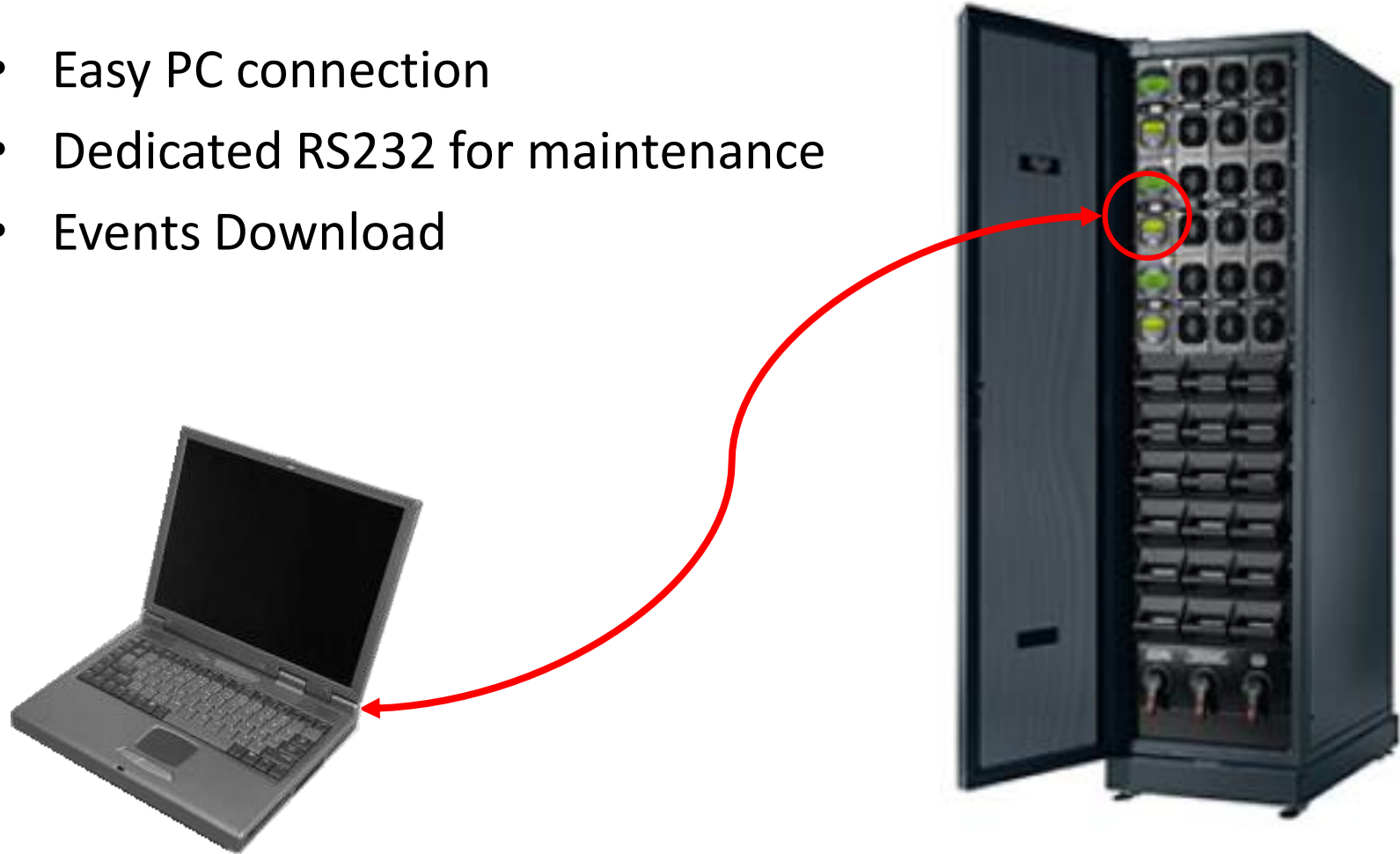


- Communication RS 232 serial port
- Maintenance RS 232 serial port
- Logic level port
- Dry contact port



- Easy PC connection
- Dedicated RS232 for maintenance
- Events Download

Front RS232



CONCLUSION

Conclusions

MODULAR UPS

High performances

Easy management

Reliability

Fast service

Flexibility

Intelligence

Scalability

Communication



TRIMOD



ARCHIMOD

Questions?





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Thank You