

MODULYS MC

from 1.5 to 24 KVA

a modular UPS

for Mission Critical applications

Permanent availability

- To ensure availability 24 hours a day, 7 days a week, to critical applications for businesses and their customers.

An adapted system

- Offered in three versions with 4, 6 or 9 slots, **MODULYS[®] MC** can be perfectly adapted to your requirements for protecting your strategic applications.

For redundant power needs

- **Mod-MC415** and **Mod-MC430**. Designed for users requiring low levels of power, but wanting the option of an available redundant installation, this equipment uses **Mod-Power** 1.5 and 3 kVA. Adding the N + 1 **Mod-Power**, provides a system which is redundant, but also incredibly safe and economical.

Grows with your business

- **Mod-MC645**, **Mod-MC660** and **Mod-MC660 six**. These models integrate **Mod-Power** modules with greater power (up to 6 kVA). The perfect combination of power and back-up makes this system the central configuration of the whole range, with a higher number of slots available for any future expansion.

Integrated communication

- **Mod-MC 960**, **Mod-MC 990** and **Mod-MC 912 six**. Providing the easiest expansion of the entire **MC** range. These configurations have been designed for users requiring both operating power and back-up. **NET VISION**, provided as standard, fulfils users requirements by guaranteeing continuity of service of up to 99.999 %.

A single or three-phase supply

- **Mod-MC645**, **Mod-MC660 six**, **Mod-MC990** and **Mod-MC912 six** can also be connected to a three-phase input.



Your protection
for

- > Information processing centres
- > Telecommunications
- > Medical



The answer to all your needs

Upgradable over time

- **MODULYS**® adapts easily to changes and to the growth of your system. SOCOMEC UPS is the only company able to offer you power modules of 1.5, 3, 4.5 and 6 kVA in tower, rack or system versions, which are easily combined to ensure the ideal configuration for your present and future power supply requirements.

Total protection

- **MODULYS**® is a modular UPS. The number of units can easily be increased to provide redundant operation, from N + 1 to N + X. In this way, total availability of the system is achieved, even if one or more modules are inoperative.

Continuous protection

- The **MODULYS**® has “Hot swap” power and back-up modules, which can be replaced or inserted while the system is in operation. In this way, true continuity of power supplied to the applications is achieved, without any interruption of service.

Your future needs

- The modular design of **MODULYS**® allows the number of modules to be increased and therefore, the power and back-up time of your UPS to grow. In this way you can easily cope with future situations which you are not able to predict today.

Working space

- **MODULYS**® is the most compact UPS in its category. Whether in stand alone version or one of the many system configurations, installation takes up very little of your working area.

“No Single Point of Failure” solutions

- Each power module has its own integrated controller and an automatic bypass. In the system version, this design is an additional guarantee since the application will be powered even if one of the modules is not working.

Full digital control technology

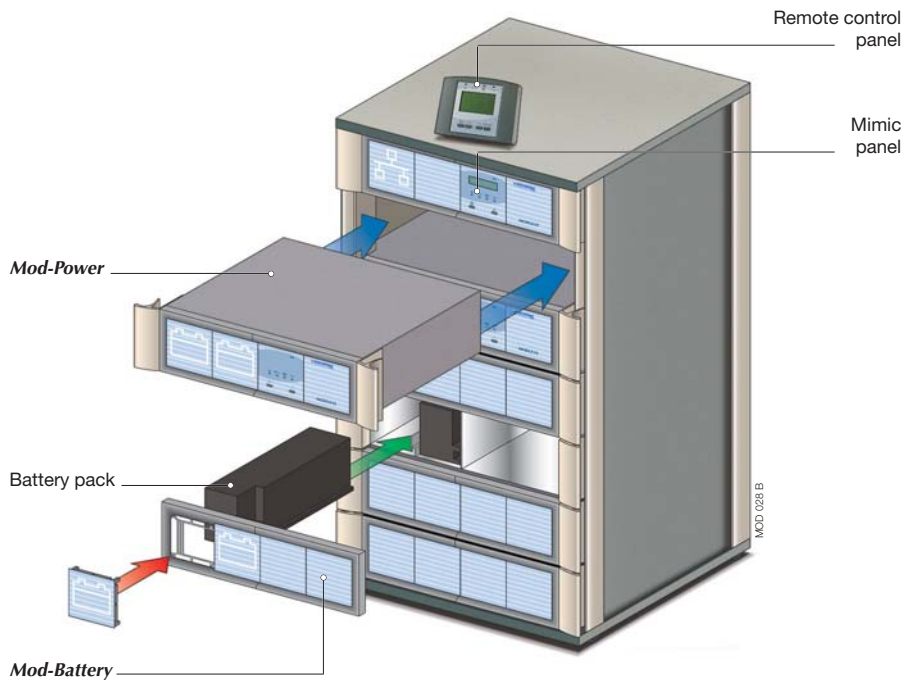
- **MODULYS**® is controlled by digital circuits. Their use allows for greater precision and ensures that the operating parameters of the whole system are stable over time.

Top level communication solutions

- A complete range of solutions makes the **MODULYS**® range of UPS the most open and communicative on the market, adaptable to the environment of each and every user: RS232 serial interface as standard, dry contacts relay card, **NET VISION** SNMP/Web card and advanced communications card offering control of the environment (temperature, etc.) at the same time as a second RS 232/485 serial interface.

“On-Line double conversion” Technology (Voltage Frequency Independent VFI)

- The most effective technology for protecting data in the event of a power cut or low quality power supply. The inverter generates the output voltage and continuously supplies power to the application. Continuity and stability of both the voltage and frequency is thus ensured, irrespective of the mains input.



System adapted to your use

• **POWER SHARE**

This is a standard socket dedicated to non-critical loads. It is able to disconnect its load when a preset condition (relative to remaining back-up) occurs, to save battery back-up time for critical applications.

• **ECO MODE**

This operating mode has been designed to reduce inverter power consumption by going to stand by.

• **Frequency converter**

This makes it possible to have a 50 Hz input and a 60 Hz output, or vice versa.

• **Earthing arrangements**

MODULYS® is compatible with IT, TT and TN neutral arrangements.

• **NET VISION**



MOD 026 A

This interface allows the UPS to be monitored, programmed and controlled, either via the means of a simple Web browser or by using an NMS (Network Management Station) via the SNMP. **NET VISION** allows the shutdown of remote server and client workstations connected to the computer network.

Plug-in* batteries and modules

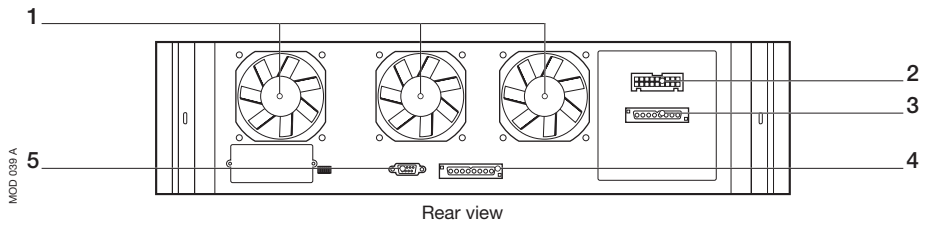
• **Mod-Power**



MOD 020 B 1 CAT



MOD 020 B 1 CAT



- | | |
|--|---|
| <p>1. Fans (number of fans depending on power)</p> <p>2. Parallel bus plug-in connection</p> | <p>3. INPUT/OUTPUT plug-in connection</p> <p>4. Battery plug-in connection</p> <p>5. DIP switch for configuration</p> |
|--|---|

• **Mod-Battery**



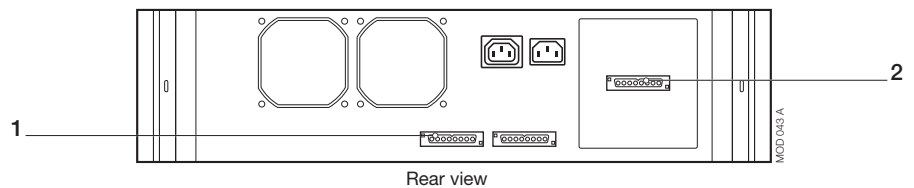
MOD 040 B 1 CAT



MOD 041 B 1 CAT

MOD 042 B 1 CAT

Battery pack



- | | |
|--------------------------------------|--|
| <p>1. Battery plug-in connection</p> | <p>2. AC Supply for internal charger (plug-in)</p> |
|--------------------------------------|--|

* Connectable

An adaptable system

Mod-MC	VA	Typical back-up time ⁽¹⁾		Expandable up to	
		standard min.	max.	power VA	back-up time min.
415	1500	8	180	6000	25
430	3000	8	110	6000	40
645	4500	8	100	13500	12
660	6000	8	65	12000	23
660 six	6000	8	65	18000	12
960	6000	8	100	12000	40
990	9000	8	60	18000	18
912 six	12000	8	40	24000	12

(1) Back-up time at 75% of the load

Standard equipment

- Two slots for communication boards.
- RS 232/485 serial port.
- 4 dry contacts relay card.
- Separate bypass input.
- **NET VISION** interface for the LAN Ethernet network on the **Mod-MC 9XX**.

Accessories

- Galvanic isolation transformer.
- Temperature sensor.

Communication options

- Dry contacts relay card.
- Advanced communication card.
- Remote monitoring and control kit.
- **NET VISION** interface for the LAN Ethernet network.
- **UNI VISION PRO** software. [Info. p. 93]

Basic configurations

Mod-MC 4XX expandable from 1.5 to 6 kVA



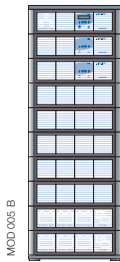
Model	Mod-MC 415	Mod-MC 430
Mod-Power	1 x 1500VA	1 x 3000VA
Battery pack	1	2

Mod-MC 6XX expandable from 4.5 to 18 kVA



Model	Mod-MC 645	Mod-MC 660	Mod-MC 660 six
Mod-Power	1 x 4500VA	2 x 3000VA	1 x 6000VA
Battery pack	3	4	4

Mod-MC 9XX expandable from 6 to 24 kVA



Model	Mod-MC 960	Mod-MC 990	Mod-MC 912 six
Mod-Power	2 x 3000VA	2 x 4500VA	2 x 6000VA
Battery pack	4	6	8

Technical data

MODULE UNIT POWER	1500 VA / 1050 W	3000 VA / 2100 W	4500 VA / 3150 W	6000 VA / 4200 W
INPUT				
Nominal input voltage	230 V (1 ph + N)		230 V (1 ph + N) or 400 V (3 ph + N)	
Input voltage tolerance	± 20% (up to -30% at 70% nominal load)			
Frequency	50/60 Hz ± 10%			
Power factor/THDI	> 0.99/6%			
OUTPUT				
Output voltage	230 V (1 ph + N) ± 3% (can be set 208/220/240 V)			
Output frequency	50 Hz - 60 Hz ± 2% (± 0.1% autonomous frequency)			
Automatic bypass	Voltage selected ± 15% - frequency selected ± 2%			
Overload (mains mode)	(110% for one minute) (130% for 10 seconds) (200% for 5 cycles)			
Efficiency AC/AC	88-90% in on line mode 97% in ECO MODE			
Admissible crest factor	3:1			
ENVIRONMENT				
Operating ambient temperature	0 °C to + 40 °C (15 °C to 25 °C for best battery life)			
Relative humidity	0% - 90% without condensation			
Maximum altitude (above sea level)	1000 m without de-rating (maximum 3000 m)			
Mod-System MODULYS MC				
Mod-MC 4XX - 4 slots (W x D x H)/mm	550 x 625 x 760			
Mod-MC 6XX - 6 slots (W x D x H)/mm	550 x 625 x 1026			
Mod-MC 9XX - 9 slots (W x D x H)/mm	550 x 625 x 1425			
Noise level (ISO 3746)	< 52 dB at 1 m (Mod-MC 4XX)		< 60 dB at 1 m (Mod-MC 6XX and Mod-MC 9XX)	
Heat dissipation (W)	530 (Mod-MC 4XX)	700 (Mod-MC 6XX)	2090 (Mod-MC 9XX)	
Communication	RS 232/485 serial connection - Signal contacts			
Connections: input/output/power share	Terminals			
STANDARDS				
Technology	IEC 62040-3 - VFI (Voltage Frequency Independent) On line double conversion			
Safety	(EN) IEC 62040-1-1			
Performance & topology	(EN) IEC 62040-3			
EMC standard	EN 50091-2/IEC 62040-2			
Product certification	CE			
IP rating	IP 20 (compliant with IEC 60529)			