

# MODULYS XM

Ultra-reliable and flexible UPS – built to last up to 2 MW



GAMME\_892\_PSD

## Function

As flexible as it is reliable, the MODULYS XM – a medium power modular UPS - can be configured to order. This smart and modular system has been designed with longevity in mind. With a proven design life of more than 20 years, it's built to last.

## Advantages

### Proven ultimate reliability

- Power modules with more than 1,000,000 h MTBF – 3rd party certified.
- Power modules with embedded upstream and downstream galvanic separation and fast fuses.
- Smart selective disconnection of electronic parts: any potential fault is isolated inside the affected power module, without affecting the remaining modules.
- Totally independent power modules with distributed parallel control (no single point of failure, centralised control).
- Redundant parallel bus connection (ring configuration).

### Minimum MTTR

- Fast and safe maintenance based on parts that can be all hot-swapped (like power modules, auxiliary mains bypass, electronic boards).
- Full frontal access to all components and subassemblies.
- Add or remove power modules in just only 2 minutes.
- Certified by third party for safe and completely automatic hot-swap.
- Automatic power module self-configuration and testing.
- Automatic firmware alignment - whatever the version - without any human intervention.

### High flexibility

- Easy to customise: complete set of preengineered and pre-tested parts to meet any customer need.
- Flexible Bypass short-circuit current withstanding that can be increased with the addition of extra plug-in «Bypass Module».
- Flexible options for top, bottom and mixed top / bottom cabling.
- Flexibility to work on any grounding system: TN-S, TN-C, IT.
- Flexibility in terms of energy storage technologies (VRLA, Li-Ion, Ni-Cd, ...).

### Environmentally friendly

- Reduced ageing: 20 year designed life – that's proven.
- Life cycle extension: "Forever Young" concept: modules and all subassemblies are plug-in, with compatibility guaranteed for 20+ years.
- Eco-design concept: designed with the environment in mind, the system's components are easy to recycle.
- Remote diagnostics and troubleshooting for zero transport-related carbon emissions.

### Parallel capability up to 2 MW

- Up to 6 x 300 kW units or 4 x 500 kW units.
- Adaptable to all aspects of parallel architecture, various arrangements and designs. Whether the project calls for increased capacity, enhanced redundancy or unique parallel configurations, the MODULYS XM is engineered to meet and exceed every requirement, offering a future-proof solution for critical power needs.

## The solution for

- > Data centre
- > Healthcare
- > Energy
- > Infrastructure & Transport
- > Building

## Strong points

- > Proven ultimate reliability
- > Minimum MTTR
- > High flexibility
- > Environmentally friendly
- > Parallel capability up to 2MW

## Conformity to standards

- > EN/IEC 62040-1
- > AS 62040-1 EN/IEC 62040-2
- > AS 62040-2 IECCE CB Scheme EN/IEC 62040-3
- > AS 62040-3

## Certifications and attestations



MODULYS XM is certified by TÜV SÜD with regard to product safety (EN 62040-1)



## Advantages

<b>1 000 000 HOURS MTBF</b>	<b>FLEXIBILITY</b>	<b>HOT-SWAP</b>
<b>Li-Ion</b>	<b>automatic firmware alignment</b>	<b>20+ YEARS</b>

Ready for Li-Ion battery

## General characteristics

- Dual input mains.
- Internal maintenance auxiliary mains bypass.
- Backfeed protection: detection circuit.
- EBS (Expert Battery System) for battery management.
- Auto battery test.
- Battery temperature sensor.
- Energy saver mode.
- Seismic resistant (certified).

## Electrical options

- ACS synchronisation system.
- Internal backfeed isolation device.
- N+1 Bypass.
- Cold start.
- PEN kit for TN-C grounding system.
- Connection kit for common mains.

## Standard communication features

- User-friendly 7" touch-screen multilingual colour graphic display.
- Power Slot tricolour led indicating the Power Module status.
- 3 slots for communication options.
- USB port to download the UPS reports and log files.
- Ethernet port for service purposes.

## Communication options

- Dry-contact interface (configurable, voltage-free contacts).
- MODBUS RTU RS485 or MODBUS TCP.
- BACnet/IP interface.
- NET VISION: professional WEB/SNMP Ethernet interface for secure UPS monitoring and remote automatic shutdown.
- REMOTE VIEW PRO supervision software.
- IoT gateway for Socomec cloud services and the SoLive UPS mobile app.
- Remote touch-screen panel.

## Technical data

MODULYS XM				
Architecture	Modular stand-alone		Modular units for parallel	
Parallelability	-		up to 6 units	up to 4 units
System capability	50 to 250 +50 kVA/kW	100 to 600 + 50 kVA/kW	50 to 1800 kVA/kW	50 to 2000 kVA/kW
Module power	50 kW (up to 40° ambient temperature)			
Number of power modules	1 to 6	2 to 13	1 to 6	1 to 10
Input / output	3/3			
<b>INPUT</b>				
Voltage frequency	400 V 3ph+N (340 V to 480 V) 40/70 Hz			
Power factor / THDI	> 0.99 / < 1.5%			
<b>OUTPUT</b>				
Power factor voltage	1 (according to IEC/EN 62040-3) 380/400/415 V ±1% 3ph+N			
Frequency	50/60 Hz (configurable) ±0.1% free running			
Voltage distortion	< 1% (linear load), < 3% (non-linear load according to IEC 62040-3)			
Overload	125% for 10 minutes, 150% for 1 minute			
<b>BYPASS</b>				
Voltage	rated output voltage ±15% (configurable from 10% to 20%)			
Frequency	50/60 Hz ±2% (configurable for GenSet compatibility)			
Bypass short-circuit capability (ITSM)	up to 28 kA <sub>pk</sub>	up to 40 kA <sub>pk</sub>	15 kA <sub>pk</sub> <sup>(1)</sup>	21 kA <sub>pk</sub> <sup>(1)</sup>
<b>EFFICIENCY (TÜV SÜD VERIFIED)</b>				
Online double conversion mode	up to 96.5%			
<b>SHORT CIRCUIT PERFORMANCE</b>				
Conditional short circuit current (I <sub>cc</sub> ) <sup>(2)</sup>	up to 65 kA <sub>rms</sub>	up to 100 kA <sub>rms</sub>	up to 65 kA <sub>rms</sub> <sup>(1)</sup>	up to 100 kA <sub>rms</sub> <sup>(1)</sup>
Short circuit current withstand (I <sub>cw</sub> ) <sup>(3)</sup>	up to 50 kA <sub>rms</sub>	up to 65 kA <sub>rms</sub>	up to 50 kA <sub>rms</sub> <sup>(1)</sup>	up to 65 kA <sub>rms</sub> <sup>(1)</sup>
<b>ENVIRONMENT</b>				
Ambient temperature	0 °C to 40 °C (15 to 25 °C for maximum battery life)			
Relative humidity	0 to 95% without condensation			
Maximum altitude	1000 m without derating (3000 m max)			
Acoustic level at 1 m	< 57 dBA	< 64 dBA	< 57 dBA <sup>(1)</sup>	< 62 dBA <sup>(1)</sup>
<b>SYSTEM CABINET</b>				
Width	600 mm	1200 mm	600 mm	800 mm
Depth	890 mm	950 mm	890 mm	950 mm
Height	1990 mm	1990 mm	1990 mm	1990 mm
Weight (empty cabinet)	253 kg	675 kg	253 kg	380 kg
Degree of protection	IP20			
<b>STANDARDS</b>				
Safety EMC	IEC/EN 62040-1, AS 62040-1 IEC/EN 62040-2 Class C3, AS 62040-2			
Performance	VFI-SS-11 - IEC/EN 62040-3, AS 62040-3			
Environmental	IEC/EN 62040-4			
Product declaration	CE, RCM, EAC, CMIM, UKCA			
<b>POWER MODULE</b>				
Height	3U			
Weight	36 kg			
Type	Hot plug-in / Hot-swappable			
MTBF	> 1 000 000 hours (calculated and verified)			

(1) For a single unit. (2) According to IEC/EN 62040-1. (3) According to IEC/EN 62040-1 - certified.

## Expert services

Our services guarantee the highest level of availability to your UPS:

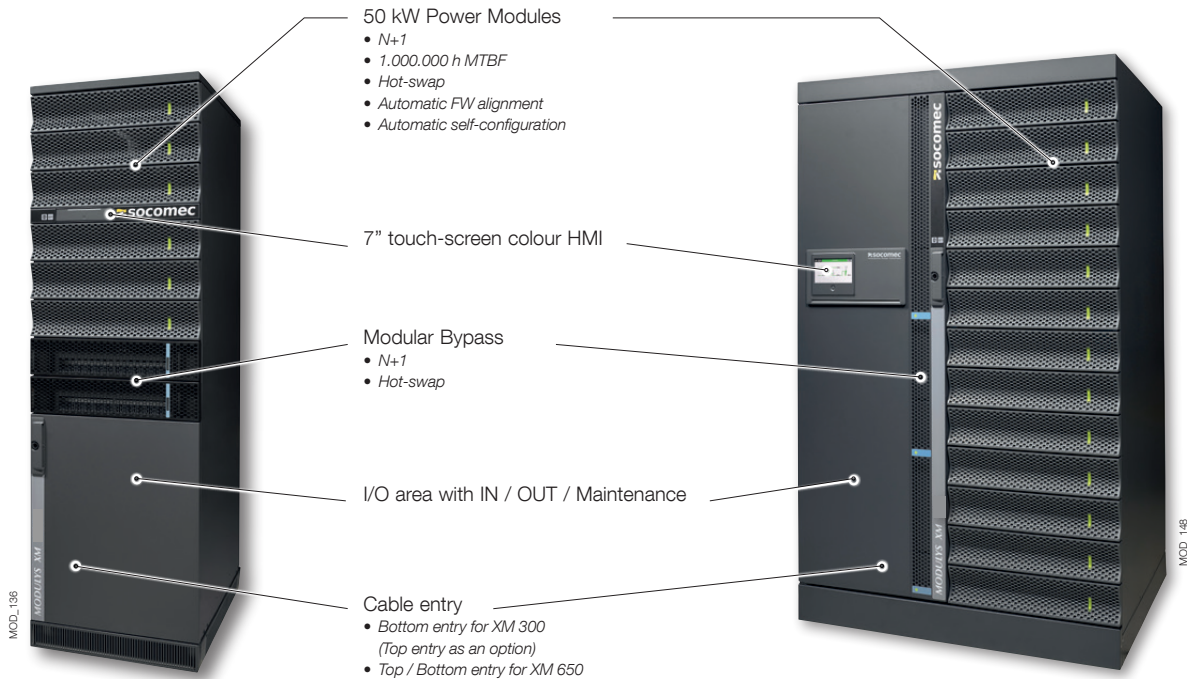
- Technical advice
- Commissioning
- Manufacturer training
- Maintenance contracts including digital services



# MODULYS XM

Three-phase UPS  
up to 2 MW

## A fully modular system



## The benefit of a fully modular system

### Easy to manage

- Totally modular system ideal for power scaling and quickly adapting to business changes.
- Standardised system and modules covering a wide range of power and back-up times.
- Repeatable and standardised scalable architecture for time-saving designs, ideal for various configuration and architecture requirements.

### Pay as required / Pay for what you use

- No prior expenditure on unpredictable future extensions to power and back-up time.
- Space saving design with reduced footprint and front access.
- Eliminates installation rework costs when new capacity is required from IT physical infrastructure.
- No risk of design oversizing due to project data uncertainty.

### Everything front-access

- Connections, switches, manual bypass, auxiliary mains static bypass, power modules and all the electric parts have front-access.
- Total footprint is not increased as rear extra clearance for maintenance is not needed.
- Easy, quick, comfortable, safe and risk-free installation and maintenance.
- More reliable system.

## The benefit of a totally redundant design

### Total resilience

- Electronics-free (failure-free) cabinet.
- Totally independent and self-sufficient modules.
- Real module selective disconnection (automatic inverter bypass with galvanic separation).
- No centralised control for parallel and load sharing management.
- Totally segregated, fully sized and centralised auxiliary mains bypass.
- Configurable N+1 to N+x redundancy (power & battery).
- No single point of failure.
- Redundant parallel bus connection (ring configuration).

### Optimum reliability

- Power module designed for superior robustness proved by an independent body (MTBF > 1,000,000 h).
- Hybrid bypass architecture with distributed module's bypass and centralised mains bypass for ultimate reliability and robustness.
- Highly robust auxiliary mains bypass (MTBF > 10,000,000 h).
- Acid leak-proof modular battery box.

### Maximum availability

- Fast recovery of lost redundancy thanks to minimum MTTR (Mean Time To Repair).
- No risk of downtime during power upgrading and maintenance.
- No risk of failure propagation.

### Cost-effective redundancy

- No need to duplicate the system hardware to get redundancy.
- Redundancy achievable simply by adding one more power and battery module.
- Redundancy can be easily combined with power scalability.
- Upgrading and/or power module replacement can be done by simple plug-in without any commands to the system.

## Seamless and risk-free scalability & upgrades

- MODULYS XM protects critical loads in all conditions, including power upgrades and maintenance procedures.
- No risk of human error and downtime.

### On-line power scalability

MODULYS XM allows you to increase power scalability and redundancy while keeping the load protected on inverter mode by simply plugging-in a new power module and waiting for it to automatically self-configure, self update the firmware and self test without any human intervention.

### Power module automatic firmware alignment

- Even the power module firmware alignment is totally risk-free.
- When a new power module is plugged in, the system checks which firmware version is embedded and, if it is different, it will be automatically aligned to one of the other modules. The load is protected at all times while running on inverter mode.

### On-line global firmware update

- It is also possible to upgrade the global firmware without switching to bypass to keep the load protected on Inverter mode.
- Automatic procedure for a risk-free firmware upgrade.

## MODULYS XM "Forever Young" concept

- 'Forever Young' is an exclusive concept which extends the life-cycle of MODULYS XM and eliminates the criticality of system end-of-life, via the periodic replacement of power modules and electronic parts before they start to age.
- The concept also keeps the system open to the implementation of future technology improvements without modifying the infrastructure.

The 'Forever Young' concept:

- Is based on electronics-free (failure-free) cabinets where all the components that are subject to ageing are plug-in and, therefore, quick and easy to replace.
- Provides a system that is always up-to-date and uses the latest technology.
- Assures power modules, spare part compatibility and availability for more than 20 years.

