

Li-Ion Battery UPS

Compact innovative power protection solution

Based on the latest technologies, the Socomec LI-ION BATTERY UPS provides higher power density and faster recharges than lead-acid systems.

To maximise the power system's availability and reduce the consequences of battery failure, the LI-ION BATTERY UPS is equipped with an embedded interactive control system that provides accurate and individual cell monitoring.



The solution for

- > Data centres
- > IT infrastructures
- > Applications requiring a back-up time up to 15 minutes

High sustainability

Socomec is committed to developing solutions that reduce the environmental impact from the design stage and throughout their entire life cycle.

The LI-ION BATTERY UPS energy system is the latest solution designed for helping environmental sustainability:

- > No toxic materials.
- > REACH / RoHS compliant materials.
- > No gas emissions.
- > No risk of acid leakage.

Thanks to its high energy density, the LI-ION BATTERY UPS saves space and is lighter than a lead-acid battery UPS.

The LI-ION BATTERY UPS allows a more effective and flexible use of the space, leaving free space for additional IT equipment or additional rooms to accommodate future power upgrades. Less sensitive to higher temperatures, the LI-ION BATTERY UPS requires less cooling and hence reduces energy costs.

	High power / energy density	»	More space for servers & IT
	Longer life span	»	Save replacement costs
	Higher working ambient temperature	»	CAP & OPEX savings
	Short recharge time High cycling capacity	»	Higher UPS availability
	Embedded monitoring	»	Increased reliability
	Eco friendly	»	Suitable for green data centres

LI-ION BATTERY UPS for MODULYS GP from 25 to 600 kVA/kW



LI-ION BATTERY UPS
with 10 hot-swap plug-in battery modules
(model with 1 string).



LI-ION BATTERY UPS
with 20 hot-swap plug-in battery modules
(model with 2 independent strings).

BMS control unit

- Short circuit protection.
- Pre-charge function.
- Current measurement.
- SOC & SOH calculation.
- Battery string balancing.
- Battery protection.
- Communication to UPS.
- (RS485, CAN, dry contact).



Technical data

	LI-ION BATTERY UPS	
	50 Ah	
Applied cell type		
Configuration	1 string	2 strings
Battery capacity	25.9 kWh	51.8 kWh
Rated voltage	±259 VDC	
Maximum voltage	±287 VDC	
Maximum charging power	50 kW	100 kW
Minimum voltage	±210 VDC	
Maximum discharging power	225 kW	450 kW
Communication bus	CAN2.0/RS485	
Operating ambient temperature	charge: 0 to +45 °C, discharge: -20 to +45 °C	
Dimensions (W x D x H)	600 x 1090 x 2000 mm	
Weight	500 kg	800 kg
Relative humidity	Up to 95 % @ 25 °C	
Degree of protection	IP20	
Maximum altitude	≤ 2000 m	
Additional accessories	Master BMS/Gateway Hub (Optional)	

Battery Module

- Plug-in design.
- Integrated Cell Monitor Unit.
- Lightweight with handle bar.
- Standard rack mount type (3U).

MODULYS GP with LI-ION BATTERY UPS 60 Ah cells(1)

UPS Power (kW)	Back-up time (in minutes)									
	1 cabinet		2 cabinets		3 cabinets		4 cabinets		5 cabinets	
	Battery modules		Battery modules		Battery modules		Battery modules		Battery modules	
	10	20	30	40	50	60	70	80	90	100
	31.0 kWh	62.0 kWh	93.0 kWh	124.0 kWh	155.0 kWh	186.0 kWh	217.0 kWh	248.0 kWh	279.0 kWh	310.0 kWh
50	28.5	57.1	85.7	contact us	contact us	contact us	contact us	contact us	contact us	contact us
150	7.9	18.8	28.5	38	47.6	57.1	66.6	contact us	contact us	contact us
200	4.9	13.5	21.1	28.5	35.7	42.8	49.9	57.1	64.2	contact us
250	-	10.2	16.2	22.5	28.5	34.2	40	45.7	51.4	57.1
300	-	7.9	13.5	18.8	23.8	28.5	33.3	38	42.8	47.6
350	-	6.3	10.9	15.5	20.1	24.4	28.5	32.6	36.7	40.8
400	-	4.9	8.9	12.7	17.6	21.1	24.9	28.5	32.1	35.7
450	-	-	7.9	11.3	15	18.8	22.2	25.3	28.5	31.7
500	-	-	6.6	10.2	13.5	16.9	19.7	22.8	25.7	28.5
550	-	-	5.4	8.7	11.6	14.8	17.9	20.5	23.3	25.9
600	-	-	4.9	7.3	10.6	13.5	16.4	18.8	21.4	23.8

(1) The values are given for nominal conditions and are subject to normal production tolerances.
Run times are subject to tolerances and may vary. For other configurations please contact us.

Li-Ion Battery UPS

Compact innovative power protection solution

LI-ION BATTERY UPS for DELPHYS GP UPS from 160 to 1000 kVA/kW



BMS control unit

- Short circuit protection.
- Pre-charge function.
- Current measurement.
- SOC & SOH calculation.
- Battery string balancing.
- Battery protection.
- Communication to UPS.
- (RS485, CAN, dry contact).



Technical data

Electrical data	
Applied cell type	67 Ah
Configuration	1 string
Battery capacity	34.6 kWh
Rated voltage	516.8 VDC
Maximum voltage	571.2 VDC
Maximum charging power	40 kW
Minimum voltage	408 VDC
Maximum discharging power	200 kW
Communication bus	RS485 - TCP/IP DRY-CONTACT
Environmental data	
Operating ambient temperature	0 °C to +40 °C
Dimensions (W x D x H)	650 x 600 x 2055 mm
Weight	500 kg
Relative humidity	Up to 90 % @ 25 °C
Degree of protection	IP20
Maximum altitude	≤ 2000 m
Additional accessories	Master BMS/ Gateway Hub (option)

DELPHYS GP with LI-ION BATTERY UPS 67 Ah cells(1)

UPS Power (kW)	Back-up time (in minutes)									
Number of battery racks	1	2	3	4	5	6	7	8	9	10
100	16.8	35.8	54.4	71.1	88.9	106.6	124.4	142.2	160.0	177.8
200	6.2	15.5	25.6	34.7	43.4	52.0	61.5	71.1	80.0	88.9
300	-	10.3	15.5	22.7	28.4	34.5	40.2	46.0	51.7	58.4
400	-	6.2	12.1	16.1	21.3	25.6	29.8	35.0	39.4	43.8
500	-	-	9.3	12.4	16.1	20.5	23.9	27.8	31.5	35.0
600	-	-	6.2	10.6	13.4	16.8	19.6	23.0	25.8	29.0
700	-	-	-	8.8	11.1	13.3	16.6	18.9	21.9	24.6
800	-	-	-	6.2	9.7	11.6	14.0	16.6	18.7	21.3
900	-	-	-	-	8.6	10.3	12.0	14.7	16.6	18.9
1000	-	-	-	-	6.2	9.3	10.8	12.4	14.9	16.6

The values are stated at nominal condition and are subject to normal production tolerances.
Run times are subject to tolerances and may vary. For other configurations please contact us.

UPS interaction

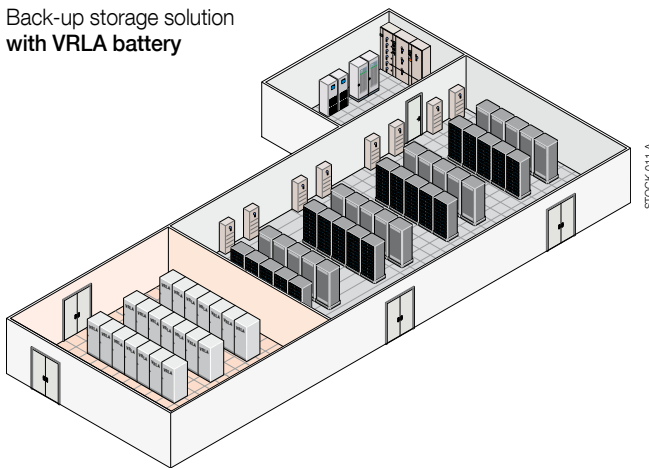
The LI-ION BATTERY UPS solution includes an interactive control system to check and manage all the Li-Ion cells' parameters (i.e. temperature, voltage, current, charging status, etc.) and to dynamically adapt how the UPS operates depending on the status of the LI-ION BATTERY.

The UPS interaction guarantees the most reliable performance and improves the system's availability by:

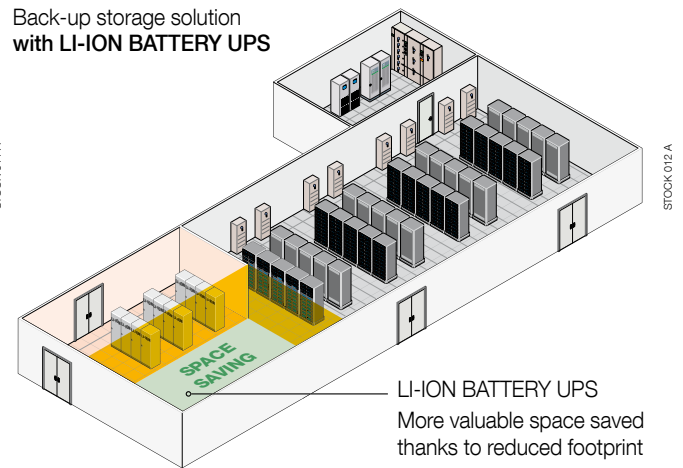
- ensuring a proper control of the LI-ION BATTERY,
- preventing any irreversible overcharge failure,
- performing automatic corrective actions in case of any critical conditions that can affect battery performance.

Footprint comparison with VRLA battery

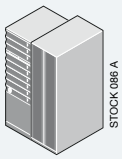
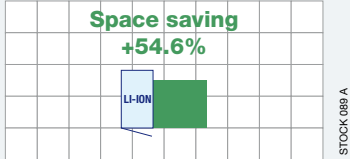
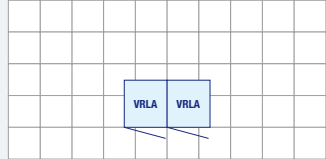
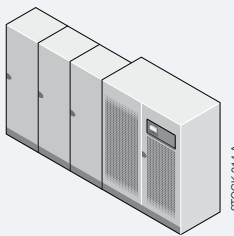
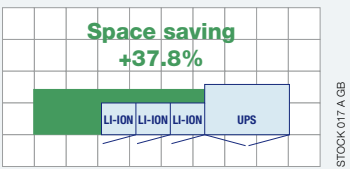
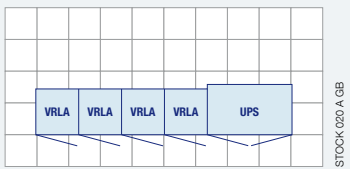
Back-up storage solution
with VRLA battery



Back-up storage solution
with LI-ION BATTERY UPS



LI-ION BATTERY UPS
More valuable space saved
thanks to reduced footprint

LI-ION BATTERY UPS Examples of configurations ⁽¹⁾	Footprint	
	LI-ION BATTERY UPS	VRLA BATTERY
 <p>Power: 200 kW Back-up time: 13 min</p>	 <p>Footprint: 0.95 m²</p>	 <p>Footprint: 1.96 m²</p>
 <p>Power: 450 kW Back-up time: 9 min</p>	 <p>Footprint: 2.69 m²</p>	 <p>Footprint: 4.32 m²</p>

(1) Other configurations: please contact us.