

www.midacbatteries.com



LI-ION BATTERIES LFPblock



POWER PASSION

**With an In-depth
knowledge on battery
technology, we can provide
fully customized solutions.**

In almost three decades of experience in the production of batteries for industrial applications, we have countless solutions in several fields, discovering new ways to improve the performance of our batteries and maximize efficiency in every situation.

Our in-depth knowledge on battery technology allows us to select the best solution for each application, a key point for producing excellent lithium battery systems.



**NO GAS
EMISSIONS**



**98%
EFFICIENCY**



**WIDE RANGE
OF OPERATING
TEMPERATURES**

LFPblock è la gamma di batterie litio modulare dalle alte prestazioni che Midac ha specificatamente sviluppato per applicazioni Light Motive, Camper, Solar, Telecom, Cleaning, Light Marine, Golf Cart.

Le batterie LFPblock garantiscono le stesse elevate prestazioni delle batterie Midac Li-ion customizzate ma con il vantaggio di essere una soluzione modulare (12V/24V/36V/48V) che si adatta facilmente a molte applicazioni diverse evitando i costi ed i tempi di sviluppo di una soluzione custom.

Le batterie sono realizzate con tecnologia LFP per garantire il massimo livello di sicurezza, un'efficienza del 98%, l'assenza assoluta di emissioni di gas, garantendo una vita attesa almeno tripla rispetto alla tradizionale batteria al piombo.

LFPblock is the range of high performance modular lithium batteries that Midac has specifically developed for Light Motive, Camper, Solar, Telecom, Cleaning, Light Marine, Golf Cart applications.

LFPblock batteries guarantee the same high performance as custom Midac Li-ion batteries but with the advantage of being a modular solution (12V/24V/36V/48V) that easily adapts to many different applications avoiding the costs and development times of a custom solution.

The batteries are made with LFP technology to ensure the highest level of safety, an efficiency of 98%, the absolute absence of gas emissions, ensuring an expected life at least three times that of the traditional lead-acid battery.

MAIN APPLICATIONS



P/N	V	Ah	Wh	Dimensions (±3 mm)			Weight Kg	Terminals Type	Layout
				L	W	H			
3023602	12	20	256	181	76	165	3,0	M5	B
3023606	12	30	384	197	165	174	5,0	M6	B
3023669	12	40	512	197	165	174	6,5	M6	B
3023670	12	50	640	197	165	174	6,5	M8	B
3023671	12	60	768	260	169	215	8,5	M8	A
3023611	12	100	1280	318	165	215	12,5	M8	A
3023612	12	100	1280	355	176	190	11,0	DIN	B
3023613	12	125	1600	318	165	215	15,0	M8	A
3023614	12	150	1920	485	170	245	20,2	M8	A
3023615	12	200	2560	485	170	245	24,8	M8	A
3023616	12	300	3840	520	269	220	37,7	M8	C
3023842	24	25	640	196	165	174	6,5	M6	B
3023617	24	50	1280	318	165	215	12,5	M8	A
3023618	24	100	2560	485	170	245	24,8	M8	A



A



B

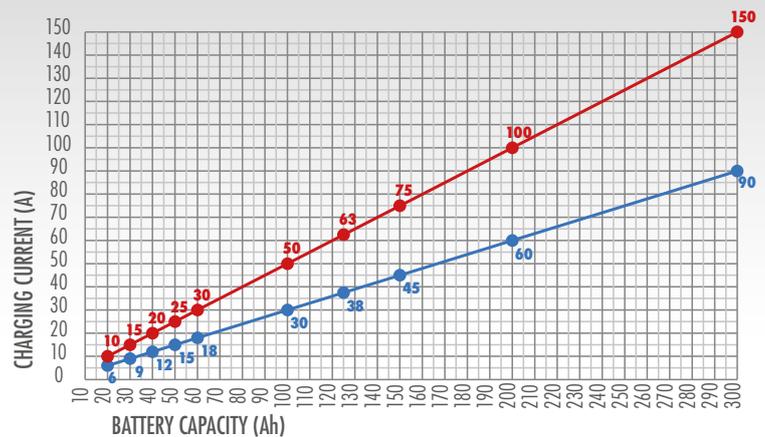


C

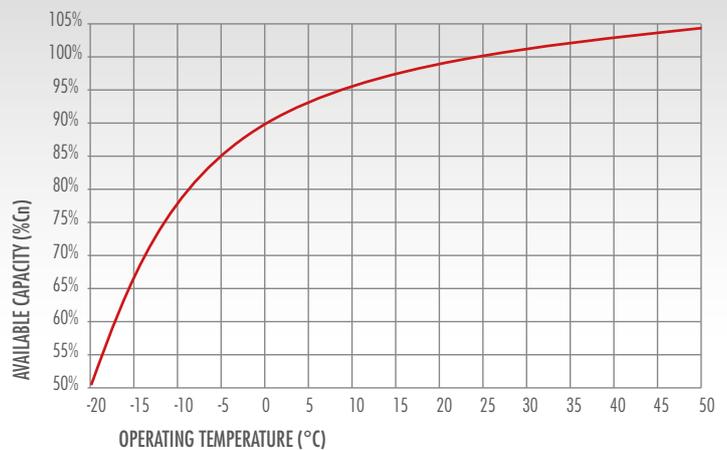
CHARGING CHARACTERISTICS

Slow 0.3C (A) = 4/5 hours charging time

Fast 0.5C (A) = 2/3 hours charging time



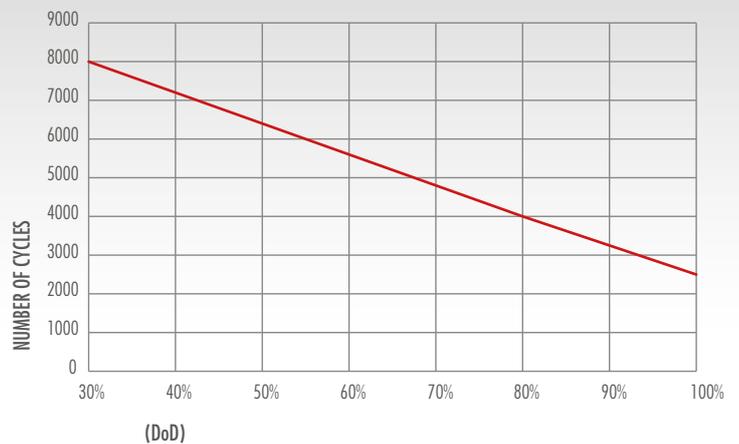
AVAILABLE CAPACITY vs OPERATING TEMPERATURE



CYCLES vs DEPTH OF DISCHARGE (DoD)

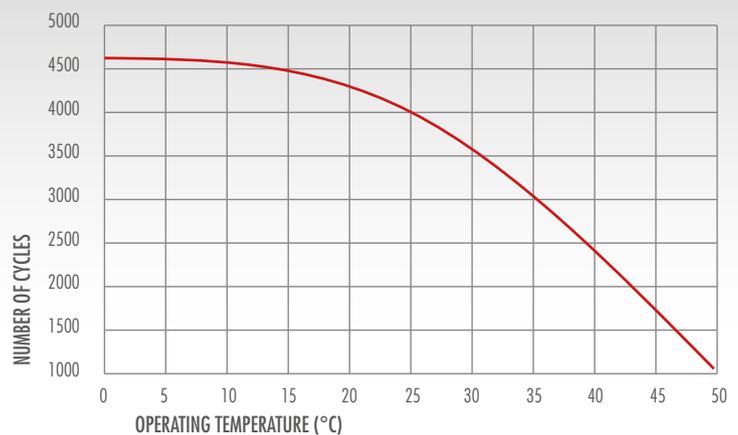
@25°C with residual capacity of 80%

(charging/discharging rate 0.3C)



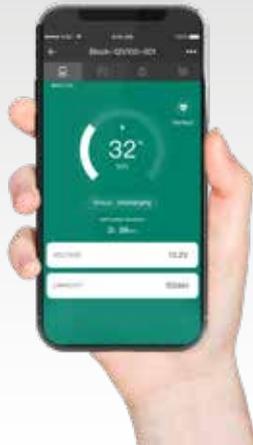
CYCLES vs OPERATING TEMPERATURE

residual capacity of 80%





LFPblock



Bluetooth®

Bluetooth Monitoring System

By downloading the Android™ or Apple® app to your smartphone or tablet device, you can monitor the following information:

- Battery Voltage
- Battery Current (A)
- Battery Capacity (Ah)
- Battery State of Charge (SOC)
- Battery State of Health (SOH)
- Battery Temperature
- Individual Cell Voltage
- Battery Status
- Battery Cycles
- Battery Alarms
- Battery Event Information

OPERATING CONDITIONS

MAX. DISCHARGE CURRENT (A)	1C
NOMINAL CHARGE CURRENT (A)	0.3C slow ; 0.5C fast
OPERATING TEMPERATURE (°C)	-20°C/60°C
CHARGING TEMPERATURE (°C)	0°C/45°C
STORAGE TEMPERATURE (°C)	-10°C/35°C
MAX. HUMIDITY (no condensation)	<75%
MAXIMUM ALTITUDE (m)	2000
CYCLES @ 80%DoD, 25°C, 80% remaining capacity (charging/discharging rate 0.3C)	4000
CALENDAR LIFE (Years)	10
SERIES CONNECTION (allowed on 12V blocks only)	MAX 4
PARALLEL CONNECTION	MAX 4
CHARGING ALGORITHM	! SPECIFICALLY DEFINED ONLY !

POSSIBLE OPTIONAL SOLUTIONS



BATTERY MONITORING KIT

to easily monitoring the battery through a display



BATTERY INTEGRATION KIT

to get fully integrated applications



LOW TEMPERATURE RANGE

with heaters to allow normal charging down to -20°C



HIGH CURRENT RANGE

for fast charging applications at 0.8C (A)

**NEED MORE TECHNICAL DATA?
ASK FOR PRODUCT DATASHEET!**

IP20 CHARGERS



TYPE TIPO	Output Uscita		BATTERY (charging time 4 to 5 hrs)	BATTERY (charging time 2 to 3 hrs)	Mains Rete	Phase Current Pmax	HOUSING DIMENSIONS DIMENSIONI ARMADIO			Weight Peso
			BATTERIA (tempo di carica 4 - 5 ore)	BATTERIA (tempo di carica 2 - 3 ore)			L (front)	W (side)	H	
	V	A MAX	Ah MAX	Ah MAX	±10% Vac	±10% A	mm	mm	mm	kg
HF LFPblock 12-20M	12	20	67	40	1x 230	1,5	112	243	74	2,1
HF LFPblock 12-30M	12	30	100	60	1x 230	2,2	112	243	74	2,1
HF LFPblock 12-45M	12	45	150	90	1x 230	3,3	138	295	89	3,1
HF LFPblock 12-60M	12	60	200	120	1x 230	4,5	138	295	89	3,1
HF LFPblock 12-100M	12	100	333	200	1x 230	6,8	235	78	407	7,8
HF LFPblock 12-200T	12	200	667	400	3x 400	5,1	256	243	529	23,2
HF LFPblock 24-20M	24	20	67	40	1x 230	2,8	112	243	74	2,1
HF LFPblock 24-30M	24	30	100	60	1x 230	4,3	112	243	74	2,1
HF LFPblock 24-45M	24	45	150	90	1x 230	6,4	138	295	89	3,1
HF LFPblock 24-60M	24	60	200	120	1x 230	8,5	138	295	89	3,1
HF LFPblock 24-100M	24	100	333	200	1x 230	13,6	235	78	407	7,8
HF LFPblock 24-200T	24	200	667	400	3x 400	9,9	256	243	529	23,2
HF LFPblock 36-20M	36	20	67	40	1x 230	4,3	112	243	74	2,1
HF LFPblock 36-40M	36	40	133	80	1x 230	8,5	138	295	89	3,1
HF LFPblock 36-60M	36	60	200	120	1x 230	12,2	235	78	407	7,8
HF LFPblock 36-105T	36	105	350	210	3x 400	7,6	266	152	387	9,7
HF LFPblock 36-150T	36	150	500	300	3x 400	10,9	256	243	417	18,4
HF LFPblock 48-15M	48	15	50	30	1x 230	4,3	112	243	74	2,1
HF LFPblock 48-30M	48	30	100	60	1x 230	8,5	138	295	89	3,1
HF LFPblock 48-40M	48	40	133	80	1x 230	10	235	78	407	7,2
HF LFPblock 48-60M	48	60	200	120	1x 230	15,5	235	78	407	7,8
HF LFPblock 48-100T	48	100	333	200	3x 400	9,6	266	152	387	8,9
HF LFPblock 48-165T	48	165	550	330	3x 400	15,7	256	243	417	18,4

IP20 CHARGER SELECTION GUIDE

0,3C = 4/5 HOURS CHARGING TIME											
Battery Voltage (V)	Battery Capacity (Ah)										
	20	25	30	40	50	60	100	125	150	200	300
12	12-20M	-	12-20M	12-20M	12-20M	12-20M	12-30M	12-45M	12-45M	12-60M	12-100M
24	24-20M	24-20M	24-20M	24-20M	24-20M	24-20M	24-30M	24-45M	24-45M	24-60M	24-100M
36	36-20M	-	36-20M	36-20M	36-20M	36-20M	36-40M	36-40M	36-60M	36-60M	36-105T
48	48-15M	-	48-15M	48-15M	48-15M	48-30M	48-30M	48-40M	48-60M	48-60M	48-100T

0,5C = 2/3 HOURS CHARGING TIME											
Battery Voltage (V)	Battery Capacity (Ah)										
	20	25	30	40	50	60	100	125	150	200	300
12	12-20M	-	12-30M	12-45M	12-45M	12-45M	12-60M	12-100M	12-100M	12-100M	12-200T
24	24-20M	24-30M	24-30M	24-45M	24-45M	24-45M	24-60M	24-100M	24-100M	24-100M	24-200T
36	36-20M	-	36-20M	36-20M	36-40M	36-40M	26-60M	36-105T	36-105T	36-105T	36-150T
48	48-15M	-	48-15M	48-30M	48-30M	48-30M	48-60M	48-100T	48-100T	48-100T	48-165T

IP66 CHARGERS (ON-BOARD INSTALLATION POSSIBLE)



TYPE TIPO	Output Uscita		BATTERY (charging time 4 to 5 hrs)		BATTERY (charging time 2 to 3 hrs)		Mains Rete	Phase Current Pmax	HOUSING DIMENSIONS DIMENSIONI ARMADIO			Weight Peso
	V	A MAX	BATTERIA (tempo di carica 4 - 5 ore)		BATTERIA (tempo di carica 2 - 3 ore)				L (front)	W (side)	H	
			Ah MAX		Ah MAX		mm	mm				mm
IC650 24V 27A	24	27	90		54		1x 100-240	2,9	188	80	252	3,0
IC1200 24V 50A	24	50	167		100		1x 100-240	5,5	179	105	335	4,1
IC650 36V 18A	36	18	60		36		1x 100-240	2,9	188	80	252	3
IC1200 36V 33,3A	36	33,3	111		67		1x 100-240	5,5	179	105	335	4,1
IC650 48V 13,5A	48	13,5	45		27		1x 100-240	2,9	188	80	252	3
IC1200 48V 25A	48	25	83		50		1x 100-240	5,5	179	105	335	4,1

IP66 CHARGER SELECTION GUIDE

0,3C = 4/5 HOURS CHARGING TIME											
Battery Voltage (V)	Battery Capacity (Ah)										
	20	25	30	40	50	60	100	125	150	200	300
24	IC650 24V 27A	IC650 24V 27A	IC650 24V 27A	IC650 24V 27A	IC650 24V 27A	IC650 24V 27A	IC1200 24V 50A	IC1200 24V 50A	IC1200 24V 50A	-	-
36	IC650 36V 18A	-	IC650 36V 18A	IC650 36V 18A	IC650 36V 18A	IC650 36V 18A	IC1200 36V 33,3A	IC1200 36V 33,3A	-	-	-
48	IC650 48V 13,5A	-	IC650 48V 13,5A	IC650 48V 13,5A	IC1200 48V 25A	IC1200 48V 25A	IC1200 48V 25A	-	-	-	-

0,5C = 2/3 HOURS CHARGING TIME											
Battery Voltage (V)	Battery Capacity (Ah)										
	20	25	30	40	50	60	100	125	150	200	300
24	IC650 24V 27A	IC650 24V 27A	IC650 24V 27A	IC650 24V 27A	IC650 24V 27A	IC1200 24V 50A	IC1200 24V 50A	-	-	-	-
36	IC650 36V 18A	-	IC650 36V 18A	IC1200 36V 33,3A	IC1200 36V 33,3A	IC1200 36V 33,3A	-	-	-	-	-
48	IC650 48V 13,5A	-	IC1200 48V 25A	IC1200 48V 25A	IC1200 48V 25A	-	-	-	-	-	-



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MIDAC SPA HEADQUARTERS, SOAVE, VERONA, ITALY

Unica realtà a produrre batterie avviamento, trazione e stazionarie in un singolo stabilimento produttivo, è diventata una delle aziende leader in Europa con prodotti distribuiti in tutto il mondo.

The only company that produces Automotive, Motive power and Stationary batteries in the same manufacturing plant, it has become one of the leading companies in Europe and its products are sold worldwide.

MIDAC PRODUZIONE VERDE

Midac utilizza esclusivamente energia rinnovabile. Dal proprio impianto fotovoltaico viene prodotta energia per la produzione di batterie e accumulatori, evitando l'emissione di 945 tonnellate di CO₂ ogni anno

MIDAC FABRICATION ÉCOLOGIQUE

Midac utilise exclusivement des énergies renouvelables. Son installation photovoltaïque génère de l'énergie pour la production de batteries et d'accumulateurs, ce qui permet d'éviter l'émission de 945 tonnes de CO₂ chaque année.

MIDAC GREEN PRODUCTION

Midac uses energy from renewable sources exclusively. The company's photovoltaic plant generates energy for the production of batteries and accumulators, avoiding the emission of 945 tons of CO₂ each year.

MIDAC GRÜNE ENERGIE

Midac verwendet grüne Energie, welche von der eigenen Solaranlage geliefert wird, um ihre Batterien und Akkumulatoren herzustellen. So sind wir in der Lage 945 Tonne an CO₂ einzusparen.

MIDAC PRODUCCIÓN DE ENERGÍA VERDE

Midac utiliza exclusivamente energía renovable. Cuenta con un sistema fotovoltaico propio que produce energía para la fabricación de baterías y acumuladores permitiendo evitar la emisión de 945 toneladas de CO₂ al año.

MIDAC GRÖN PRODUKTION

Midac använder enbart förnybar energi. Från den egna solcellsanläggningen produceras energi för tillverkningen av batterier och ackumulatörer, vilket innebär att 945 ton CO₂-utsläpp kan undvikas varje år.

