

POWER TO CONNECT



Series:

- AGM Front Terminal LPF series
- Pure Lead Floating
 PLH series
- Pure Lead Carbon High Endurance PLH+C series
- High Temperature
 LHT series
- Tubular Gel OPzV series
- Li-lon 48V LFeLi series







LEOCH batteries brand was founded in 1999 and has gained international recognition since then by having in its portfolio a very wide range of leadacid and lithium batteries.

LEOCH presence through out EMEA region is rather significant having established **6 subsidiary companies**, aiming to work closely with major OE manufacturers, distributors, service providers as well as B2B customers.

LEOCH retains ten (10) regional manufacturing plants located in PRC, Malaysia, Sri Lanka, India and Vietnam, producing mainly reserve power batteries, SLI batteries and motive power batteries with an annual production capacity of over 20GVAh / year.





Manufacturing **Plants**



Manufacturing

Plants (10)

Sri Lanka Malaysia (2)

• India Vietnam

 China Zhaoqing · China Jiangsu · China Anhui (3)

Subsidiaries /

Sales Offices

 Athens, Greece · Leicestershire, UK Paris, France

Ankara, Turkey

EMEA region (10)

 Paderborn, Germany Bologna, Italy Madrid, Spain

· Johannesburg, S. Africa

 Stockholm, Sweden Budapest, Hungary

APAC region (5)

Shenzen, China

Sydney, Australia

 Singapore · Bangalore, India



AUSTRALIA

Your Global Battery Partner





US\$ Annual Sales





Manufacturing **Plants**



24

GWH Production Capacity per Year



16

Subsidiaries and Sales Offices Worldwide



12.000

Employees Production Worldwide

105

Lines



SOUTH AFRICA

3.000

Customers around the World

...covering your needs for telecommunication

We manufacture a wide range of Premium Lead Acid and Lithium-Ion batteries to cover any telecommunications requirement. Aiming to deliver an unprecedented value to your needs, these solutions offer exceptional performance, longlife, high energy density, ease of installation and hassle-free operation for a broad spectrum of telecom applications.



AGM Front Terminal LPF series

-15°C~ +50°C

TEMPERATURE RANGE Up to 6 months at 25°C

SHELF LIFE

3 Years

WARRANTY

12 years (25°C)

DESIGN LIFE



LEOCH Premium Front Terminal batteries, LPF series, are AGM Valve-Regulated Lead-Acid front terminal batteries that have been optimized for telecom applications. Engineered for long life floating applications such as Base Transceiver Stations, LPF batteries offer a 12-year life design and a front terminal design for easy installation and maintenance.



GENERAL FEATURES



Ideal for 19-inch or 23-inch telecom cabinets



Unique anti-explosion one-way vent valve design to minimize water loss and increase safety



Front terminal design makes the installation & maintenance "hassle free"



Thick plates using a special pasting formula ensures long service life



Shielded design terminal caps reduces risk of short circuits and improves safety



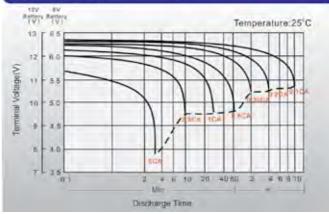
ABS case UL94-HB (UL94-V0 Optional) is used for increased container strength

BATTERY SPECIFICATIONS

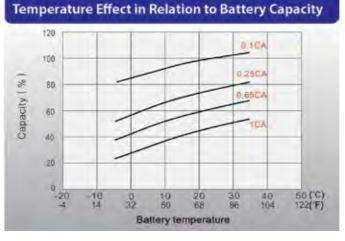
	Nominal	Rated Capacity 10Hr @ 1.80V/cell			Appro		Approx.						
Model	Voltage (V)		Length		Wid	th	Heig	ght	Total H	leight	Wei	ight	Terminal Type
		(AH)	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	.,,,,
LPF12-40	12	40	277.00	10.91	106.00	4.17	222.00	8.74	222.00	8.74	14.60	32.19	M6
LPF12-50	12	50	390.00	15.35	105.00	4.13	200.00	7.87	200.00	7.87	18.50	40.79	M6
LPF12-55	12	55	277.00	10.91	106.00	4.17	222.00	8.74	222.00	8.74	17.30	38.14	M6
LPF12-70	12	70	564.00	22.20	114.00	4.49	187.00	7.36	187.00	7.36	25.50	56.22	M6
LPF12-75	12	75	564.00	22.20	114.00	4.49	187.00	7.36	187.00	7.36	26.00	57.32	M6
LPF12-90	12	90	394.00	15.51	110.00	4.33	285.00	11.22	285.00	11.22	31.00	68.34	M6
LPF12-100	12	100	394.00	15.51	110.00	4.33	286.00	11.26	286.00	11.26	31.00	68.34	M6
LPF12-100A	12	100	508.00	20.00	110.00	4.33	238.50	9.39	238.50	9.39	32.00	70.55	M6
LPF12-125	12	125	551.00	21.69	110.00	4.33	288.00	11.34	288.00	11.34	41.50	91.49	M6
LPF12-150	12	150	551.00	21.69	110.00	4.33	288.00	11.34	288.00	11.34	44.80	98.77	M6
LPF12-150V	12	150	550.00	21.65	125.00	4.92	281.50	11.08	281.50	11.08	50.60	111.55	M6
LPF12-170	12	170	550.00	21.65	125.00	4.92	281.50	11.08	281.50	11.08	51.00	112.43	M6
LPF12-180	12	180	550.00	21.65	125.00	4.92	280.00	11.02	280.00	11.02	51.20	112.88	M6
LPF12-190	12	190	560.00	22.05	126.00	4.96	320.00	12.60	320.00	12.60	57.00	125.66	M6
LPF12-200	12	200	560.00	22.05	126.00	4.96	320.00	12.60	320.00	12.60	61.00	134.48	M8

PERFORMANCE CHARACTERISTICS

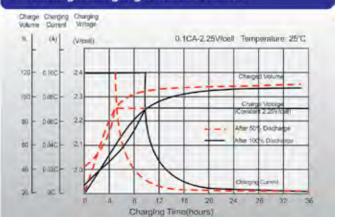
Discharge Characteristics







Floating Charging Characteristics



Temperature Effect on Long Term Float Life





Pure Lead Floating

PLH series

-40°C~ +65°C

TEMPERATURE RANGE Up to 24 months at 25°C

SHELF LIFE

5 Years

WARRANTY

20 years (25°C)

DESIGN LIFE



LEOCH Pure Lead Floating front Terminal batteries, PLH series, are AGM Valve-Regulated Lead-Acid front terminal batteries that have been optimized for extreme long-life telecom applications. Engineered for high endurance telecom applications such as harsh conditions Base Transceiver Stations, PLH batteries offer long life design under extreme temperature ranges and fast charge performance.



GENERAL FEATURES



Front terminal design makes PLH batteries ideal for 19-inch or 23-inch telecom cabinets



Pure Lead design makes PLH series ideal for high temperature applications



True Pure Lead design and manufacturing offering Very Long Design Life in accordance to Eurobat (up to 20 years @ 20°C)



Shielded design terminal caps and patented anti-explosion one-way vent valve design to minimize water loss and increased safety



Thin plates using a special pasting formula ensures long service life

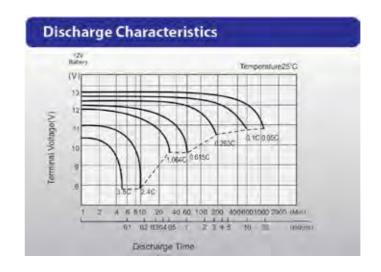


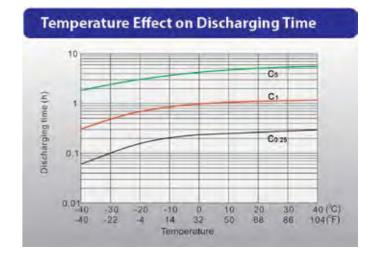
Premium ABS+PC jar & covers flame retardant to UL94-V0

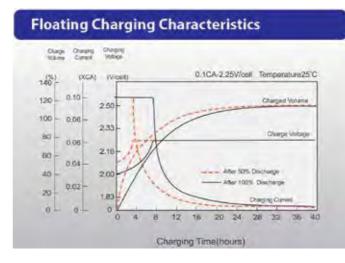
BATTERY SPECIFICATIONS

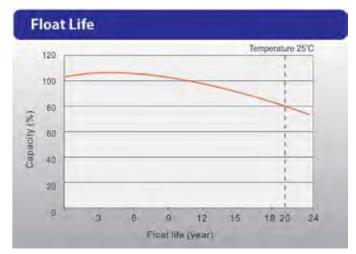
	Nominal	Rated Capacity 10Hr @ 1.80V/cell (AH)			Appro		Approx.						
Model	Voltage (V)		Length		Wid	th	Hei	ght	Total H	leight		ight	Terminal Type
	(1)		mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	.,,,,,
PLH40FT(A)	12	38	298.70	11.76	97.00	3.82	184.00	7.24	184.00	7.24	12.50	27.56	M6
PLH62FT(A)	12	62	298.70	11.76	97.00	3.82	267.00	10.51	267.00	10.51	19.50	42.99	M6
PLH90FT(A)	12	90	405.40	15.96	108.00	4.25	287.00	11.30	287.00	11.30	28.70	63.27	M6
PLH100FT(A)	12	100	405.40	15.96	108.00	4.25	287.00	11.30	287.00	11.30	30.80	67.90	M6
PLH110FT(A)	12	110	559.00	22.01	125.00	4.92	227.00	8.94	227.00	8.94	36.50	80.47	M6
PLH150FT(A)	12	150	559.00	22.01	125.00	4.92	277.00	10.91	277.00	10.91	48.00	105.82	M6
PLH170FT(A)	12	170	559.00	22.01	125.00	4.92	320.00	12.60	320.00	12.60	54.20	119.49	M6
PLH190FT(A)	12	190	559.00	22.01	125.00	4.92	320.00	12.60	320.00	12.60	57.60	126.98	M6
PLH210FT(A)	12	210	559.00	22.01	125.00	4.92	328.00	12.91	328.00	12.91	60.50	133.38	M6

PERFORMANCE CHARACTERISTICS











Pure Lead Carbon High Endurance PLH+C series

-40°C~ +65°C

TEMPERATURE RANGE Up to 24 months at 25°C

SHELF LIFE

5

WARRANTY

Years

>1000 cycles

NUMBER OF CYCLES AT 60% DOD



LEOCH Pure Lead Carbon Front Terminal batteries, PLH+C series, are AGM Valve-Regulated Lead-Acid front terminal batteries that have been optimized for hybrid telecom applications. Engineered for long life shallow cycling applications such as Hybrid and Renewable Energy powered Base Transceiver Stations. PLH+C batteries offer long life design and high cyclic performance.



GENERAL FEATURES

19-INCH OR
23-INCH

IDEAL
DIMENSIONS

Front terminal design makes PLH+C batteries ideal for 19-inch or 23-inch telecom cabinets



Shielded design terminal caps reduce risk of short circuits and improves safety



True Pure Lead design and manufacturing offering Very Long Design Life in accordance to Eurobat (up to 20 years @ 20°C)



Unique anti-explosion one-way vent valve design to minimize water loss and increase safety



Carbon additives for increased PSoC resilience and increased cycle life compared to floating Pure Lead Series (>1000cycles at 60% DoD)

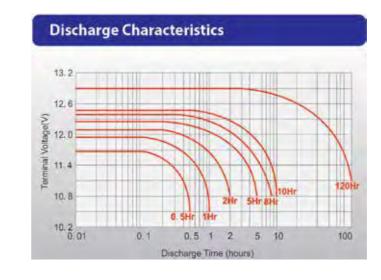


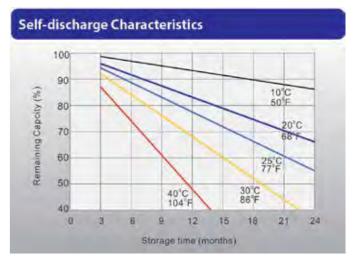
Premium ABS+PC jar & covers flame retardant to UL94-V0

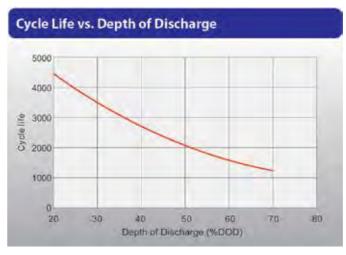
BATTERY SPECIFICATIONS

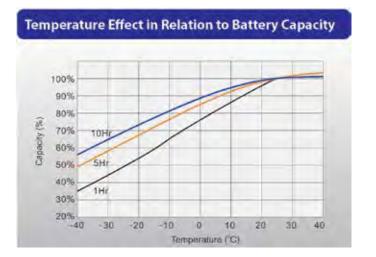
	Nominal	Rated Capacity 10Hr @ 1.80V/cell (AH)			Appro	Approx.							
Model	Voltage (V)		Length		Wid	th	Hei	ght	Total H	leight	Wei	ght	Terminal Type
			mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	.,,,,,
PLH40FT(A)	12	38	298.70	11.76	97.00	3.82	184.00	7.24	184.00	7.24	12.50	27.56	M6
PLH62FT(A)	12	62	298.70	11.76	97.00	3.82	267.00	10.51	267.00	10.51	19.50	42.99	M6
PLH90FT(A)	12	90	405.40	15.96	108.00	4.25	287.00	11.30	287.00	11.30	28.70	63.27	M6
PLH100FT(A)	12	100	405.40	15.96	108.00	4.25	287.00	11.30	287.00	11.30	30.80	67.90	M6
PLH110FT(A)	12	110	559.00	22.01	125.00	4.92	227.00	8.94	227.00	8.94	36.50	80.47	M6
PLH150FT(A)	12	150	559.00	22.01	125.00	4.92	277.00	10.91	277.00	10.91	48.00	105.82	M6
PLH170FT(A)	12	170	559.00	22.01	125.00	4.92	320.00	12.60	320.00	12.60	54.20	119.49	M6
PLH190FT(A)	12	190	559.00	22.01	125.00	4.92	320.00	12.60	320.00	12.60	57.60	126.98	M6
PLH210FT(A)	12	210	559.00	22.01	125.00	4.92	328.00	12.91	328.00	12.91	60.50	133.38	M6

PERFORMANCE CHARACTERISTICS











High Temperature LHT series





LEOCH High Temperature batteries, LHT series, are High Temperature AGM Valve-Regulated Lead-Acid batteries that have been optimized for high temperature telecom applications. Engineered for high temperature applications to reduce CAPEX & OPEX for the end-user, LHT(F) batteries offer a long life design at 35°C where conventional AGM batteries last half of the life duration of LHT(F) batteries, a front and top terminal design and extended warranty under high temperatures that offer "peace of mind" during usage.



GENERAL FEATURES



Ideal for high temperature communications and emergency power supply applications



High Temperature design paste formula, double sealing agent and separator to optimize performance under higher temperatures



To be operated at reference temperatures of 35°C, 10°C higher than the reference temperature of conventional VRLA batteries (25°C)



Unique anti-explosion one-way vent valve design to minimize water loss and increase safety



Long life design of up to 10 years (12V) and 15 years (2V) at 35°C



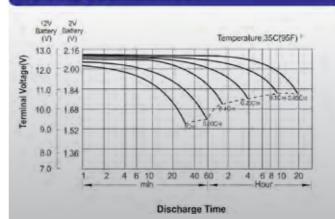
Premium ABS+PC jar & covers flame retardant to UL94-V0

BATTERY SPECIFICATIONS

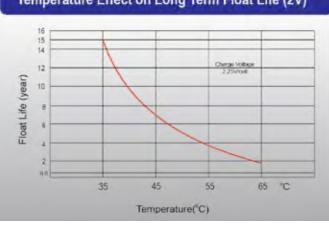
	Nominal	Rated Capacity 10Hr @ 1.80V/cell			Appro		Approx.						
Model	Voltage (V)		Length		Wid	th	Heig	ght	Total H	leight	Weight		Terminal Type
		(AH)	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	,
LHT2-200	2	200	170.00	6.69	110.00	4.33	328.00	12.91	348.00	13.70	13.50	29.76	M8
LHT2-300	2	300	170.00	6.69	150.00	5.91	328.00	12.91	348.00	13.70	18.80	41.45	M8
LHT2-400	2	400	210.00	8.27	175.00	6.89	330.00	12.99	350.00	13.78	25.50	56.22	M8
LHT2-500	2	500	240.00	9.45	175.00	6.89	330.00	12.99	350.00	13.78	30.00	66.14	M8
LHT2-600	2	600	300.00	11.81	175.00	6.89	330.00	12.99	350.00	13.78	37.00	81.57	M8
LHT2-800	2	800	410.00	16.14	175.00	6.89	330.00	12.99	350.00	13.78	50.40	111.11	M8
LHT2-1000	2	1000	475.00	18.70	175.00	6.89	328.00	12.91	350.00	13.78	60.00	132.28	M8
LHT2-1500	2	1500	403.00	15.87	354.00	13.94	339.00	13.35	349.00	13.74	97.50	214.95	M8
LHT2-2000	2	2000	490.00	19.29	350.00	13.78	339.00	13.35	349.00	13.74	121.00	266.76	M8
LHT2-3000	2	3000	709.00	27.91	350.00	13.78	337.00	13.27	347.00	13.66	183.00	403.44	M8
LHT12-100	12	100	330.00	12.99	173.00	6.81	212.00	8.35	218.00	8.58	33.50	73.85	M8
LHT12-150	12	150	532.00	20.94	207.00	8.15	214.00	8.43	220.00	8.66	56.00	123.46	M8
LHT12-200	12	200	522.00	20.55	240.00	9.45	218.00	8.58	224.00	8.82	67.40	148.59	M8
LHTF12-100	12	100	394.00	15.51	110.00	4.33	286.00	11.26	286.00	11.26	31.50	69.44	M6
LHTF12-150	12	150	551.00	21.69	110.00	4.33	288.00	11.34	288.00	11.34	46.00	101.41	M6
LHTF12-200	12	200	560.00	22.05	126.00	4.96	320.00	12.60	320.00	12.60	59.500	131.17	M8

PERFORMANCE CHARACTERISTICS

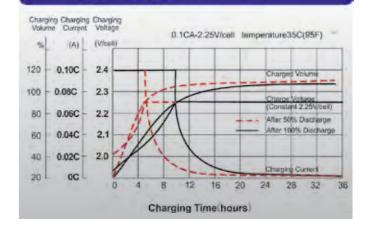
Discharge Characteristics



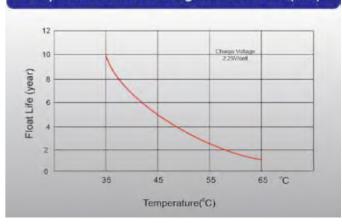
Temperature Effect on Long Term Float Life (2V)



Floating Charging Characteristics



Temperature Effect on Long Term Float Life (12V)





Tubular Gel OPzV series

-20°C~ +55°C

TEMPERATURE RANGE

at 25°C

3-5 Years*

WARRANTY

*model dependent

≤3% per month SHELF

DISCHARGE

Up to 20 years* (25°C)

DESIGN LIFE





LEOCH Tubular Gel batteries, OPzV series, are Gel Valve-Regulated Lead-Acid batteries using tubular plates that have been optimized for cyclic applications. Engineered for long-life cyclic applications such as Renewable Energy Stations, OPzV batteries are manufactured in a wide variety and offer up to 20-year life design with high cyclic abilities.

GENERAL FEATURES



Wide range including 2V cells, 12V top terminal and unique 12V front terminal blocks



Unique anti-explosion one-way vent valve design to minimize water loss and increase safety



For cyclic applications offering up to 2000 cycles at 60% DoD (2V) or up to 1600 cycles at 60% DoD (12V)



Complete maintenance free design throughout the battery's life (in accordance to the provided product and user's manual)



Design life of up to 20 years



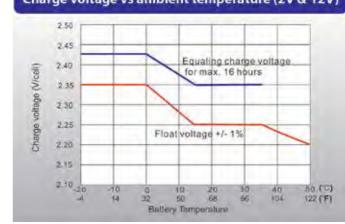
ABS case UL94-HB (UL94-V0 Optional) is used for increased container strength

BATTERY SPECIFICATIONS

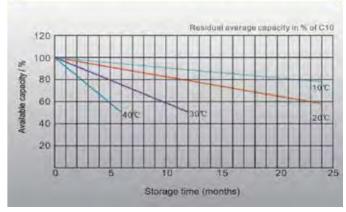
	Nominal				Appro		Approx.						
Model	Voltage (V)		Length		Wid	th	Hei	ght	Total H	leight	Wei	ght	Terminal Type
			mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	71 -
4 OPzV200	2	200	103.00	4.06	206.00	8.11	355.00	13.98	390.00	15.35	18.80	41.50	M8
5 OPzV250	2	250	124.00	4.88	206.00	8.11	355.00	13.98	390.00	15.35	22.40	49.40	M8
6 OPzV300	2	300	145.00	5.71	206.00	8.11	355.00	13.98	390.00	15.35	26.40	58.20	M8
5 OPzV350	2	350	124.00	4.88	206.00	8.11	471.00	18.54	506.00	19.92	29.00	63.90	M8
6 OPzV420	2	420	145.00	5.71	206.00	8.11	471.00	18.54	506.00	19.92	34.50	76.10	M8
7 OPzV490	2	490	166.00	6.54	206.00	8.11	471.00	18.54	506.00	19.92	39.00	86.00	M8
6 OPzV600	2	600	145.00	5.71	206.00	8.11	646.00	25.43	681.00	26.81	48.00	105.80	M8
8 OPzV800	2	800	191.00	7.52	210.00	8.27	646.00	25.43	681.00	26.81	65.10	143.50	M8
10 OPzV1000	2	1000	233.00	9.17	210.00	8.27	646.00	25.43	681.00	26.81	78.50	173.10	M8
12 OPzV1200	2	1200	275.00	10.83	210.00	8.27	646.00	25.43	681.00	26.81	93.00	205.10	M8
12 OPzV1500	2	1500	275.00	10.83	210.00	8.27	796.00	31.34	831.00	32.72	115.00	253.60	M8
16 OPzV2000	2	2000	399.00	15.71	214.00	8.27	772.00	30.39	807.00	31.77	155.00	341.80	M8
20 OPzV2500	2	2500	487.00	19.17	212.00	8.34	772.00	30.39	807.00	31.77	196.00	432.20	M8
24 OPzV3000	2	3000	576.00	22.68	212.00	8.34	772.00	30.39	807.00	31.77	232.00	511.50	M8
12V3OPzV100FT	12	100	551.00	21.69	110.00	4.33	274.00	10.79	287.00	11.30	41.10	90.60	M6
12V10OPzV200	12	200	522.00	20.55	268.00	14.49	220.00	8.66	226.00	8.90	70.50	155.40	M8

PERFORMANCE CHARACTERISTICS

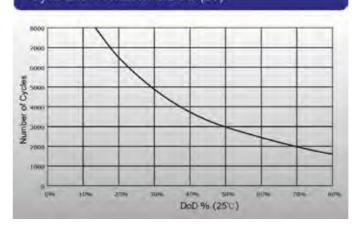
Charge voltage vs ambient temperature (2V & 12V)



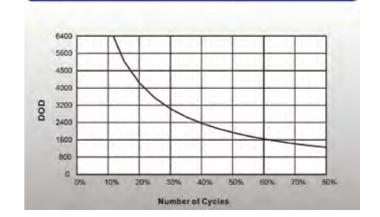




Cycle Life in Relation to DOD (2V)



Cycle Life in Relation to DOD (12V)





Li-lon 48V LFeLi series

-20°C~ +60°C

TEMPERATURE RANGE 24 months

SHELF LIFE

Years

5

WARRANTY

model dependent Up to 20 years

DESIGN LIFE



Lithium-Ion batteries offer extreme cyclic abilities compared to lead-acid batteries. For extreme demanding telecom applications LEOCH has developed 48V Lithium-Ion (LiFePo₄) modules to replace front terminal 48V strings of lead acid batteries. Offering more than 5000 cycles at 60% DoD, 19-inch rack mounting design facilitate easy replacement in existing installations and easy maintenance.

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GENERAL FEATURES



Environmentally friendly without any heavy metals inside



Lithium Ion Phosphate chemistry has a high thermal runaway threshold being one of the safest market lithium technology



Extreme Cycle Life, up to 3500 cycles at 100% DoD to reduce CAPEX & OPEX in demanding telecom, switchgear or hybrid applications



Advanced BMS communication protocols (Modbus, Canbus, RS232, RS485) and bespoke solutions upon request (SNMP, Anti-Theft & Tracking Systems availability)



LCD screen available for on-site tool-free monitoring. Advanced BMS with a multitude of safety and communication options available.

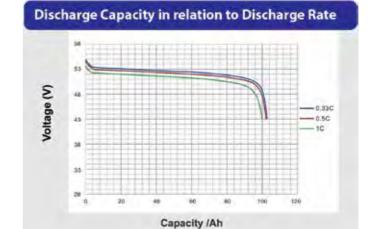


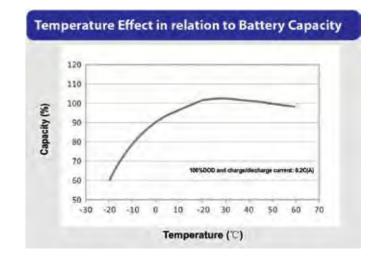
Passive cooling and electromagnetic shielded design

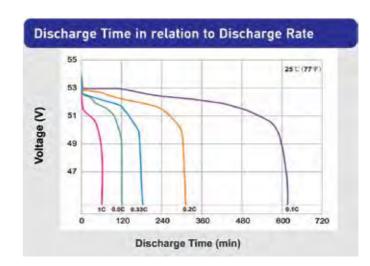
BATTERY SPECIFICATIONS

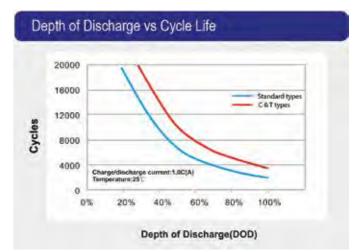
	Nominal	Rated Capacity 10Hr @ 2.70V/cell			Approx.	Dimens	ions	Approximate						
	Voltage (V)		Length		Wid	th	Heig	ght	Total Height		Weight		Remarks	
	(*)	(AH)	mm	in.	mm	in.	mm	in.	mm	in.	kg lbs			
LFeLi-4810S	48V	10	442.00	17.40	290.00	11.42	44.00	1.73	44.00	1.73	9.50	20.94	No parallel conectivity available	
LFeLi-4820S	48V	20	442.00	17.40	330.00	12.99	88.00	3.46	88.00	3.46	15.50	34.17	No parallel conectivity available	
LFeLi-4850C	48V	50	443.00	17.40	442.00	17.40	132.00	5.20	132.00	5.20	32.00	70.55	Parallel conectivity available	
LFeLi-4850T	48V	50	442.00	17.40	442.00	17.40	132.00	5.20	132.00	5.20	32.00	70.55	Parallel conectivity available	
LFeLi-4875C	48V	75	440.00	17.40	399.00	15.71	177.00	6.97	177.00	6.97	42.00	92.59	Parallel conectivity available	
LFeLi-48100F	48V	100	442.00	19.69	230.00	9.06	260.00	10.24	260.00	10.24	42.00	92.59	Parallel conectivity available	
LFeLi-48100T	48V	100	500.00	17.40	431.00	16.97	177.50	6.99	177.50	6.99	43.00	94.80	Parallel conectivity available	
LFeLi-48150T	48V	150	442.00	17.40	495.00	19.49	177.00	6.97	177.00	6.97	65.00	143.30	Parallel conectivity available	
LFeLi-48200T	48V	200	442.00	17.40	560.00	22.05	244.00	9.61	244.00	9.61	82.00	180.78	Parallel conectivity available	

PERFORMANCE CHARACTERISTICS









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