

KSTAR

Battery Series



KSTAR Overview

Founded in 1993 and listed on the Shenzhen Stock Exchange in 2010, KSTAR has specialized in the research, development, and manufacturing of **UPS, Precision Air Conditioner and Modular Data Center, Battery, PV Inverter, Energy Storage, and EV Charger** for over 30 years. It is a leading provider of comprehensive solutions in the smart energy sector.



—
1993

Founded in

—
2010

Listed in

—
4300+

Employees

—
2

R&D Centers

—
8

Manufacturing Bases

—
180+

Countries and Regions



Enterprise Advantage

Leading UPS Supporting Battery Manufacturer

As a leading UPS battery manufacturer with over 20 years of industry expertise, KSTAR has an integrated R&D, production, and sales ecosystem. Our products are widely deployed across critical sectors including finance, education, healthcare, telecommunications, etc.

Since 2021, the company's battery production base has officially moved to Yichun, Jiangxi Province, and established Jiangxi Changxin Gold Sunshine Power Supply Co., LTD. (CGS), which is a wholly-owned subsidiary funded by Shenzhen Kstar Technology Co., LTD. (Stock code 002518).

Spanning 228 mu (approx. 37.6 acres), this facility encompasses end-to-end R&D, manufacturing, sales, and service operations for batteries.



Market Achievement



Global UPS Manufacturer



The Valve-regulated Sealed Lead-acid Battery
Products Ranked First in the Chinese Mainland
Market in 2024-2025



Five Automatic Production Lines
The Annual Production Capacity is 3 Million kVAh



Cumulative Sales Reached 55 Million Units
A Large-scale National Industry System
National Unified Selection

Source: Omdia's "UPS Hardware Annual Tracker 2025"
2024-2025 Annual Report on China's UPS Battery Market (ICT Research)

Enterprise Advantage

Intelligent Manufacturing of Batteries

The workshop has five automated assembly lines, with an annual output of more than 6 million small batteries and more than 2 million high and middle batteries. All batteries are automatically cast, sealed, bonded, sealed and inspected by the machine.

The charging & packaging process mainly include automatic vacuum quantitative acid addition, computer-controlled IGBT feedback formation (include cell formation and battery formation), automatic circulating water bath temperature control, automatic cleaning and multi-functional 100% factory inspection to ensure the safety of each battery.



Three Production Process



Plate Production



Battery Assembly



Charging Packaging



Data Center Fires: More Devastating Than You Think

In the era of data centers, ensuring facility safety is paramount. Among all threats, fire remains the greatest threat to operational continuity. Battery-related incidents account for 50% of all data center fires, with battery leakage being the most critical and often overlooked cause of fire ignition.



Terminal acid leakage



Leakage from battery cover



Leakage from battery bottom



A major organization suffered a fire in its data center



Significant operational and financial losses

Prevent Battery Leakage Fires with Kstar's Safety Trays

Fire is unpredictable; safety is not.

Kstar's patented anti-slip & anti-acid tray (Patent No.: ZL 2017 2 1570272.0) provides dual protection against battery leakage and short circuits in data centers. Trusted nationwide across finance, telecom, and government sectors, Kstar maintains a "zero accidents" record with hundreds of thousands of safe deployments.

- With good acid resistance and impact resistance, it can effectively alleviate the collision damage to the battery during transportation and handling
- Prevent electrolyte from leaking during battery use, which may cause battery short circuit and fire
- Effectively control the battery installation distance and effectively prevent accidents caused by battery thermal runaway.



Kstar Batteries - Core Strengths



Fully Self-developed and Self-produced

Plate production - battery assembly - charging and packaging, PCBA, battery, battery rack, ultimate safety, ultimate cost control, convenient maintenance



Dual Patents

Integrated tray / panel grid, providing all-round protection against fire, explosion and leakage



Long Life

The cycle life is over 800 times, and the float charging design life is over 20 years



High Flexibility

Complete power range, flexible solutions, space-saving and cost-saving



Strong Adaptability

-20°C to +50°C environment, desert, plateau climate and explosion-proof areas



Maintenance-free

The unique gas recombination technology does not require regular liquid replenishment and maintenance



Universal Deployment

With cumulative sales of 55 million units, it covers all scenarios in various industries such as power, finance, communication, and manufacturing

FM Small Sealed Battery Series

Battery Capacity	1.2Ah~28Ah
Battery Characteristics	Standard series, designed float charging life up to 5 years
Application Scope	Small capacity UPS / Emergency lighting / Security alarm



Model	Rated voltage (V)	Rated capacity (Ah)			Dimensions (mm)				Reference weight (kg)	Terminal type
		20HR	5HR	1HR	Length	Width	Height	Total Height		
		1.75V/C	1.75V/C	1.6V/C						
3-FM-1.2	6	1.2	1	0.72	97.5	24	52	58	0.31	F1
3-FM-3	6	3	2.55	1.8	135	35	60	66	0.71	F1
3-FM-4	6	4	3.4	2.4	70	47	100	106	0.81	F1
3-FM-7	6	7	5.6	4.2	151	34	95	101	1.15	F1/F2
6-FM-1.9	12	1.9	1.6	1.14	178.5	35	60.5	66.5	0.9	F1
6-FM-3	12	3	2.55	1.8	135	67.5	61	67	1.28	F1
6-FM-4	12	4	3.4	2.4	90	70	100	107	1.45	F1/F2
6-FM-4.5	12	4.5	3.6	2.7	90	70	100	107	1.5	F1/F2
6-FM-5	12	5	4	3	90	70	100	107	1.61	F1/F2
6-FM-6	12	6	4.8	3.6	151	65	94	100	1.8	F1/F2
6-FM-6.5	12	6.5	5.2	3.9	151	65	94	100	2	F1/F2
6-FM-7	12	7	5.6	4.2	151	65	94	100	2.05	F1/F2
6-FM-7.2	12	7.2	5.7	4.3	139.5	48	118	118	2.2	F1/F2
6-FM-7.5	12	7.5	6	4.5	151	65	94	100	2.2	F1/F2
6-FM-8	12	8	6.4	4.8	151	65	94	100	2.35	F1/F2
6-FM-8.5	12	8.5	6.8	5.1	151	65	94	100	2.5	F1/F2
6-FM-9	12	9	7.5	5.9	151	65	94	100	2.52	F1/F2
6-FM-12	12	12	9.6	7.2	151	98	94	100	3.8	F2
6-FM-14	12	14	11.2	8.4	151	98	94	100	4	F2
6-FM-15	12	15	12	9	181	77	167	167	4.9	B1/T4
6-FM-17	12	17	13.6	10.2	181	77	167	167	5.1	B1/T4
6-FM-18	12	18	14.4	10.8	181	77	167	167	5.2	B1/T4
6-FM-20	12	20	16	12	181.5	77	167	167	6	T4
6-FM-22	12	22	17.6	13.2	181.5	77	167	167	6.4	T4
6-FM-24	12	24	19.2	14.4	166	126	174	174	8	T1
6-FM-26	12	26	20.8	15.6	177	167	126	126	8.2	B1/T4
6-FM-28	12	28	22.4	16.8	166	126	174	174	9.1	T1

FM Standby Sealed Battery Series

Battery Capacity	33Ah~250Ah (The anti-slip and anti-acid battery tray is configured for standard)
Battery Characteristics	Standard series, designed float charging life up to 12 years
Application Scope	UPS / Communication / Power



Model	Rated voltage (V)	Rated capacity (Ah)				Dimensions (mm)				Reference weight (kg)	Terminal type
		10HR	8HR	5HR	1HR	Length	Width	Height	Total Height		
		1.8V/C	1.8V/C	1.8V/C	1.75V/C						
3-FM-180	6	180	165	139	108	323	178	226	231	27.7	T5
3-FM-200	6	200	174	160	120	323	178	226	231	28.8	T5
6-FM-33	12	33	30.4	25.4	19.8	196	131	155	169	10.1	T1
6-FM-38	12	38	33.6	30.4	22.8	198	166	170	170	12	T1
6-FM-45	12	45	40.3	36	27	198	166	170	170	13.7	T1
6-FM-50	12	50	44.8	40	30	229	138	211	216	16	T1
6-FM-55	12	55	49.3	44	33	229	138	211	216	18.5	T1
6-FM-65	12	65	56.5	52	39	350	167	174	174	19.7	T2
6-FM-70	12	70	62.7	56	42	260	169	211	216	21.4	T1
6-FM-75	12	75	67.2	60	45	260	169	211	216	22.3	T1
6-FM-80	12	80	71.7	64	48	260	169	211	216	23.6	T1
6-FM-90	12	90	80	72	54	307	169	211	216	26.8	T2
6-FM-100	12	100	90	80	60	407	174	208	236	33	T3
6-FM-120	12	120	107	96	72	407	174	208	236	34.5	T3
6-FM-150	12	150	134	120	90	532	207	214	219	47.5	T3
6-FM-160	12	160	144	128	96	341	173	281	288	43.8	T5
6-FM-200	12	200	180	160	120	523	240	225	230	58.5	T3
6-FM-250	12	250	225	200	150	520	269	223	228	69.2	T5

FML Long Life Middle Sealed Battery Series

Battery Capacity 65Ah~200Ah (The anti-slip and anti-acid battery tray is configured for standard)

Battery Characteristics Standard series, designed float charging life up to 12 years

Application Scope UPS / Communication / Power



Model	Rated voltage (V)	Rated capacity (Ah)					Dimensions (mm)				Reference weight (kg)	Terminal type
		20HR	10HR	8HR	5HR	1HR	Length	Width	Height	Total Height		
		1.80V/C	1.80V/C	1.80V/C	1.80V/C	1.75V/C						
6-FML-65	12	65	60	54.7	48	34.6	350	167	174	174	20.7	T2
6-FML-100	12	100	80	71.7	64	46	407	174	208	236	29.4	T3
6-FML-120	12	120	100	89.6	80	59.8	407	174	208	236	33.5	T3
6-FML-150	12	150	140	117	108	78	532	207	214	219	48.5	T3
6-FML-200	12	200	180	150	144	104	523	240	225	230	59.5	T3

FMH Sealed Battery Series

Battery Capacity 50Ah~200Ah

Battery Characteristics Rack-mounted series, designed float charging life up to 12 years

Application Scope UPS / Communication / Power



Model	Rated voltage (V)	Rated capacity (Ah)				Dimensions (mm)				Reference weight (kg)	Terminal type
		10HR	8HR	5HR	1HR	Length	Width	Height	Total Height		
		1.8V/C	1.8V/C	1.8V/C	1.75V/C						
6-FMH-50	12	50	44.8	40	30	277	106	222	222	16	T1
6-FMH-100	12	100	89.6	80	60	395	110	286	286	31.7	T5
6-FMH-150	12	150	134	120	90	551	110	288	288	44.8	T5
6-FMH-200	12	200	174	160	120	560	125	320	320	59.5	T5

GFM Sealed Battery Series

- Battery Capacity** 200Ah~3000Ah (The anti-slip and anti-acid battery tray is configured for standard)
- Battery Characteristics** High-capacity battery cell series, designed float charging life up to 20 years
- Application Scope** Communication / Power



Model	Rated voltage (V)	Rated capacity (Ah)				Dimensions (mm)				Reference weight (kg)	Terminal type
		10HR	8HR	5HR	1HR	Length	Width	Height	Total Height		
		1.8V/C	1.8V/C	1.8V/C	1.75V/C						
GFM200	2	200	185	170	110	172	111	329	365	13	T3
GFM300	2	300	277	255	165	171	151	330	366	18	T3
GFM400	2	400	370	340	220	210	171	329	363	24.5	T3
GFM500	2	500	463	425	275	241	172	331	366	28	T3
GFM600	2	600	555	510	330	301	175	331	366	35	T3
GFM800	2	800	740	680	440	410	175	330	365	49.5	T3
GFM1000	2	1000	925	850	550	475	175	328	365	57	T3
GFM1200	2	1200	1110	1020	660	401	351	344	382	80	T3
GFM1500	2	1500	1388	1275	825	401	351	344	382	90.5	T3
GFM2000	2	2000	1850	1700	1100	491	351	343	383	120	T3
GFM2500	2	2500	2313	2125	1375	712	353	341	382	157	T3
GFM3000	2	3000	2775	2550	1650	712	353	341	382	174	T3

GFML Long Life Sealed Battery Series

- Battery Capacity** 300Ah~1000Ah (The anti-slip and anti-acid battery tray is configured for standard)
- Battery Characteristics** High-capacity battery cell series, designed float charging life up to 20 years
- Application Scope** UPS / Communication / Power



Model	Rated voltage (V)	Rated capacity (Ah)					Dimensions (mm)				Reference weight (kg)	Terminal type
		20HR	10HR	8HR	5HR	1HR	Length	Width	Height	Total Height		
		1.80V/C	1.80V/C	1.80V/C	1.80V/C	1.75V/C						
GFML-300	2	300	270	249	229	149	171	151	330	366	19.0	T3
GFML-400	2	400	360	332	306	195	210	171	329	363	24.5	T3
GFML-500	2	500	450	415	382	248	241	172	331	366	30.6	T3
GFML-600	2	600	540	498	459	297	301	175	331	366	36.7	T3
GFML-800	2	800	720	664	612	396	410	175	330	365	51.0	T3
GFML-1000	2	1000	900	830	765	495	475	175	328	365	61.3	T3

Solar Deep Cycle Battery Series

- Battery Capacity** 38Ah~3000Ah (The anti-slip and anti-acid battery tray is configured for standard)
- Battery Characteristics** Solar series, 12V series, designed float charging life up to 12 years, 2V series , designed float charging life up to 20 years
- Application Scope** Solar Energy Storage Equipment



Model	Rated voltage (V)	Rated capacity (Ah)				Dimensions (mm)				Reference weight (kg)	Terminal type
		10HR	8HR	5HR	1HR	Length	Width	Height	Total Height		
		1.8V/C	1.8V/C	1.8V/C	1.75V/C						
6-FM-38T	12	38	33.6	30.4	22.8	198	166	170	170	12	T1
6-FM-65T	12	65	56.5	52	39	350	167	174	174	20	T2
6-FM-100T	12	100	90	80	60	407	174	208	236	33	T3
6-FM-120T	12	120	107.2	96	72	407	174	208	236	34.5	T3
6-FM-150T	12	150	134	120	90	532	207	214	219	47.8	T3
6-FM-200T	12	200	180	160	120	523	240	225	230	58.5	T3
GFM-200T	2	200	185	170	110	172	111	329	365	13.1	T3
GFM-300T	2	300	277	255	165	171	151	330	366	18	T3
GFM-400T	2	400	370	340	220	210	171	329	363	25	T3
GFM-500T	2	500	463	425	275	241	172	331	366	29	T3
GFM-600T	2	600	555	510	330	301	175	331	366	35	T3
GFM-800T	2	800	740	680	440	410	175	330	365	49.5	T3
GFM-1000T	2	1000	925	850	550	475	175	328	365	58	T3
GFM-1500T	2	1500	1388	1275	825	401	351	344	382	92.6	T3
GFM-2000T	2	2000	1850	1700	1100	491	351	343	383	122.5	T3
GFM-3000T	2	3000	2775	2550	1650	712	353	341	382	174	T3

AGEL Sealed Gel Battery Series

Battery Capacity 38Ah~3000Ah (The anti-slip and anti-acid battery tray is configured for standard)

Battery Characteristics Gel battery series, the 12V series is designed float charging life up to 12 years, the 2V series is designed float charging life up to 20 years

Application Scope UPS / Communication / Energy storage



Model	Rated voltage (V)	Rated capacity (Ah)				Dimensions (mm)				Reference weight (kg)	Terminal type
		10HR	8HR	5HR	1HR	Length	Width	Height	Total Height		
		1.8V/C	1.8V/C	1.8V/C	1.75V/C						
6-FM-38J	12	38	33.6	30.4	22.8	198	166	170	170	12.2	T1
6-FM-65J	12	65	56.5	52	39	350	167	174	174	20.3	T2
6-FM-100J	12	100	90	80	60	407	174	208	236	33	T3
6-FM-120J	12	120	107.2	96	72	407	174	208	236	34.7	T3
6-FM-150J	12	150	134	120	90	532	207	214	219	48.6	T3
6-FM-200J	12	200	180	160	120	523	240	225	230	58.5	T3
GFM200J	2	200	185	170	110	172	111	329	365	13.3	T3
GFM300J	2	300	277	255	165	171	151	330	366	18.3	T3
GFM400J	2	400	370	340	220	210	171	329	363	25.4	T3
GFM500J	2	500	463	425	275	241	172	331	366	29.5	T3
GFM600J	2	600	555	510	330	301	175	331	366	35.6	T3
GFM800J	2	800	740	680	440	410	175	330	365	50.3	T3
GFM1000J	2	1000	925	850	550	475	175	328	365	59	T3
GFM1500J	2	1500	1388	1275	825	401	351	344	382	94	T3
GFM2000J	2	2000	1850	1700	1100	491	351	343	383	124.5	T3
GFM3000J	2	3000	2775	2550	1650	712	353	341	382	177	T3

GFMHR High Rate Sealed Battery Series

- Battery Capacity** 250W~780W (The anti-slip and anti-acid battery tray is configured for standard)
- Battery Characteristics** High rate discharge series, designed float charging life of 12 years
- Application Scope** Data center / UPS



Features

- ◆ Gas composite technology, maintenance-free.
- ◆ Automatic safety valve to protect the battery.
- ◆ Leak-proof, flexible installation.
- ◆ Adaptable to wide temperature environments (-20~+60°C).

Model	Rated voltage (V)	Rated capacity (Ah)				Dimensions (mm)				Reference weight (kg)	Terminal type
		15min 1.67V/C	10HR 1.80V/C	5HR 1.80V/C	1HR 1.75V/C	Length	Width	Height	Total Height		
6-GFMHR-250	12	250	65	61	40.6	260	169	211	216	22.3	T1
6-GFMHR-350	12	350	100	85	57	407	174	208	236	32	T3
6-GFMHR-400	12	400	110	94	65	407	174	208	236	34	T3
6-GFMHR-510	12	510	150	120	90	483	170	241	243	44	T3
6-GFMHR-550	12	550	150	128.5	85.4	480	177	225	230	44	T3
6-GFMHR-630	12	630	180	154	97.6	523	240	225	230	54	T3
6-GFMHR-750	12	750	200	178	118	523	240	225	230	60	T3
6-GFMHR-780	12	780	200	182	121	523	240	225	230	62	T3

EV Battery Series

- Battery Capacity** 80Ah~200Ah
- Battery Characteristics** Sealed power series, designed for a cycle life of 5 years
- Application Scope** Special vehicles, Towing vehicles



Features

- ◆ Maintenance-free, saving labor costs.
- ◆ Battery cycle life is twice the industry average.
- ◆ Discharge at 1C(A) reaches over 90% of rated capacity.
- ◆ Capacity at -20°C exceeds national standards by over 10%.

Model	Rated voltage (V)	Rated capacity (Ah)		Dimensions (mm)				Reference weight (kg)	Terminal type
		5HR 1.75V/C	3HR 1.75V/C	Length	Width	Height	Total Height		
3-EVF-170	6	181	170	260	180	252	253	30	T3
3-EVF-200	6	213	200	260	180	269	270	35	T3
6-EVF-80	12	88	80	261	169	215	216	25	T2
6-EVF-100	12	110	100	332	173	215	216	33.6	T3

LiFePO₄ Lithium Battery Pack Series

Battery Capacity 7Ah~280Ah

Battery Characteristics Long cycle life

Application Scope Home storage, Backup power, UPS



Features

- ◆ Maintenance-free throughout the entire battery life, suitable for a wide temperature range
- ◆ Lightweight design, high-power fast charging, reliable and durable
- ◆ Highly safe lithium iron phosphate, modular and flexible configuration
- ◆ Intelligent BMS protection, supports multiple installation methods

Model	Rated voltage (V)	Rated capacity (5HR) (Ah)	Cut-off voltage (V)	Typical energy (Wh)	Dimensions (mm)				Reference weight (kg)	Installation Type
					Length	Width	Height	Total Height		
LFP12.8-7	12.8	7	10	89.6	151	65	94	100	1.0	Lead-acid to Lithium
LFP12.8-8	12.8	8	10	102.4	151	65	94	100	1.0	Lead-acid to Lithium
LFP12.8-10	12.8	10	10	128	151	65	94	100	1.2	Lead-acid to Lithium
LFP12.8-12	12.8	12	10	153.6	151	98	95	101	1.6	Lead-acid to Lithium
LFP12.8-18	12.8	18	10	230.4	151	98	95	101	2.2	Lead-acid to Lithium
LFP12.8-20	12.8	20	10	256	181	77	167	167	2.5	Lead-acid to Lithium
LFP12.8-24	12.8	24	10	307.2	165	126	175	175	3.0	Lead-acid to Lithium
LFP12.8-36	12.8	36	10	460.8	198	166	170	170	4.2	Lead-acid to Lithium
LFP12.8-50	12.8	50	10	640	229	138	208	208	7.5	Lead-acid to Lithium
LFP12.8-100	12.8	100	10	1280	329	172	215	215	11.5	Lead-acid to Lithium
LFP12.8-150	12.8	150	10	1920	483	170	241	241	16.5	Lead-acid to Lithium
LFP12.8-200	12.8	200	10	2560	520	240	220	220	20.5	Lead-acid to Lithium
LFP25.6-100	25.6	100	20	2560	520	240	220	220	20.3	Lead-acid to Lithium
LFP25.6-200	25.6	200	20	5120	520	268	220	220	37.5	Lead-acid to Lithium
LFP51.2-100	51.2	100	40	5120	520	268	220	220	37.5	Lead-acid to Lithium
LFP 51.2-100R	51.2	100	40	5120	480	484	155	155	45	Rack
LFP 51.2-200R	51.2	200	40	10240	530	484	266	266	87	Rack
LFP 51.2-100W	51.2	100	40	5120	580	415	150	180	52	Wall-mounted
LFP 51.2-200W	51.2	200	40	10240	600	800	160	200	99	Wall-mounted
LFP 51.2-200V	51.2	200	40	10240	520	280	718.5	718.5	90	Vertical
LFP 51.2-230V	51.2	230	40	11776	530	230	718.5	718.5	100	Vertical
LFP 51.2-280V	51.2	280	40	14336	560	230	818.5	818.5	122	Vertical

Note

*Nominal charge/discharge and power derating will occur to temperature and SOC.

*Please visit Kstar website for the latest certificates.

*All picture shown are for reference only. Actual appearance may vary.

*Specification are subject to change without prior notice.

Standard Series Battery Rack



Standard Battery Rack Parameters (For 12V lead-acid batteries)

Model	BR-8-A	BR-8-B	BR-8-C	BR-10-A	BR-10-B	BR-10-C	BR-12-A	BR-12-B	BR-12-C	BR-16-A	BR-16-B	BR-16-C	BR-20-A	BR-20-B	BR-20-C	BR-24-A	BR-24-B	BR-24-C
Length (mm)	900	900	900	1100	1100	1100	1300	1300	1300	900	900	900	1100	1100	1100	1300	1300	1300
Width (mm)	450	550	650	450	550	650	450	550	650	450	550	650	450	550	650	450	550	650
Height (mm)	750	750	750	750	750	750	750	750	750	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4
Number of layers	2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4
Layer height (mm)	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2
Net weight (kg)	28.27	33.44	35.15	31.71	37.57	39.27	35.14	41.69	43.4	55.44	65.38	68.46	62.31	73.63	76.7	69.18	81.87	84.95

Standard Battery Rack Parameters (For 12V lead-acid batteries)

Model	BR-32-A	BR-32-B	BR-32-C	BR-36-A	BR-36-B	BR-36-C	BR-40-A	BR-40-B	BR-40-C	BR-44-A	BR-44-B	BR-44-C	BR-48-A	BR-48-B	BR-48-C
Length (mm)	800	1800	1800	2000	2000	2000	2200	2200	2200	2400	2400	2400	2600	2600	2600
Width (mm)	450	550	650	450	550	650	450	550	650	450	550	650	450	550	650
Height (mm)	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4	1528.4
Number of layers	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Layer height (mm)	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2
Net weight (kg)	105.59	124.11	128.89	112.45	132.45	137.14	119.32	140.6	145.38	126.19	148.84	153.63	133.06	157.09	161.87

Standard Battery Rack Parameters (For 2V lead-acid batteries)

Model	SR-8-A	SR-8-B	SR-8-C	SR-10-A	SR-10-B	SR-10-C	SR-12-A	SR-12-B	SR-12-C	SR-16-A	SR-16-B	SR-16-C	SR-20-A	SR-20-B	SR-20-C	SR-24-A	SR-24-B	SR-24-C
Length (mm)	900	900	900	1100	1100	1100	1300	1300	1300	900	900	900	1100	1100	1100	1300	1300	1300
Width (mm)	450	550	650	450	550	650	450	550	650	450	550	650	450	550	650	450	550	650
Height (mm)	1041.9	1041.9	1041.9	1041.9	1041.9	1041.9	1041.9	1041.9	1041.9	1625.7	1625.7	1625.7	1625.7	1625.7	1625.7	1625.7	1625.7	1625.7
Number of layers	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3
Layer height (mm)	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8
Net weight (kg)	30.26	35.41	37.12	33.7	39.53	41.24	37.13	43.66	45.36	45.17	52.71	55.1	50.32	58.89	61.29	55.47	65.08	67.47

Standard Series Battery Cabinet

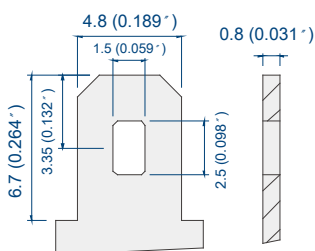


Model	A1	A2	A3	A4	A6	A8	A10	A12	A16	A20	A32
Net weight (kg)	5.3	10.4	12.5	15.5	18	19.5	30.8	27.5	35	43	60
Dimensions	Length (mm)	500	462	635	462	630	820	985	820	820	820
	Width (mm)	225	470	470	480	480	480	480	480	480	960
	Height (mm)	304	350	350	644	644	644	660	937	1230	1230

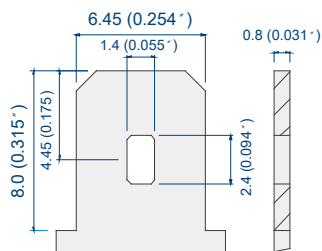
Product features: The number of batteries that can be placed is 1/2/4/6/12/8/16/20/32/40.

Standard color: Light gray

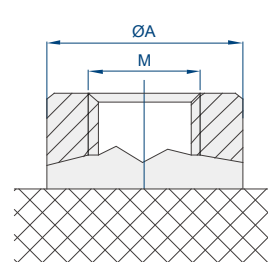
Battery Terminal Type



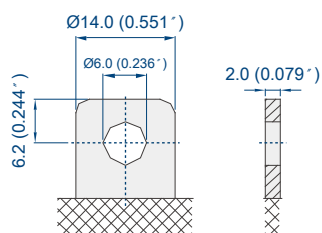
F1



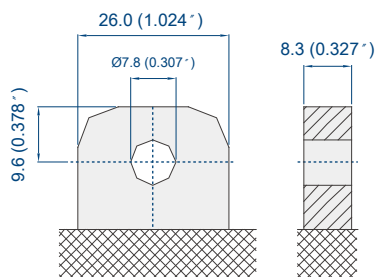
F2



T



B1



B2

Specification Type	ΦA (mm)	M
T1	14	6
T2	16	6
T3	20	8
T4	12	4
T5	18	8
T6	18	6

Monitoring Management System

Kstar UPS battery monitoring and management system is an online battery monitoring and management system specially designed for UPS battery systems in data centers, information centers, communication centers, control centers, industrial control and other applications.

Battery Issues Overview

Batteries are one of the main sources of faults in UPS and communication systems. During battery operation, there are various fault problems such as water loss, thermal runaway, vulcanization, plate corrosion, diaphragm shrinkage, and plate short circuits.

Main Failure Mode: Sulfation

PbSO₄ crystallization inside the battery caused by long-term insufficient charging

Dangerous Failure: Thermal Runaway

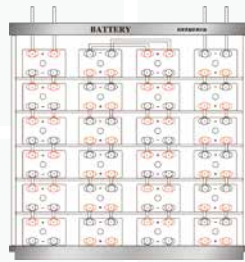
Seriously failed batteries may cause thermal runaway, and in extreme cases may explode or burn.

Main Failure Mode: Water Loss

Loss of water inside the battery caused by long-term overcharging or excessive charging voltage

Other Failure Modes:

Plate corrosion, diaphragm shrinkage, plate short circuit, etc.



Lead-acid Battery Failure Mechanism

Kstar Energy and Battery Management Solutions

As an energy management expert, Kstar not only has leading R&D and manufacturing scale of UPS and supporting batteries, but also focuses on the research and development of battery management and internal resistance monitoring technology, providing comprehensive, professional and reliable battery monitoring and management solutions in the field of UPS battery systems.

Kstar's battery management system adopts the most advanced battery analysis technology in China and combines the company's rich application experience to realize functions such as battery pack internal resistance testing, failed battery detection, and backup time prediction. Solving online maintenance problems such as failed battery detection and backup time prediction in battery maintenance has high application value and effectively ensures the high reliability of uninterrupt-ed power system power supply.

Features of Kstar Battery Monitoring System:

Reliable and secure comprehensive monitoring, testing and management system

- Accurate:** The correlation between internal resistance and battery capacity is as high as 95%. Use internal resistance to determine capacity to ensure safety
- Safety:** The internal resistance test does not require discharge and has no impact on the normal operation of the power system
- Real-time:** Monitor battery voltage, current, temperature and other operating parameters
- Management:** Capture battery degradation immediately and monitor battery safety in real time



Networked remote management



Simple configuration



Low implementation, maintenance and management costs

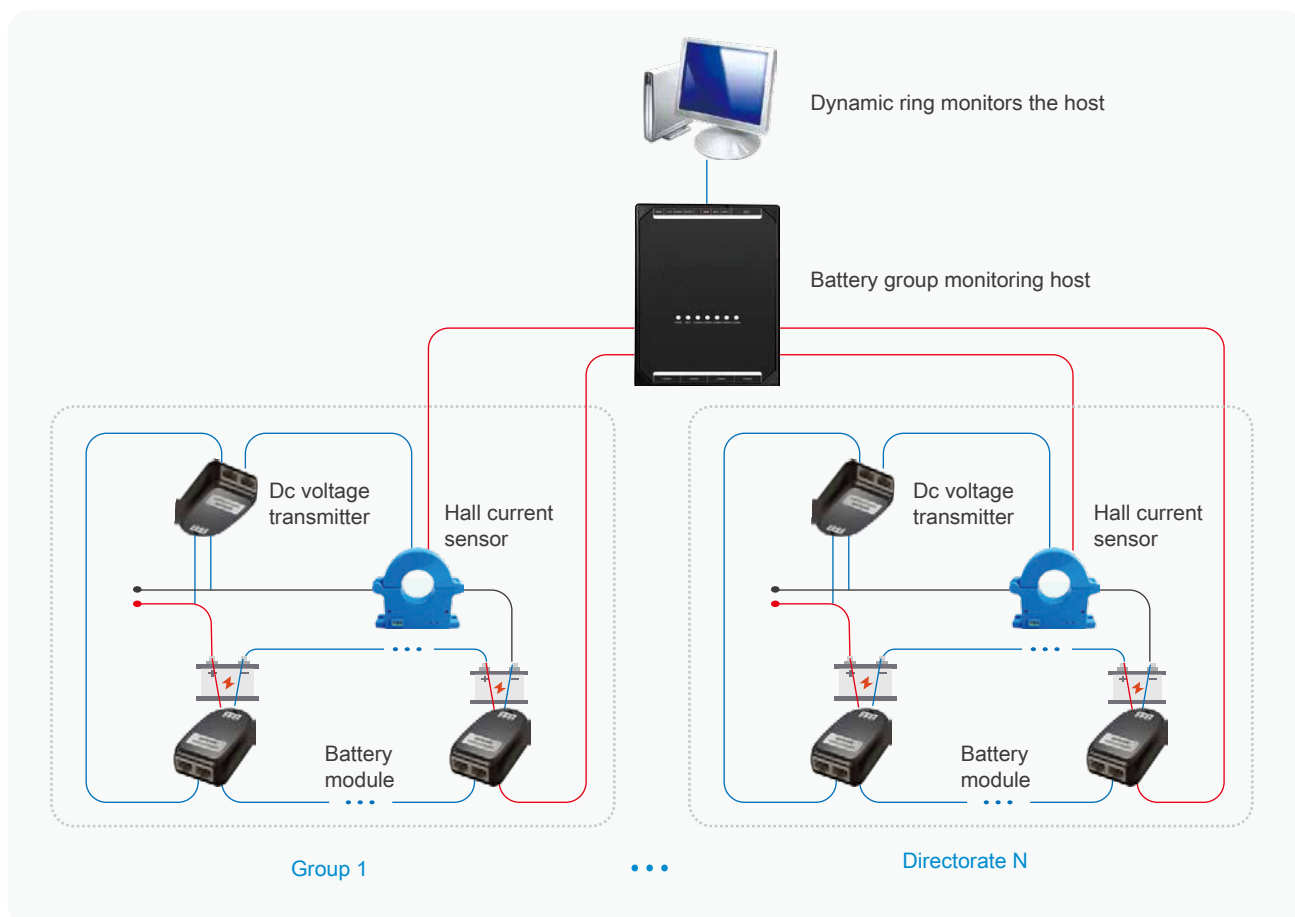


Kstar Battery Monitoring System Functions:

- ◆ Dedicated internal resistance testing technology - small signal pulse AC testing technology, real-time online monitoring and analysis of the internal resistance change trend of the battery, and prediction of backward batteries in the battery pack
- ◆ High security. It has multiple protections such as power isolation, optocoupler isolation, and fuse protection, which will not affect the operation of the battery pack;
- ◆ Collect the voltage, internal resistance, temperature, and total current of each battery in real time
- ◆ Automatic allocation of internal resistance module address, easy on-site installation and debugging
- ◆ Dual watchdog design, with self-recovery function and strong stability
- ◆ Provide early prediction of the operating status of the battery pack, providing a reliable basis for battery maintenance or replacement
- ◆ The circuit port has an EMC design and has strong anti-electromagnetic interference ability, especially for high-frequency machine UPS battery packs, which can achieve high measurement accuracy
- ◆ Modular structure design allows for flexible configuration of different numbers of battery packs to minimize solution costs
- ◆ Provides RS485 communication port to realize remote monitoring function and facilitate access to third-party application system



Kstar Battery Monitoring Application Solution:



Sustainability Commitment



Pollutant Discharge Permit
(2016)



Authoritative System
Certification



Product Certification



1.5 million kW/h
Annual output of photovoltaic
power generation system



4.76 kg/a.
Total lead emission reduction of
lead fume purification system



96.3%
Reuse rate of production water

Success Story



Beijing New Airport Eastern Airlines Base Project

Project Location: Beijing

Lead-acid Batteries: 6-FM series, UPS



State Grid Project

Project Locations: Beijing, Sichuan, Xi'an, Heilongjiang, etc.

Lead-acid Batteries: GFM Series, HPM3300 Series



Core Data Center Project for a Major State-owned Bank's Headquarters

Project Locations: Beijing, Shanghai, Inner Mongolia, Anhui

Lead-acid Batteries: High-rate batteries, including 6-FM-200S and 150S



China Unicom Cloud Data Center Project

Project Location: Xinxiang, Henan

Solution: Micro modules, precision air conditioners, UPS, etc

Lead-acid Batteries: 6-FM series

Success Story



JD Group Data Center UPS Project

Solution: HPM3300 Series High-Frequency Modular UPS



Guangxi Medical University Second Affiliated Hospital Project

Location: Nanning, Guangxi

Solution: UPS EP series

Lead-acid batteries: FM series, 12V 65AH-100AH



BYD Shenzhen&Shantou Plant 1 UPS Power Distribution Project

Project Location: Shenzhen

Lead-acid Batteries: GFM600, GFM500



KL LRT/MRT Project, Malaysia

Project Location: Malaysia

Lead-acid Battery: 6-FM Series

Qualification Certification



National Torch Plan Key Hi-tech Enterprise



National Recognized Enterprise Technical Center

National Technical and Innovative
Demonstration Enterprise

Green Factory



Post-doctoral Research Center



Five-star After-sales Service Certificate



A-share Listed Companies

ISO9001 Quality
Management System
Authentication CertificateISO14001 Environment
Management System
CertificateISO45001:2018
Occupational Health and
Safety Management
System CertificateIECQ QC080000
Hazardous Substances
Process Management
System CertificateISO9001:2015
Quality Management
System Certificate
(Golden Sunshine)ISO14001:2015
Environmental Management
System Certificate
(Golden Sunshine)ISO45001:2018
Occupational Health and
Safety Management System
Certification (Golden Sunshine)

Qualification Certification



Top 100 Listed Companies in China



Standing director unit of China Power Supply Society



Guangdong Province integrity demonstration enterprise



Pollutant discharge permit



Radio and Television Certification



Thiel Certificate



Energy Saving Authentication Certificate



UL Certification



CE Authentication Certificate



CE Certification (Golden Sunshine)



UL Certification (Golden Sunshine)



TLC Certificate (Golden Sunshine)



CNAS Laboratory Accreditation Certificate



Two Fusion Evaluation Management System Certificate

UPS Solution Transformer-less Memopower Series

1~40kVA



UPS Solution Transformer-less HPM3300E Series

30~1200kVA



UPS Solution Robust Transformer-based UPS Series

1~800kVA



Precision Cooling Series

5~300kW



Data Center Integrated Solution

IDU/IDM/IDB/IOU Series



Battery Series



UPS Solution Line Interactive UPS Series

400~3000VA



UPS Solution Transformer-less YDC3300 Series

10~200kVA



UPS Solution Transformer-less UL Products Series

1~100kVA



KSTAR



Kstar



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Add: Kstar Industrial Park, Fuyuan Industrial Zone, Guanlan, Shenzhen

Add: CATL-KSTAR Science and Technology Co., Ltd.

Add: Jiangxi Changxin Gold Sunshine Power Co., Ltd.

Add: Jiangsu Kstar Energy Technology Co., Ltd.

Add: KSTAR (Vietnam) Co., Ltd.