

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 400, integrated
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	Model Number
Base Model	244M36400I-04V(BJ-A3A0112AA)
series Model	244M36400I-04V(BJ-A3A0113AA)
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	10.56 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	387.4 W	Nominal current x Nominal voltage
	and power fade (in %)	34%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.19 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	34%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:10.76A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0001-01

2024/08/05

Market Model		Giant EnergyPak Smart 400, integrated
Model Number	Base Model	244M36400I-04V(BJ-A3A0112AA)
	series Model	244M36400I-04V(BJ-A3A0113AA)
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	10.56 Ah 30%
2	Power (in W) and power fade (in %)	387.4 W 34%
3	Internal resistance (in Ω) and resistance increase (in %)	0.19 Ω 34%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 500, integrated
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	Model Number
Base Model	244M36500I-12V(BJ-A3A0104AA)
series Model	244M36500I-12V(BJ-A3A0103AA)
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	12.92 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	472.3 W	Nominal current x Nominal voltage
	and power fade (in %)	12%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.17 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	12%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:13.12A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0003-01

2024/08/05

Market Model		Giant EnergyPak Smart 500, integrated
Model Number	Base Model	244M36500I-12V(BJ-A3A0104AA)
	series Model	244M36500I-12V(BJ-A3A0103AA)
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	12.92 Ah 30%
2	Power (in W) and power fade (in %)	472.3 W 12%
3	Internal resistance (in Ω) and resistance increase (in %)	0.17 Ω 12%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 625, integrated
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	Model Number
Base Model	244M36625I-04V(BJ-A3A0097AA)
series Model	244M36625I-04V(BJ-A3A0105AA)
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	16.15 Ah	charge:41.8V-4A 375mA cut at 20°C discharge:3.28A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	590.4 W	Nominal current x Nominal voltage
	and power fade (in %)	10%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.15 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	10%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 375mA cut at 20°C discharge:3.28A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 375mA cut at 25°C discharge:16.4A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0005-01

2024/08/05

Market Model		Giant EnergyPak Smart 625, integrated
Model Number	Base Model	244M36625I-04V(BJ-A3A0097AA)
	series Model	244M36625I-04V(BJ-A3A0105AA)
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	16.15 Ah 30%
2	Power (in W) and power fade (in %)	590.4 W 10%
3	Internal resistance (in Ω) and resistance increase (in %)	0.15 Ω 10%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 625, integrated
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	Model Number
Base Model	244M36625I-05V(BJ-A3A0097AA)
series Model	244M36625I-05V(BJ-A3A0105AA)
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	16.15 Ah	charge:41.8V-4A 375mA cut at 20°C discharge:3.28A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	590.4 W	Nominal current x Nominal voltage
	and power fade (in %)	10%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.15 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	10%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 375mA cut at 20°C discharge:3.28A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 375mA cut at 25°C discharge:16.4A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0006-01

2024/08/07

Market Model		Giant EnergyPak Smart 625, integrated
Model Number	Base Model	244M36625I-05V(BJ-A3A0097AA)
	series Model	244M36625I-05V(BJ-A3A0105AA)
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	16.15 Ah 30%
2	Power (in W) and power fade (in %)	590.4 W 10%
3	Internal resistance (in Ω) and resistance increase (in %)	0.15 Ω 10%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 750, integrated
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	Model Number
Base Model	244M36750I-02V(BJ-ALA0005AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	19.4 Ah	charge:42V-4.8A 300mA cut at 20°C discharge:3.96A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	712.8 W	Nominal current x Nominal voltage
	and power fade (in %)	9%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.14 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	9%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:42V-4.8A 300mA cut at 20°C discharge:3.96A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:42V-4.8A 300mA cut at 25°C discharge:19.8A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0007-01

2024/08/05

Market Model		Giant EnergyPak Smart 750, integrated
Model Number	Base Model	244M36750I-02V(BJ-ALA0005AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah)	19.4 Ah
	and capacity fade (in %)	30%
2	Power (in W)	712.8 W
	and power fade (in %)	9%
3	Internal resistance (in Ω)	0.14 Ω
	and resistance increase (in %)	9%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 780, integrated, 48V
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	Model Number
Base Model	GPID48780-01(BJ-AND0001AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	16.005 Ah	charge:54.6V-4A 300mA cut at 20°C discharge:3.261A to 32.5V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	763.1 W	Nominal current x Nominal voltage
	and power fade (in %)	4%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.15 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	4%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:54.6V-4A 300mA cut at 20°C discharge:3.261A to 32.5V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:54.6V-4A 300mA cut at 25°C discharge:16.305A to 32.5V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0008-01

2024/07/31

Market Model		Giant EnergyPak Smart 780, integrated, 48V
Model Number	Base Model	GPID48780-01(BJ-AND0001AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	16.005 Ah 30%
2	Power (in W) and power fade (in %)	763.1 W 4%
3	Internal resistance (in Ω) and resistance increase (in %)	0.15 Ω 4%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 800, integrated
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	Model Number
Base Model	GPID36800-01(BJ-ANA0001AA)
series Model	GPID36800-01(BJ-ANA0001BA)
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	21.23 Ah	charge:42V-6A 400mA cut at 20°C discharge:4.326A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	778.7 W	Nominal current x Nominal voltage
	and power fade (in %)	3%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.13 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	3%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:42V-6A 400mA cut at 20°C discharge:4.326A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:42V-6A 400mA cut at 25°C discharge:21.63A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0009-01

2024/08/05

Market Model		Giant EnergyPak Smart 800, integrated
Model Number	Base Model	GPID36800-01(BJ-ANA0001AA)
	series Model	GPID36800-01(BJ-ANA0001BA)
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	21.23 Ah 30%
2	Power (in W) and power fade (in %)	778.7 W 3%
3	Internal resistance (in Ω) and resistance increase (in %)	0.13 Ω 3%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart Compact 500, integrated
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	Model Number
Base Model	GPIS36500-01(BJ-A3A0099AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	12.92 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	472.3 W	Nominal current x Nominal voltage
	and power fade (in %)	11%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.18 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	11%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:13.12A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0011-01

2024/07/31

Market Model		Giant EnergyPak Smart Compact 500, integrated
Model Number	Base Model	GPIS36500-01(BJ-A3A0099AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	12.92 Ah 30%
2	Power (in W) and power fade (in %)	472.3 W 11%
3	Internal resistance (in Ω) and resistance increase (in %)	0.18 Ω 11%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 250, intube
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	Model Number
Base Model	GPII36250-01(BJ-A3A0094AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	6.48 Ah	charge:42V-2A 300mA cut at 20°C discharge:1.316A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	236.9 W	Nominal current x Nominal voltage
	and power fade (in %)	12%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.32 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	12%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:42V-2A 330mA cut at 20°C discharge:1.316A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:42V-2A 330mA cut at 25°C discharge:6.58A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0012-01

2024/07/31

Market Model		Giant EnergyPak Smart 250, intube
Model Number	Base Model	GPII36250-01(BJ-A3A0094AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	6.48 Ah 30%
2	Power (in W) and power fade (in %)	236.9 W 12%
3	Internal resistance (in Ω) and resistance increase (in %)	0.32 Ω 12%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 400, intube
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	Model Number
Base Model	GPII36400-01(BJ-ANA0002AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	10.56 Ah	charge:42V-5.4A 300mA cut at 20°C discharge:2.152A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	387.4 W	Nominal current x Nominal voltage
	and power fade (in %)	4%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.2 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	4%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:42V-5.4A 300mA cut at 20°C discharge:2.152A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:42V-5.4A 300mA cut at 25°C discharge:10.76A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0013-01

2024/07/26

Market Model		Giant EnergyPak Smart 400, intube
Model Number	Base Model	GPII36400-01(BJ-ANA0002AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	10.56 Ah 30%
2	Power (in W) and power fade (in %)	387.4 W 4%
3	Internal resistance (in Ω) and resistance increase (in %)	0.2 Ω 4%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 500, side release
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	Model Number
Base Model	GPTT36500-01(BJ-A3A0125AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	13.2 Ah	charge:42V-4A 300mA cut at 20°C discharge:2.68A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	482.4 W	Nominal current x Nominal voltage
	and power fade (in %)	12%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.17 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	12%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:42V-4A 300mA cut at 20°C discharge:2.68A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:42V-4A 300mA cut at 25°C discharge:13.4A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0014-01

2024/07/26

Market Model		Giant EnergyPak Smart 500, side release
Model Number	Base Model	GPTT36500-01(BJ-A3A0125AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	13.2 Ah 30%
2	Power (in W) and power fade (in %)	482.4 W 12%
3	Internal resistance (in Ω) and resistance increase (in %)	0.17 Ω 12%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart 600, side release
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	Model Number
Base Model	GPTT36600-01(BJ-ANA0004AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	16.005 Ah	charge:42V-4A 300mA cut at 20°C discharge:3.261A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	587 W	Nominal current x Nominal voltage
	and power fade (in %)	4%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.14 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	4%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:42V-4A 300mA cut at 20°C discharge:3.261A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:42V-4A 300mA cut at 25°C discharge:16.305A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0015-01

2024/07/26

Market Model		Giant EnergyPak Smart 600, side release
Model Number	Base Model	GPTT36600-01(BJ-ANA0004AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	16.005 Ah 30%
2	Power (in W) and power fade (in %)	587 W 4%
3	Internal resistance (in Ω) and resistance increase (in %)	0.14 Ω 4%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Plus 250
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	Model Number
Base Model	244M36250F-03V(BJ-A3A0068AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	6.33 Ah	charge:41.8V-2A 300mA cut at 20°C discharge:1.286A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	231.5 W	Nominal current x Nominal voltage
	and power fade (in %)	13%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.31 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	13%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-2A 300mA cut at 20°C discharge:1.286A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-2A 300mA cut at 25°C discharge:6.43A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0016-01

2024/07/31

Market Model		Giant EnergyPak Plus 250
Model Number	Base Model	244M36250F-03V(BJ-A3A0068AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	6.33 Ah 30%
2	Power (in W) and power fade (in %)	231.5 W 13%
3	Internal resistance (in Ω) and resistance increase (in %)	0.31 Ω 13%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 400, side release
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	Model Number
Base Model	244M36400F-11V(BJ-A3A0107AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	10.56 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	387.4 W	Nominal current x Nominal voltage
	and power fade (in %)	36%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.18 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	36%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:10.76A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0017-01

2024/07/30

Market Model		Giant EnergyPak 400, side release
Model Number	Base Model	244M36400F-11V(BJ-A3A0107AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	10.56 Ah 30%
2	Power (in W) and power fade (in %)	387.4 W 36%
3	Internal resistance (in Ω) and resistance increase (in %)	0.18 Ω 36%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 500, side release
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	Model Number
Base Model	244M36500F-15V(BJ-A3A0066AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	12.92 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	472.3 W	Nominal current x Nominal voltage
	and power fade (in %)	12%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.15 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	12%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:13.12A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0018-01

2024/08/07

Market Model		Giant EnergyPak 500, side release
Model Number	Base Model	244M36500F-15V(BJ-A3A0066AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	12.92 Ah 30%
2	Power (in W) and power fade (in %)	472.3 W 12%
3	Internal resistance (in Ω) and resistance increase (in %)	0.15 Ω 12%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 300, carrier
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	Model Number
Base Model	GPCA36300-01(BJ-A1A0112AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	8.2 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:1.68A to 27.5V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	302.4 W	Nominal current x Nominal voltage
	and power fade (in %)	13%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.21 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	13%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:1.68A to 27.5V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:8.4A to 27.5V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0019-01

2024/07/31

Market Model		Giant EnergyPak 300, carrier
Model Number	Base Model	GPCA36300-01(BJ-A1A0112AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	8.2 Ah 30%
2	Power (in W) and power fade (in %)	302.4 W 13%
3	Internal resistance (in Ω) and resistance increase (in %)	0.21 Ω 13%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 400, carrier
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	Model Number
Base Model	GPCA36400-01(BJ-A3A0111AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	10.56 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	387.4 W	Nominal current x Nominal voltage
	and power fade (in %)	36%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.18 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	36%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:10.76A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0020-01

2024/07/30

Market Model		Giant EnergyPak 400, carrier
Model Number	Base Model	GPCA36400-01(BJ-A3A0111AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	10.56 Ah 30%
2	Power (in W) and power fade (in %)	387.4 W 36%
3	Internal resistance (in Ω) and resistance increase (in %)	0.18 Ω 36%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 500, carrier
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	Model Number
Base Model	GPCA36500-01(BJ-A3A0083AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	12.92 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	472.3 W	Nominal current x Nominal voltage
	and power fade (in %)	12%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.17 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	12%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:13.12A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0021-01

2024/07/30

Market Model		Giant EnergyPak 500, carrier
Model Number	Base Model	GPCA36500-01(BJ-A3A0083AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	12.92 Ah 30%
2	Power (in W) and power fade (in %)	472.3 W 12%
3	Internal resistance (in Ω) and resistance increase (in %)	0.17 Ω 12%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Plus 200
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	Model Number
Base Model	GPWB36200-01(BJ-ANA0003AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	5.26 Ah	charge:42V-2.68A 300mA cut at 20°C discharge:1.072A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	193 W	Nominal current x Nominal voltage
	and power fade (in %)	5%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.35 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	5%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:42V-2.68A 300mA cut at 20°C discharge:1.072A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:42V-2.68A 300mA cut at 25°C discharge:5.36A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0022-01

2024/07/31

Market Model		Giant EnergyPak Plus 200
Model Number	Base Model	GPWB36200-01(BJ-ANA0003AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	5.26 Ah 30%
2	Power (in W) and power fade (in %)	193 W 5%
3	Internal resistance (in Ω) and resistance increase (in %)	0.35 Ω 5%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 250, side release
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	Model Number
Base Model	244M36250F-04V(BJ-A3A0106AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	6.33 Ah	charge:41.8V-2A 300mA cut at 20°C discharge:1.286A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	231.5 W	Nominal current x Nominal voltage
	and power fade (in %)	13%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.31 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	13%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-2A 300mA cut at 20°C discharge:1.286A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-2A 300mA cut at 25°C discharge:6.43A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0023-01

2024/07/30

Market Model		Giant EnergyPak 250, side release
Model Number	Base Model	244M36250F-04V(BJ-A3A0106AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	6.33 Ah 30%
2	Power (in W) and power fade (in %)	231.5 W 13%
3	Internal resistance (in Ω) and resistance increase (in %)	0.31 Ω 13%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak Smart Compact 500, Sub
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	Model Number
Base Model	GPIS36500-01(BJ-A3A0101AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	12.92 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	472.3 W	Nominal current x Nominal voltage
	and power fade (in %)	11%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.18 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	11%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:13.12A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0024-01

2024/07/31

Market Model		Giant EnergyPak Smart Compact 500, Sub
Model Number	Base Model	GPIS36500-01(BJ-A3A0101AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	12.92 Ah 30%
2	Power (in W) and power fade (in %)	472.3 W 11%
3	Internal resistance (in Ω) and resistance increase (in %)	0.18 Ω 11%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 500, top pull
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	Model Number
Base Model	244M36500F-08(BJ-A3A0043AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	12.92 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	472.3 W	Nominal current x Nominal voltage
	and power fade (in %)	12%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.17 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	12%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:13.12A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0025-01

2024/08/05

Market Model		Giant EnergyPak 500, top pull
Model Number	Base Model	244M36500F-08(BJ-A3A0043AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah)	12.92 Ah
	and capacity fade (in %)	30%
2	Power (in W)	472.3 W
	and power fade (in %)	12%
3	Internal resistance (in Ω)	0.17 Ω
	and resistance increase (in %)	12%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 500, top pull
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	Model Number
Base Model	244M36500F-09(BJ-A3A0045AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	12.92 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	472.3 W	Nominal current x Nominal voltage
	and power fade (in %)	12%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.17 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	12%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.62A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:13.12A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0026-01

2024/07/31

Market Model		Giant EnergyPak 500, top pull
Model Number	Base Model	244M36500F-09(BJ-A3A0045AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	12.92 Ah 30%
2	Power (in W) and power fade (in %)	472.3 W 12%
3	Internal resistance (in Ω) and resistance increase (in %)	0.17 Ω 12%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 400, top pull
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	Model Number
Base Model	244M36400F-08(BJ-A3A0051AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	10.56 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	387.4 W	Nominal current x Nominal voltage
	and power fade (in %)	36%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.18 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	36%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:10.76A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0027-01

2024/08/05

Market Model		Giant EnergyPak 400, top pull
Model Number	Base Model	244M36400F-08(BJ-A3A0051AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah)	10.56 Ah
	and capacity fade (in %)	30%
2	Power (in W)	387.4 W
	and power fade (in %)	36%
3	Internal resistance (in Ω)	0.18 Ω
	and resistance increase (in %)	36%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.

Article 10 : Performance and durability requirements for EV/Industrial(>2kWh)/LMT

Market Model	Giant EnergyPak 400, top pull
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	Model Number
Base Model	244M36400F-09(BJ-A3A0052AA)
series Model	---
series Model	---
series Model	---
series Model	---

REGULATION(EU)2023/1542

Battery category	Light means of transport battery(LMT)
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*Annex IV:

- 1) Part A: Parameters related to electrochemical performance and durability.
- 2) Part B: Elements for explanation of the measurements made for parameters listed in Part A.

		1) Part A	2) Part B
1	Rated capacity (in Ah)	10.56 Ah	charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
	and capacity fade (in %)	30%	After 300cyc capacity fade (70% recovery capacity)
2	Power (in W)	387.4 W	Nominal current x Nominal voltage
	and power fade (in %)	36%	Internal resistance increase (in %) = Power fade (in %)
3	Internal resistance (in Ω)	0.18 Ω	0.5C-10sec at SOC50%
	and resistance increase (in %)	36%	After 300cyc internal resistance increase
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%	Discharge capacity/Charge capacity ; charge:41.8V-4A 300mA cut at 20°C discharge:2.11A to 25V at 20°C
5	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year	Cycle Condition; charge:41.8V-4A 300mA cut at 25°C discharge:10.76A to 25V at 25°C

(*) IEC61960-3

(**) Conditions agreed in the delivery specification

Performance and durability requirements

No.CAR-S0028-01

2024/07/31

Market Model		Giant EnergyPak 400, top pull
Model Number	Base Model	244M36400F-09(BJ-A3A0052AA)
	series Model	---
	series Model	---
	series Model	---
Battery category		Light means of transport battery(LMT)

		Parameter
1	Rated capacity (in Ah) and capacity fade (in %)	10.56 Ah 30%
2	Power (in W) and power fade (in %)	387.4 W 36%
3	Internal resistance (in Ω) and resistance increase (in %)	0.18 Ω 36%
4	Where applicable, energy round trip efficiency and its fade (in %)	99.90%
5 ※	The expected lifetime of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	300cyc/1year

※This value is the expected value in which specialists are able to reuse adequately.
It is not indicative of performance.