



English

Specification sheet 48V

Datasheet

Battery characteristics

Product name	48V 60Ah	48V 100Ah	48V 200Ah
Article code	300002631	300002632	300002633
Nominal voltage	51.2V	51.2V	51.2V
Nominal capacity	60Ah	100Ah	200Ah

Battery dimensions

Product name	48V 60Ah	48V 100Ah	48V 200Ah
Weight	30kg	50kg	75kg
Dimensions (LxWxH)	34x33x26 cm	51x35x26 cm	60x42x24 cm
Terminals	2x plus / 2x minus	2x plus / 2x minus	2x plus / 2x minus
Terminal size	M10	M10	M10
Impedance	<300 mΩ	<300 mΩ	<300 mΩ

Battery specifications

Product name	48V 60Ah	48V 100Ah	48V 200Ah
Max. continues charge current	30A	50A	100A
Max. continues discharge current	120A	125A	200A
Maximum charge voltage	58.4V	58.4V	58.4V
Discharge cut-off voltage	35.2V	35.2V	35.2V
Handles	Yes	Yes	Yes
IP-rating	IP65	IP65	IP65

Battery temperatures – general

Environment	Details	Minimum	Maximum
Operating temperature	Charge	0°C	45°C
	Discharge	-20°C	65°C
Storage temperature	1 month	-20°C	60°C
	3 months	-20°C	45°C
	12 months	-20°C	20°C

Discharge temperature	-20°C	-10°C	0°C	23°C	60°C
Discharge capacity	50%	60%	80%	100%	95%

Battery management system (BMS)

Each battery has an integrated Battery Management System (BMS). A BMS is the electronic system that manages a rechargeable battery such as by protecting the battery from operating outside its safe operating area, monitoring its state, calculating secondary data, reporting that data, controlling its environment, authenticating it and balancing it.

Specifications	Details	48V 60Ah	48V 100Ah	48V 200Ah
Over charge protection	Detection voltage (V)	3.7	3.7	3.7
	Detection delay time (ms)	200	200	200
	Release voltage (V)	3.5	3.5	3.5
Over discharge protection	Detection voltage (V)	2.3±0.1	2.3±0.1	2.3±0.1
	Release voltage (V)	2.7±0.1	2.7±0.1	2.7±0.1
Over current protection	Detection current (A)	300	360	600
	Detection delay time (ms)	150	150	150
	Release conditions	Cut short circuit	Cut short circuit	Cut short circuit
Short protection	Protection condition	Exterior short circuit	Exterior short circuit	Exterior short circuit
	Release condition	Close short circuit	Close short circuit	Close short circuit

Specifications	Details	48V 60Ah	48V 100Ah	48V 200Ah
Over current protection (charging)	Charging current normale range (A)	10 - 30	20 - 50	20 - 50
	Protection condition (A)	>30	>50	>200
	Release condition	Disconnect charger	Disconnect charger	Disconnect charger
Overheat protection	Protection condition (°C)	75	75	75
	Release condition (°C)	65	65	65
Inside resistance	Main loop electrify resistor	$V_{gs} = 10V; RDS \leq 60m\Omega$	$V_{gs} = 10V; RDS \leq 60m\Omega$	$V_{gs} = 10V; RDS \leq 60m\Omega$
Consumption	Consumption normal operation [μA]	≤ 80	≤ 80	≤ 80

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