

ARTS

ENERGY

The ARTS Energy Flat Power battery is developed to stringent safety rules to ensure user security, with an associated charger to optimise its life duration.

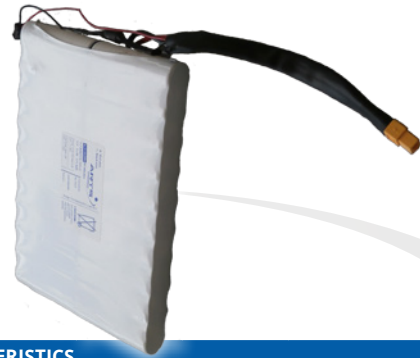
The battery is constructed with the highest quality cells in the market with safety protection electronics, developed and qualified by ARTS Energy battery experts.

FEATURES

- Discharge up to 20A continuous
- Built in protection board
 - Overcharge protected
 - Overdischarge protected
 - Overcurrent protected
 - Short circuit protected
 - Overtemperature protected
- Built in balancing system
- Standard connector
- Designed and produced in Europe
- UN38.3 certified for transportation

BENEFITS

- High durability (up to 800 cycles)
- Long lasting due to cell balancing
- Safe product as fully protected
- Evolutionary product with improved performance and capacity and the assurance of the ARTS Energy branded design.



ELECTRICAL CHARACTERISTICS

Rated energy (Wh)	159.1
Nominal voltage (V)	37
Nominal capacity (Ah)*	4.50
Rated capacity (Ah)*	4.30
Typical 1 KHz impedance (mΩ)	200

* at 0.2C discharge.

MECHANICAL CHARACTERISTICS

Length, Width, Thickness (mm)	201 / 136 / 28
Connector type & Wire length (mm)	AMASS XT60 - 120
Weight (Gr)	1000

CHARGING CONDITIONS

CCCV with end of charge by current cut-off or timer	80mA ± 20mA or T = C/Ich + 1h
Nominal charging voltage (V)	41.75 ± 0.25
Maximum charging current Ich (A)	2.15
Recommended charging temperature (°C)	10~45
Operating temperature (°C)	0~55

DISCHARGE CONDITIONS

Application recommended voltage cut-off (V)	> 27.5
Maximum continuous current (A)	20
Operating temperature (°C)	0~55

SAFETY PROTECTIONS INCLUDED

Cell over charge detection voltage (V)	4.225 ± 0.025
Cell over discharge detection voltage (V)	2.5 ± 0.050
Cell charge inhibit detection voltage (V)	1.5 ± 0.050
Over charge current detection (A)	5 ± 1
Over discharge current detection (A)	25 ± 4
Over temperature detection temperature (°C)	55 ± 5
Under temperature detection temperature (°C)	0 ± 2.5

LIFE TIME

Nb of cycles @ 23° C, STD ch, STD disch.	> 500
--	-------

LI-ION

FLAT POWER BATTERY PACK

Safe and long life Li-Ion battery and charger

FLAT POWER BATTERY PACK

Safe and long life Li-Ion battery and charger

APPLICATIONS

- Perfect for riders who depend on their battery strongly performing and giving safe secure freedom

STORAGE

- Storage temperature 0°C to +30°C
- Store battery around 30% state of charge

ARTS ENERGY CHARGER

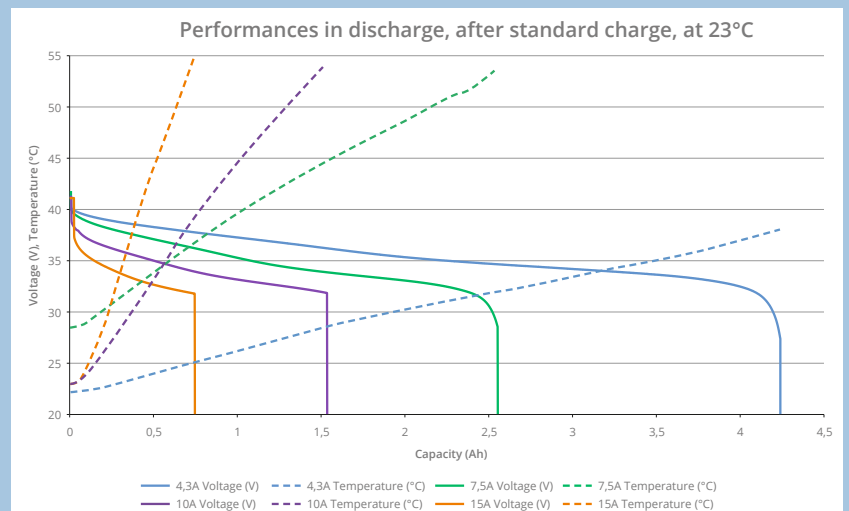
- Fully matched to the ARTS Energy battery
- 100V-220V-VAC input
- Charging duration 3 hours
- Safe charge and optimised performances
- Connector M12, 3 pins, ext.diam. 9mm
- Customised connector on request



RECOMMENDATIONS

- The battery accepts limited regenerative charge (do not go down a slope with fully charged battery)
- The battery is protected at 55°C in charge or discharge, do not drive full power for too long

Performances:



Using another charger, characteristics must be as follows

CONTENTS		CRITERIA
Charge method	CCCV with current end of charge	
Battery over discharge reset		CC mode or Hicup mode
CC Charge voltage range		Lower than 26V to end of charge voltage
End of charge voltage	CV Nominal voltage	41.75V + 0.7V (*) = 42.45V ± 0.25V
Charge current	CC Nominal current	0.75A < 2.2A max
End of charge cut-off	Low current detection	100mA ± 30mA
Current after end of charge cut-off		-5mA < 0mA
Restart voltage		40.55V + 0.7V (*) = 41.25V ± 0.25V
Short-circuit protection		No safety issue
Over load protection		No safety issue

(*) If diode 6A10 from Diodes incorporated in spinboard

The operation of the battery pack must strickly be in accordance with ARTS Energy technical recommendations to obtain the performances stated by ARTS Energy.

Please consult ARTS Energy for utilisation outside specification.

Data in this document is subject to change without notice and become contractual only after written confirmation by ARTS Energy.



10, rue Ampère
Zone Industrielle - 16440 Nersac, France
Tél. +33(0)5 45 90 35 52 / 35 53
contact@arts-energy.com

Doc No.: 021-A-0217 - Edition: february 2017
ARTS Energy SAS. Stock capital 971.002
RCS Angoulême 792 635 013
Conception in FR by Alain Bruneaud Création



www.arts-energy.com