



Product Datasheet v.3 (feb-16)

24VDC | 39,6Ah LITHIUM-ION BATTERY



- 24V Battery Pack
- Capacity of 39,6Ah
- Easy and Safe Installation
- Rugged Stainless Steel Casing
- Low Self-discharge (< 5% / month)
- Long Service Life (+600 cycles)
- Low Weight

PACK SPECIFICATIONS

SUBJECT	VALUE
Voltage	24V (nominal)
Capacity	39,6 Ah
Cell configuration	18P7S
Cell type	18650 / 2200 mAh
Chemistry	Lithium-NMC
Cycle Life	>600 cycles (@80% DOD)
Self-Discharge	<5% / month
Dimensions	163 x 153 x 212 mm
Weight	8,66 Kg
Casing	Stainless steel
Enclosure	Waterproof
Connector	Anderson type (50A)
BMS	Integrated

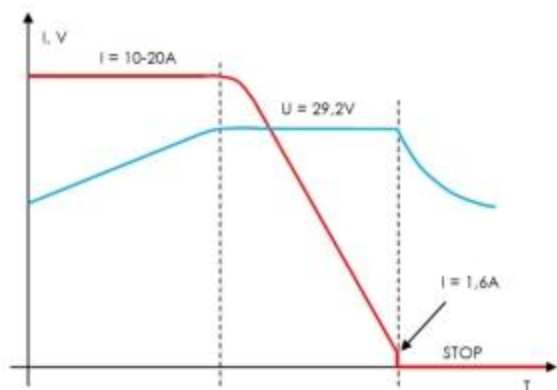
BMS SPECIFICATIONS

SUBJECT	VALUE
Charge ending voltage	29.2±0.1 V
Discharge ending voltage	19.6±0.1 V
Standard cont. charging current	10A
Fast cont. charging current	50A (Recommended current = 20A)
Standard cont. discharge current	30A
MAX. cont. discharge current	50A
Peak current	120A (<1S)
Current consumption	<2 (mA)

BMS CONFIGURATION

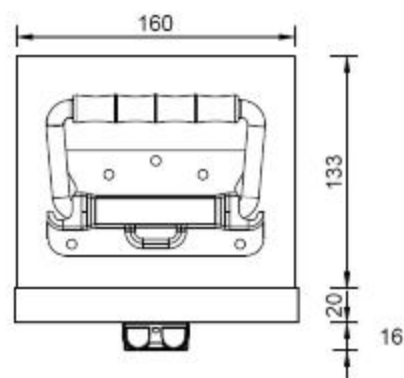
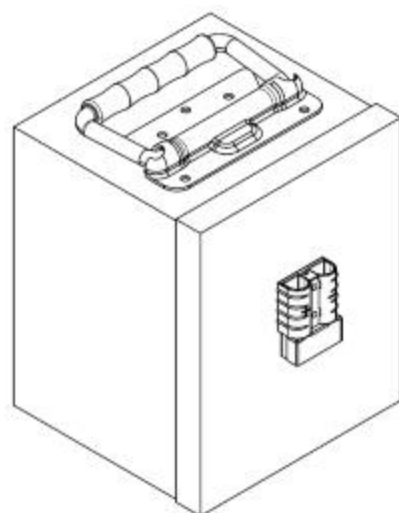
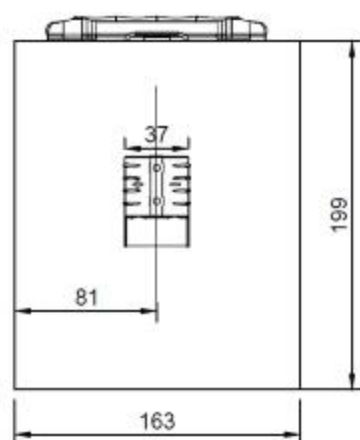
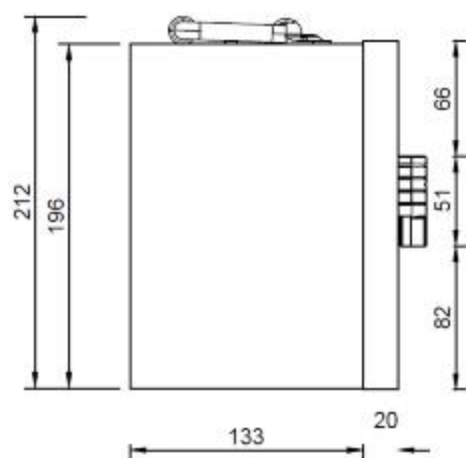
SUBJECT	SPECIFICATION	VALUE	TOLERANCE
Overcharge protection	Over charge voltage	4.25V	± 50 (mV)
	Output delay of overcharge	1000	± 100 (mS)
	Overcharge release voltage	4.15V	± 50 (mV)
Overdischarge protection	Overdischarge voltage	2.8V	± 50 (mV)
	Output delay of overdischarge	200	± 50 (mS)
	Overdischarge release voltage	3.0V	± 50 (mV)
Overcurrent protection	Overcurrent protection	120	± 10 (A)
	Output delay of overdischarge current protection	500	± 50 (mS)
	Qualification of release from overcurrent protection	Cut off load	
Short circuit protection	Short circuit protection current	200	± 10 (A)
	Output delay of short protection	200	± 100 (μ S)
	Qualification of release from short protection	Cut off load	
High temperature protection	High Temperature Protection ($^{\circ}$ C)	65	± 2 ($^{\circ}$ C)
	High Temperature Protection Release ($^{\circ}$ C)	55	± 2 ($^{\circ}$ C)

CHARGE PROFILE



Charging must be performed with a suitable lithium battery charger. First phase must be "constant current" (CC) – second phase must be "constant voltage" (CV). For an optimal life-span, the charging process should stop when the charging current is less than 2A. Trickle-charging or float-charging is not necessary, and can potentially shorten the life-span of the battery. When stored for a prolonged time, charging should be performed every 3 months, in order to maintain battery performance and capacity.

BATTERY DIMENSIONS (All units shown in mm, and are approximate)



29.06.2017

Test af LiNMC batteri type ADL24LINMC-39AH/50A

Afladning 29,2V til 21V med 10A => 4:03:27 målt kapacitet: 40,53Ah (C4)

Afladning 29,2V til 21V med 2A => 20:47:38 målt kapacitet: 42,30Ah (C20)

Rating 1 (R ₁)	20,8	Hrs
----------------------------	------	-----

Capacity (C ₁)	42,3	Ahrs
----------------------------	------	------

Rating 2 (R ₂)	4,058	Hrs
----------------------------	-------	-----

Capacity (C ₂)	40,53	Ahrs
----------------------------	-------	------

Peukert's Exponent = n =

1,026857782

$$\frac{\text{Log}(R_2/R_1)}{\text{Log}(C_1/R_1) - \text{Log}(C_2/R_2)}$$