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AN011
Recommended batteries and DC/DC converter

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Application Note - AN016

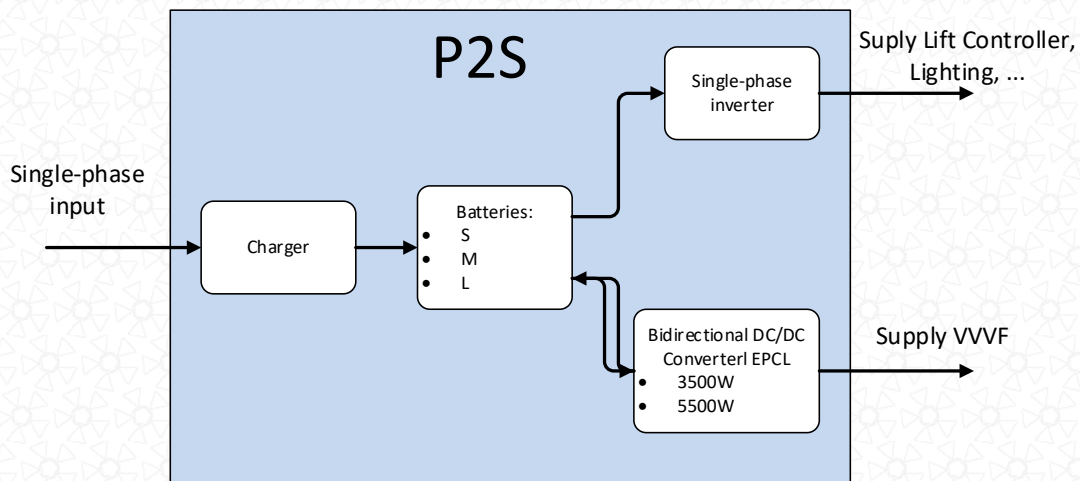# P2S – Recommended batteries and DC/DC converter

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Introduction

P2S device from epic power is comprised, between other elements, of batteries and DC/DC converter. These batteries and the DC/DC converter could be ones or another depending on the electric consumption of every installation.

Depending on the parameters as the total travel distance and the maximum load of the lift is recommended to use ones or another batteries with the objective of increase batteries life, make a reasonable number of trips in the case of a power outage and obtain enough number of maximum starters per hour.

Again, depending on the same parameters the speed of the lift in the trips with maximum consumption could be one or another depending on the DC/DC converter selected.

P2S Configuration options:

Depending on the parameters showed below batteries and DC/DC Converter will be selected:

- Total travel distance [m]
- Maximum load [kg]

Batteries

epic power has different batteries sizes (talking about accumulate energy).

Description	Internal REF
SMALL batteries (S)	M.1010.0001
MEDIUM batteries(M)	M.1010.0002
LARGE batteries (L)	M.1010.0003

DC/DC Converter

epic power has several DC/DC Converters capables of being installed in parallel in order to achieve higher power outputs. This document talks about options of 3500W and 5500W but not about another options like 7000W, 9000W and 11000W also available. If you are interested in one of this version contact with sales@epicpower.es

Description	Nominal Power [W]	Internal REF
EPCL 3k5 648	3500	F.1005.0002
EPCL 5k5 648	5500	F.1005.0003

The selection of the converter stablishes the maximum power provided towards the VVVF so this could affect to the speed of the elevator. To know more about that please check the point **3.5. MAXIMUM CONSUMED POWER ADJUSTMENT** in the Installation guide of the P2S Series

Recommended batteries using 3500W DC/DC – EPCL 3k5 648

Max Load	225kg	300kg	375kg	450kg	525kg	630kg
3	S	S	S	S	S	S
4	S	S	S	S	S	S
5	S	S	S	S	S	S
6	S	S	S	S	S	S
7	S	S	S	S	S	S
8	S	S	S	S	S	S
9	S	S	S	S	S	S
10	S	S	S	S	S	S
11	S	S	S	S	S	S
12	S	S	S	S	S	S
13	S	S	S	S	S	S o M
14	S	S	S	S	S	S o M
15	S	S	S	S	S	S o M
16	S	S	S	S	S o M	M
17	S	S	S	S	S o M	M
18	S	S	S	S	S o M	M
19	S	S	S	S o M	M	M
20	S	S	S	S o M	M	M
21	S	S	S	S o M	M	M
22	S	S	S o M	S o M	M	M
23	S	S	S o M	M	M	M o L
24	S	S	S o M	M	M	M o L
25	S	S	S o M	M	M	M o L
26	S o M	S o M	S o M	M	M	L
27	S o M	S o M	M	M	M	L
28	S o M	S o M	M	M	M o L	L
29	S o M	S o M	M	M	M o L	L
30	S o M	S o M	M	M	M o L	L
	225*	300*	375*	450*	525*	630*

Table 1 – Batteries with 3500W DC/DC Converter

225* → All trips would be a nominal speed
300* → All trips would be a nominal speed
375* → All trips would be a nominal speed
450* → Variable speed between 0.8 and 1m/s (or nominal speed). Indicative data
525* → Variable speed between 0.65 and 1m/s (or nominal speed). Indicative data
630* → Variable speed between 0.5 and 1m/s (or nominal speed). Indicative data

Note: Nominal speed will be 1m/s or for example if the selected nominal speed is 1.6m/s the nominal speed will be 1.6m/s without problem.

This functionality of the variable speed in every trip has to be allowed by the VVVF.

Recommended batteries using 5500W DC/DC– EPCL 5k5 648

Max Load	450kg	525kg	630kg	800kg	1000k
3	M	M	M	M	M
4	M	M	M	M	M
5	M	M	M	M	M
6	M	M	M	M	M
7	M	M	M	M	M
8	M	M	M	M	M
9	M	M	M	M	M
10	M	M	M	M	M
11	M	M	M	M	M
12	M	M	M	M	M
13	M	M	M	M	M
14	M	M	M	M	M
15	M	M	M	M	M o L
16	M	M	M	M	M o L
17	M	M	M	M	M o L
18	M	M	M	M	L
19	M	M	M	M o L	L
20	M	M	M	M o L	L
21	M	M	M	M o L	L
22	M	M	M	M o L	L
23	M	M	M	L	L
24	M	M	M	L	L
25	M	M	M	L	L
26	M	M	M	L	L
27	M	M	M	L	L
28	M	M	M	L	L**
29	M	M	M	L	L**
30	M	M	M o L	L	L**
31	M	M	M o L	L	L**
32	M	M	M o L	L	L**
33	M	M	M o L	L	L**
34	M	M	M o L	L	L**
35	M	M o L	M o L	L	L**
36	M	M o L	L	L**	L**
37	M	M o L	L	L**	L**
38	M o L	M o L	L	L**	L**
39	M o L	M o L	L	L**	L**
40	M o L	M o L	L	L**	L**
41	M o L	M o L	L	L**	L**
42	M o L	M o L	L	L**	L**
43	M o L	L	L	L**	L**
44	M o L	L	L	L**	L**
45	M o L	L	L	L**	L**
	450*	525*	630*	800*	1000*

Total travel distance [m]

Table 2 – Batteries with 5500W DC/DC Converter

450* → All trips would be a nominal speed
525* → All trips would be a nominal speed
630* → All trips would be a nominal speed
800* → Variable speed between 0.75 and 1m/s (or nominal speed). Indicative data
1000* → Variable speed between 0.5 and 1m/s (or nominal speed). Indicative data
L** → In this situation please write to epic power (support@epicpower.es)
*** In the case with there are two differents kind of batteries recommended, please contact to epic power (support@epicpower.es) sending total travel distance, lift maximum charge, reference to the frequency controller used and estimated lift traffic data

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