

SUMMARY REPORT

Summary Report No.	YF5S005/2019	Date of Issued	July 3, 2019
Product Description	Battery Management System	Number of Page	1
Model Number	NPSP-01 BMS	Series Model(s)	JD1004AA (BL520-3611) JD1004BA (BL15-3611)
Applicant	TD HITECH ENERGY INC.	Manufacturer	TD HITECH ENERGY INC.
Address of Applicant	NO. 21, SHUILI RD., EAST DIST., HSINCHU CITY 300, TAIWAN	Address of Manufacturer	NO. 21, SHUILI RD., EAST DIST., HSINCHU CITY 300, TAIWAN
Evaluation Report Cited	YF50005/2019	Applicable Standard	EN ISO 13849-1:2015

Conclusion

Based on our issued Evaluation Report(s) for client's product according to EN ISO 13849-1:2015, the conclusion is summarized as below.

According to clause 4.3.22 – Table 34 of EN 15194:2017, the following required performance level should be achieved.

Safety function	PL _r	Safety function ID
Prevention of an unintentional self-start of the EPAC	PL _r c	Not applicable
Prevention of electric motor assistance functions without pedalling, and without activation of the start-up assistance mode	PL _r c	Not applicable
Prevention of risk of fire in case of management system failure for batteries with capacity above 100 Wh	PL _r c	SF01 to SF08

The ability of the client's product to perform safety functions is expressed through the determination of the performance level shown below.

Safety Function ID	PL _r	Category	MTTF _D (year)	DC _{avg}	CCF (point)	PFH _D (1/h)	Performance Level	Verdict PL ≥ PL _r
SF01	PL _r c	Cat. 2	100	87.23%	95	2.6E-7	PL c	Yes
SF02	PL _r c	Cat. 2	100	87.14%	95	2.6E-7	PL c	Yes
SF03	PL _r c	Cat. 2	30.18	89.79%	95	1.2E-6	PL c	Yes
SF04	PL _r c	Cat. 2	100	87.14%	95	2.6E-7	PL c	Yes
SF05	PL _r c	Cat. 2	100	87.23%	95	2.6E-7	PL c	Yes
SF06	PL _r c	Cat. 2	100	87.14%	95	2.6E-7	PL c	Yes
SF07	PL _r c	Cat. 2	30.18	89.79%	95	1.2E-6	PL c	Yes
SF08	PL _r c	Cat. 2	100	87.14%	95	2.6E-7	PL c	Yes

These safety functions also meet the following requirements according to EN ISO 13849-1:2015.

- safety-related software complied with clause 4.6 and Annex J.
- systematic failure complied with Annex G.

Per our opinions, the evaluation results indicate that the designed safety functions of the client's product achieve PL c ≥ PL_r c.

**Signed for and on behalf of
SGS TAIWAN Ltd.**



Terence Jer-Horng Hsieh
Department Manager

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