

LITHIUM BATTERY MODULE INFORMATION & APPROVED SUPPLIERS

This document is written for the following area(s) checked below:			
<input checked="" type="checkbox"/> R&D	<input checked="" type="checkbox"/> Production	<input checked="" type="checkbox"/> Repair & Maintenance	<input checked="" type="checkbox"/> Customer

1.0 PURPOSE

The purpose of this specification is to provide battery module information and detail approved supplier information for APS customers.



WARNING: Failure to observe lithium battery safety procedures may result in serious injury. Improper handling of battery packs can result in cell venting (gases), exposure to chemicals, combustion, or explosion. Please read and comply with all safety guidelines.



WARNING: All employees must undergo lithium battery safety training. Contact your supervisor if you have not received training prior to working with battery packs.

2.0 REFERENCE DOCUMENTS

- 60213 BATTERY MODULE, 10 X "DD" CELL-150C, HIGH RATE
- 60759 BATTERY MODULE, 10X "DD" CELL (150 DEG. C, MODERATE RATE)
- 61167 BATTERY MODULE, 10 X 'DD', 165°C MODERATE RATE
- 60663 BATTERY MODULE, 10X "DD" CELL (180 C, HIGH RATE)
- DOC-EHS-10014 LITHIUM BATTERY SAFETY

3.0 APPROVED BATTERY SUPPLIERS

3.1 Southwest Electronic Energy Corp.

823 Buffalo Run
Missouri City, TX 77489
800.231.3612 voice
281.240.4000 voice
281.240.5672 fax

www.swe.com

David Obanion (Sales)
Leon Adams (VP Sales)
LeShelle Davis (Customer Project Manager)
Chad Miller (Engineer Associate)
Alex Marin (QA Supervisor)
Sales Contact

dobanion@swe.com
ladams@swe.com
ldavis@swe.com
cmiller@swe.com
amarin@swe.com
po@swe.com

3.2 Excell Battery Company

1638 W Sam Houston Pkwy N

LITHIUM BATTERY MODULE INFORMATION & APPROVED SUPPLIERS

Houston, TX 77043

713.647.0600 voice

713.647.8915 fax

www.excellbattery.com

Mark Kroeker (President)

W.F. Tripicchio (Sales Manager, Houston)

trip@excellbattery.com

Bob Fay (Branch Manager)

bfay@excellbattery.com

Brian Larson (VP Engineering & Sales)

3.3 Moorfield International Ltd.

Russell Street

Johnstone, Renfrewshire, UK. PA58BZ

+44 (0) 1505 335559 voice

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www.moorfieldint.com

Ron Roger (Sales and General Manager)

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3.4 Innova Power Solutions, Inc.

(Formerly Universal Power Solutions, Inc.)

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Calgary, AB T2H 2K1

(403) 207-5607 voice

(877) 363-5607 toll free

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16641 West Hardy Road

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4.0 BATTERY SUMMARY

4.1 MWD Batteries

Battery	APS P/N	Volts	Minimum Operating Temperature	Cell Data	Rated Capacity (A·hrs)	Replace-able Fuse	Internal Fuse	Recommended Applications
150° C High Rate 10 Cell	60213	36	0°C	Exium 32126H150 ElectroChem 4416-400	24 23	4A	5A	Recommended Battery Module for with all SureShot™ tools strings to 150°C
150° C Moderate Rate 10 Cell	60759	36	0°C	ElectroChem 33-127-150MR Tracer 4912ESAD-165	26 24	4A	Not Supplied	Approved – <i>but not preferred</i> - may not provide optimal life - for SureShot™ MWD Applications to 150°C
165° C Moderate Rate 10 Cell	61167	36	23°C	ElectroChem 33-127-165MR Tracer 4912ESAD-165	25 23	5A	Not Supplied	Recommended Battery Module for all high temperature applications to 165°C
180° C High Rate 10 Cell	60663	36	50°C	Engineered Power LIRDD-180HT	13	5A	7A	Recommended Battery Module for very high temperature applications to 175°C

Some of the APS Approved Battery Pack Vendors have their own proprietary Battery Monitoring and Logging Circuitry. If the end user wants to incorporate these circuits in their tool-strings – refer to the APS Drawing for the Battery Pack type for details. APS Technology does not provide interface boxes or support these features but does not discourage their use.

4.2 Other APS BATTERY Packs

Battery	APS P/N	Volts	Cell Data	Rated Capacity (A·hrs)	Fuse	Recommended Applications/Comments
Battery Pack, 3 AA Cell, RSM Electronics	61581	10.8V	ElectroChem PMX 150 AA (86282)	1.6 A·hr	1A	RSM Backup Battery
Battery Assy, 4 x AA	60537	7.2V	ElectroChem PMX 150 AA (82150)	3.2 A·hr	1A	VMS Gen 1
Battery Assy, 4 x AA	60537-001				1A	VMS Gen 2
Battery Pack, RSM Electronics Chassis	61367	10.95V	ElectroChem 10-25-150LR (85404)	0.5 A·hr	1A	Obsolete (RSM)
Battery Pack, C-Cell, Moderate Rate, WTB	85141	14.4V	ElectroChem 25-48-150 MR (85722)	6.0 A·hr		For WTB
Battery Pack, C-Cell, High Rate, WTB	14642-001	14.4V	Engineered Power, LIRC-HT (89669)	6.0 A·hr	1A	For WTB
BATTERY ASSY - VMS	60752					Need Datasheet / Info
BATTERY MODULE, 10 X "DD" CELLS, 165°C, MODERATE RATE W / MONITORING CIRCUITRY	61788					Obsolete....
BATTERY, LITHIUM - HI-TEMP, 120mAh - 3.0V	82594	3V	Panasonic BR1632	120 mA·hr	NA	Watch Battery
BATTERY MODULE, 4DD CELL - WTB (SCD)	86015					
BATTERY, NICKEL-METAL-HYDRIDE, 3A - 6 CELL - 7.2 V	81752	7.2V				Need Datasheet / Info
BATTERY ASSY, T/A - AVD EA	60612					Need Datasheet / Info

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5.0 DOCUMENT REVISION HISTORY

Rev	Date	Completed By	Description	ECO No.	Checked By
A	04/26/2009	C. Perry	Initial Release	09-147	J. Hickey
B	05/29/2009	C. Perry	Added Universal Power Solutions as a supplier	09-202	J. Hickey
C	07/21/2011	C. Perry	Update to include P/N 61167 - 165° C Moderate Rate Pack; reformatted for customer procurement	10-283	J. Hickey
D	08/26/2013	L. Daley	Added Moorfield International Ltd.(3.3) And Universal Power Solutions, Inc. (UPSI) (3.4); delete P/N DOC-SPEC-11139 and P/N 61022; revise the BATTERY SUMMARY MWD Batteries table	13-297	C. Perry
E	11/20/2013	L. Leonhardt	Added E-mails to suppliers and Cell Data to Battery Module Summary. Update Fuse information. Revise part number descriptions to match vantage in reference section and add SPEC-11152	13-368	G. Daigle
F	07/09/2014	M. Pomerleau	Changed Contact Information for Southwest and Universal Power Solutions, Inc.	14-188	C. Perry
G	06/16/2015	M. Pomerleau	Added / Changed Notes for Recommended Battery Types to table in ¶4.0	15-144	C. Perry
H	01/25/2016	M. Pomerleau	Updated Contact Information for Vendors	16-002	C. Perry
J	06/23/2017	M. Pomerleau	Added DOC-EHS-10014 "Battery Safety" to Reference Documents. Added New Safety Graphic to Document	17-141	C. Perry
K	12/07/2018	M. Pomerleau	Removed Charger as a supplier	18-340	C.Perry
L	04/02/2019	M. Pomerleau	Added ElectroChem 4416-400 to 150°C High Rate Approved Cells	19-084	C.Perry

Related Product Lines: Batteries