

△ 1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.

2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.

3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

△4. A MINIMUM OF 39.37 Inches [1000mm] FRONT, 7.87 Inches [200mm] TOP CLEARANCE REQUIRED. 3.94 Inches [100mm] REAR CLEARANCE IS REQUIRED ONLY FOR SEISMIC ANCHORING INSTALLATION. CLEARANCE DIMENSIONS ARE FOR AIRFLOW AND SERVICE ACCESS ONLY.

△ 5. ALL DIMENSIONS EXCLUDES SCREW PROJECTION OUTSIDE THE ENCLOSURE.

6. CABLE ENTRY IS FROM TOP OF THE UNIT.

△ 7. REFER TO TABLE FOR APPLICABLE SKUS & WEIGHT DETAILS. WEIGHT OF ONE BATTERY MODULE IS 36.38 Ib [16.5 kg].

8. COLOR: RAL9003, GLOSS LEVEL 85%.

9. PROTECTION CLASS: IP20

10. OPERATING TEMPERATURE: 64 - 82°F [18 - 28°C] TO OPTIMIZE THE LIFE OF BATTERY, IT IS RECOMMENDED TO MAINTAIN 77°F [25°C].

△11. THIS INFORMATION PROVIDES APPROXIMATE CENTER OF GRAVITY CALCULATION. 12. BATTERY RACKS CAN BE CONNECTED SIDE BY SIDE AND BACK TO BACK. REFER TO INSTALLATION MANUAL FOR DETAILS.

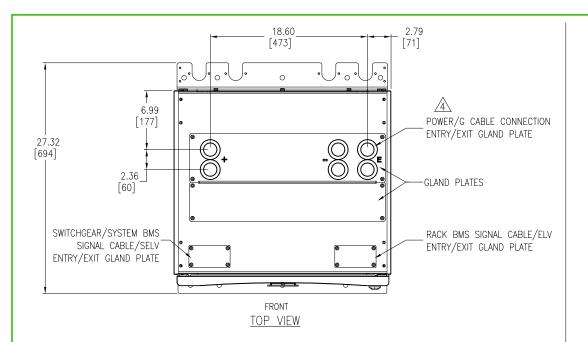


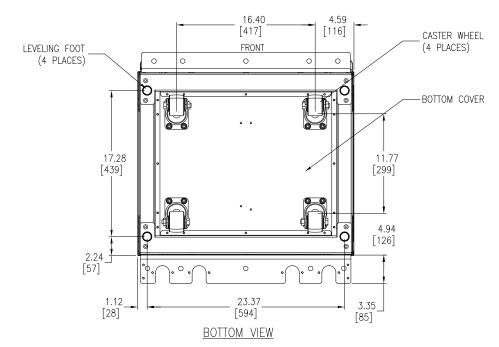
	SKU NUMBER	WEIGHT	IN lb [kg]	COG IN Inch [mm]					
		Empty	Fully	Empty Rack		F	ully loaded Rac	k	
		Rack	loaded	X-diection	Y-direction	z-direction	X-diection	Y-direction	Z-direction
	LIBSESMG17UL	465 [211]	1080 [490]	12.66 [321.5]	40.61 [1031.5]	12.25 [311.2]	12.56 [319]	39.89 [962.3]	10.99 [279.2]



IIILE:					١
Calavy	Lithium ion	Pattony pakingt	CVM	1.0	
Guluxy	GENERAL	Battery cabinet, ARRANGEMENT	GVIVI	UL	D
					7

TITLE:	DWG NO: LIBSESMGGVMUL	REV.
		U
Galaxy Lithium—ion Battery cabinet, GVM UL GENERAL ARRANGEMENT	DRAWN BY: JAYAPRAKASH 27-MAY-21	THIRD
		ANGLE
PROJECT: SUBMITTAL DRAWING SHEET 1 OF 11	APPROVED Birred XIA/JEFFREY P 31-MAY-21	PROJECTION





NOTES:

- 1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
- 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- 3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

ARE REQUIRED TO BE USED.

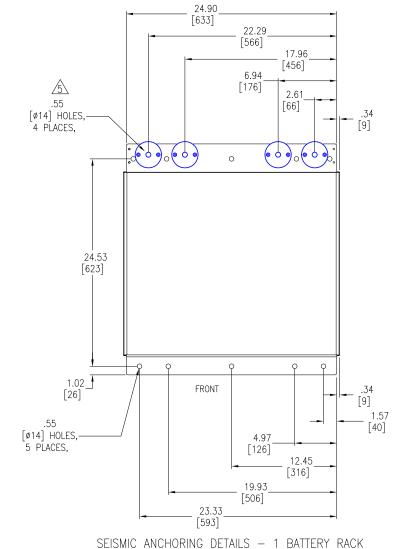
A4. DO NOT DRILL/PUNCH HOLES WITH THE GLAND PLATES INSTALLED. REMOVE THE GLAND PLATE FROM BATTERY RACK BEFORE DRILLING/PUNCHING. DRILL/PUNCH HOLES ACCORDING TO THE LABEL ON THE GLAND PLATE.

REMOVE THESE GLAND PLATES FOR TOP HAT CABLE ENTRY INSTALLATION.

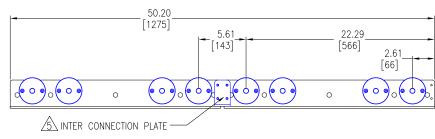
\$\triangle 5.\$ USE ACCESSORY KIT (OM-95331) TO ANCHOR THE UNIT IN SEISMIC LOCATION.

FOR SEISMIC ANCHORING, M12 SCREWS OF STRENGTH GRADE 8.8 HARDWARE

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SEISMIC ANCHORING DETAILS FOR MORE THAN ONE BATTERY RACK

Schneider & Electric

	DWG NO: LIBSESMGGVMUL			
Galaxy Lithium—ion Battery cabinet, GVM UL TOP/BOTTOM VIEW & ANCHORING DETAILS	DRAWN BY:	JAYAPRAKASH	27-MAY-21	
,	ENCINEED:	Frad VIA /DALII I	31_MAY_21	

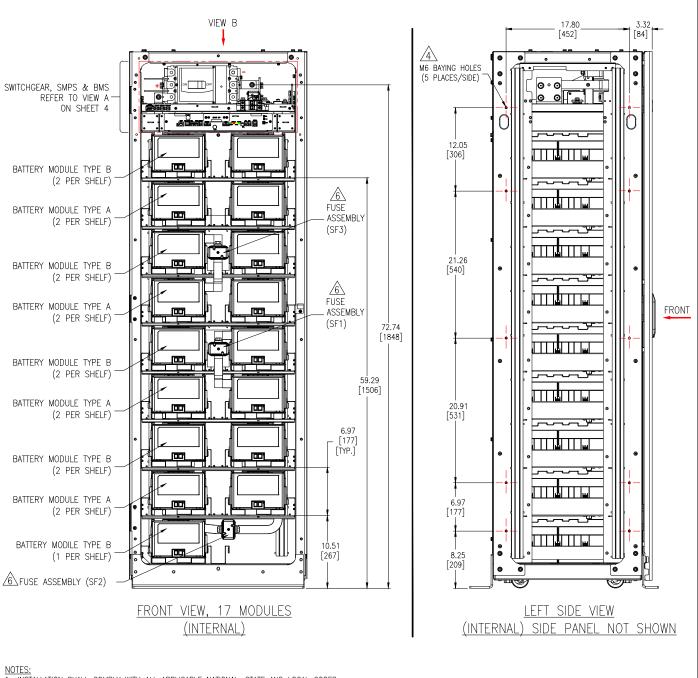
PROJECT: SUBMITTAL DRAWING SHEET 2 OF 11 APPROVED BIFred XIA/JEFFREY P 31-MAY-21

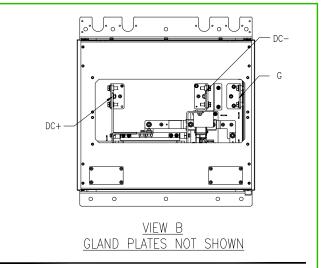
REV.

THIRD

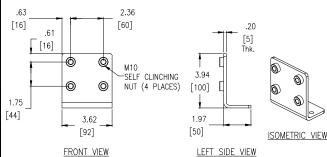
ANGLE

PROJECTION

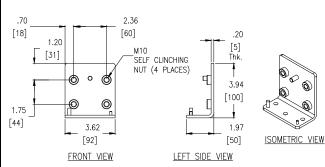




BUSBAR DETAILS



BUSBAR GROUND



BUSBAR DC+/DC-

NOTE: BOLT AND NUTS ARE PROVIDED WITH THE TERMINALS.

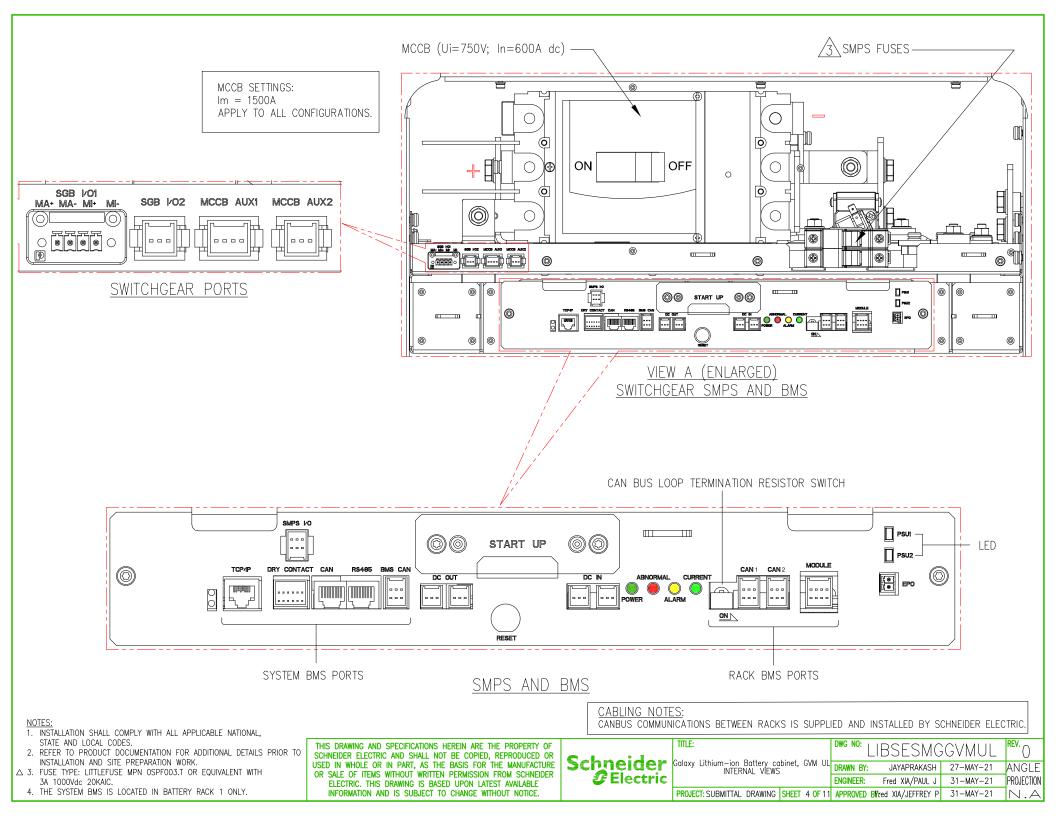
RECOMMENDED TORQUE FOR M10 BOLTS IS 22.13 Ib-ft [30Nm]

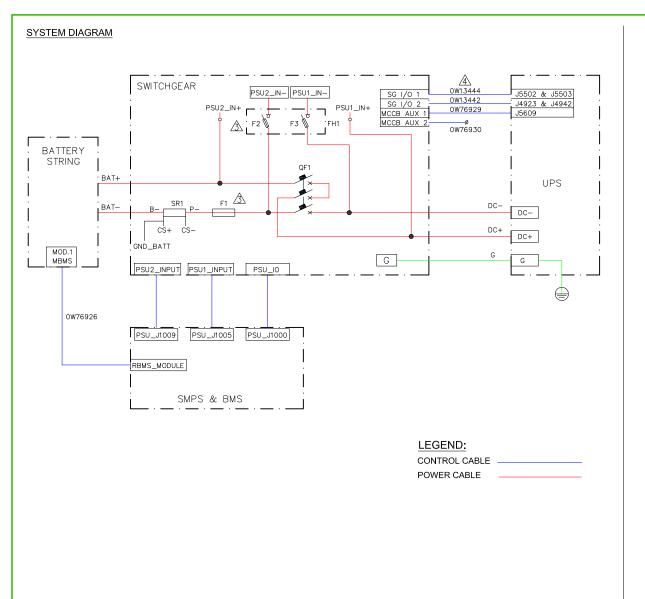
- 1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
- 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- 3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
- Δ 4. USE M6x16 SCREWS FOR MOUNTING MULTIPLE RACKS SIDE BY SIDE.
 REMOVE SIDE PANELS OF ADJACENT BATTERY RACKS WHILE BAYING.
- 5. THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.
- \triangle 6. FUSE TYPE: Merson MPN PC33UD69V500TF OR
- LITTLEFUSE MPN PSR033FL0500Z WITH 500A 600Vdc 100KAIC.

 7. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.



TITLE:	DWG NO: LIBSESMGGVMUL			REV. 1
Galaxy Lithium—ion Battery cabinet, GVM UL INTERNAL VIEWS	DRAWN BY:	RANJITHA	22-MAY-23	THIRE
	ENGINEER:	SHERRY L E	24-MAY-23	ANGLI
PROJECT: SUBMITTAL DRAWING SHEET 3 OF 11	APPROVED BY:	RICK ZHANG	24-MAY-23	PROJECTIO





CABLING DIAGRAM, 17 MODULES/STRING BATT-BATT+ + **6** −**9** MOD 17 MOD 1 рррр РРРР -• + **•** MOD 16 - **6** + **9** MOD 2 PPPP MOD 15 MOD 3 рррр рррр FUSE (SF3) · ⊕ + ⊕ □ - 💩 + 🍥 MOD 4 MOD 14 9999 фффф pppp + 0 - 6 MOD 5 рррр QQQQ FUSE · • + • MOD 12 -@ +@ MOD 6 PPPP рррр + 6 −@ MOD 11 MOD 7 QQQQ $\phi \phi \phi \phi$ pppp - 🗄 + 🍥 MOD 8 рррр фффф рррр + **6** −**9** MOD 9 FUSE рррр LEGEND: CONTROL CABLE BUS BAR

NOTES:

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- 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- \triangle 3. F1 FUSE TYPE: Merson MPN PC33UD69V500A or LITTLEFUSE MPN PSR033DS0500X WITH 500A 600Vdc 100KAlC.
- F2 & F3 FUSE TYPE: LITTLEFUSE MPN OSPF003.T OR EQUIVALENT WITH 3A 1000Vdc 20KAlC. \triangle 4. COMMUNICATION CABLES OF 5 Meter LENGTH ARE PROVIDED WITH THE BATTERY RACK.
- FOR REQUIREMENT OF ANY ADDITIONAL LENGTH OF CABLES,
 OPTIONAL COMMUNICATION CABLE KIT LIBSEOPTOOI WITH 25 Meter
 CABLE LENGTH IS AVAILABLE FOR PROCUREMENT.

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Galaxy	Lithium—ion SYSTEM CABLIN	Battery c DIAGRAM NG DIAGRAM		GVM	U
PROJE	CT: SUBMITTAL	DRAWING	SHEET	5 OF	1

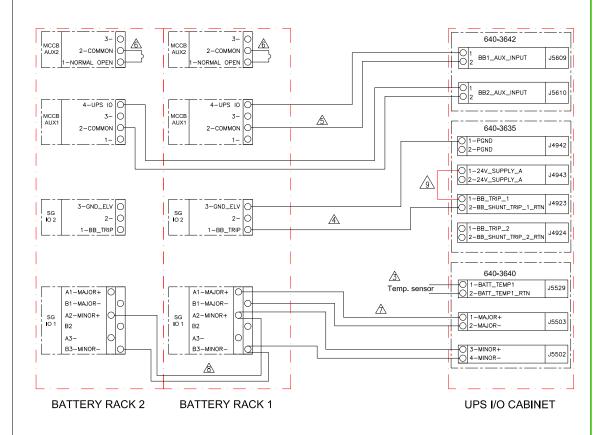
TITLE:

	DWG NO: LIBSESMGGVMUL				
UL	DRAWN BY:	JAYAPRAKASH	27-MAY-21	ANGL	
	ENGINEER:	Fred XIA/PAUL J	31-MAY-21	PROJECTIO	
11	APPROVED E	Fred XIA/JEFFREY P	31-MAY-21	N Z	

640-3642 мссв 2-COMMON AUX2 J5609 BB1_AUX_INPUT NORMAL OPEN BB2_AUX_INPUT J5610 4-UPS 10 (Δ AUX1 640-3635 2-COMMON J4942 O 2-PGND O 1-24V_SUPPLY_A O 2-24V_SUPPLY_A .14943 $\sqrt{9}$ 1-BB_TRIP_1 J4923 3-GND_ELV 0 2-BB_SHUNT_TRIP_1_RTN SG <u>A</u> 102 2-O 1-BB_TRIP_2 1-BB_TRIP (J4924 2-BB SHUNT TRIP 2 RTI 640-3640 3 1-BATT_TEMP1 Temp. sensor J5529 A1-MAJOR+ O 2-BATT_TEMP1_RTN B1-MAJOR-Δ A2-MINOR+ SG IO 1) 1-MAJOR+ J5503 O 2-MAJOR-В2 R3-MINOR-→ J = MINOR+

INTERFACE DETAILS FOR GALAXY VM WHEN ONE BATTERY RACK CONNECTED TO UPS

INTERFACE DETAILS FOR GALAXY VM WHEN TWO BATTERY RACK CONNECTED TO UPS



	Cable Tray Installation		Conduit Connection		
UPS		Max Number of LIB		Max Number of LIB	
013	Recommended Cable Size	Racks connected	Recommended Cable Size	Racks connected	
		directly*		directly*	
	350kcmil (Positive, Negative, Ground)		Parallel 250kcmil at 75°C for		
GVM		2 Racks**	conduit connection with	2 Racks**	
			ETO Top Hat Option		

- * For 4 to 8 Racks, contact the ETO teams for the required Pull Boxes with Fuses/ DC disconnects.
- ** Based on 30°C ambient temperature as per NEC.
- 3 Racks need a Pull box if 2 holes cable lug is required.

 $Li-ion\ Battery\ Rack's\ short\ circuit\ rating\ RMS\ value\ is\ 2.9kA\ per\ rack\ and\ GVM\ limit\ is\ 10kA, the\ fuse\ protection\ shall\ cover\ the\ UPS\ short\ circuit\ limit.$

NOTES: 1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES

- 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- \triangle 3. INSTALL THE TEMPERATURE SENSOR OM-1160 PROVIDED WITH THE UPS IN THE BATTERY ROOM.
- \triangle 4. USE THE PROVIDED OW13442 TO CONNECT UPS BB_TRIP CONTACT.
- Δ 5. USE THE PROVIDED 0W76929 TO CONNECT MCCB $^{
 m AUX}$ 1 (THE FIRST ONE RACK OF A BANK) TO UPS.
- △ 6. USE THE PROVIDED OW76930 TO CONNECT MCCB AUX 2 CONTACT
- FOR LAST RACK IN A BANK.

 \$\triangle 7\$. USE THE PROVIDED OW13444 TO CONNECT MAJOR AND MINOR FAULT CONTACTS.
- riangle8. USE THE PROVIDED 0W76972 TO CONNECT MINOR FAULT ALARM CONTACTS.
- △9. SHORT PIN 1 IN J4923 AND J4943.

BATTERY RACK

10. THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.

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J5502

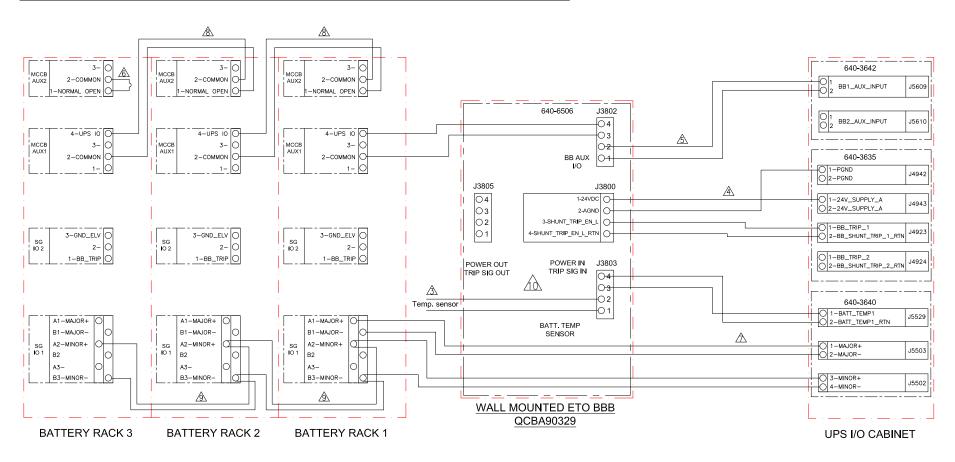
4-MINOR-

UPS I/O CABINET



TITLE:				REV.
Galaxy Lithium—ion Battery cabinet, GVM UL INTERFACE DETAILS—1 & 2 RACKS	DRAWN BY:	JAYAPRAKASH	27-MAY-21	ANGLE
	ENGINEER:	Fred XIA/PAUL J	31-MAY-21	PROJECTION
PROJECT: SUBMITTAL DRAWING SHEET 6 OF 11	APPROVED	BFred XIA/JEFFREY P	31-MAY-21	NA

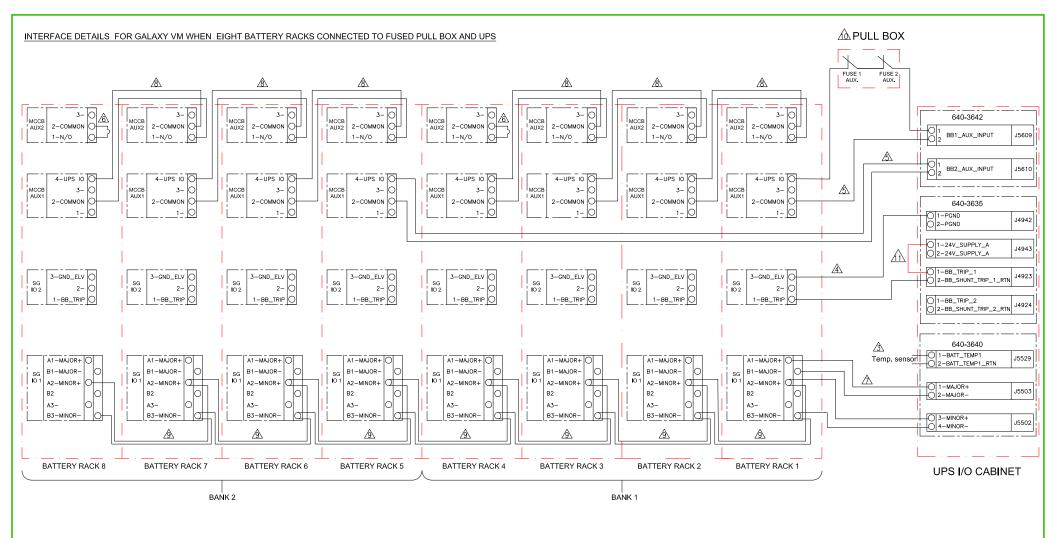
INTERFACE DETAILS FOR GALAXY VM WHEN THREE BATTERY RACK CONNECTED WITH BATTERY BREAKER BOX TO UPS



- 1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
- 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- △3. INSTALL THE TEMPERATURE SENSOR OM-1160 PROVIDED WITH THE UPS IN THE BATTERY ROOM.
- \triangle 4. USE THE PROVIDED OW13442 TO CONNECT UPS BB_TRIP CONTACT.
- △5. USE THE PROVIDED 0W76929 TO CONNECT MCCB AUX 1
 - (THE FIRST ONE RACK OF A BANK) TO UPS.
- \triangle 6. ÙSE THE PROVIDED 0W76930 TO CONNECT MCCB AUX 2 CONTACT
 - FOR LAST RACK IN A BANK.
- △ 7. USE THE PROVIDED 0W13444 TO CONNECT MAJOR AND MINOR FAULT CONTACTS.
- \triangle 8. USE THE PROVIDED 0W76934 TO CONNECT MCCB AUX SIGNALS IN SERIES.
- Δ 9. USE THE PROVIDED OW76972 TO CONNECT MINOR FAULT ALARM CONTACTS.
- △10. FOR THE CONNECTIONS MADE THROUGH A CENTRAL BATTERY BREAKER CABINET. THE UPS SENDS THE TRIP SIGNAL TO THE BATTERY BREAKER CABINET TO TRIP OFF THE BATTERY BREAKER CABINET.
 - (NOT TO THE LI-ION BATTERY RACKS).
- 11. THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.



TITLE:	LIBSESINIGGVINIUL			REV.
Galaxy Lithium—ion Battery cabinet, GVM UL INTERFACE DETAILS—WITH BBB	DRAWN BY: JA	AYAPRAKASH	27-MAY-21	ANGLE
	ENGINEER: Fred	XIA/PAUL J	31-MAY-21	PROJECTION
PROJECT: SUBMITTAL DRAWING SHEET 7 OF 1	APPROVED Bifred X	(IA/JEFFREY P	31-MAY-21	N.A



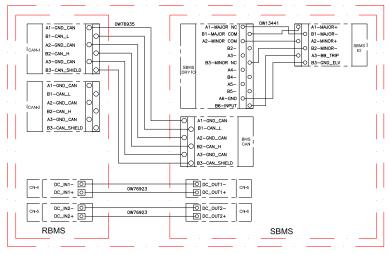
CONFIGURATION WITH 8 BATTERY RACKS SHOWN FOR ILLUSTRATION

- 1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES
- 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- \triangle 3. INSTALL THE TEMPERATURE SENSOR OM-1160 PROVIDED WITH THE UPS IN THE BATTERY ROOM.
- △ 4. USE THE PROVIDED OW13442 TO CONNECT UPS BB_TRIP CONTACT.
- \triangle 5. USE THE PROVIDED 0W76929 TO CONNECT MCCB AUX 1
 - (THE FIRST ONE RACK OF A BANK) TO UPS.
- USE THE PROVIDED 0W76930 TO CONNECT MCCB AUX 2 CONTACT
- FOR LAST RACK IN A BANK.
- △ 7. USE THE PROVIDED OW13444 TO CONNECT MAJOR AND
- MINOR FAULT CONTACTS.
- \triangle 8. USE THE PROVIDED OW76934 TO CONNECT MCCB AUX SIGNALS IN SERIES
- \triangle 9. USE THE PROVIDED OW76972 TO CONNECT MINOR FAULT ALARM CONTACTS.
- △10. PLEASE CONTACT APPLICATION ENGINEERING TEAM FOR THE REQUIRED CONNECTION METHODS WITH PULL BOX, FUSED PULL BOX AND etc.
- △11. SHORT PIN 1 IN J4923 AND J4943.
- 12. THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.



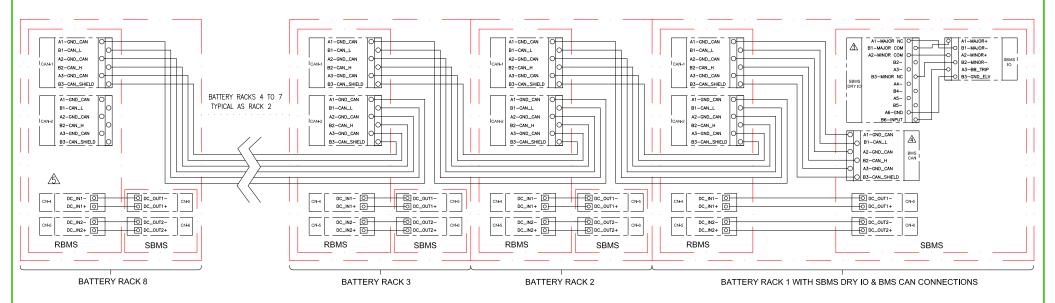
		IBSESMO	GVMUL	REV.
plaxy Lithium—ion Battery cabinet, GVM UL INTERFACE DETAILS—WITH PULL BOX	DRAWN BY:	JAYAPRAKASH	27-MAY-21	ANGLE
	ENGINEER:	Fred XIA/PAUL J	31-MAY-21	PROJECTION

BMS WIRING DETAILS FOR ONE BATTERY RACK



BATTERY RACK 1 WITH SBMS DRY IO & BMS CAN CONNECTIONS

BMS WIRING DETAILS UP TO EIGHT BATTERY RACKS

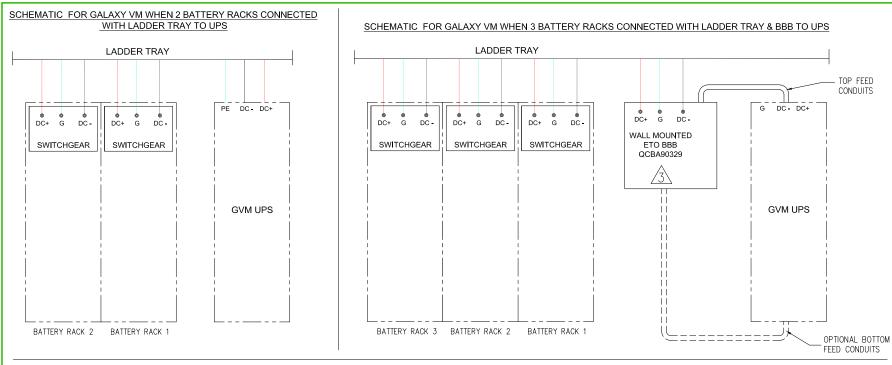


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- 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- △3. SBMS DRY IO IS CONNECTED IN BATTERY RACK 1 ONLY.
- △4. BMS CAN IS CONNECTED IN BATTERY RACK 1 ONLY.
- \triangle 5. SLIDE THE **CAN** BUS LOOP TERMINATION RESISTOR SWITCH TO ON POSITION IN THE LAST ONE BATTERY RACK

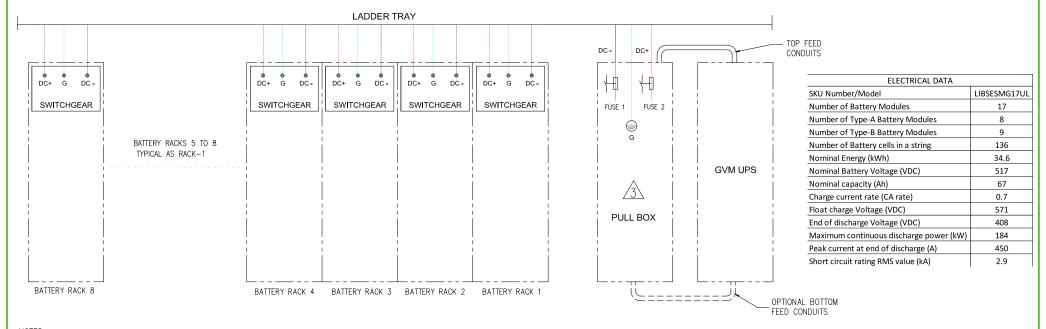


		DWG NO:
•	Galaxy Lithium—ion Battery cabinet, GVM UL INTERFACE DETAILS—SBMS TO RBMS	DRAWN BY:
		FNGINFFR:

DWG NO:	REV.		
DRAWN BY:	JAYAPRAKASH	27-MAY-21	ANGLE
ENGINEER:	Fred XIA/PAUL J	31-MAY-21	PROJECTION



SCHEMATIC FOR GALAXY VM WHEN 4 TO 8 BATTERY RACKS CONNECTED WITH LADDER TRAY & PULL BOX TO UPS



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- 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- 3. FOR 2 RACKS AND ABOVE, PLEASE CONTACT APPLICATION ENGINEERING TEAM FOR THE REQUIRED CONNECTION METHODS. REFER TO PAGE-6 FOR MORE DETAILS REGARDING CONNECTIONS. CONFIGURATIONS AND RACK'S SHORT CIRCUIT RATING RMS VALUE.

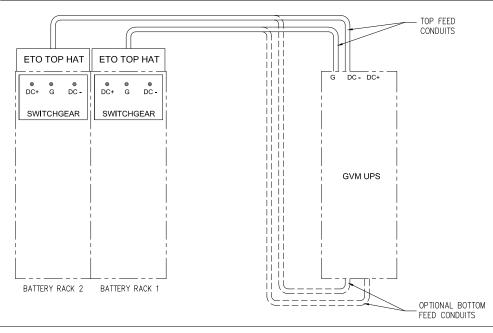
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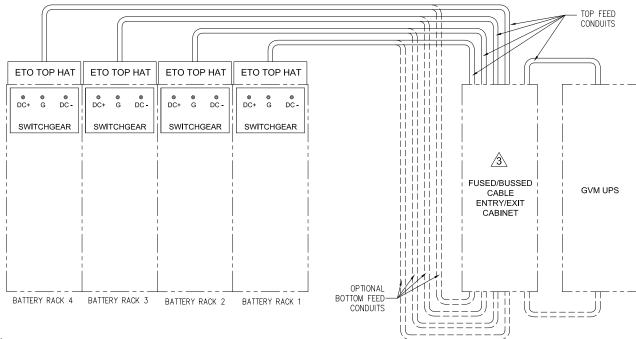
ı	11166
	Galaxy Lithium—ion Battery cabinet, GVM I SCHEMATIC DIAGRAM WITH LADDER

TITLE:	DWG NO:	LIBSESMG	GVMUL	REV.	
Galaxy Lithium—ion Battery cabinet, GVM UL SCHEMATIC DIAGRAM WITH LADDER					ANGLE
		ENGINEER:	Fred XIA/PAUL J	31-MAY-21	PROJECTION
	PROJECT: SUBMITTAL DRAWING SHEET 100F 11	APPROVED	BITred XIA/JEFFREY P	31-MAY-21	N.A

SCHEMATIC FOR GALAXY VM WHEN 2 BATTERY RACKS CONNECTED WITH TOP HAT & CONDUITS TO UPS



SCHEMATIC FOR GALAXY VM WHEN 4 BATTERY RACKS CONNECTED WITH TOP HAT, CONDUITS, BUSSED CABINET TO UPS



NOTES:

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2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.

 Δ 3. FOR 2 RACKS AND ABOVE, PLEASE CONTACT APPLICATION ENGINEERING TEAM FOR THE REQUIRED CONNECTION METHODS.

REFER TO PAGE-6 FOR MORE DETAILS REGARDING CONNECTIONS, CONFIGURATIONS AND RACK'S SHORT CIRCUIT RATING RMS VALUE.

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TITLE:
Galaxy Lithium—ion Battery cabinet, GVM SCHEMATIC DIAGRAM WITH CONDUITS

]	DWG NO: LIBSESMGGVMUL			
L	DRAWN BY:	JAYAPRAKASH	27-MAY-21	