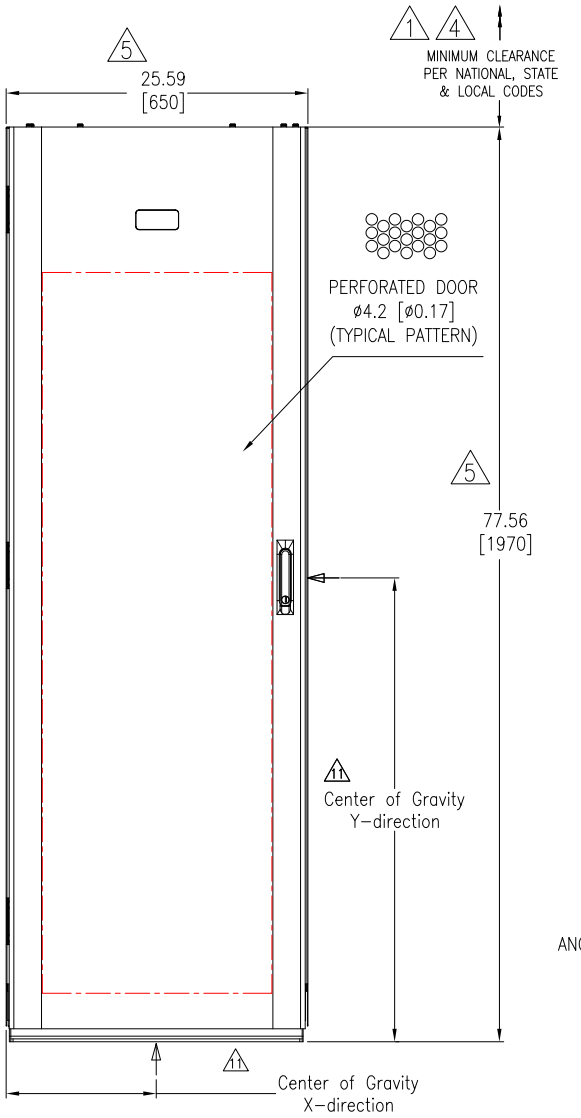
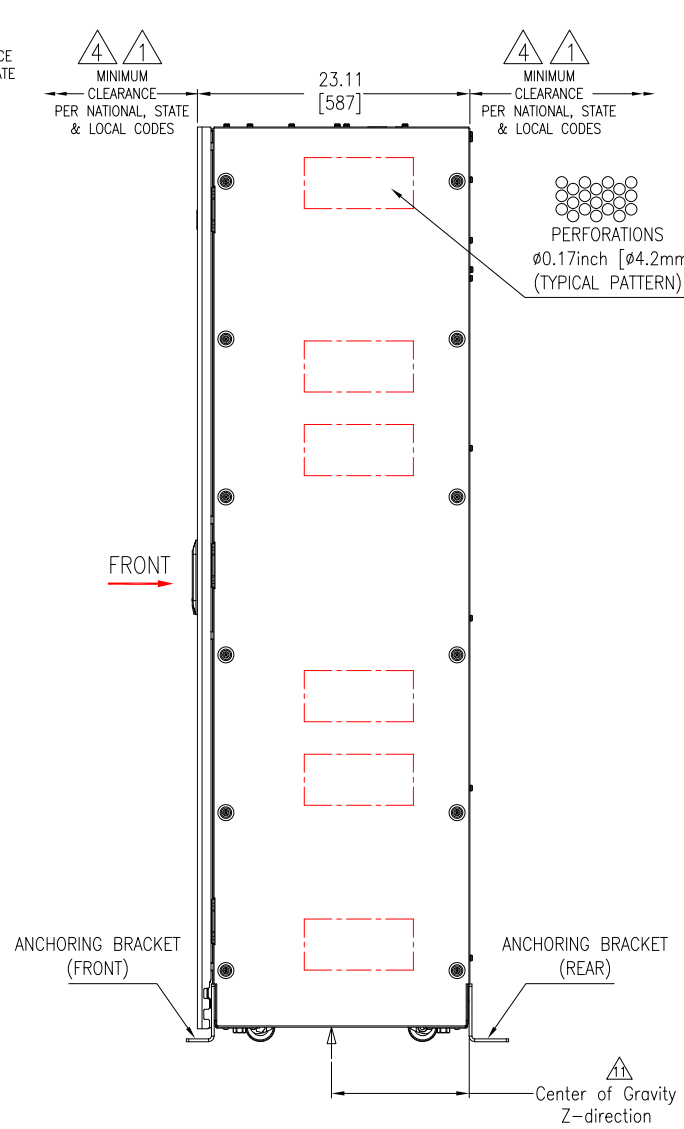
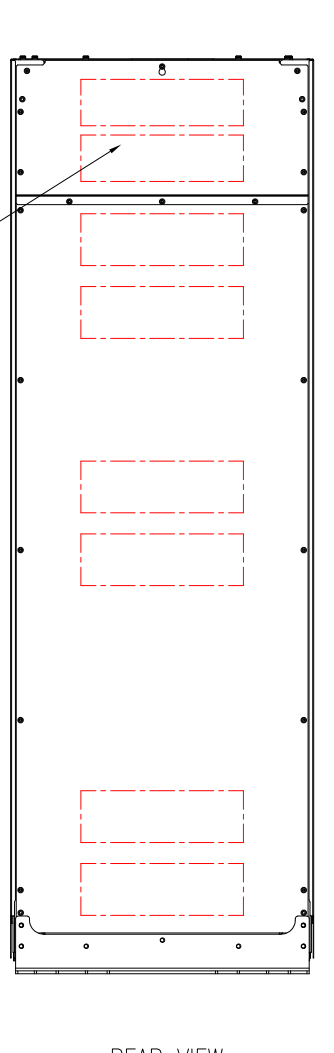


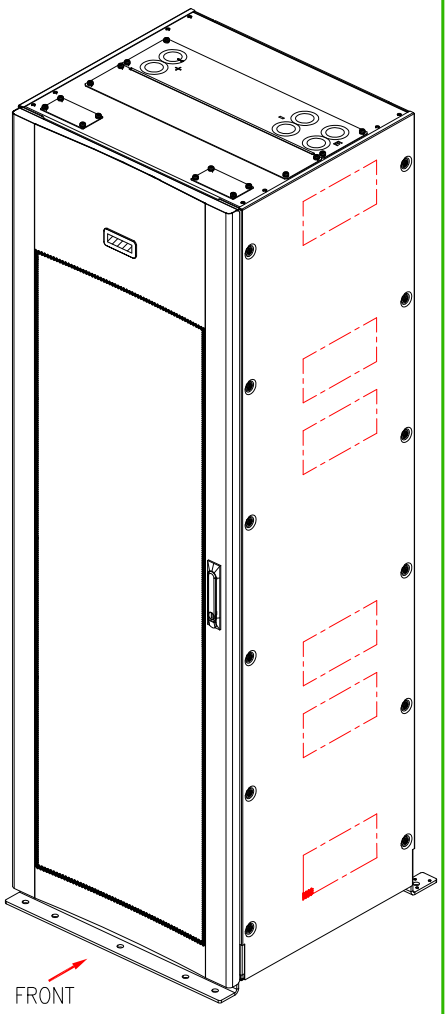
FRONT VIEW



RIGHT SIDE VIEW



REAR VIEW



ISOMETRIC VIEW

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] .
△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 lb [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.

△7 △11

SKU NUMBER	WEIGHT IN lb [kg]		COG IN Inch [mm]					
	Empty Rack	Fully loaded	Empty Rack			Fully loaded Rack		
			X-diection	Y-direction	z-direction	X-diection	Y-direction	Z-direction
LIBSESMG16UL	465 [211]	1036 [470]	12.66 [321.5]	40.61 [1031.5]	12.25 [311.2]	12.76 [324]	39.00 [990.7]	11.02 [279.9]
LIBSESMG17UL		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]

Schneider Electric

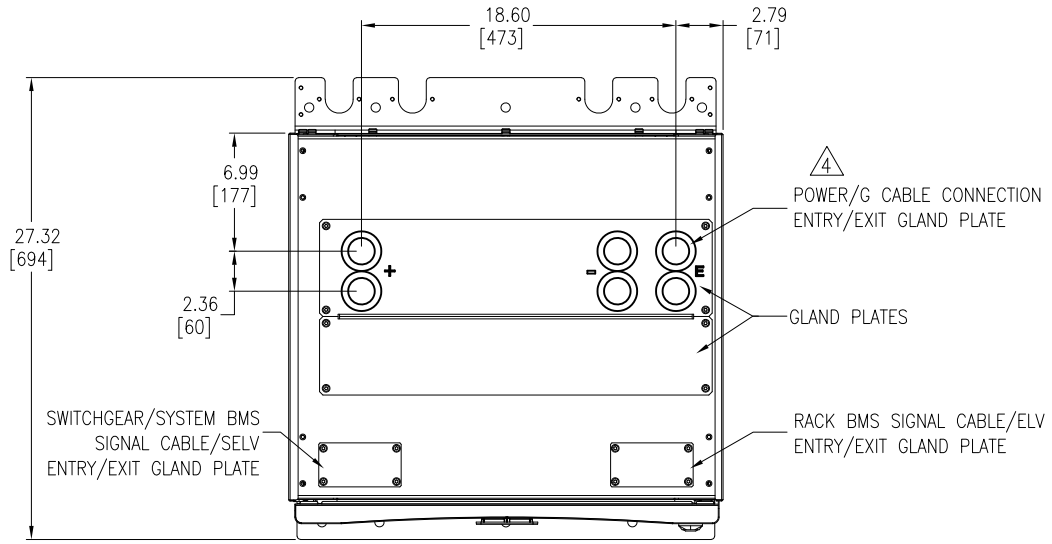
TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL
GENERAL ARRANGEMENT

DWG NO: LIBSESMGGVLUL REV. 0

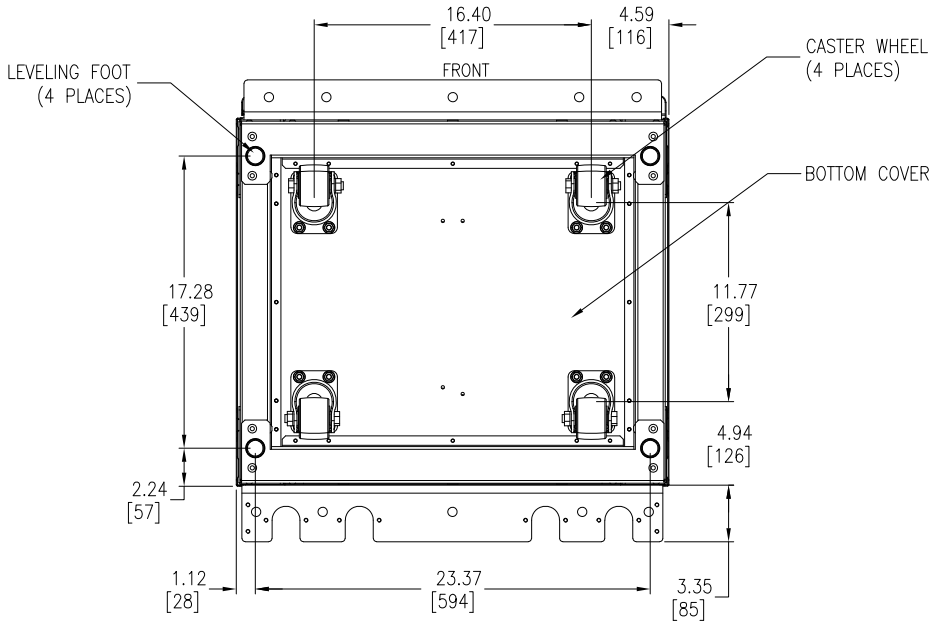
DRAWN BY:	JAYAPRAKASH	27-MAY-21
ENGINEER:	Fred XIA/PAUL J	31-MAY-21
APPROVED BY:	Fred XIA/JEFFREY P	31-MAY-21

PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 11

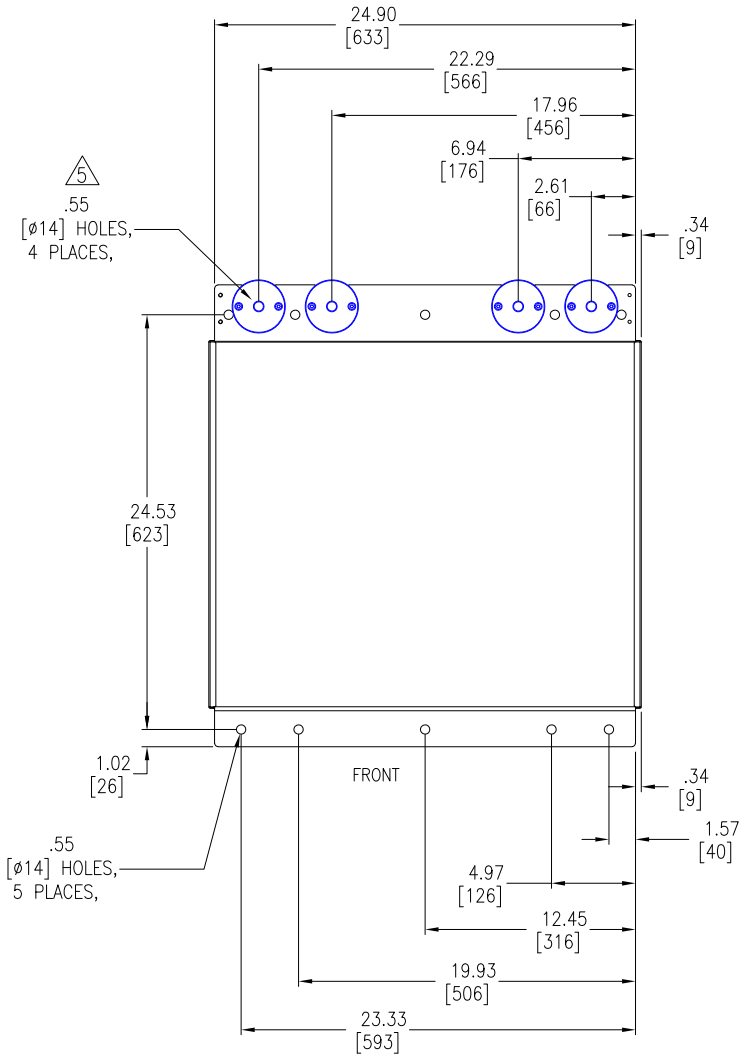
THIRD ANGLE PROJECTION



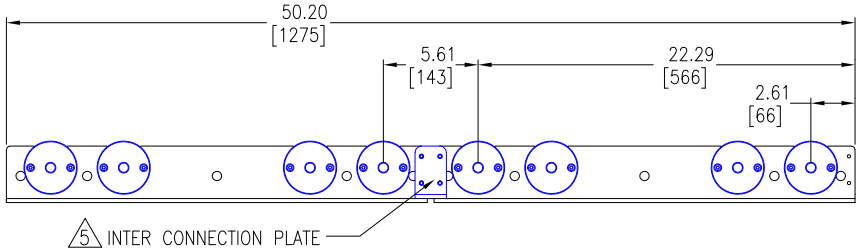
TOP VIEW



BOTTOM VIEW



SEISMIC ANCHORING DETAILS – 1 BATTERY RACK



SEISMIC ANCHORING DETAILS FOR MORE THAN ONE BATTERY RACK

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].

△4. 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.

△5. USE ACCESSORY KIT (0M-95331) TO ANCHOR THE UNIT IN SEISMIC LOCATION.
FOR SEISMIC ANCHORING, M12 SCREWS OF STRENGTH GRADE 8.8 HARDWARE
ARE REQUIRED TO BE USED.

Schneider Electric

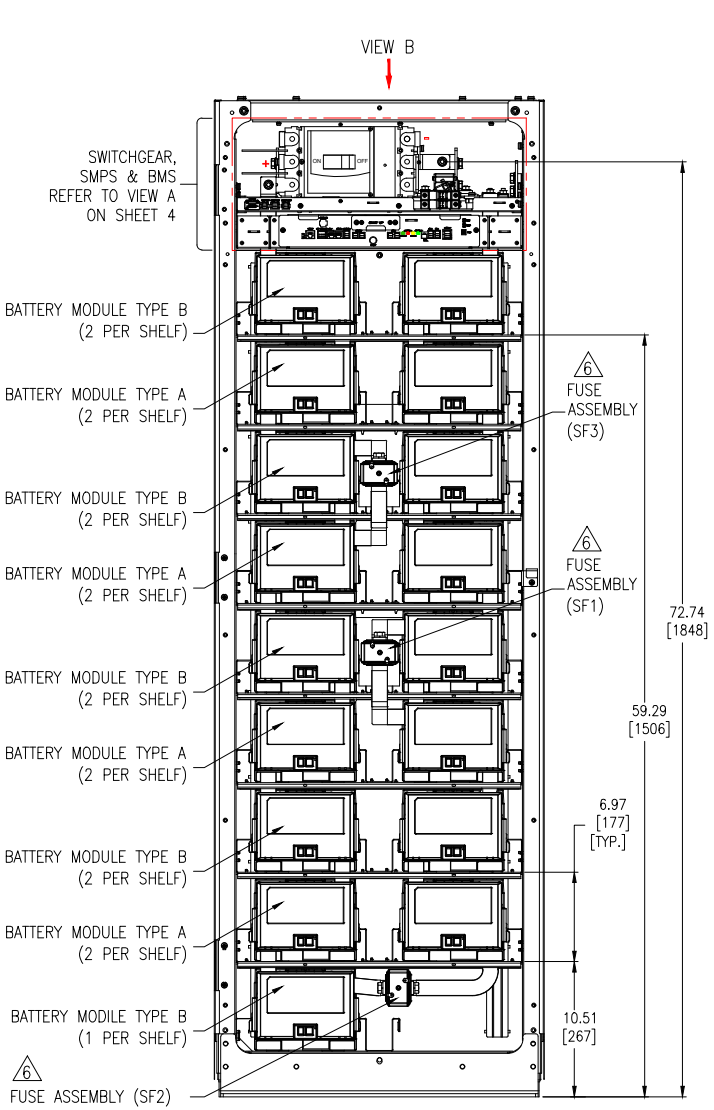
TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL TOP/BOTTOM VIEW & ANCHORING DETAILS

DWG NO: LIBSESMGGVLUL REV. 0

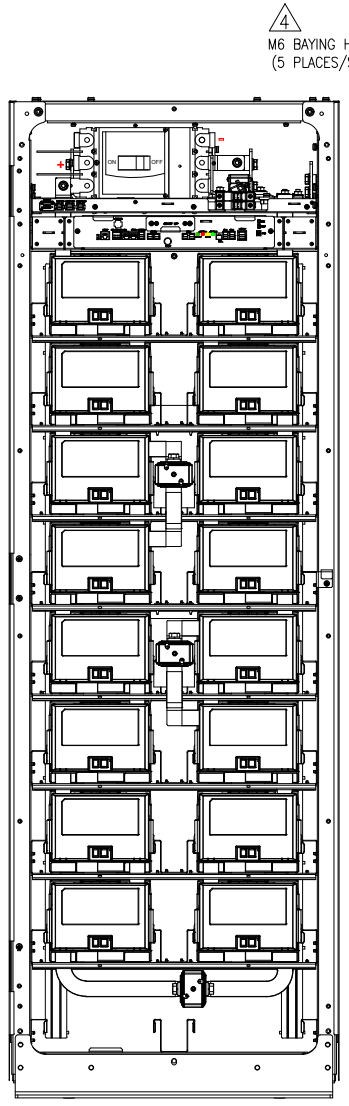
DRAWN BY:	JAYAPRAKASH	27-MAY-21
ENGINEER:	Fred XIA/PAUL J	31-MAY-21
APPROVED BY:	Fred XIA/JEFFREY P	31-MAY-21

PROJECT: SUBMITTAL DRAWINGS SHEET 2 OF 11

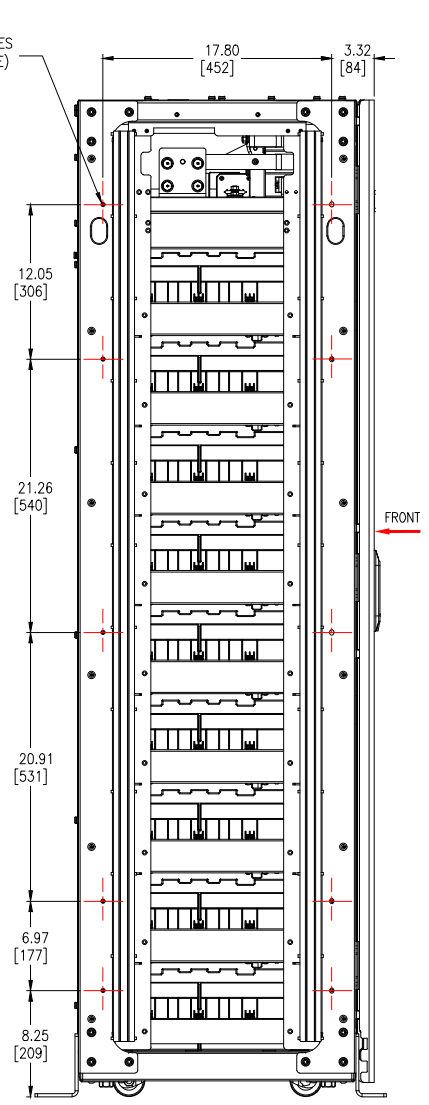
THIRD ANGLE PROJECTION



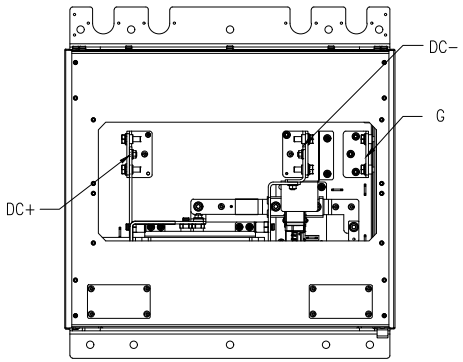
FRONT VIEW, 17 MODULES (INTERNAL)



FRONT VIEW, 16 MODULES (INTERNAL)

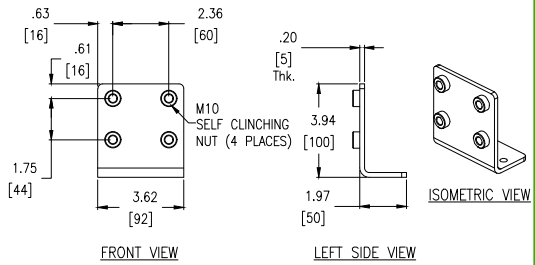


LEFT SIDE VIEW, 17 MODULES (INTERNAL) SIDE PANEL NOT SHOWN

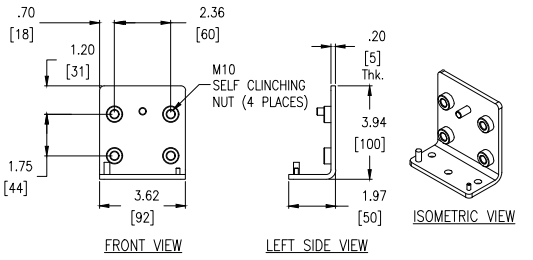


VIEW B
GLAND PLATES NOT SHOWN

BUSBAR DETAILS



BUSBAR GROUND



BUSBAR DC+/DC-

NOTE: BOLT AND NUTS ARE PROVIDED WITH THE TERMINALS.
RECOMMENDED TORQUE FOR M10 BOLTS IS 22.13 lb-ft [30Nm]

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].
△ 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.
△ 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.

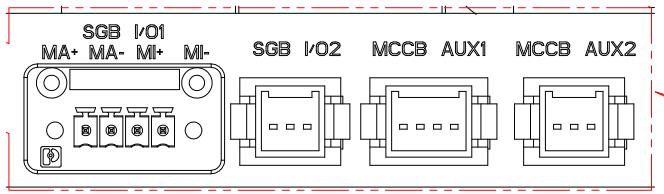
Schneider Electric

TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL INTERNAL VIEWS	DWG NO: LIBSESMGGVLUL		REV. 1
	DRAWN BY: RANJITHA	22-MAY-23	THIRD ANGLE PROJECTION
	ENGINEER: SHERRY LE	24-MAY-23	
PROJECT: SUBMITTAL DRAWINGS SHEET 3 OF 11	APPROVED BY: RICK ZHANG	24-MAY-23	

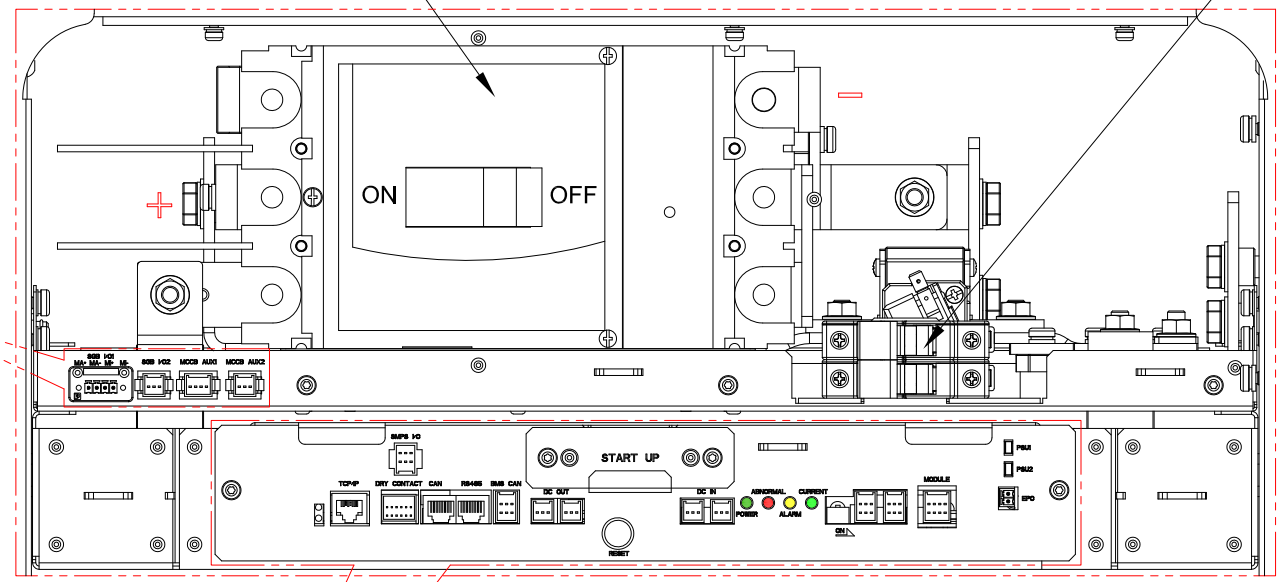
MCCB (Ui=750V; In=600A dc)

△3 SMPS FUSES

MCCB SETTINGS:
Im = 1500A
APPLY TO ALL CONFIGURATIONS.

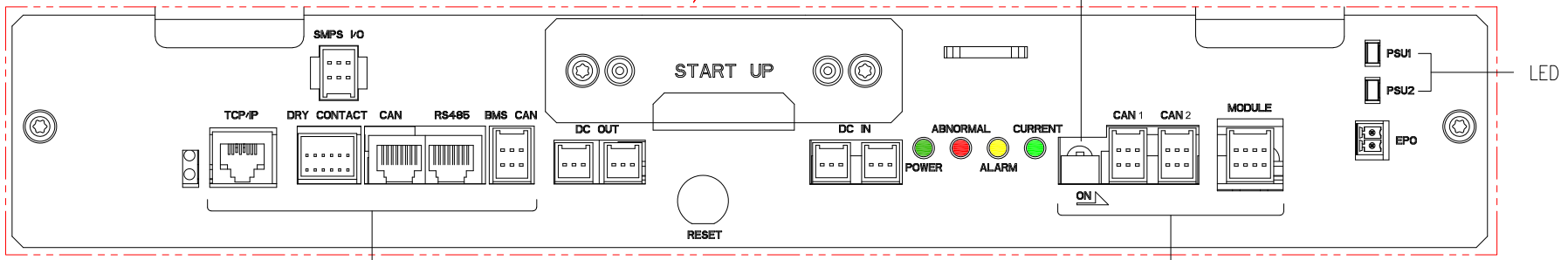


SWITCHGEAR PORTS



VIEW A (ENLARGED)
SWITCHGEAR SMPS AND BMS

CAN BUS LOOP TERMINATION RESISTOR SWITCH



SYSTEM BMS PORTS

RACK BMS PORTS

SMPS AND BMS

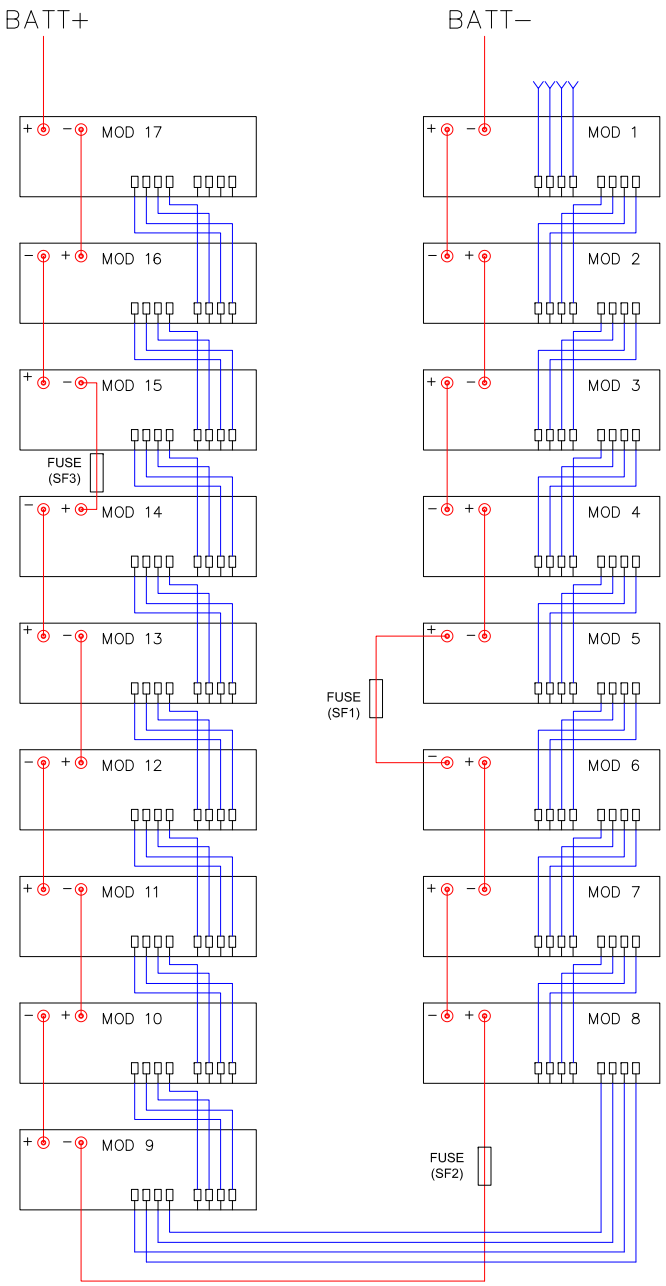
CABLING NOTES:
CANBUS COMMUNICATIONS BETWEEN RACKS IS SUPPLIED AND INSTALLED BY SCHNEIDER ELECTRIC.

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. FUSE TYPE: LITTLEFUSE MPN 0SPF003.T OR EQUIVALENT WITH 3A 1000Vdc 20KAIC.
4. THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.

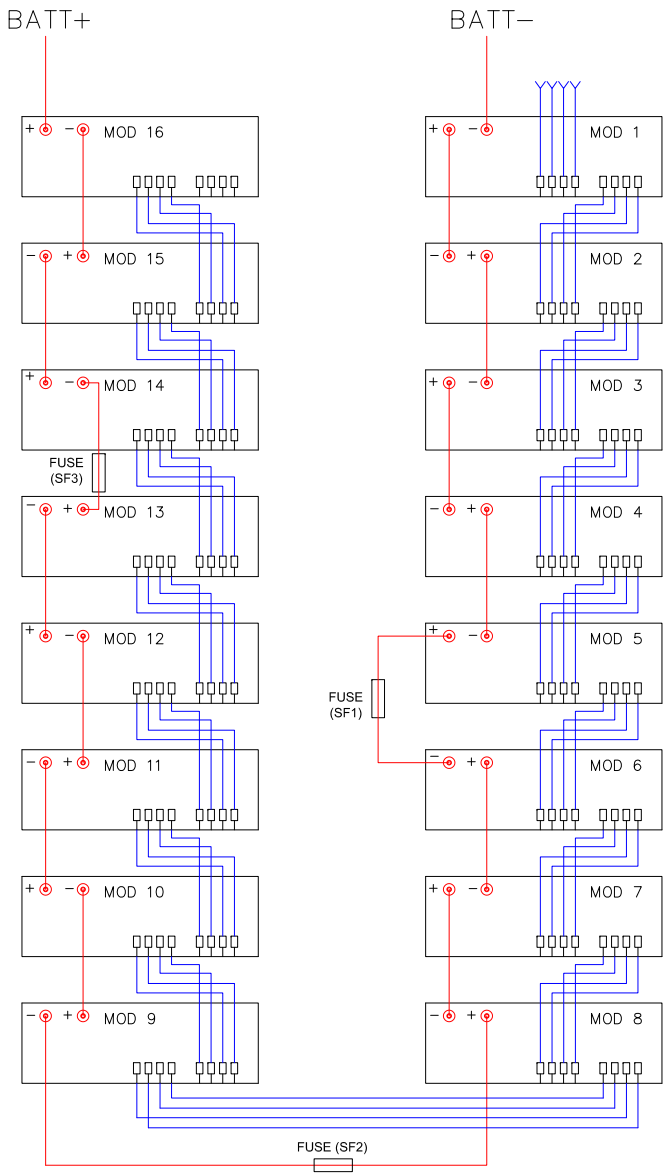
Schneider Electric

TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL INTERNAL VIEWS	DWG NO: LIBSESMGGVLUL		REV. 0
	DRAWN BY: JAYAPRAKASH	27-MAY-21	ANGLE PROJECTION
	ENGINEER: Fred XIA/PAUL J	31-MAY-21	
PROJECT: SUBMITTAL DRAWINGS SHEET 4 OF 11	APPROVED BY: Fred XIA/JEFFREY P	31-MAY-21	N.A

17 MODULES/STRING



16 MODULES/STRING



LEGEND:

CONTROL CABLE

BUS BAR

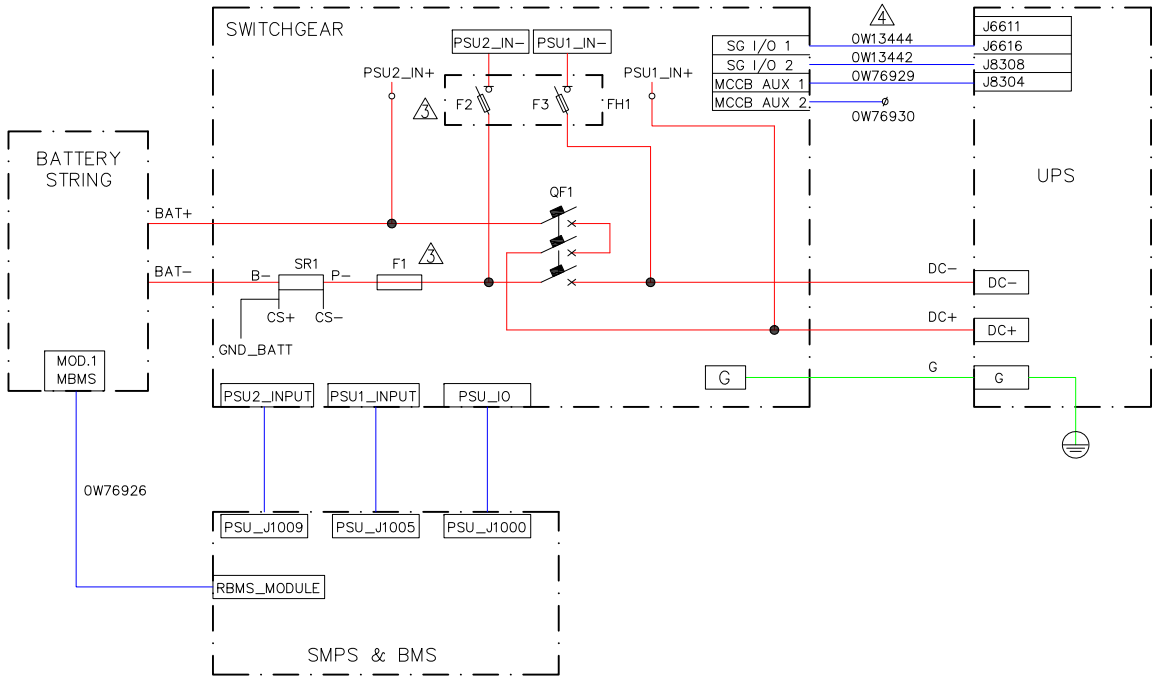
NOTES:

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.

Schneider Electric

TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL CABLING DIAGRAM	DWG NO: LIBSESMGGVLUL		REV. 0
	DRAWN BY: JAYAPRAKASH	27-MAY-21	ANGLE PROJECTION
	ENGINEER: Fred XIA/PAUL J	31-MAY-21	N.A
PROJECT: SUBMITTAL DRAWINGS SHEET 5 OF 11	APPROVED BY: Fred XIA/JEFFREY P	31-MAY-21	

SYSTEM DIAGRAM

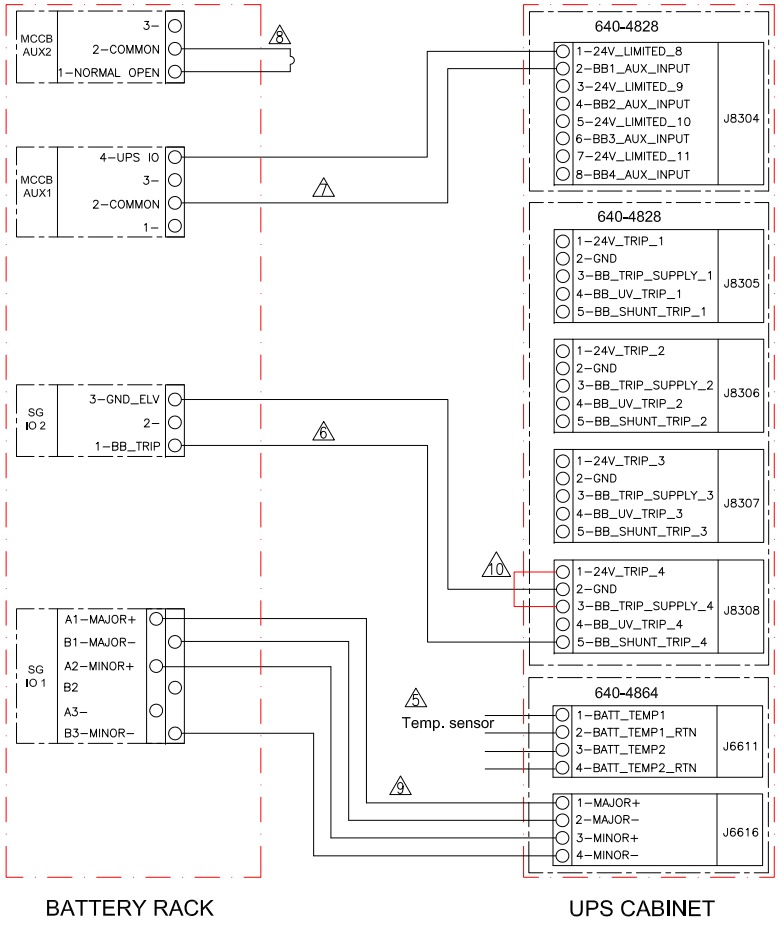


LEGEND:

CONTROL CABLE

POWER CABLE

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



UPS	Cable Tray Installation		Conduit Connection	
	Recommended Cable Size	Max Number of LIB Racks connected directly	Recommended Cable Size	Max Number of LIB Racks connected directly
GVL	350kcmil (Positive, Negative, Ground)	8 Racks (**)	Parallel 250kcmil at 75°C for conduit connection with	4 Racks(*)

NOTES:

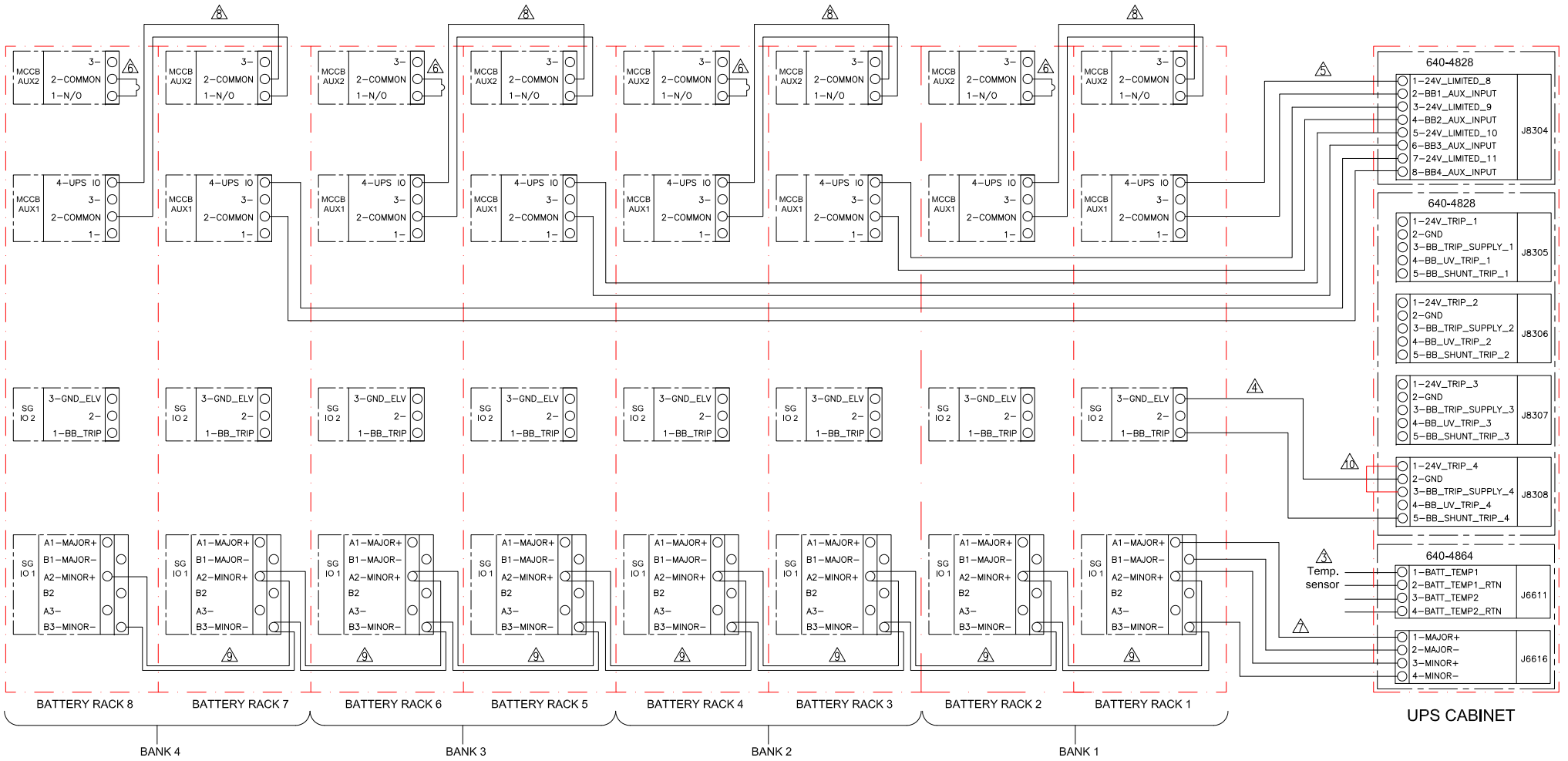
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
△3. F1 FUSE TYPE: Merson MPN PC33UD69V500A or LITTLEFUSE MPN PSR033DS0500X WITH 500A 600Vdc 100KAIC.
F2 & F3 FUSE TYPE: LITTLEFUSE MPN 0SPF003.T OR EQUIVALENT WITH 3A 1000Vdc 20KAIC.
△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 LIBSEOPT001 WITH 25 Meter
CABLE LENGTH IS AVAILABLE FOR PROCUREMENT.
△5. INSTALL THE TEMPERATURE SENSOR 0M−1160 PROVIDED WITH THE UPS IN THE BATTERY ROOM.
△6. USE THE PROVIDED 0W13442 TO CONNECT UPS BB_TRIP CONTACT.
△7. USE THE PROVIDED 0W76929 TO CONNECT MCCB AUX 1 TO UPS.
△8. USE THE PROVIDED 0W76930 TO CONNECT MCCB AUX 2 CONTACT FOR LAST RACK IN A BANK.
△9. USE THE PROVIDED 0W13444 TO CONNECT MAJOR AND MINOR FAULT CONTACTS.
△10. SHORT PIN 1 AND 3 IN J8308.
11. THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.

* With the parallel conductors and ETO Top Hat option limited by physical holes in GVL busbar.
**Fuse is required when more than 8 Battery Racks are connected directly.
(contact Application Engineering Team for more than 8 Battery racks configuration)
Li-ion Battery rack's short circuit rating RMS value is 2.9kA per rack and GVL limit is 30kA,
the fuse protection shall cover the UPS short circuit limit.

Schneider Electric

TITLE: Galaxy Lithium−ion Battery cabinet, GVL UL SYSTEM DIAGRAM & INTERFACE DETAILS−1 RACK	DWG NO: LIBSESMGGVLUL		REV. 0
	DRAWN BY: JAYAPRAKASH	27−MAY−21	ANGLE PROJECTION
	ENGINEER: Fred XIA/PAUL J	31−MAY−21	
PROJECT: SUBMITTAL DRAWINGS SHEET 6 OF 11	APPROVED BY: Fred XIA/JEFFREY P	31−MAY−21	N.A

INTERFACE DETAILS FOR GALAXY VL WHEN EIGHT BATTERY RACKS CONNECTED TO UPS



CONFIGURATION WITH 8 BATTERY RACKS (2 RACK/BANK) SHOWN FOR ILLUSTRATION

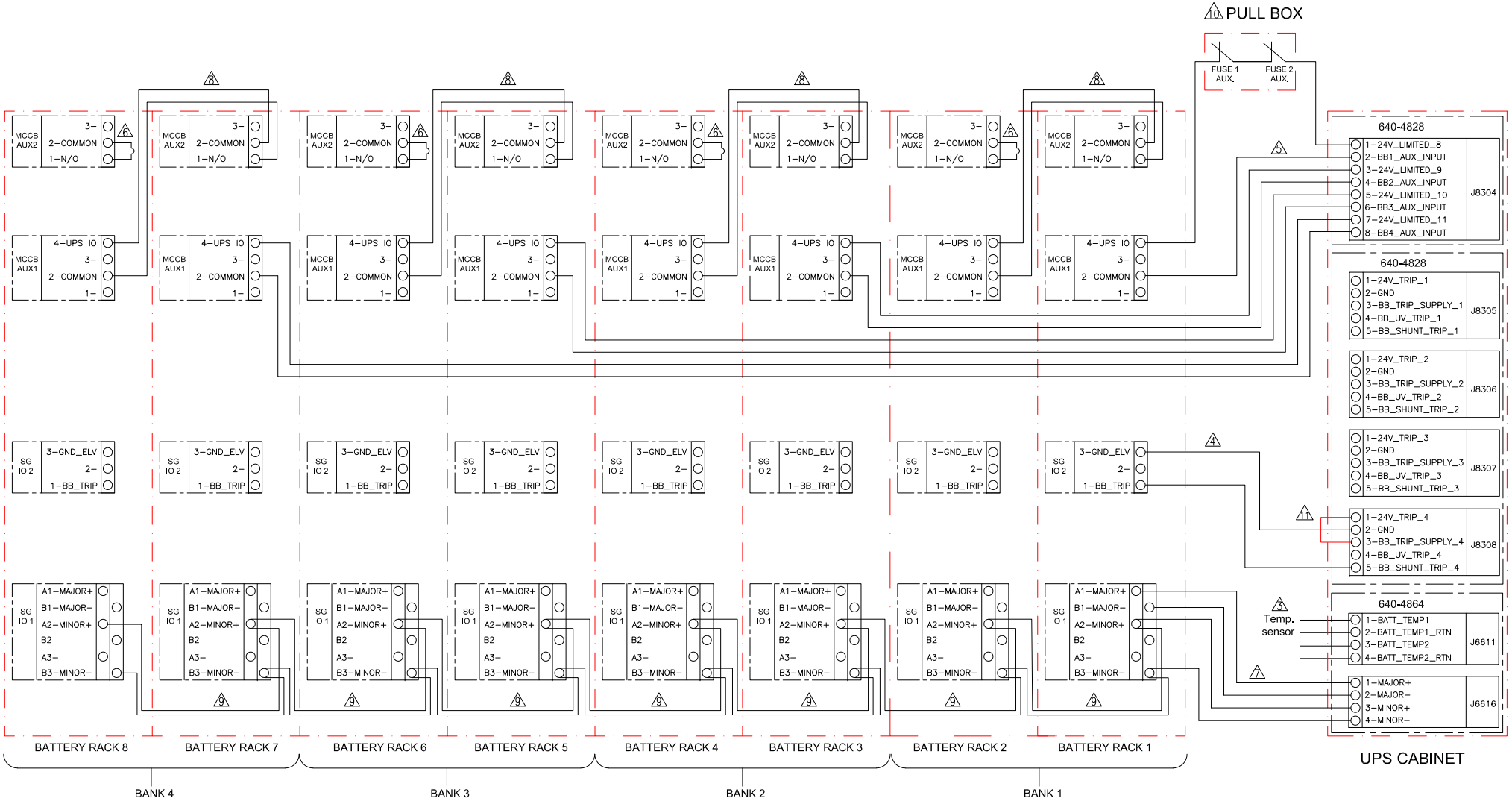
NOTES:

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. INSTALL THE TEMPERATURE SENSOR 0M–1160 PROVIDED WITH THE UPS IN THE BATTERY ROOM.
△4. USE THE PROVIDED 0W13442 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.
△6. USE 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.
△8. USE THE PROVIDED 0W76934 TO CONNECT MCCB AUX SIGNALS IN SERIES.
△9. USE THE PROVIDED 0W76972 TO CONNECT MINOR FAULT ALARM CONTACTS.
△10. SHORT PIN 1 AND 3 IN J8308
11. THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.

Schneider Electric

TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL INTERFACE DETAILS-8 RACK		DWG NO: LIBSESMGGVLUL	REV. 0
		DRAWN BY: JAYAPRAKASH	27-MAY-21
		ENGINEER: Fred XIA/PAUL J	31-MAY-21
PROJECT: SUBMITTAL DRAWINGS	SHEET 7 OF 11	APPROVED BY: Fred XIA/JEFFREY P	31-MAY-21
			ANGLE PROJECTION N.A

INTERFACE DETAILS FOR GALAXY VL WHEN 8 BATTERY RACKS CONNECTED TO FUSED PULL BOX & UPS



NOTES:

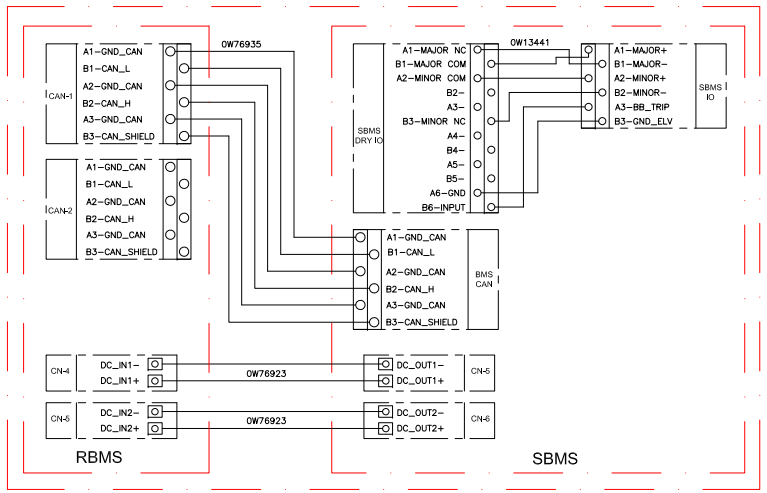
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
△3. INSTALL THE TEMPERATURE SENSOR 0M–1160 PROVIDED WITH THE UPS IN THE BATTERY ROOM.
△4. USE THE PROVIDED 0W13442 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.
△6. USE 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.
△8. USE THE PROVIDED 0W76934 TO CONNECT MCCB AUX SIGNALS IN SERIES.
△9. USE THE PROVIDED 0W76972 TO CONNECT MINOR FAULT ALARM CONTACTS.
△10. FOR MORE THAN 8 RACKS, PLEASE CONTACT APPLICATION ENGINEERING TEAM FOR THE REQUIRED CONNECTION METHODS (i.e. PULL BOX, FUSED PULL BOX AND etc)
△11. SHORT PIN 1 AND 3 IN J8308
12. THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.

Schneider Electric

TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL INTERFACE DETAILS-WITH PULL BOX		DWG NO: LIBSESMGGVLUL	REV. 0
		DRAWN BY: JAYAPRAKASH	27-MAY-21
		ENGINEER: Fred XIA/PAUL J	31-MAY-21
PROJECT: SUBMITTAL DRAWINGS	SHEET 8 OF 11	APPROVED BY: Fred XIA/JEFFREY P	31-MAY-21

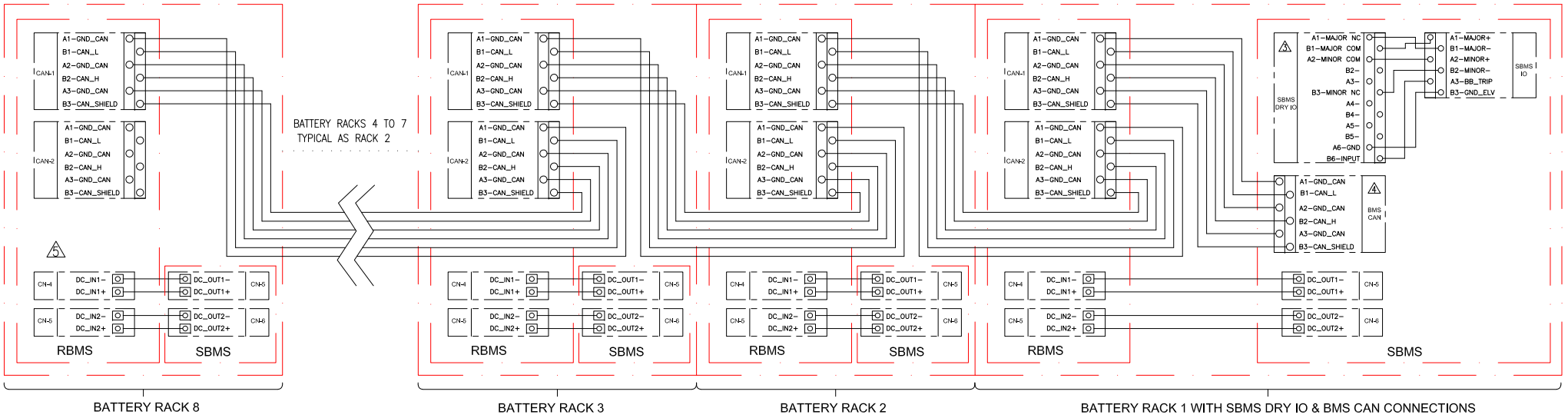
ANGLE PROJECTION N.A

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



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. SBMS DRY IO** IS CONNECTED IN BATTERY RACK 1 ONLY.

△ **4. BMS CAN** IS CONNECTED IN BATTERY RACK 1 ONLY.

△ 5. SLIDE THE **CAN** BUS LOOP TERMINATION RESISTOR SWITCH TO **ON** POSITION IN THE LAST ONE BATTERY RACK.

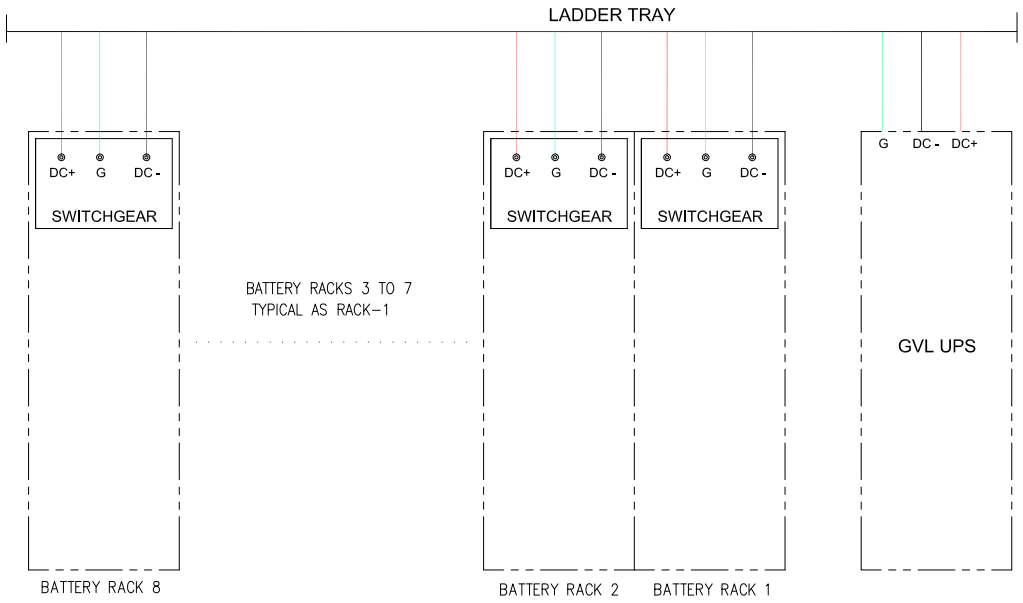
Schneider Electric

TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL INTERFACE DETAILS-SBMS TO RBMS

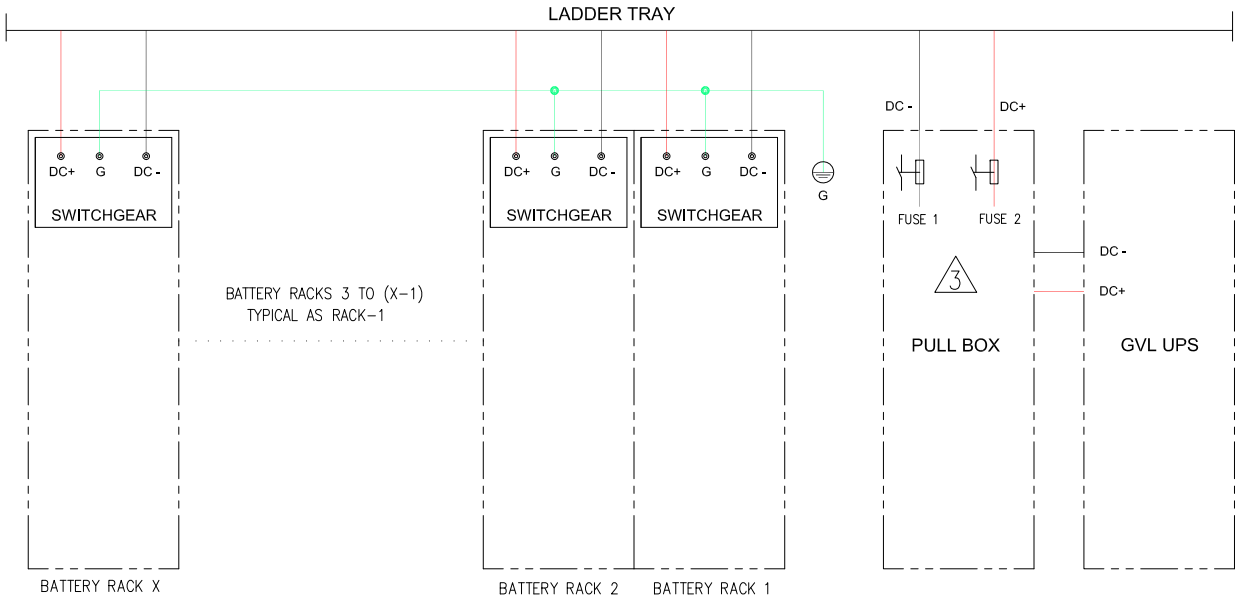
PROJECT: SUBMITTAL DRAWINGS | SHEET 9 OF 11

DWG NO: LIBSESMGGVLUL		REV. 0
DRAWN BY: JAYAPRAKASH	27-MAY-21	ANGLE PROJECTION
ENGINEER: Fred XIA/PAUL J	31-MAY-21	
APPROVED BY: Fred XIA/JEFFREY P	31-MAY-21	N.A

SCHEMATIC FOR GALAXY VL WHEN 8 BATTERY RACKS CONNECTED WITH LADDER TRAY TO UPS



SCHEMATIC FOR GALAXY VL WHEN MORE THAN 8 BATTERY RACKS CONNECTED WITH LADDER TRAY & PULL BOX TO UPS



ELECTRICAL DATA		
SKU Number/Model	LIBSESMG16UL	LIBSESMG17UL
Number of Battery Modules	16	17
Number of Type-A Battery Modules	8	8
Number of Type-B Battery Modules	8	9
Number of Battery cells in a string	128	136
Nominal Energy (kWh)	32.6	34.6
Nominal Battery Voltage (VDC)	486	517
Nominal capacity (Ah)	67	67
Charge current rate (CA rate)	0.7	0.7
Float charge Voltage (VDC)	537	571
End of discharge Voltage (VDC)	384	408
Maximum continuous discharge power (kW)	173	184
Peak current at end of discharge (A)	450	450
Short circuit rating RMS value (kA)	2.9	2.9
The maximum allowable cable size is 350kcmil/185mm^2		
Refer to applicable UPS installation manual for recommended cable sizes		

Galaxy VL LIB configuration		
UPS Rating (kW)	Voltage (VAC)	Modules/string
200	480	16 or 17
250	480	16 or 17
300	480	16 or 17
350	480	16 or 17
400	480	16 or 17
450	480	16 or 17
500	480	16 or 17

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

Schneider Electric

TITLE: Galaxy Lithium-ion Battery cabinet, GVL UL SCHEMATIC DIAGRAM

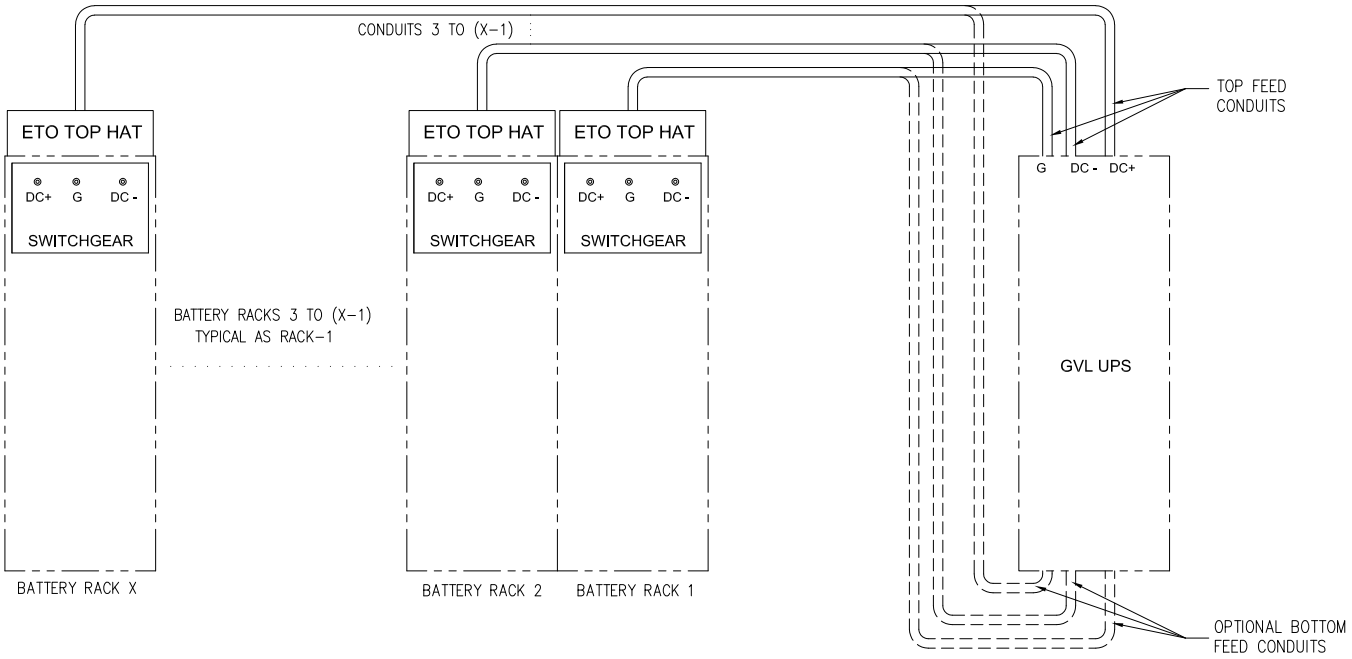
DWG NO: LIBSESMGGVLUL REV. 0

DRAWN BY:	JAYAPRAKASH	27-MAY-21
ENGINEER:	Fred XIA/PAUL J	31-MAY-21
APPROVED BY:	Fred XIA/JEFFREY P	31-MAY-21

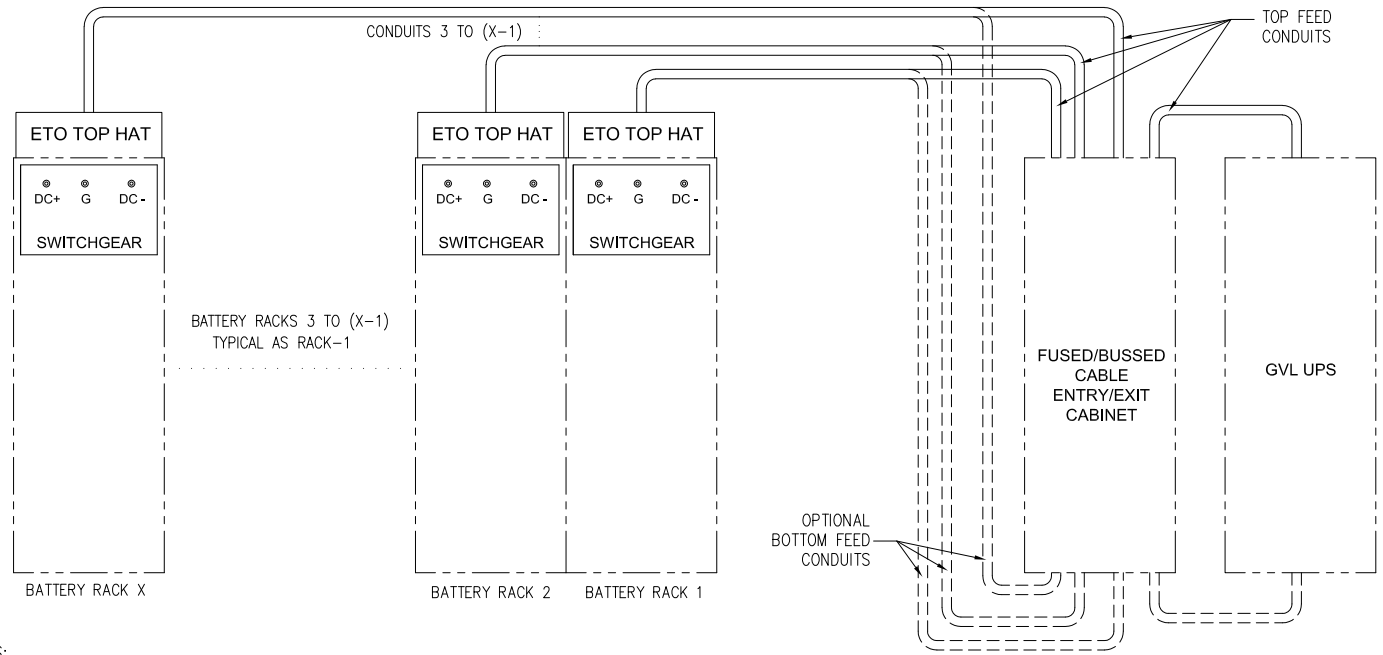
ANGLE PROJECTION N.A

PROJECT: SUBMITTAL DRAWINGS SHEET 10 OF 11

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



SCHEMATIC FOR GALAXY VL WHEN BATTERY RACKS CONNECTED WITH TOP HAT, CONDUITS, BUSSED CABINET TO UPS I/O CABINET



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Schneider Electric

TITLE: Galaxy Lithium–ion Battery cabinet, GVL UL SCHEMATIC DIAGRAM

PROJECT: SUBMITTAL DRAWINGS | SHEET 11 OF 11

DWG NO:	LIBSESMGGVLUL		REV. 0
DRAWN BY:	JAYAPRAKASH	27–MAY–21	ANGLE PROJECTION
ENGINEER:	Fred XIA/PAUL J	31–MAY–21	
APPROVED BY:	Fred XIA/JEFFREY P	31–MAY–21	N.A