

IOE-XXX-XXXX

Training Guide



DRAFT

nrgSMART™ 2-compartment 32RU Enclosures: IOE-XXX-XXXX

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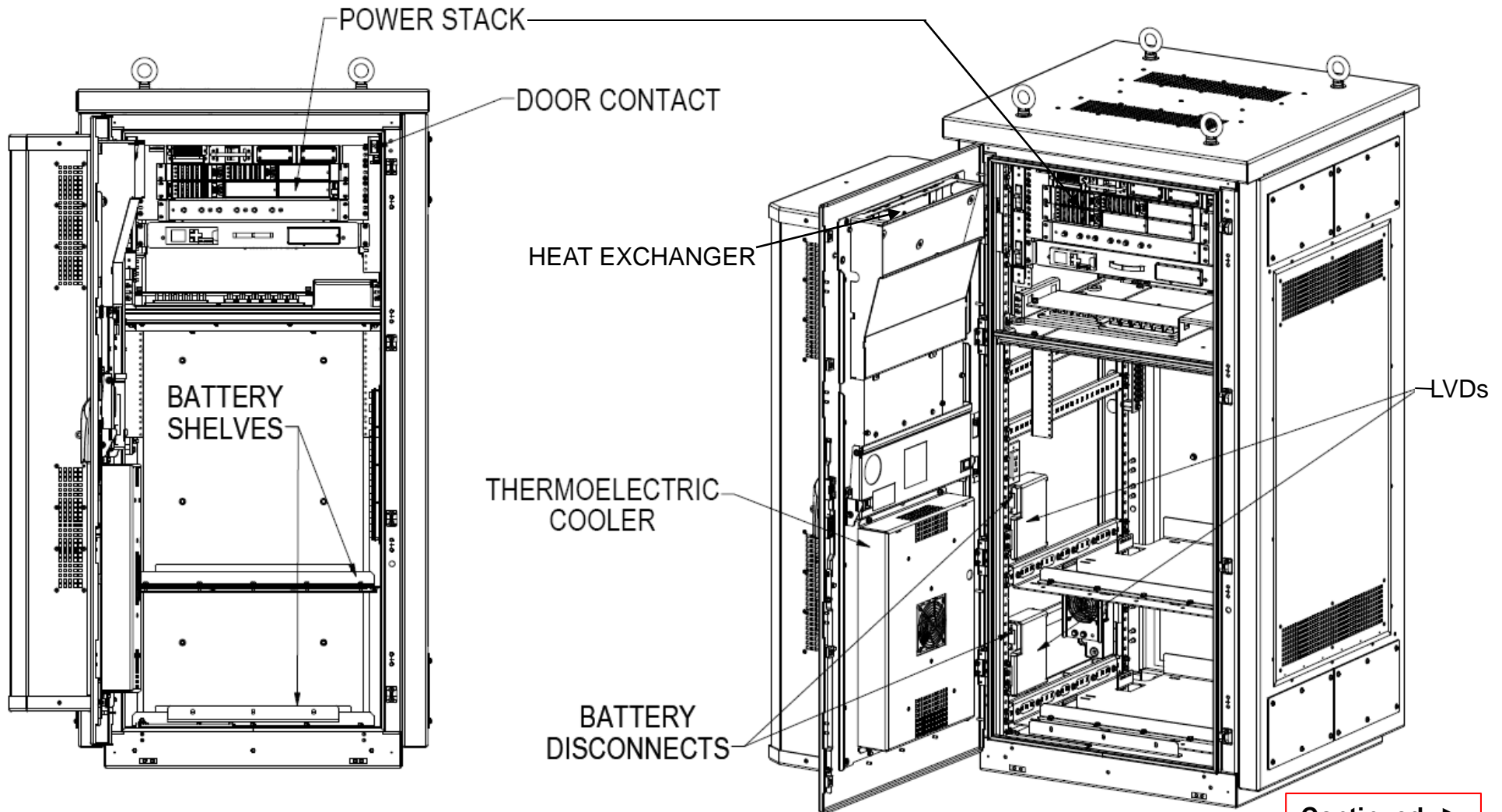
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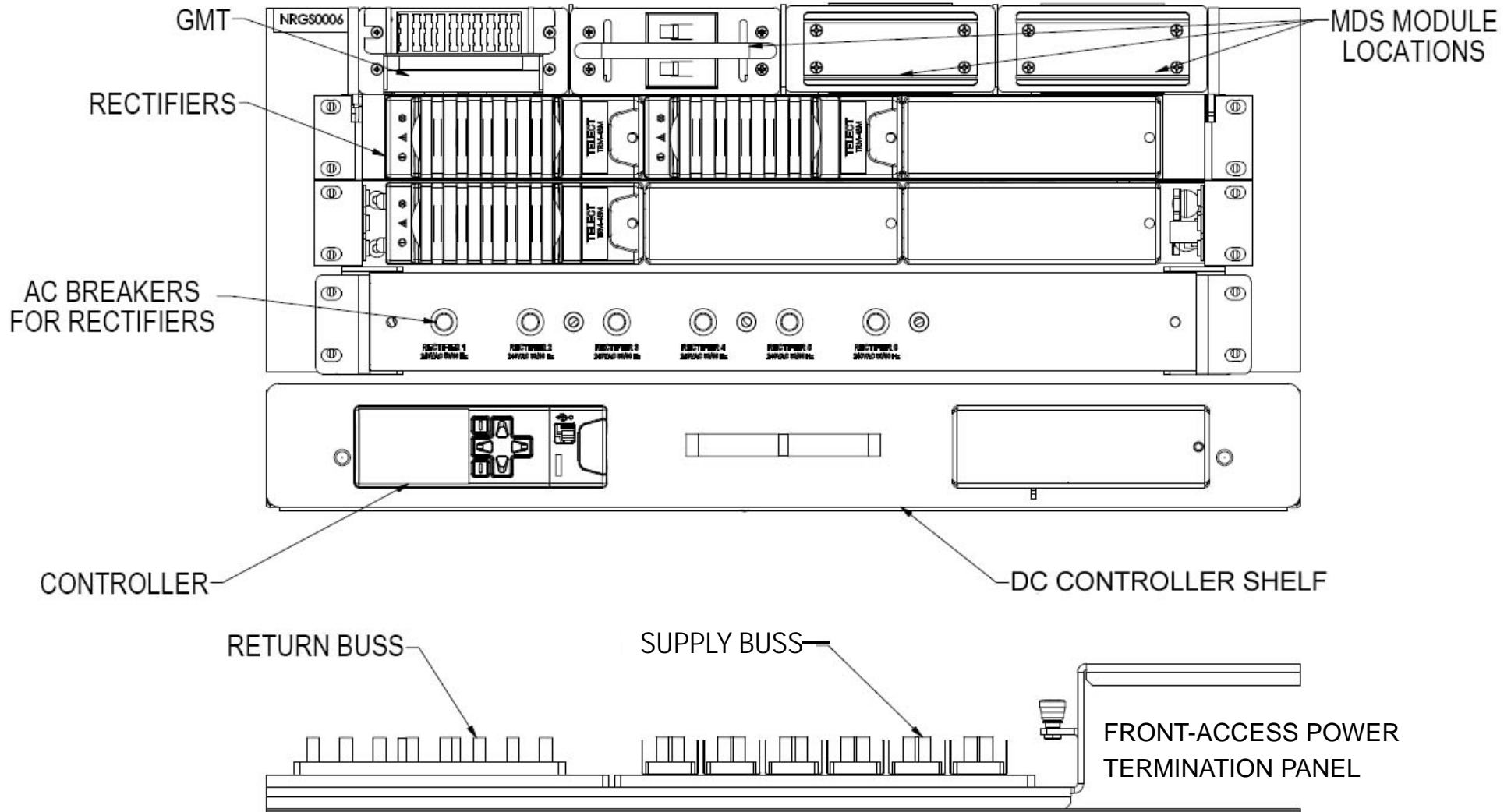
Email: telect.tac@telect.com

Internal Features.....	4
nrgSMART system (Front View)	5
TO BE COMPLETED	

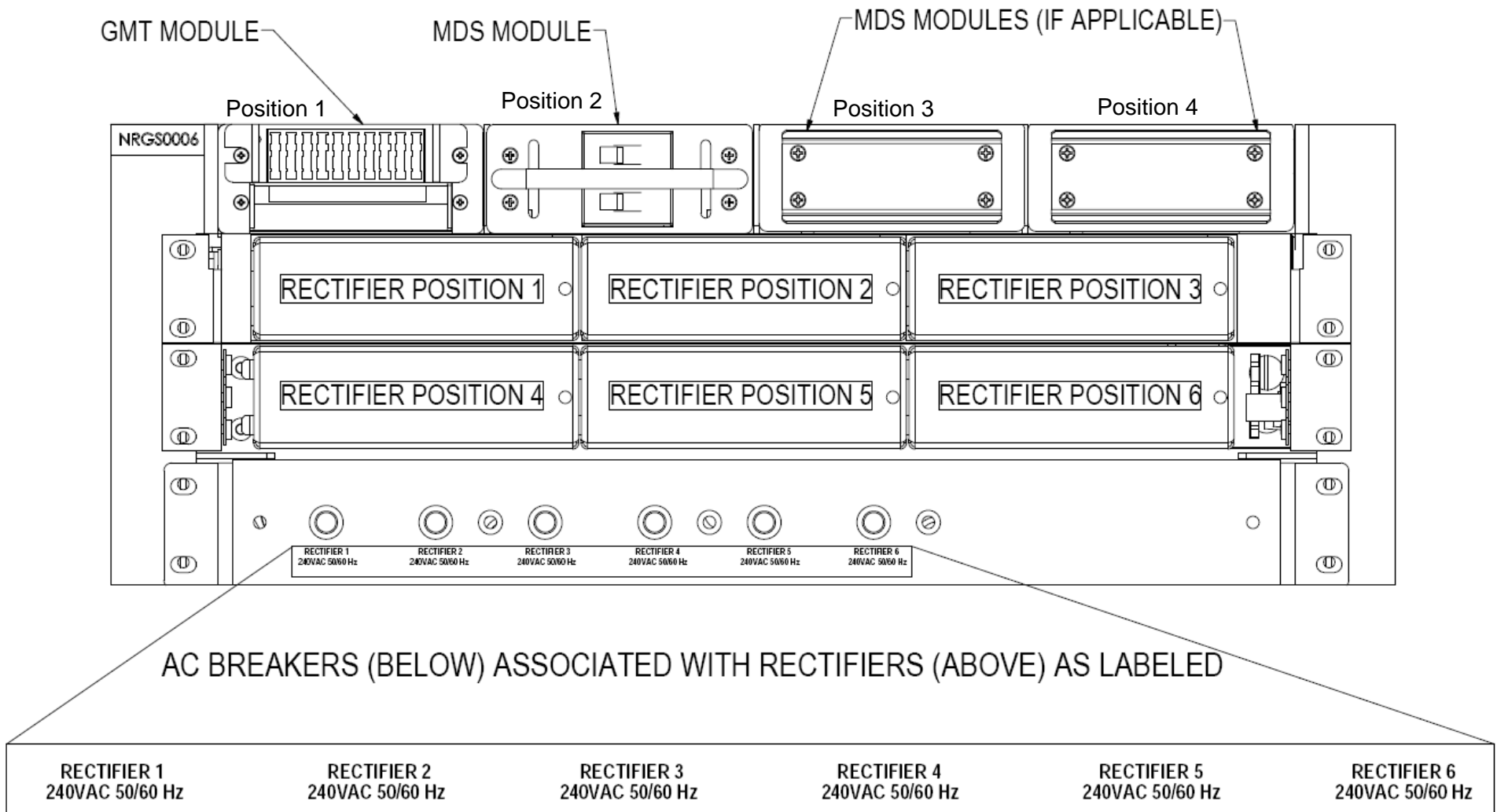
These figures show some basic structures of the single-bay (Bay 1) enclosure.



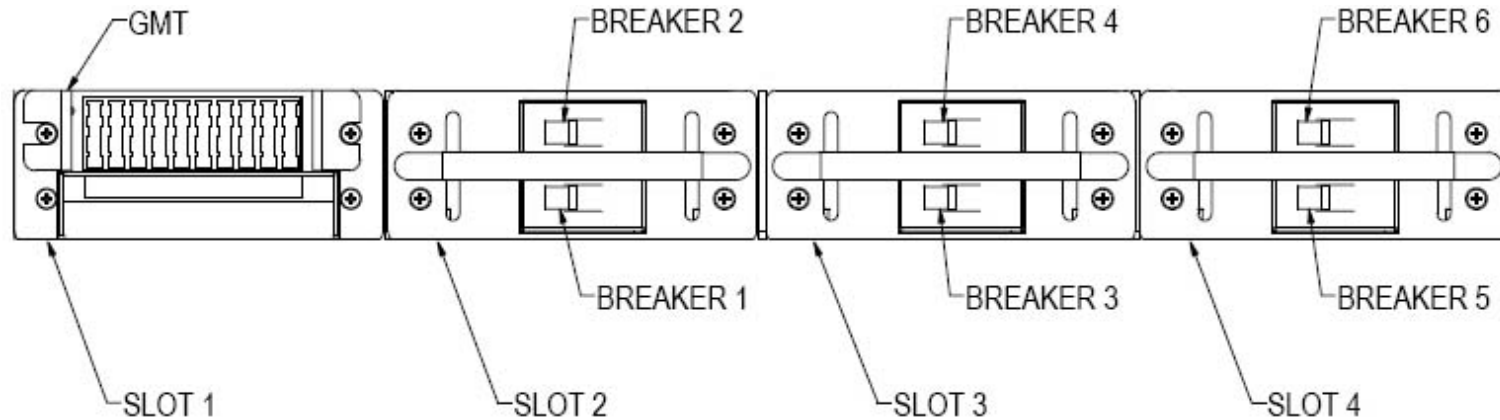
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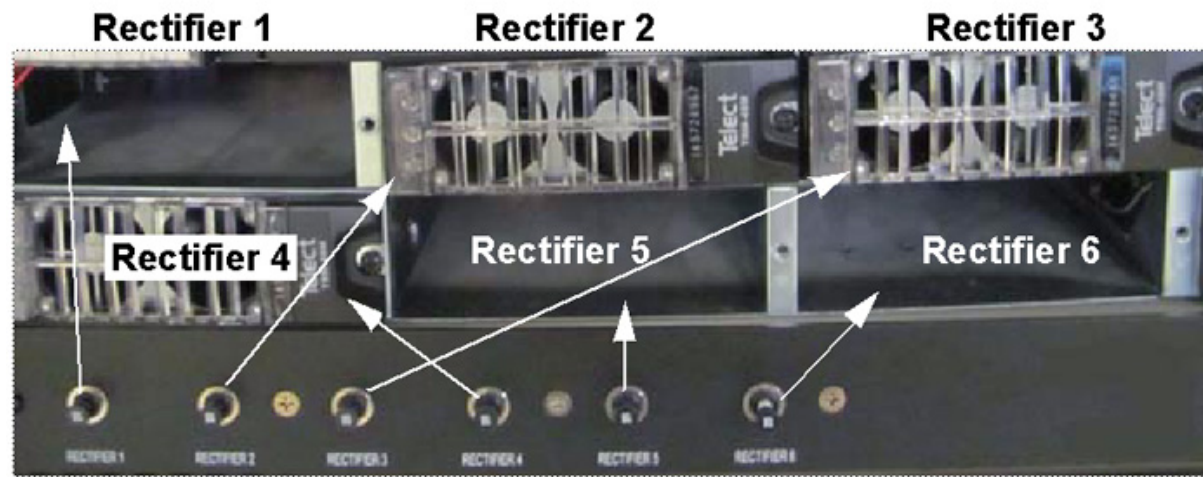
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MDS module breakers correspond to the rectifier positions on the stack, so breakers 1 & 2 correspond to rectifiers 1 & 2, etc.



Continued ->

1. Slide the rectifiers into the slots, depending on which breaker you are turning on.
2. Making sure each Phillips screw is lined up with the hole in the chassis, screw each one in until the rectifiers are firmly seated in the chassis.
3. Make sure the circuit breakers are turned OFF before installing the modules. Note in the second figure that you can see the WHITE post under the breaker button when the breakers are OFF.

Steps 1 & 2



All rectifiers in and setting up.



Step 3



Continued ->

You should not have to change the module shell itself. **Turn off the equipment before removing a fuse and use only UL-recognized supplementary protectors for the empty slots.**

You can use any of the following fuses:

Amps	Part Number	Amps	Part Number
1/4	100151	3	001012
1/2	004001	3-1/2	130782
3/4	004008	4	004013
1	100991	5	004014
1-1/3	004006	7-1/2	004010
1-1/2	004011	10	004015
2	004002	12	102287
2-1/2	130783	15	102288

To install a fuse, push the GMT fuse into the slot and add an identifier to the label.

If you are replacing a blown fuse,

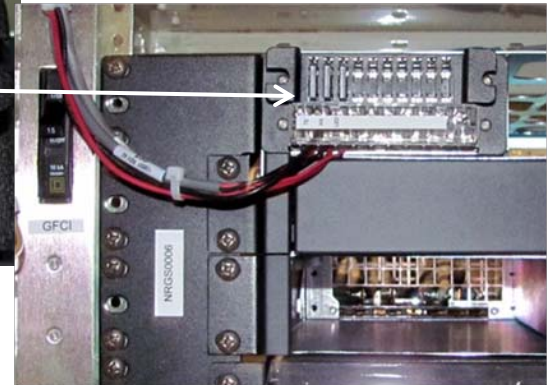
1. Pull out the fuse that needs replacing.
2. Push a new fuse into the slot from which you just removed the old fuse.



This end goes into the slot.

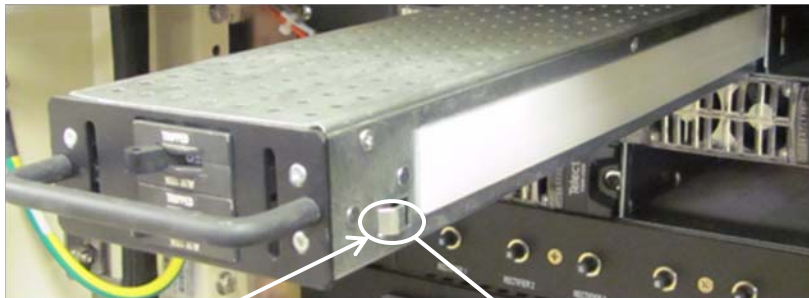


Blown fuse. The tip will appear above the fuse body when the fuse blows.

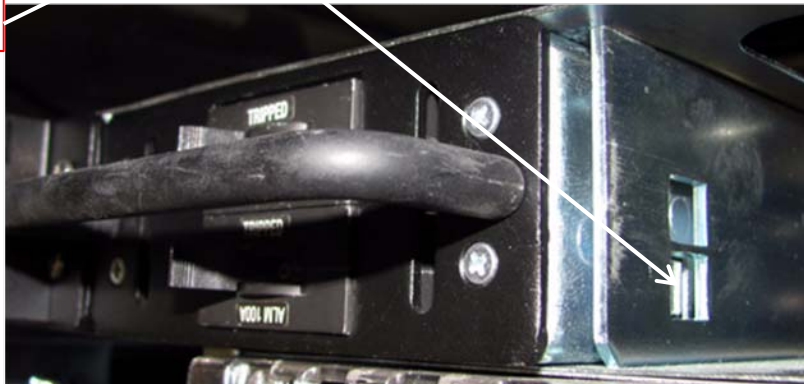


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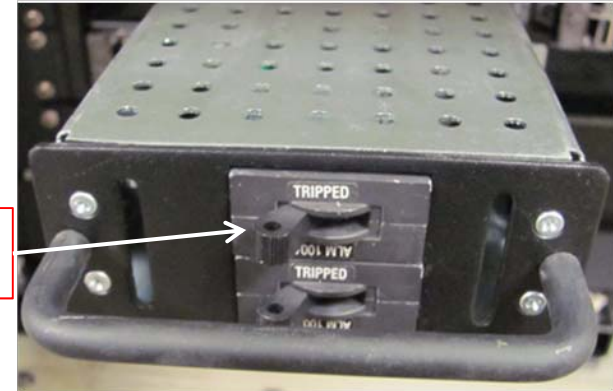
1. Slide the MDS modules into the MDS slots at the top of the stack, starting with the slot next to the GMT module in slot 1.
2. To insert the MDS module,
 - a. Facing the front of the stack, position the module as shown, with the breakers switched off.
You want to be sure the back end of the module matches the holes at the back of the module slot.
 - b. Note the tab on the side of the MDS module. Push the module in firmly until the tab fits fully into the hole on the side of the MDS slot as shown in Figure . You should definitely feel a “give” when the tab is fully seated.



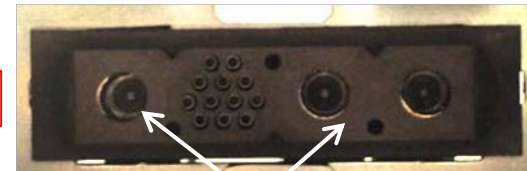
Tab



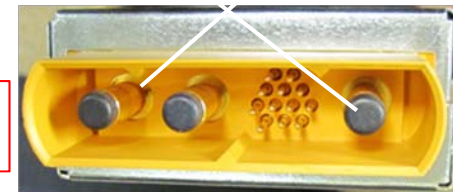
**Switch LEFT
is OFF.**



Internal slot



**Module
back end.**

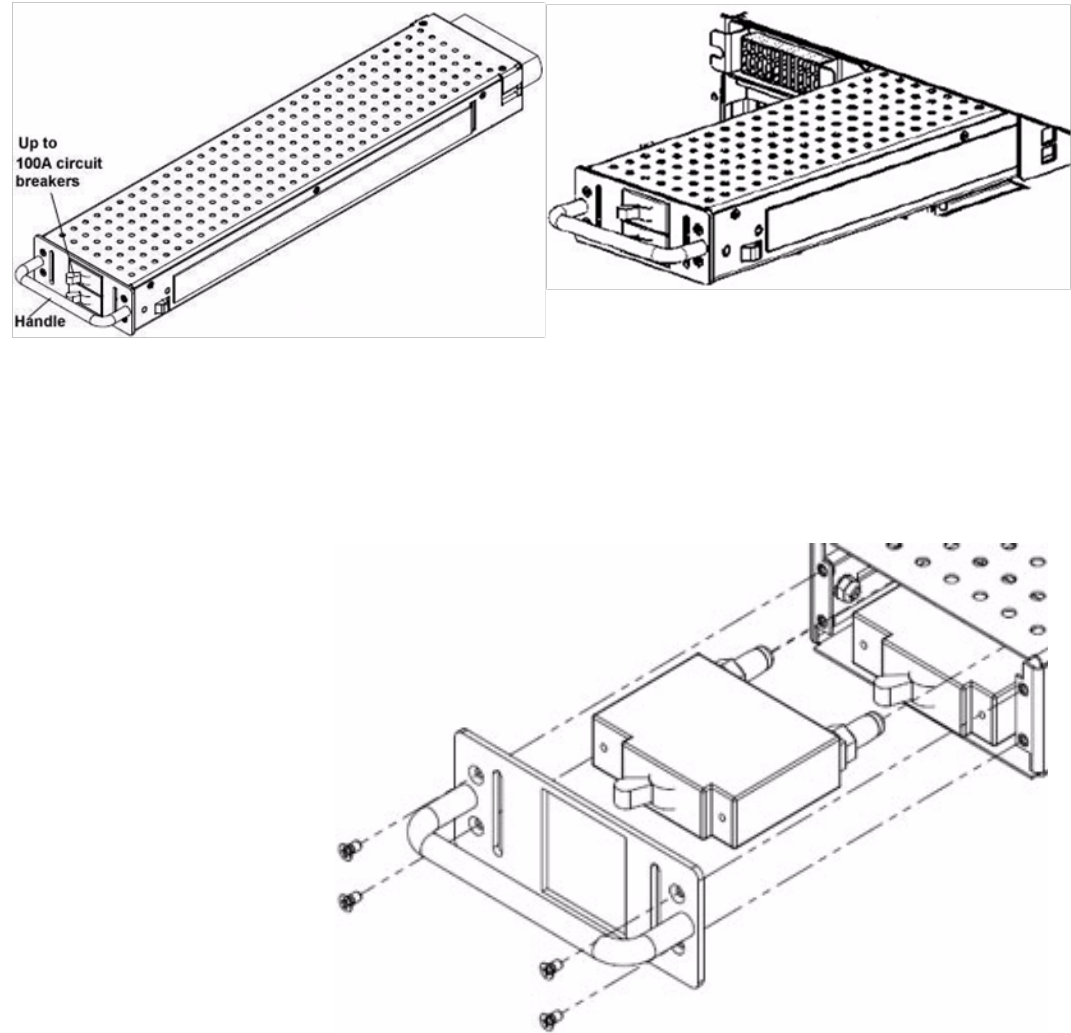


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To install a new module, hold the module by the handle, align it with the left side of the shelf, and push in until it fits firmly into the receptacles at the back of the module slot.

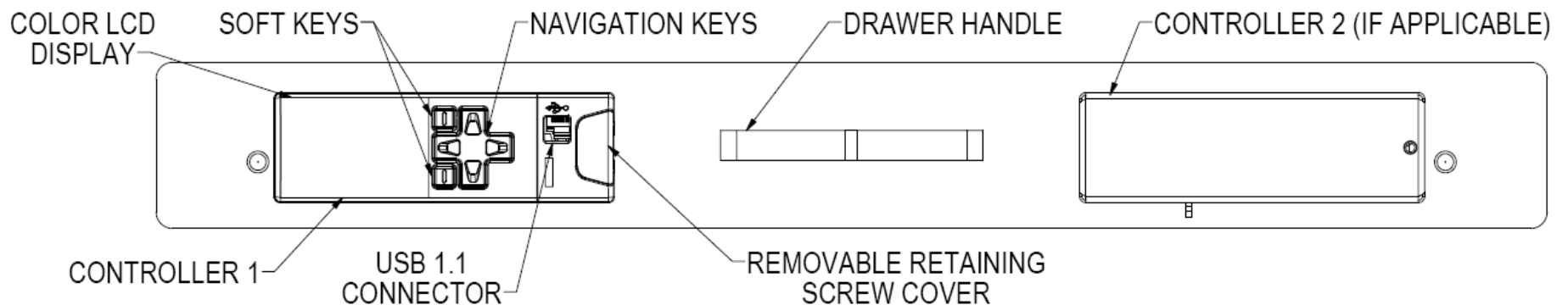
To install or replace a breaker,

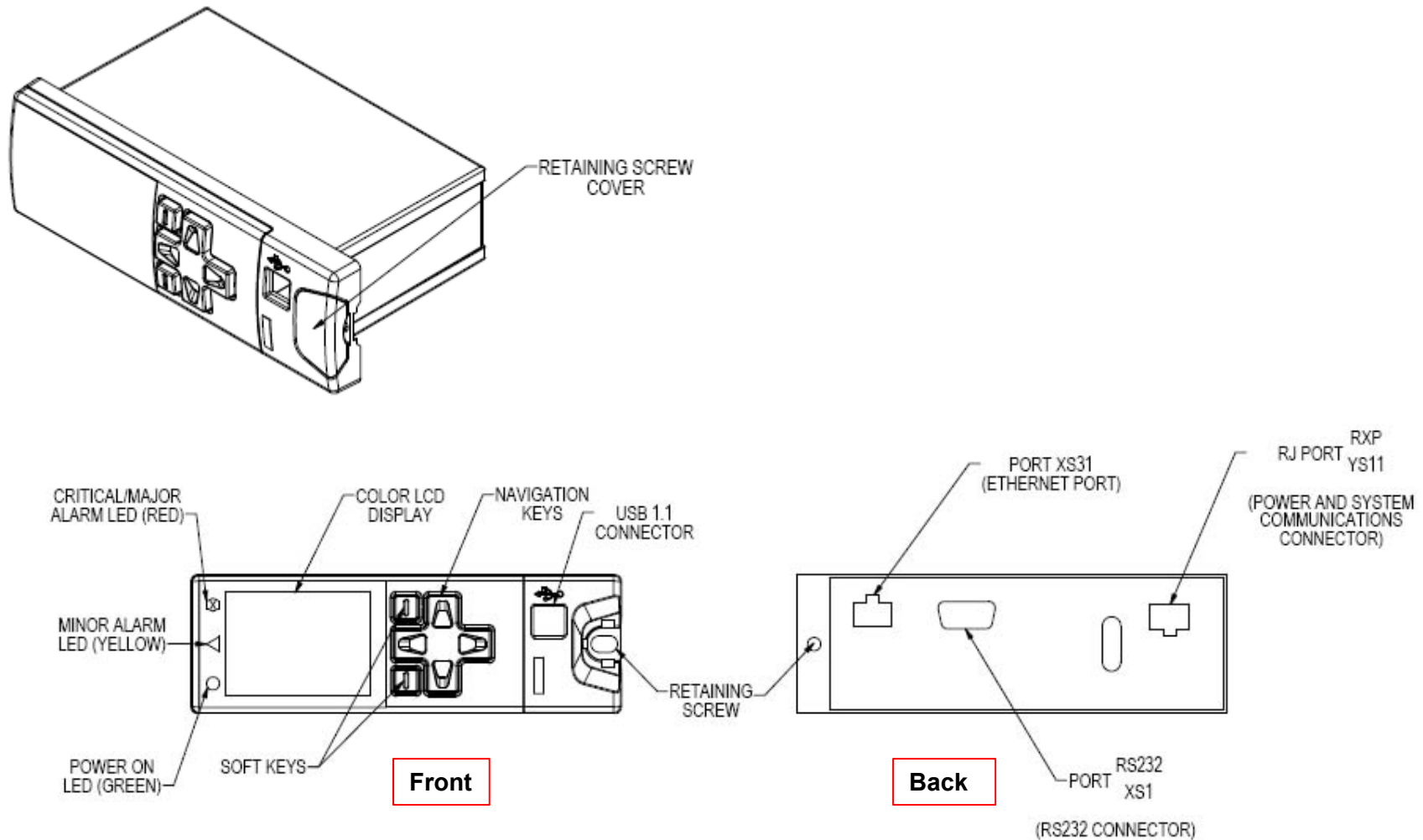
1. Remove the screws from the breaker faceplate shown in the following figure and set them aside in a safe place
2. Pull the faceplate straight out.
3. If you are replacing a breaker, pull the breaker out from the module's internal receptacles. **You do not need to pull out the whole module to replace one breaker.** The "bullet"-style contacts are set tightly into these receptacles, and you may have to wiggle the breaker slightly to remove it.
4. Set the new breaker in line with the receptacles inside to the module and push straight in. Make sure to orient the module as shown.
5. Using the screws from step 1, replace the breaker faceplate.

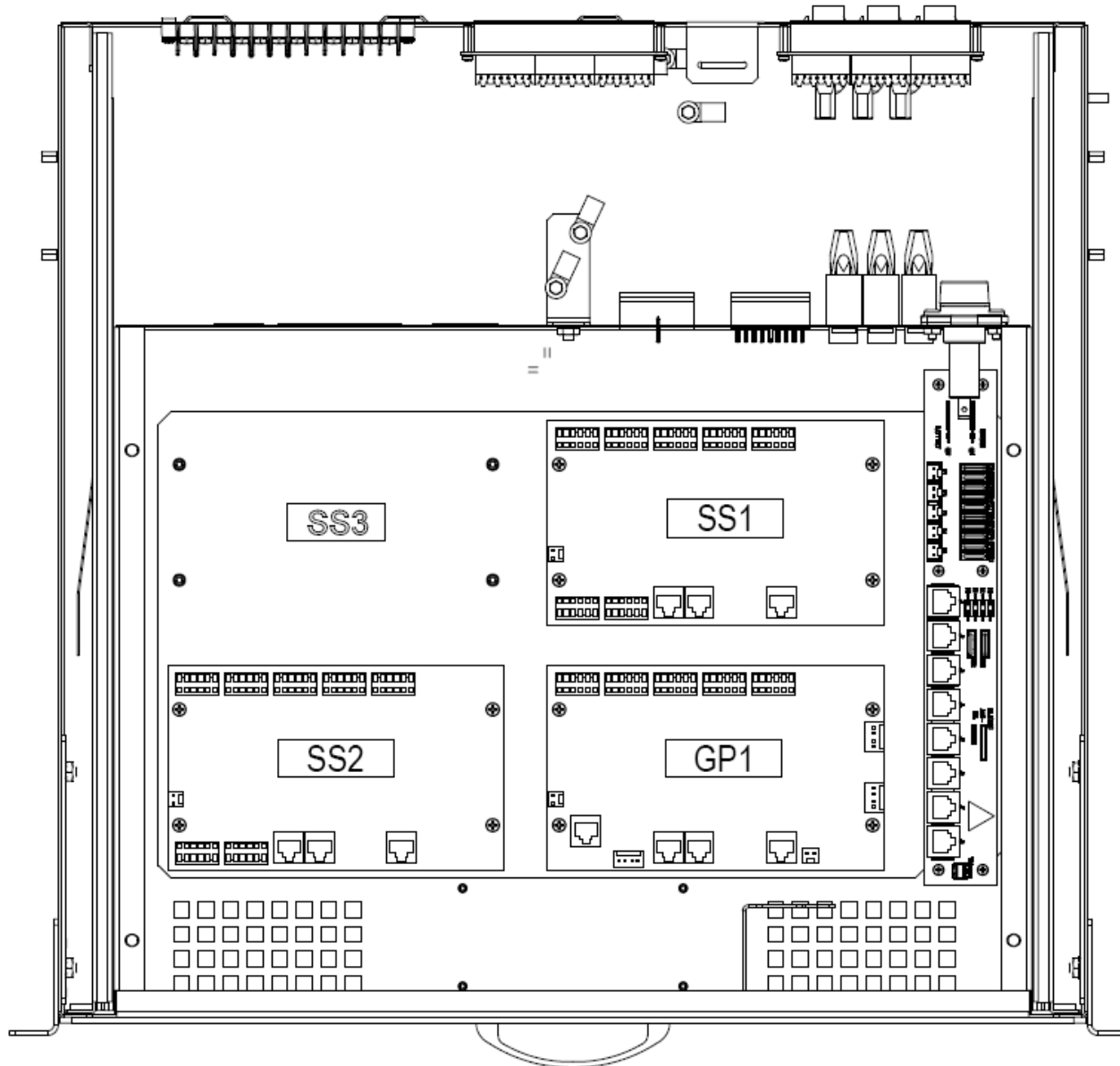




DC Controller Shelf

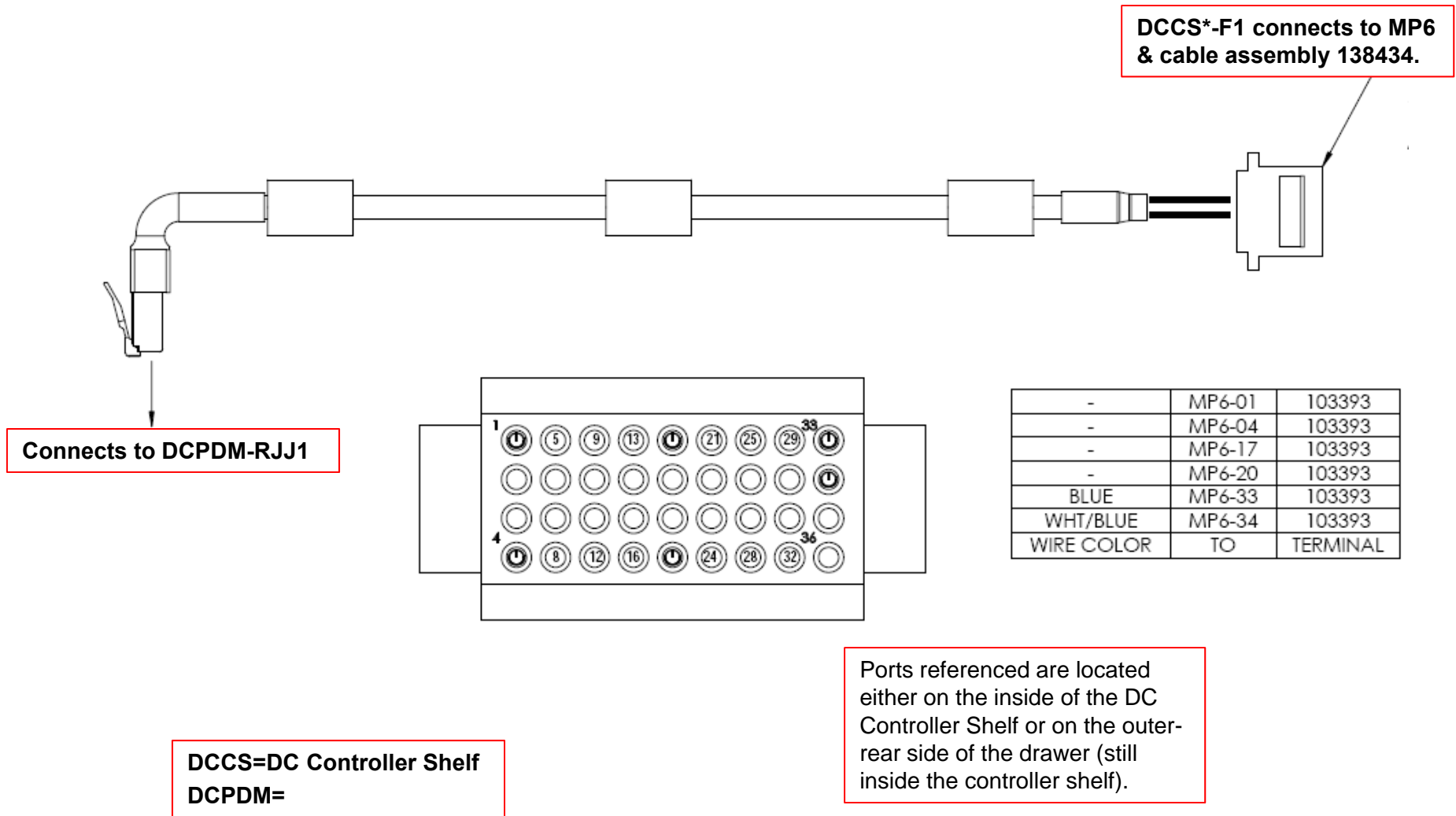




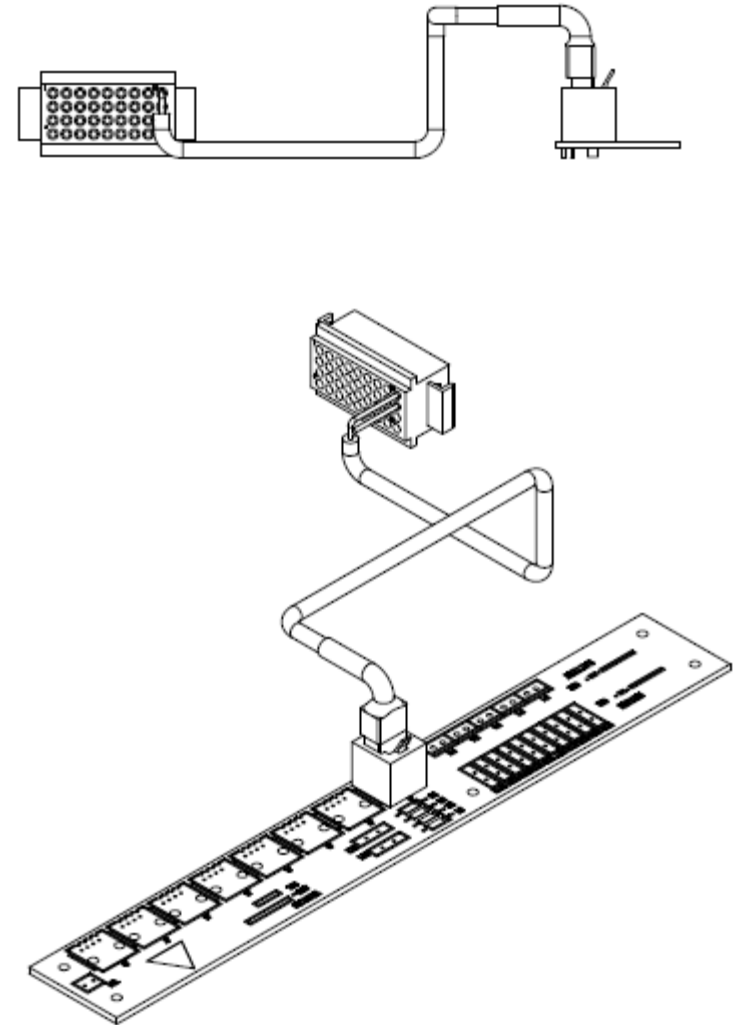
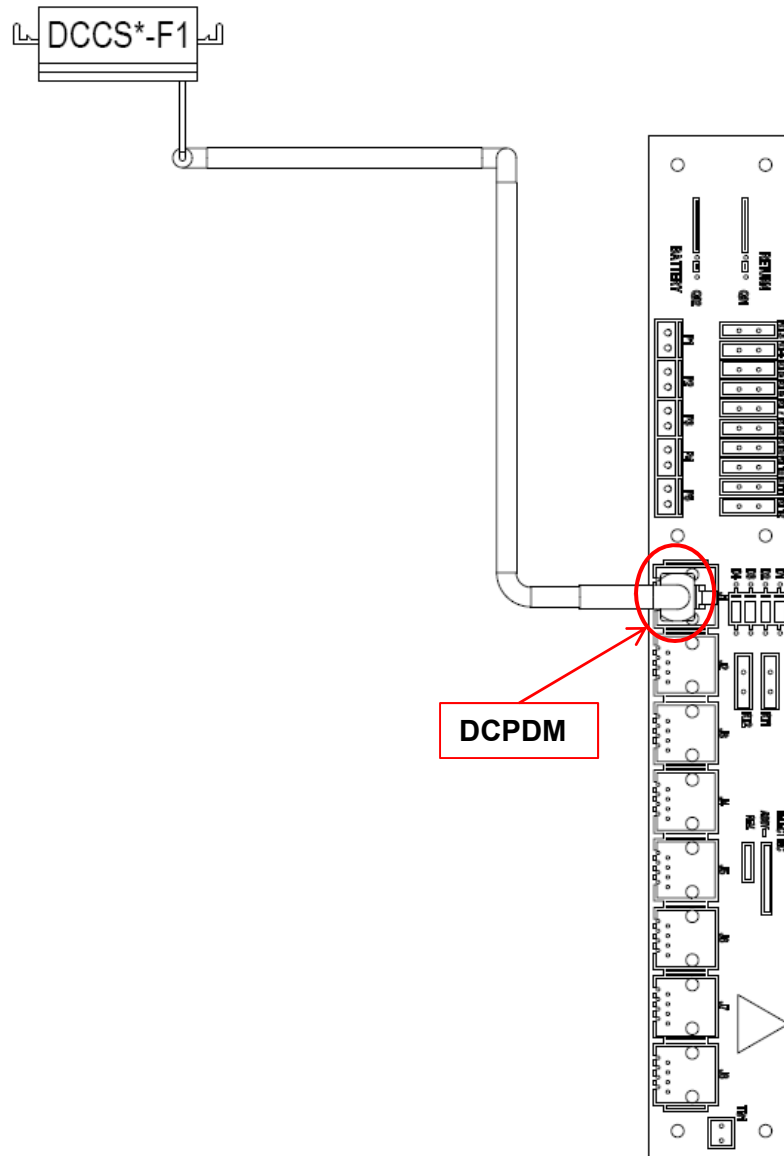


Shown without
wire harnesses.

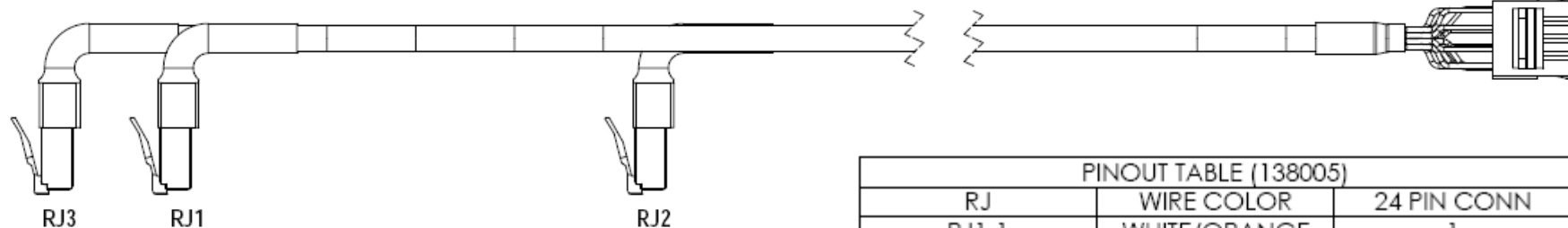
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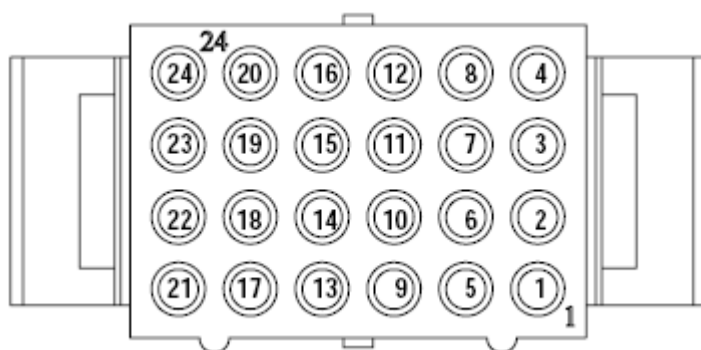


DCCS*-F2 connects to MP3
& cable assembly 138318.



RJ45 connections RJ3 & FJ1 connect to SS2-RJ1 & GP1-RJ2, respectively.

RJ45 connection RJ2 connect to SS1-RJ2.

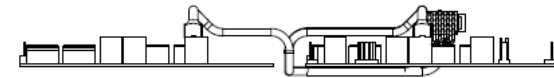
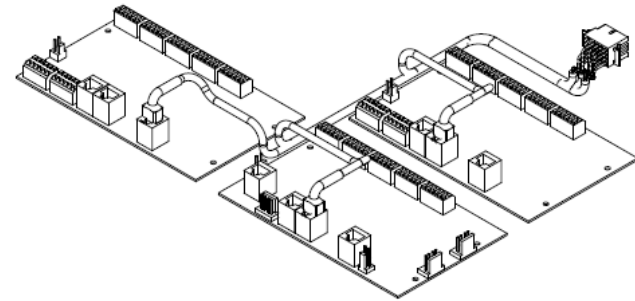
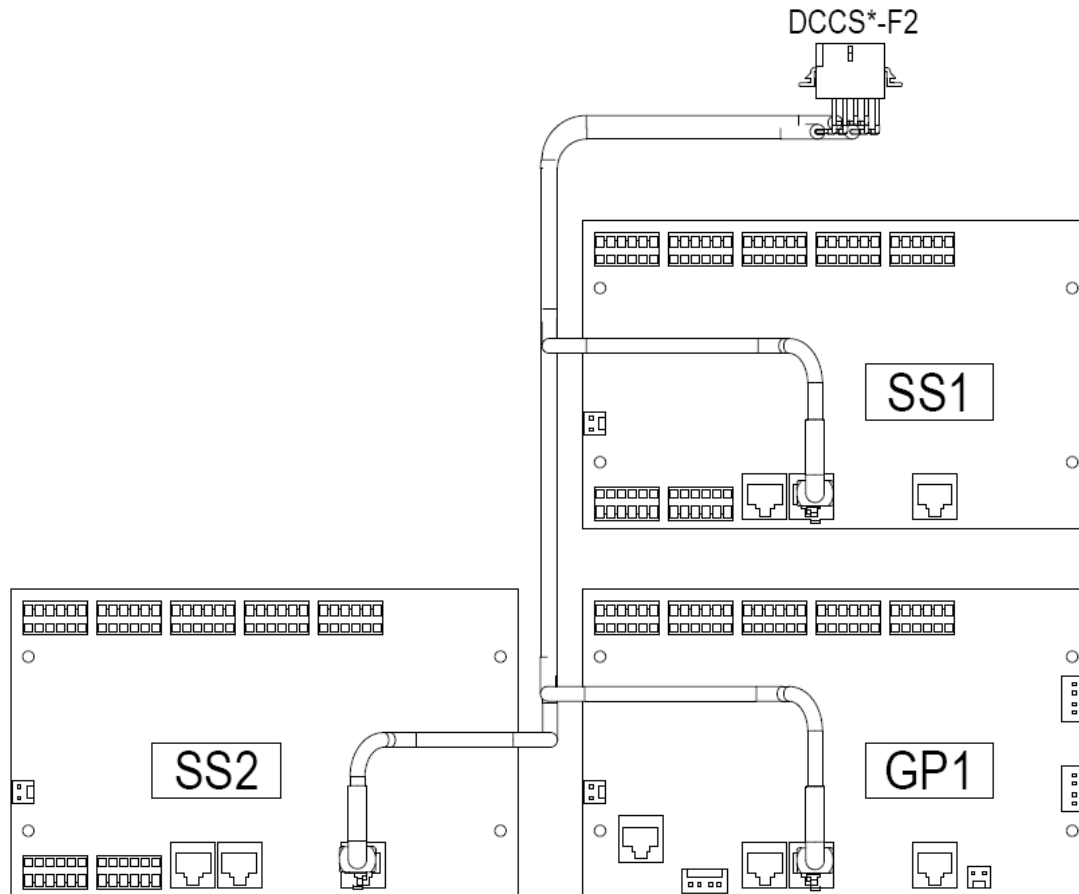


PINOUT TABLE (138005)

RJ	WIRE COLOR	24 PIN CONN
RJ1-1	WHITE/ORANGE	1
RJ1-2	ORANGE	2
RJ1-4	BLUE	3
RJ1-5	WHITE/BLUE	4
RJ1-7	WHITE/BROWN	5
RJ1-8	BROWN	6
RJ2-1	WHITE/ORANGE	7
RJ2-2	ORANGE	8
RJ2-4	BLUE	9
RJ2-5	WHITE/BLUE	10
RJ2-7	WHITE/BROWN	11
RJ2-8	BROWN	12
RJ3-1	WHITE/ORANGE	13
RJ3-2	ORANGE	14
RJ3-4	BLUE	15
RJ3-5	WHITE/BLUE	16
RJ3-7	WHITE/BROWN	17
RJ3-8	BROWN	18

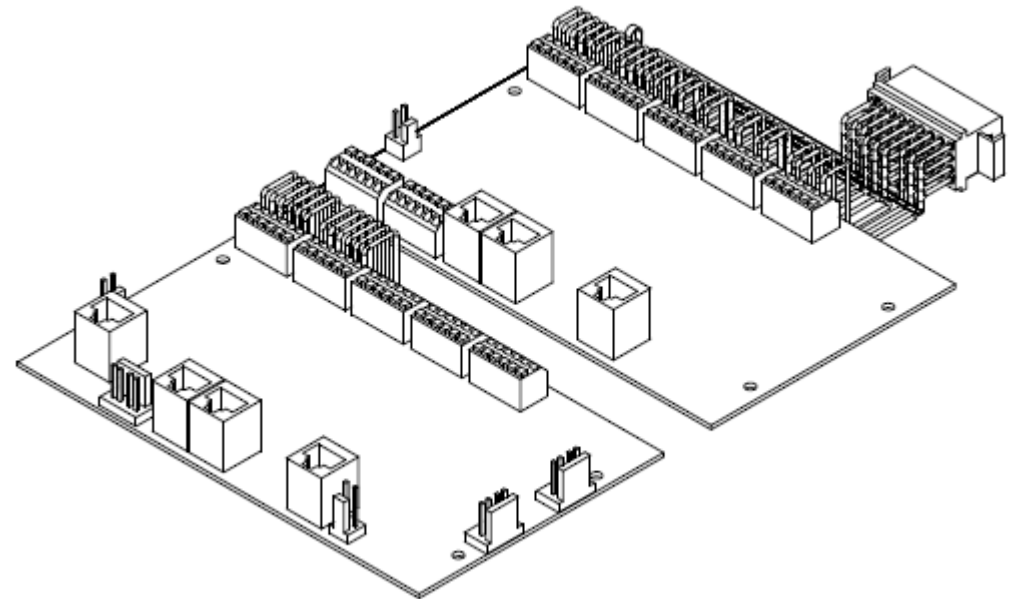
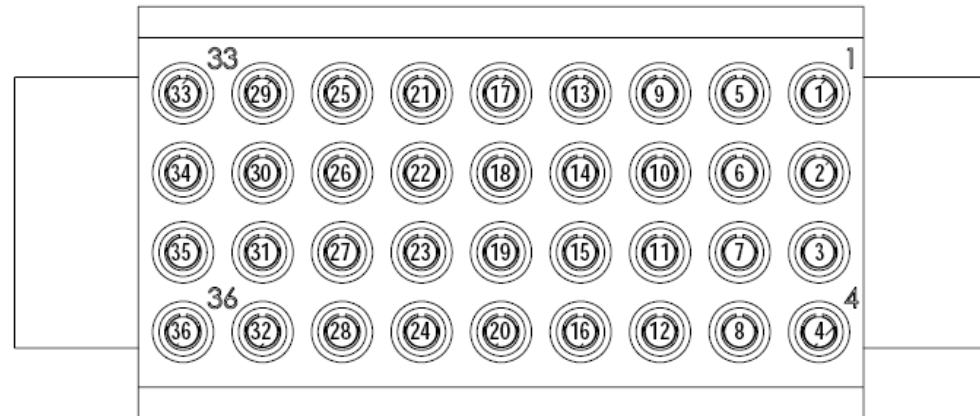
DCCS=DC Controller Shelf

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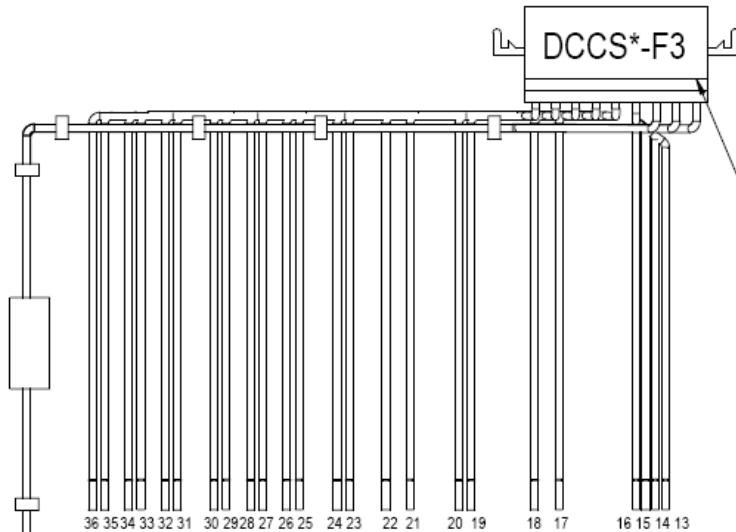
DCCS=DC Controller Shelf

PIN OUT TABLE (138413)			
WIRE #	WIRE COLOR	BEGIN LOC.	END PIN
36	BLUE	SS1-5-6	36
35	GREEN	SS1-5-5	35
34	RED	SS1-5-4	34
33	WHITE	SS1-5-3	33
32	VIOLET	SS1-5-2	32
31	BLACK	SS1-5-1	31
30	YELLOW	SS1-4-6	30
29	ORANGE	SS1-4-5	29
28	BLUE	SS1-4-4	28
27	GREEN	SS1-4-3	27
26	RED	SS1-4-2	26
25	WHITE	SS1-4-1	25
24	VIOLET	SS1-3-6	24
23	BLACK	SS1-3-5	23
22	YELLOW	SS1-3-3	22
21	ORANGE	SS1-3-2	21
20	BLUE	SS1-2-6	20
19	GREEN	SS1-2-5	19
18	RED	SS1-2-3	18
17	WHITE	SS1-2-2	17
16	VIOLET	SS1-1-6	16
15	BLACK	SS1-1-5	15
14	YELLOW	SS1-1-3	14
13	ORANGE	SS1-1-2	13
12	BLUE	GP1-5-6	12
11	GREEN	GP1-5-5	11
10	RED	GP1-5-4	10
9	WHITE	GP1-5-3	9
8	VIOLET	GP1-5-2	8
7	BLACK	GP1-5-1	7
6	YELLOW	GP1-4-6	6
5	ORANGE	GP1-4-5	5
4	BLUE	GP1-4-4	4
3	GREEN	GP1-4-3	3
2	RED	GP1-4-2	2
1	WHITE	GP1-4-1	1

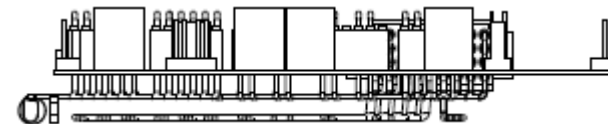


DCCS=DC Controller Shelf

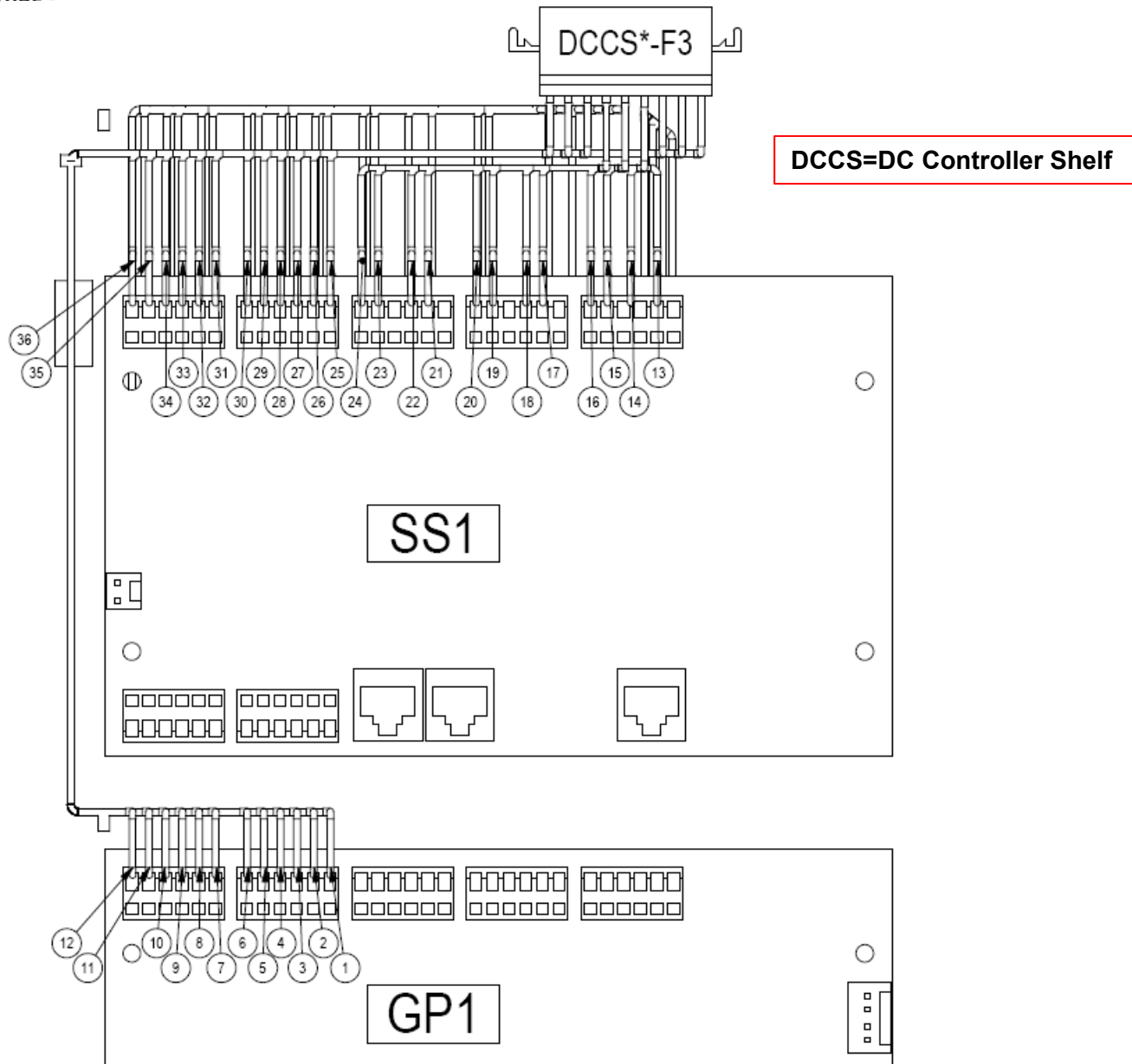
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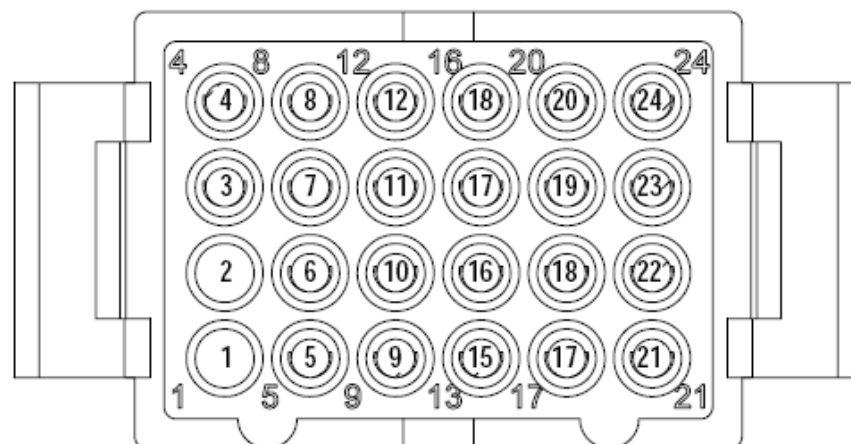
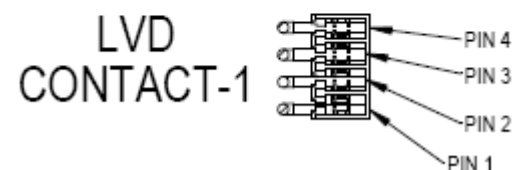
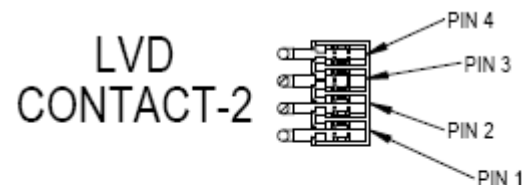
DCCS=DC Controller Shelf



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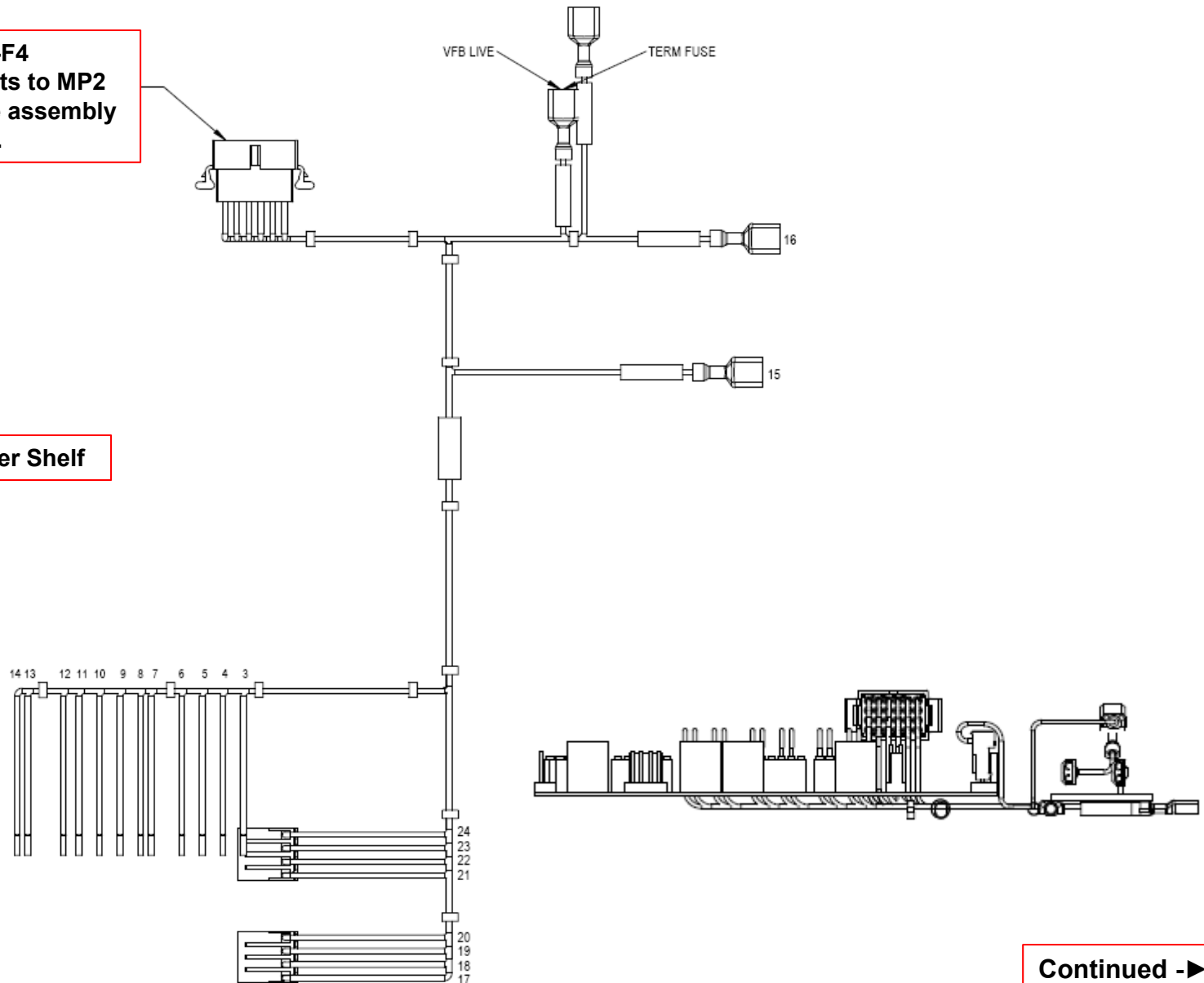
PIN OUT TABLE (137987)			
WIRE #	WIRE COLOR	START LOC.	END PIN
VFB LIVE	BLACK	BATTERY Q02	TERM FUSE
24	BLUE	LVD CONTACT-2-4	24
23	GREEN	LVD CONTACT-2-3	23
22	RED	LVD CONTACT-2-2	22
21	WHITE	LVD CONTACT-2-1	21
20	BLUE	LVD CONTACT-1-4	20
19	GREEN	LVD CONTACT-1-3	19
18	RED	LVD CONTACT-1-2	18
17	WHITE	LVD CONTACT-1-1	17
16	BLACK	RETURN Q01	16
15	BLACK	FUSE	15
14	YELLOW	GP1-3-6	14
13	ORANGE	GP1-3-5	13
12	BLUE	GP1-3-3	12
11	GREEN	GP1-3-2	11
10	RED	GP1-2-6	10
9	WHITE	GP1-2-5	9
8	YELLOW	GP1-2-3	8
7	ORANGE	GP1-2-2	7
6	BLUE	GP1-1-6	6
5	GREEN	GP1-1-5	5
4	RED	GP1-1-3	4
3	WHITE	GP1-1-2	3
NOT USED	-		2
NOT USED	-		1



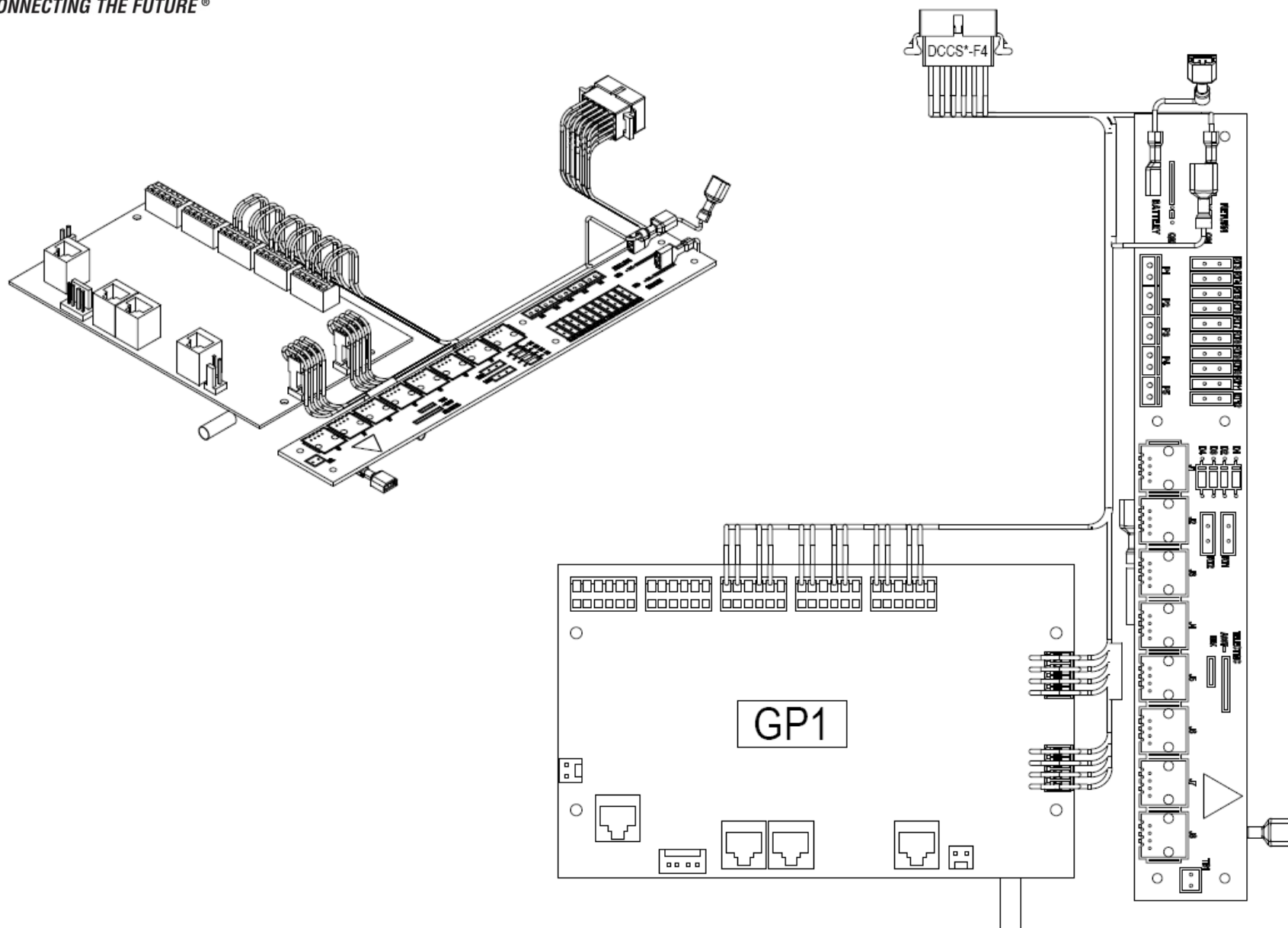
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DCCS*-F4
connects to MP2
& cable assembly
138318.

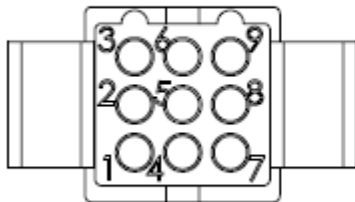
DCCS=DC Controller Shelf



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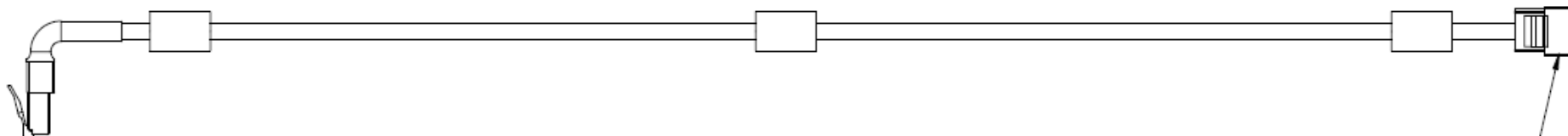


DCCS*-F5



MOLEX PIN OUT TABLE (138233)

RJ 45 PIN	WIRE COLOR	MOLEX PIN
1	WHITE/ORANGE	PIN 1
2	ORANGE	PIN 2
3	WHITE/GREEN	PIN 3
4	BLUE	PIN 4
5	WHITE/BLUE	PIN 5
6	GREEN	PIN 6
7	WHITE/BROWN	-
8	BROWN	PIN 7

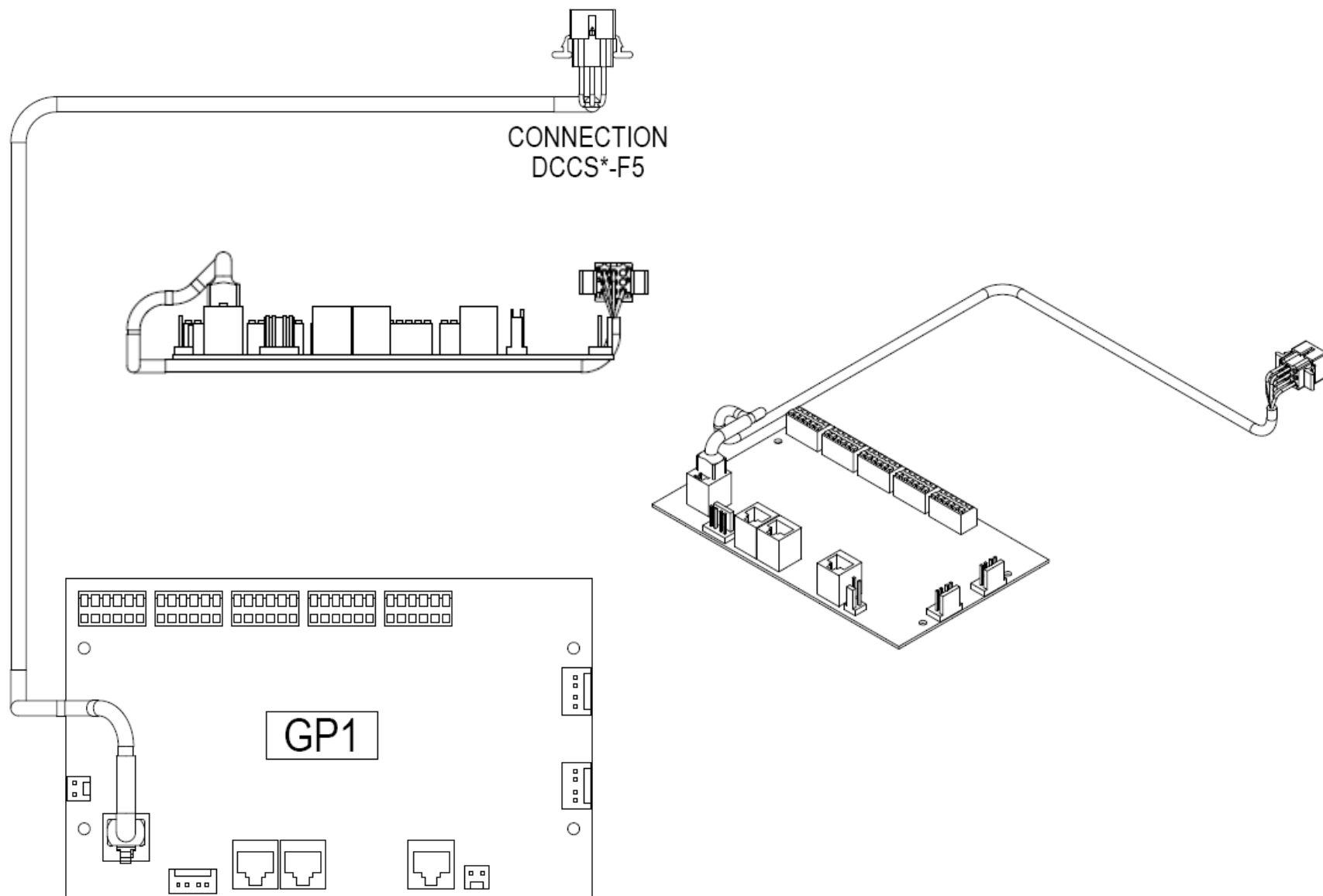


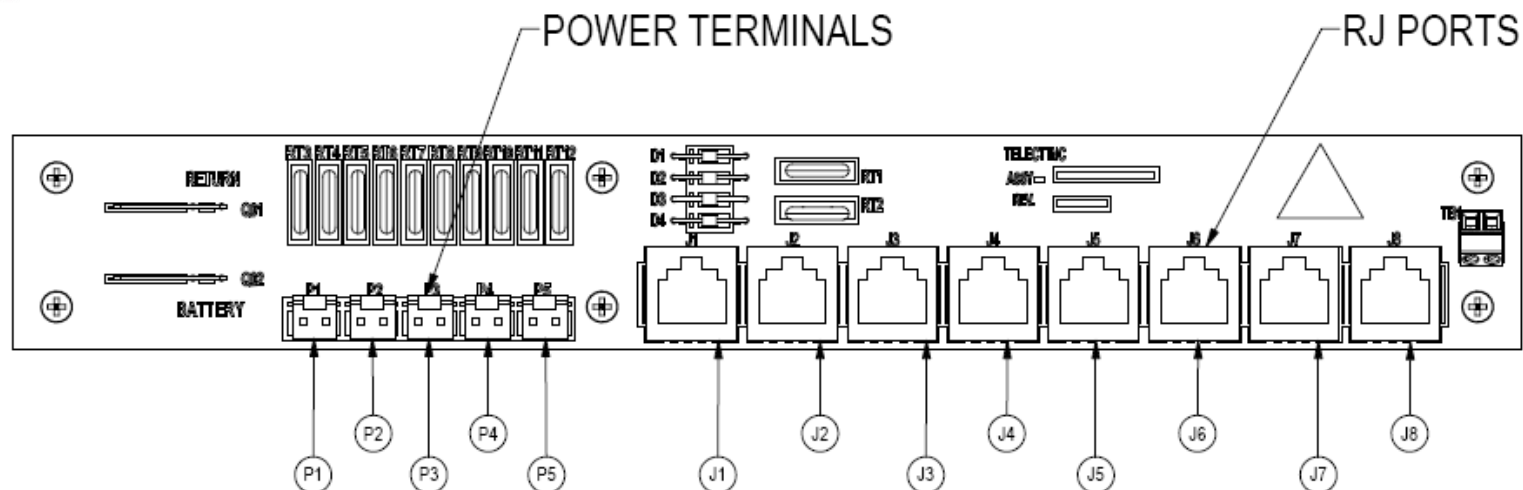
RJ45 connects to
GP1-RJ4.

DCCS*-F5 connects
to MP1 & cable
assembly 138318.

DCCS=DC Controller Shelf

Continued ->





DCPDM POWER TERMINALS P1-P5

DCPDM POWER TERMINAL	TERMINATING PORT LOCATION	DCPDM POWER TERMINAL	TERMINATING PORT LOCATION
DCPDM-P1	GP1 LVD POWER TERMINAL	DCPDM-P4	UNUSED
DCPDM-P2	GP1 BOARD POWER TERMINAL	DCPDM-P5	UNUSED
DCPDM-P3	SS1 BOARD POWER TERMINAL	DCPDM-P6	UNUSED

DCPDM-RJ PORTS J1-J8

DCPDM RJ PORT	TERMINATING PORT LOCATION	DCPDM RJ PORT	TERMINATING PORT LOCATION
DCPDM-RJJ1	DCCS*-F1	DCPDM-RJJ5	DCCS*-RJ-D2
DCPDM-RJJ2	SS1-RJ-1	DCPDM-RJJ6	UNUSED
DCPDM-RJJ3	GP1-RJ-1	DCPDM-RJJ7	CONTROLLER RJ-YS11
DCPDM-RJJ4	UNUSED	DCPDM-RJJ8	UNUSED

Continued ->

DCPDM POWER TERMINAL CONNECTIONS

DCPDM POWER TERMINAL	TERMINATING PORT LOCATION	DCPDM POWER TERMINAL	TERMINATING PORT LOCATION
P1	GP1-LVD POWER TERMINAL	P4	UNUSED
P2	GP1-BOARD POWER TERMINAL	P5	UNUSED
P3	SS1-BOARD POWER TERMINAL	P6	UNUSED

DCPDM RJ PORT CONNECTIONS

DCPDM RJ PORT	TERMINATING PORT LOCATION	DCPDM RJ PORT	TERMINATING PORT LOCATION
DCPDM-RJJ1	DCCS*-F1	DCPDM-RJJ5	DCCS*-RJD2
DCPDM-RJJ2	SS1-RJ1	DCPDM-RJJ6	UNUSED
DCPDM-RJJ3	GP1-RJ1	DCPDM-RJJ7	CONTROLLER RJ45 YS11
DCPDM-RJJ4	UNUSED	DCPDM-RJJ8	UNUSED

DCPDM-P1 → GP1-LVD POWER TERMINAL ◁

DCPDM-P2 → GP1-BOARD POWER TERMINAL ◁

DCPDM-P3 → SS1-LVD POWER TERMINAL ◁

DCPDM-P4 → UNUSED ◁

DCPDM-P5 → UNUSED ◁

DCPDM-RJJ1 → DCCS*-F1 ◁

DCPDM-RJJ2 → SS1-RJ1 ◁

DCPDM-RJJ3 → GP1-RJ1 ◁

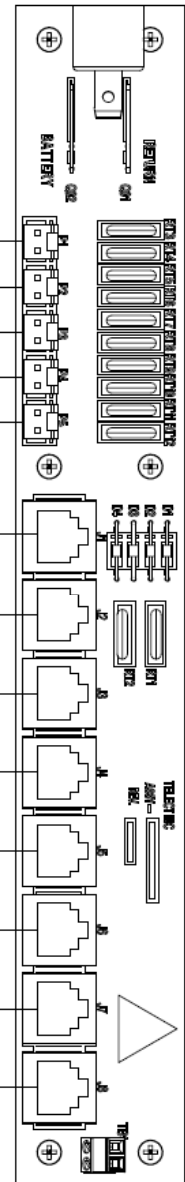
DCPDM-RJJ4 → SS2-RJ1 ◁

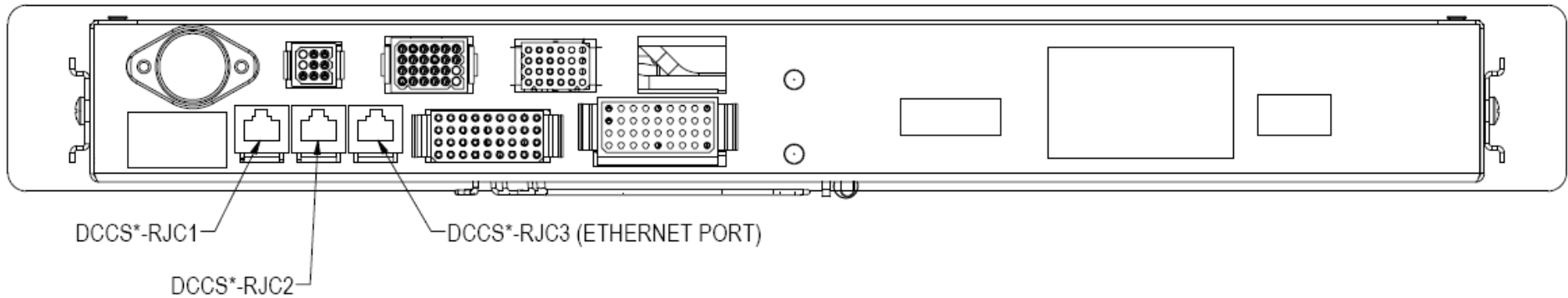
DCPDM-RJJ5 → DCCS*-RJD2 ◁

DCPDM-RJJ6 → UNUSED ◁

DCPDM-RJJ7 → CONTROLLER-YS11 ◁

DCPDM-RJJ8 → UNUSED ◁

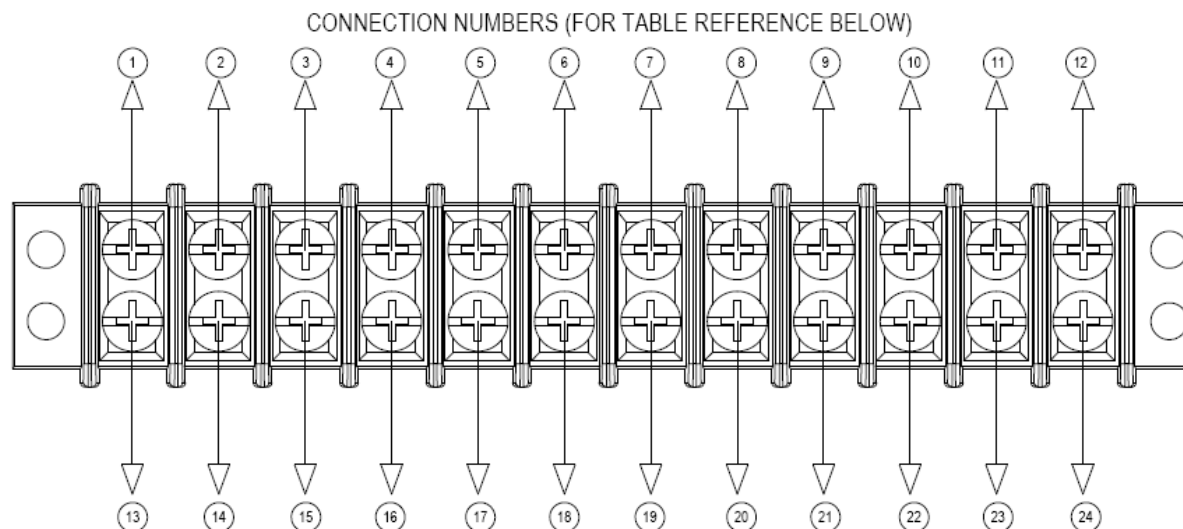




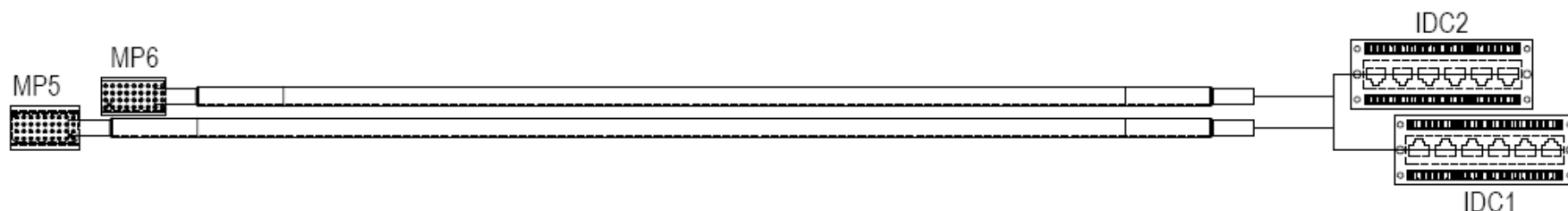
DCCS*-RJ ports C1-C3 connect to DCCS*-RJ ports D1-D3 on the reverse side, respectively.
DCCS*-RJ ports C1-C3 connect by CAT5e cable to DCCS*-RJ ports B1-B3 on the shelf inside, respectively.

DCCS=DC Controller Shelf

Continued -▶



CONN. NUMBER	WIRE START	WIRE END	WIRE NAME	CONN. NUMBER	WIRE START	WIRE END	WIRE NAME	CONN. NUMBER	WIRE START	WIRE END	WIRE NAME	CONN. NUMBER	WIRE START	WIRE END	WIRE NAME
1	TB*-A12	CBL ASSY 138322	RIO-01	5	TB*-A8	CBL-ASSY 138434	IDC2-6-4 (BLUE)	10	TB*-A3	CBL-ASSY 138434	IDC2-5-3 (WHITE/GREEN)	16	TB*-B9	CBL-ASSY 138322	RIO-10**
1	TB*-A12	CBL ASSY 138322	RIO-02	6	TB*-A7	CBL-ASSY 138434	IDC2-6-3 (WHITE/GREEN)	10	TB*-A3	CBL-ASSY 138434	IDC2-5-2 (ORANGE)	17	TB*-B8	CBL-ASSY 138322	RIO-10**
2	TB*-A11	CBL-ASSY 138322	RIO-03	6	TB*-A7	CBL-ASSY 138434	IDC2-6-2 (ORANGE)	11	TB*-A2	CBL-ASSY 138434	IDC2-5-1 (WHITE/ORANGE)	18	TB*-B7	CBL-ASSY 138322	RIO-10**
2	TB*-A11	CBL-ASSY 138322	RIO-04	7	TB*-A6	CBL-ASSY 138434	IDC2-6-1 (WHITE/ORANGE)	11	TB*-A2	CBL-ASSY 138434	IDC2-6-6 (GREEN)	19	TB*-B6	CBL-ASSY 138322	RIO-10**
3	TB*-A10	CBL-ASSY 138322	RIO-COM 1	7	TB*-A6	CBL-ASSY 138434	IDC2-5-8 (BROWN)	12	TB*-A1	CBL-ASSY 138434	IDC2-6-7 (WHITE/BROWN)	20	TB*-B5	CBL-ASSY 138322	RIO-09
3	TB*-A10	CBL-ASSY 138322	RIO-COM 2	8	TB*-A5	CBL-ASSY 138434	IDC2-5-7 (WHITE/BROWN)	12	TB*-A1	CBL-ASSY 138434	IDC2-6-8 (BROWN)	21	TB*-B4	CBL-ASSY 138322	RIO-08
4	TB*-A9	CBL-ASSY 138322	RIO-COM 3	8	TB*-A5	CBL-ASSY 138434	IDC2-5-6 (GREEN)	13	TB*-B12	CBL-ASSY 138322	RIO-05**	22	TB*-B3	CBL-ASSY 138322	RIO-06
4	TB*-A9	CBL-ASSY 138322	RIO-COM 4	9	TB*-A4	CBL-ASSY 138434	IDC2-5-5 (WHITE/BLUE)	14	TB*-B11	CBL-ASSY 138322	RIO-05**	23	TB*-B2	UNUSED	
5	TB*-A8	CBL-ASSY 138434	IDC2-6-5 (WHITE/BLUE)	9	TB*-A4	CBL-ASSY 138434	IDC2-5-4 (BLUE)	15	TB*-B10	CBL-ASSY 138322	RIO-10**	24	TB*-B1	UNUSED	

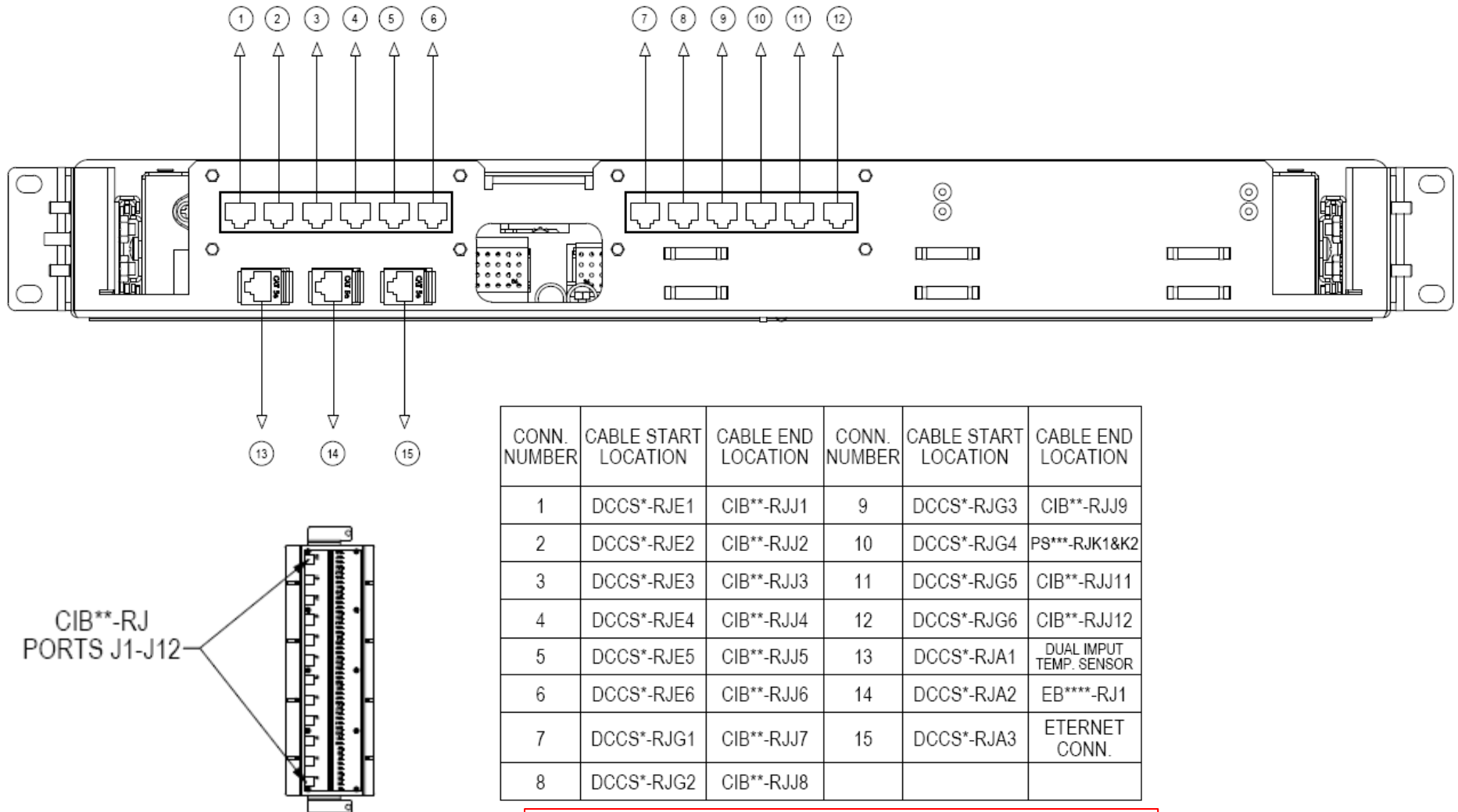


WIRE END	WIRE START	COLOR
IDC1-1-1	MP5-01	WHT/ORANGE
IDC1-1-2	MP5-02	ORANGE
IDC1-1-3	MP5-03	WHT/GREEN
IDC1-1-4	MP5-04	BLUE
IDC1-1-5	MP5-05	WHT/BLUE
IDC1-1-6	MP5-06	GREEN
IDC1-1-7	MP5-07	WHT/BROWN
IDC1-1-8	MP5-08	BROWN
IDC1-2-1	MP5-09	WHT/ORANGE
IDC1-2-2	MP5-10	ORANGE
IDC1-2-3	MP5-11	WHT/GREEN
IDC1-2-4	MP5-12	BLUE
IDC1-2-5	MP5-25	WHT/BLUE
IDC1-2-6	MP5-26	GREEN
IDC1-2-7	MP5-27	WHT/BROWN
IDC1-2-8	MP5-28	BROWN
IDC1-3-1	MP5-29	WHT/ORANGE
IDC1-3-2	MP5-30	ORANGE
IDC1-3-3	MP5-31	WHT/GREEN
IDC1-3-4	MP5-32	BLUE
IDC1-3-5	MP5-33	WHT/BLUE
IDC1-3-6	MP5-34	GREEN
IDC1-3-7	MP5-35	WHT/BROWN
IDC1-3-8	MP5-36	BROWN

WIRE END	WIRE START	COLOR
IDC1-4-1	MP6-01	WHT/ORANGE
IDC1-4-2	MP6-02	ORANGE
IDC1-4-3	MP6-03	WHT/GREEN
IDC1-4-4	MP6-04	BLUE
IDC1-4-5	MP6-05	WHT/BLUE
IDC1-4-6	MP6-06	GREEN
IDC1-4-7	MP6-07	WHT/BROWN
IDC1-4-8	MP6-08	BROWN
IDC1-5-1	MP6-09	WHT/ORANGE
IDC1-5-2	MP6-10	ORANGE
IDC1-5-3	MP6-11	WHT/GREEN
IDC1-5-4	MP6-12	BLUE
IDC1-5-5	MP6-13	WHT/BLUE
IDC1-5-6	MP6-14	GREEN
IDC1-5-7	MP6-15	WHT/BROWN
IDC1-5-8	MP6-16	BROWN
IDC1-6-1	MP5-13	WHT/ORANGE
IDC1-6-2	MP5-14	ORANGE
IDC1-6-3	MP5-15	WHT/GREEN
IDC1-6-4	MP5-16	BLUE
IDC1-6-5	MP5-17	WHT/BLUE
IDC1-6-6	MP5-18	GREEN
IDC1-6-7	MP5-19	WHT/BROWN
IDC1-6-8	MP5-20	BROWN

WIRE END	WIRE START	COLOR
IDC2-1-1	MP5-21	WHT/ORANGE
IDC2-1-2	MP5-22	ORANGE
IDC2-1-3	MP5-23	WHT/GREEN
IDC2-1-4	MP5-24	BLUE
IDC2-1-5	MP6-17	WHT/BLUE
IDC2-1-6	MP6-18	GREEN
IDC2-1-7	MP6-19	WHT/BROWN
IDC2-1-8	MP6-20	BROWN
IDC2-2-1	MP6-21	WHT/ORANGE
IDC2-2-2	MP6-22	ORANGE
IDC2-2-3	MP6-23	WHT/GREEN
IDC2-2-4	MP6-24	BLUE
IDC2-2-5	MP6-25	WHT/BLUE
IDC2-2-6	MP6-26	GREEN
IDC2-2-7	MP6-27	WHT/BROWN
IDC2-2-8	MP6-28	BROWN
IDC2-3-1	MP6-29	WHT/ORANGE
IDC2-3-2	MP6-30	ORANGE
IDC2-3-3	MP6-31	WHT/GREEN
IDC2-3-4	MP6-32	BLUE
IDC2-3-5	UNUSED	UNUSED
IDC2-3-6	UNUSED	UNUSED
IDC2-3-7	MP6-35	WHT/BROWN
IDC2-3-8	MP6-36	BROWN

WIRE END	WIRE START	COLOR
IDC2-4-1	UNUSED	UNUSED
IDC2-4-2	UNUSED	UNUSED
IDC2-4-3	UNUSED	UNUSED
IDC2-4-4	MP6-33	BLUE
IDC2-4-5	MP6-34	WHT/BLUE
IDC2-4-6	UNUSED	UNUSED
IDC2-4-7	UNUSED	UNUSED
IDC2-4-8	UNUSED	UNUSED
IDC2-5-1	TB*A2	WHT/ORANGE
IDC2-5-2	TB*A3	ORANGE
IDC2-5-3	TB*A3	WHT/GREEN
IDC2-5-4	TB*A4	BLUE
IDC2-5-5	TB*A4	WHT/BLUE
IDC2-5-6	TB*A5	GREEN
IDC2-5-7	TB*A5	WHT/BROWN
IDC2-5-8	TB*A6	BROWN
IDC2-6-1	TB*A6	WHT/ORANGE
IDC2-6-2	TB*A7	ORANGE
IDC2-6-3	TB*A7	WHT/GREEN
IDC2-6-4	TB*A8	BLUE
IDC2-6-5	TB*A8	WHT/BLUE
IDC2-6-6	TB*A2	GREEN
IDC2-6-7	TB*A1	WHT/BROWN
IDC2-6-8	TB*A1	BROWN

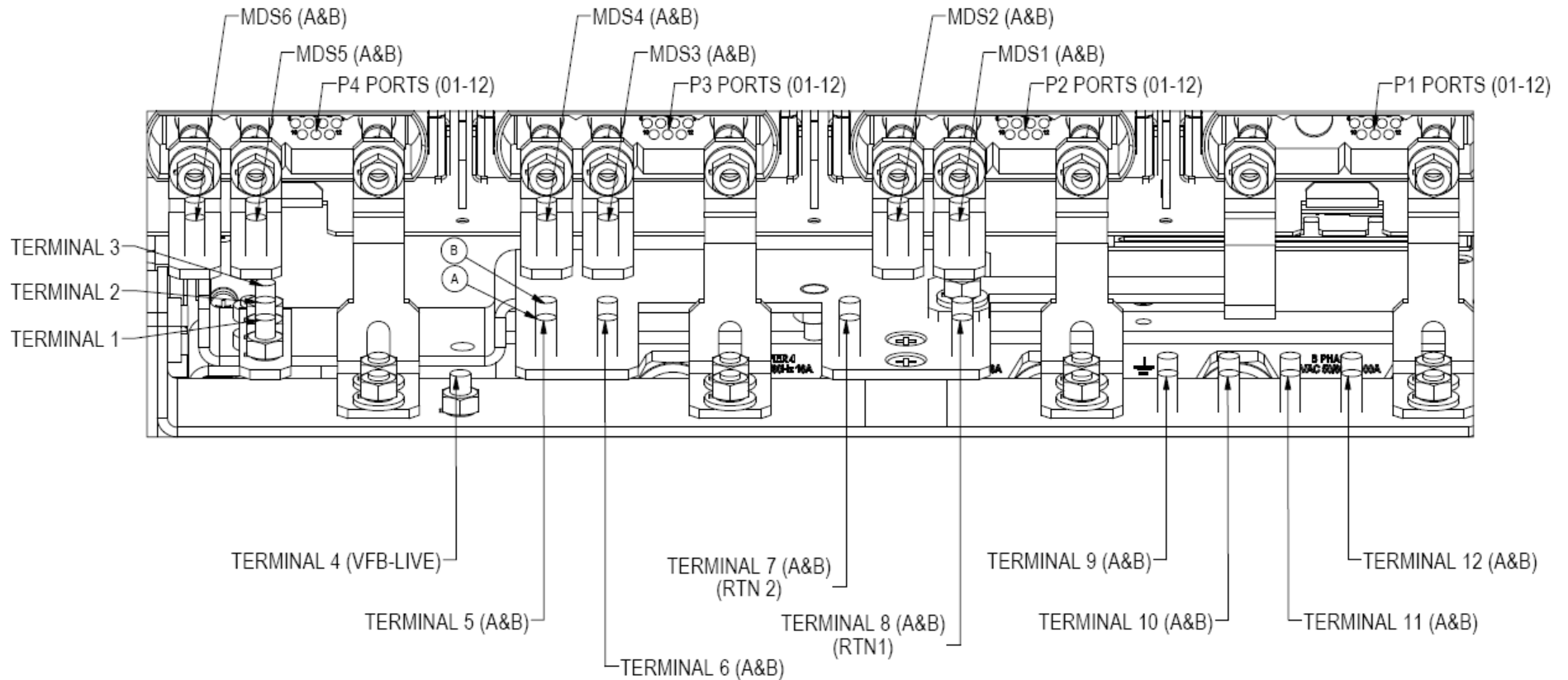


DCCS=DC Controller Shelf

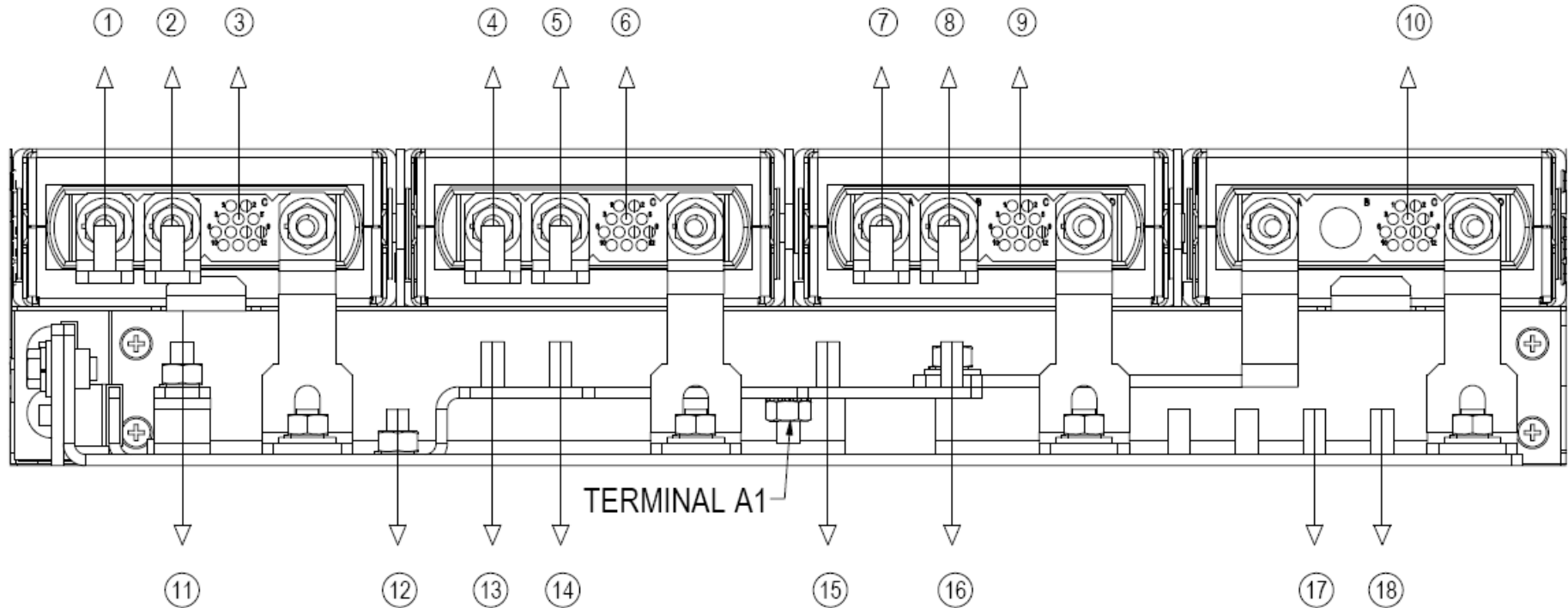
CIB=Customer Interface Board (I/O Distribution Board)

PS=nrgSMART stack

EB=Controller Assembly or Environmental Board



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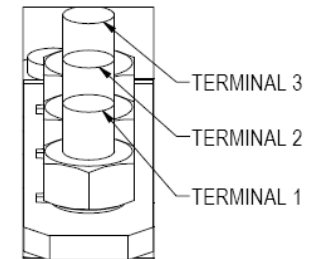


CONNECTION TABLE (SEE ABOVE)

CONNECTION NUMBER	DESCRIPTION	CONNECTION NUMBER	DESCRIPTION	CONNECTION NUMBER	DESCRIPTION
1	BT-MDS6→ SUPPLY BUSS	7	BT-MDS2→ SUPPLY BUSS	13	BT-T5→BATTERIES
2	BT-MDS5→ SUPPLY BUSS	8	BT-MDS1→ SUPPLY BUSS	14	BT-T6→BATTERIES
3	BT-P4→CBL ASSY 138318	9	BT-P2→ CBL ASSY 138318	15	BT-RTN2→ RETURN BUSS
4	BT-MDS4→ SUPPLY BUSS	10	BT-P1→ CBL ASSY 138318	16	BT-RTN1→ RETURN BUSS
5	BT-MDS3→ SUPPLY BUSS	11	SEE DETAIL 11	17	BT-T11→LVD1-TERMINAL1
6	BT-P3→CBL ASSY 138318	12	BT-T4→ CBL ASSY 138318	18	BT-T12→LVD2-TERMINAL2

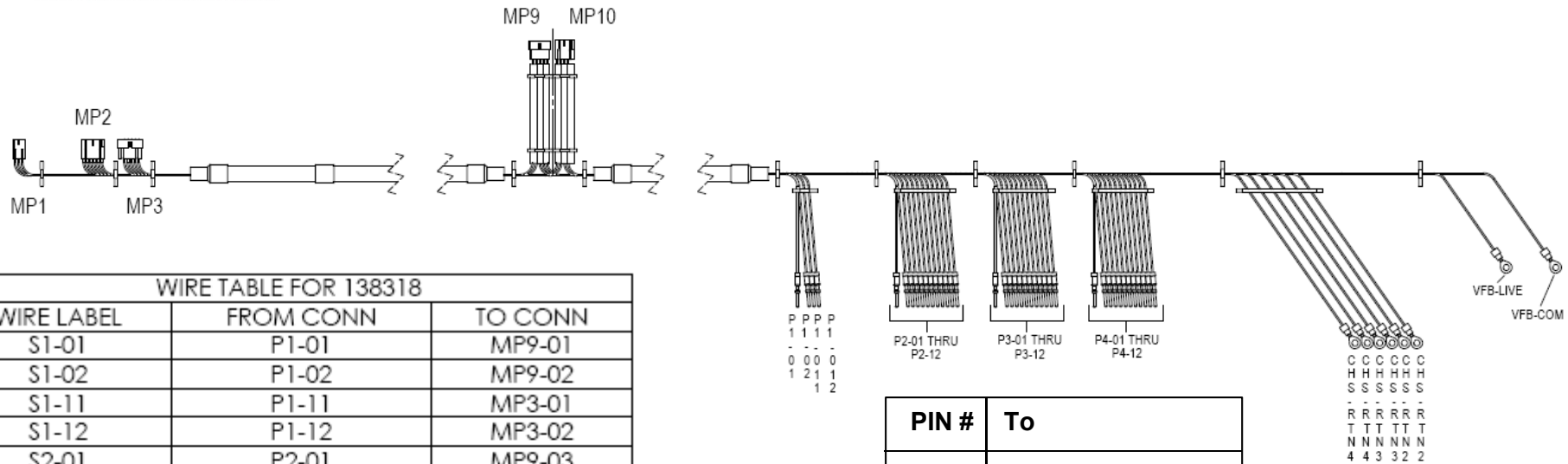
CONNECTION TABLE
(SEE DETAIL 11)

TERMINAL	WIRES THAT CONNECT	TERMINATION LOCATION
1	(VFB-COM), (CHS-RTN 2), (CHS-RTN 2)	BT-T1→ CBL ASSY 138318
2	(CHS-RTN 3), (CHS-RTN 3)	BT-T2→ CBL ASSY 138318
3	(CHS-RTN 4), (CHS-RTN 4)	BT-T3→ CBL ASSY 138318



DETAIL 11

BT=Buss Terminals



WIRE TABLE FOR 138318

WIRE LABEL	FROM CONN	TO CONN
S1-01	P1-01	MP9-01
S1-02	P1-02	MP9-02
S1-11	P1-11	MP3-01
S1-12	P1-12	MP3-02
S2-01	P2-01	MP9-03
S2-02	P2-02	MP9-04
S2-03	P2-03	MP2-03
S2-04	P2-04	MP2-04
S2-05	P2-05	MP2-05
S2-06	P2-06	MP2-06
S2-07	P2-07	CHS-RTN 2
S2-08	P2-08	CHS-RTN 2
S2-09	P2-09	MP3-03
S2-10	P2-10	MP3-04
S2-11	P2-11	MP3-05
S2-12	P2-12	MP3-06
S3-01	P3-01	MP9-05
S3-02	P3-02	MP9-06
S3-03	P3-03	MP2-07
S3-04	P3-04	MP2-08
S3-05	P3-05	MP2-09
S3-06	P3-06	MP2-10
S3-07	P3-07	CHS-RTN 3

PIN #	To
1	Breaker (COM)
2	Breaker (NO)
3	(-) Contactor #1
4	Shunt Buss #1
5	(-) Contactor #2
6	Shunt Buss #2
7	(+) Contactor #1
8	(+) Contactor #2
9	Black wire shunt #1
10	White wire shunt #1
11	Black wire shunt #1
12	White wire shunt #1

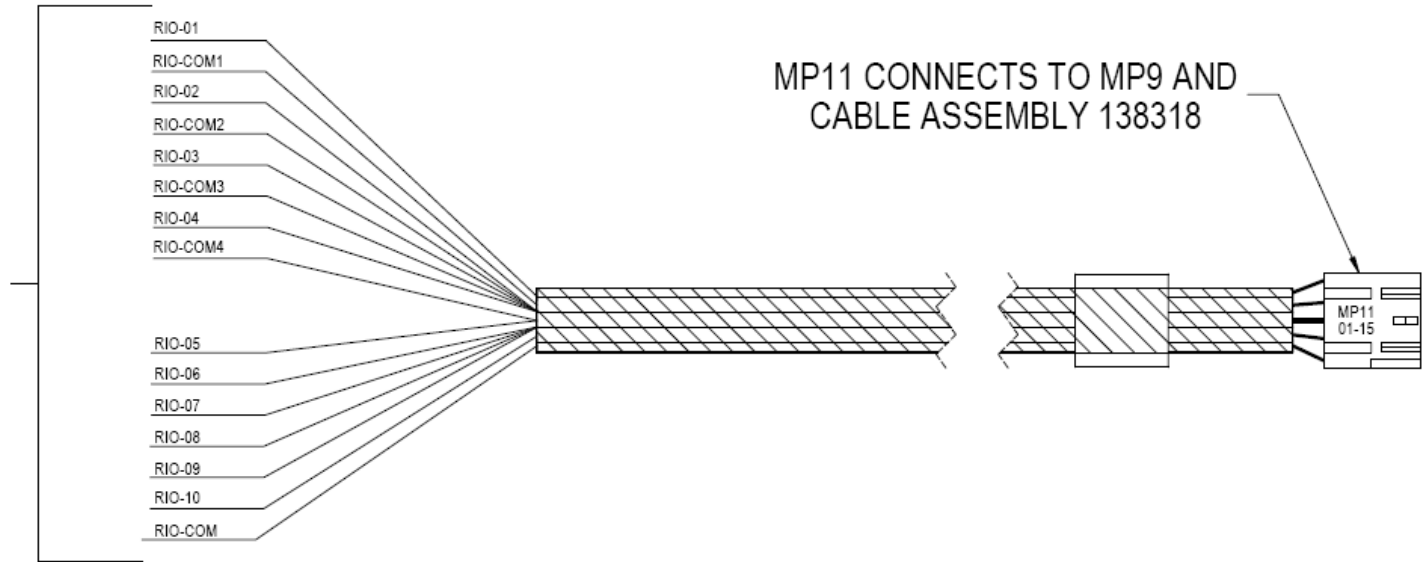
Tables Continued ->

WIRE TABLE FOR 138318		
WIRE LABEL	FROM CONN	TO CONN
S3-08	P3-08	CHS-RTN 3
S3-09	P3-09	MP3-07
S3-10	P3-10	MP3-08
S3-11	P3-11	MP3-09
S3-12	P3-12	MP3-10
S4-01	P4-01	MP9-07
S4-02	P4-02	MP9-08
S4-03	P4-03	MP2-11
S4-04	P4-04	MP2-12
S4-05	P4-05	MP2-13
S4-06	P4-06	MP2-14
S4-07	P4-07	CHS-RTN 4
S4-08	P4-08	CHS-RTN 4
S4-09	P4-09	MP3-11
S4-10	P4-10	MP3-12
S4-11	P4-11	MP3-13
S4-12	P4-12	MP3-14

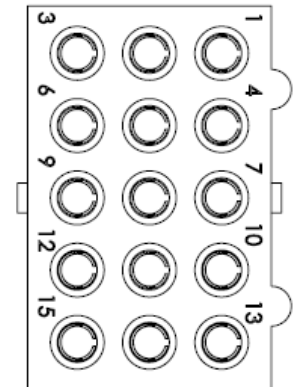
WIRE TABLE FOR 138318		
WIRE LABEL	FROM CONN	TO CONN
VFB-LIVE	VFB-LIVE	MP2-15
P2-06	VFB-COM	MP2-16
MP1-01	MP9-09	MP1-01
MP1-02	MP9-10	MP1-02
MP1-03	MP9-11	MP1-03
MP1-04	MP9-12	MP1-04
MP1-05	MP9-13	MP1-05
MP1-06	MP9-14	MP1-06
MP1-COM	MP9-15	MP1-07
GPX51	MP10-01	MP2-17
GPX52	MP10-02	MP2-18
GPX53	MP10-03	MP2-19
GPX54	MP10-04	MP2-20
LV-01	MP10-05	MP3-15
LV-02	MP10-06	MP3-16
LV-03	MP10-07	MP3-17
LV-04	MP10-08	MP3-18
GPX61	MP10-09	MP2-21
GPX62	MP10-10	MP2-22
GPX63	MP10-11	MP2-23
GPX64	MP10-12	MP2-24

WIRES CONNECT TO DC
CONTROLLER SHELF
TERMINAL BLOCK

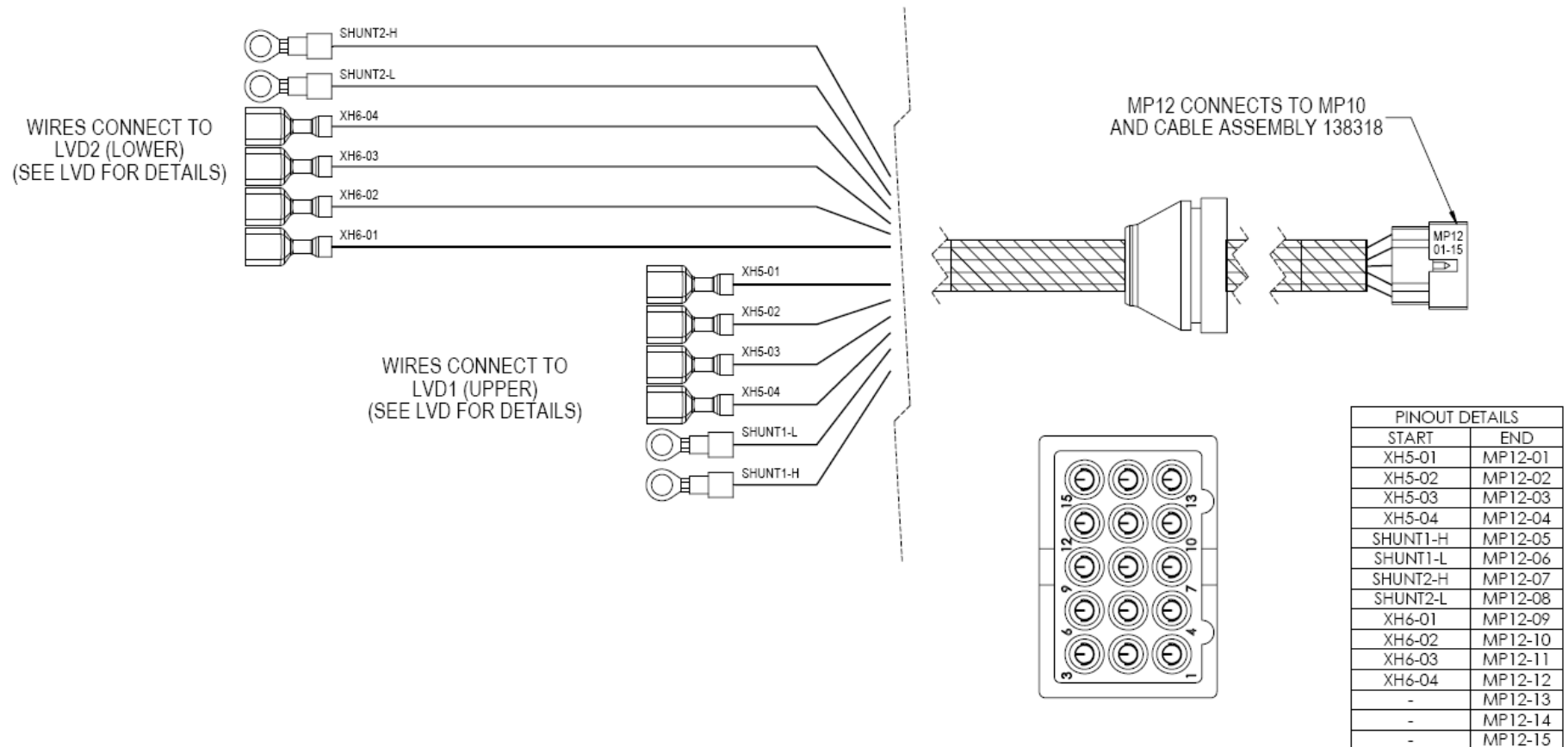
WIRE NAME	TERMINAL BLOCK (TB) LOCATION
RIO-01	TB*-A12
RIO-COM1	TB*-A10
RIO-02	TB*-A12
RIO-COM2	TB*-A10
RIO-03	TB*-A11
RIO-COM3	TB*-A09
RIO-04	TB*-A11
RIO-COM4	TB*-A09
RIO-05	TB*-B12 & TB*-B11
RIO-06	TB*-B3
RIO-07	UNTERMINATED
RIO-08	TB*-B4
RIO-09	TB*-B5
RIO-10	TB*-B6,B7,B8,B9,B10
RIO-COM	UNTERMINATED

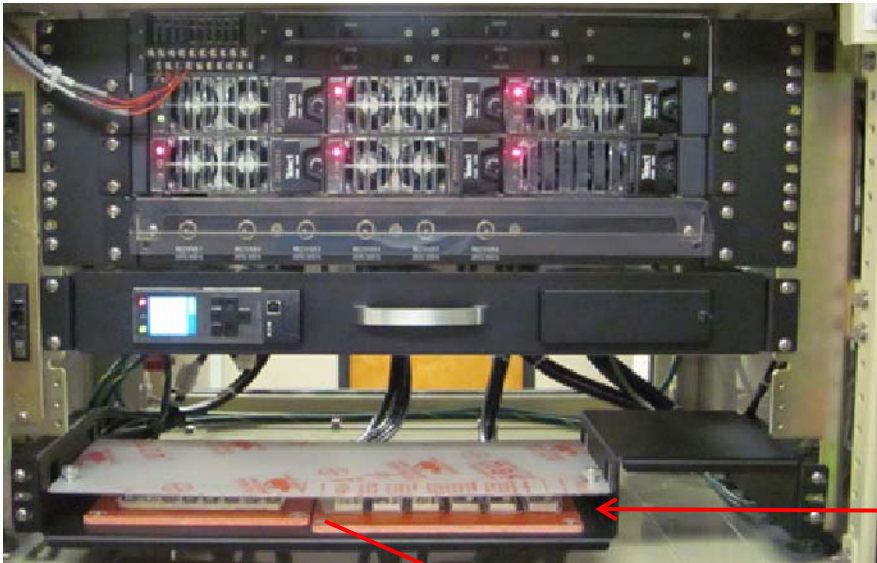


PINOUT DETAILS	
START	END
RIO-01	MP11-01
RIO-COM1	MP11-02
RIO-02	MP11-03
RIO-COM2	MP11-04
RIO-03	MP11-05
RIO-COM3	MP11-06
RIO-04	MP11-07
RIO-COM4	MP11-08
RIO-05	MP11-09
RIO-06	MP11-10
RIO-07	MP11-11
RIO-08	MP11-12
RIO-09	MP11-13
RIO-10	MP11-14
RIO-COM	MP11-15

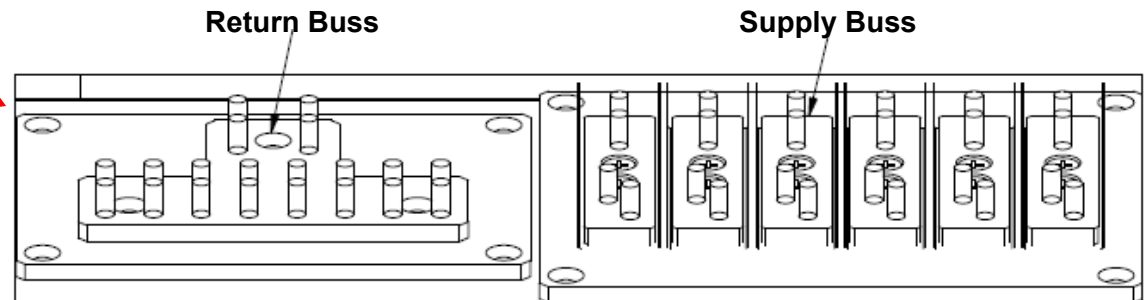


TB=Terminal Block

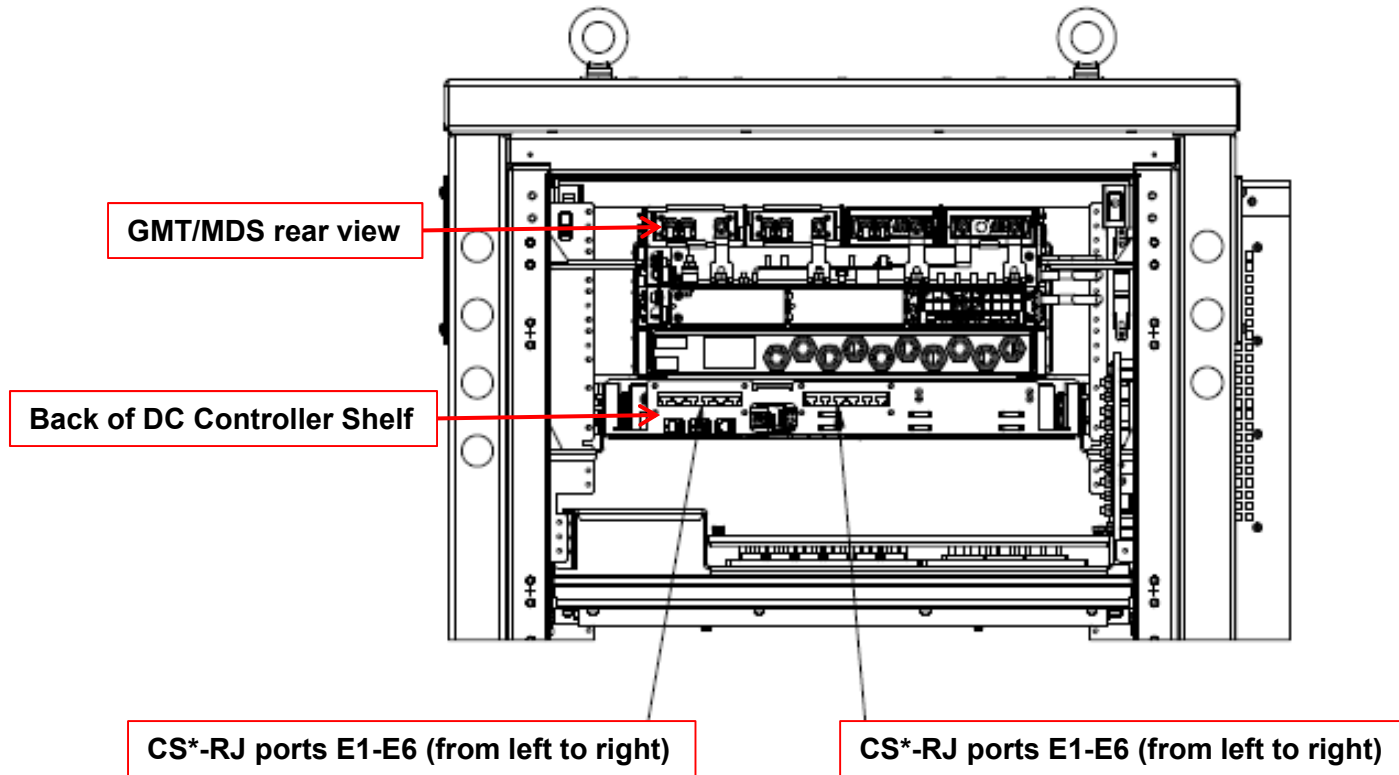




Front Access Power Termination Shelf

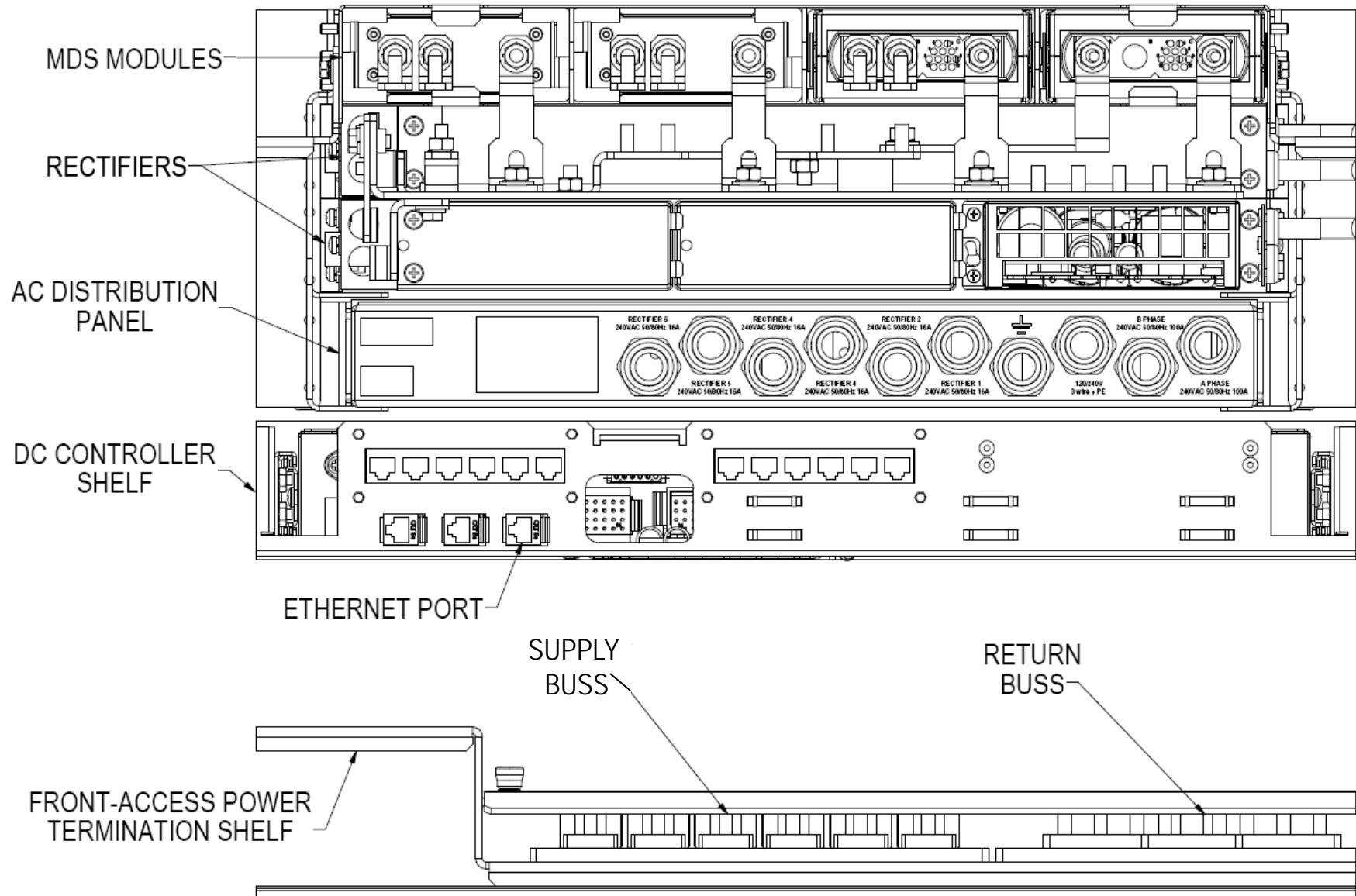


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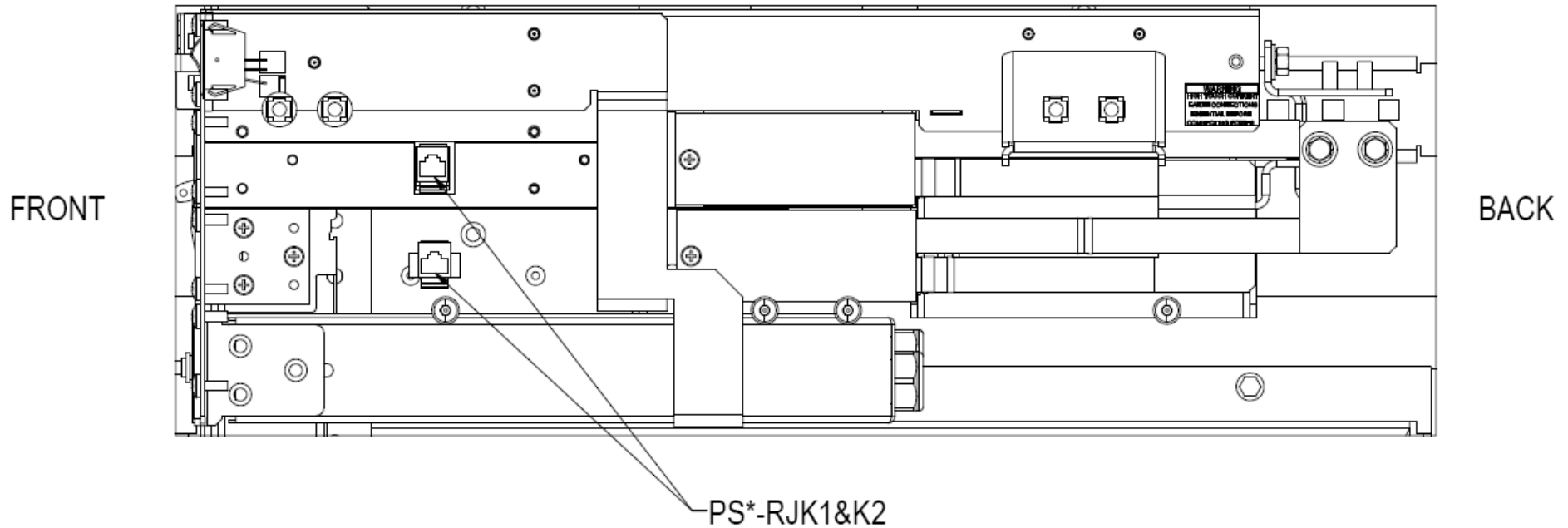


*CS: Controller Shelf. RJ ports referenced are located on the rear of the DC controller shelf.
*CIB: Customer Interface Board.

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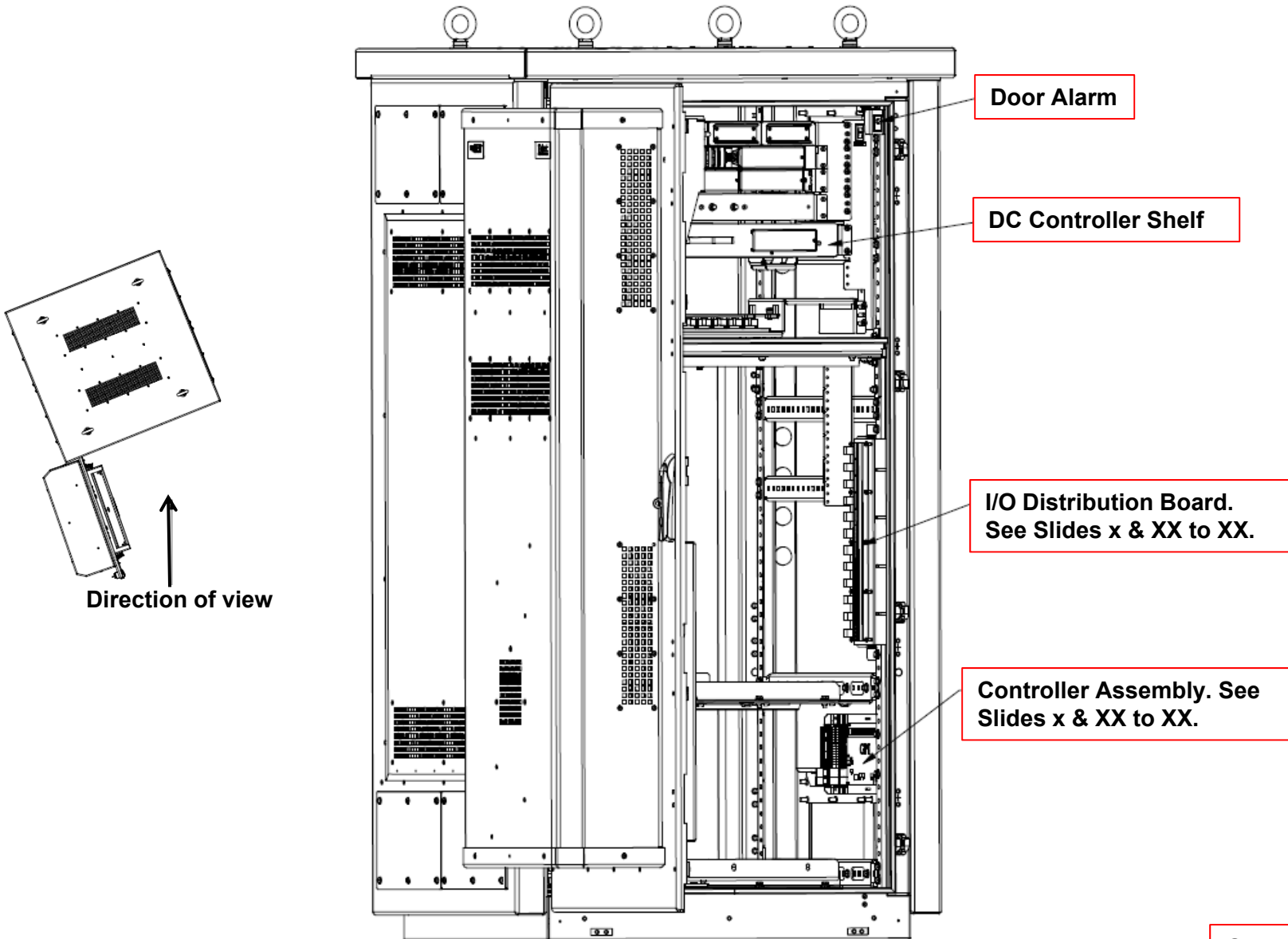


Right wall removed for view.



The nrgSMART power stack (PS)-RJ ports K1 & K2 connect with the DC Controller shelf (CS)-RJG4 on the rear of the DC Controller shelf.

IOE-XXX-XXXX Training Guide: I/O Distribution & Controller Assembly Boards



Continued -▶

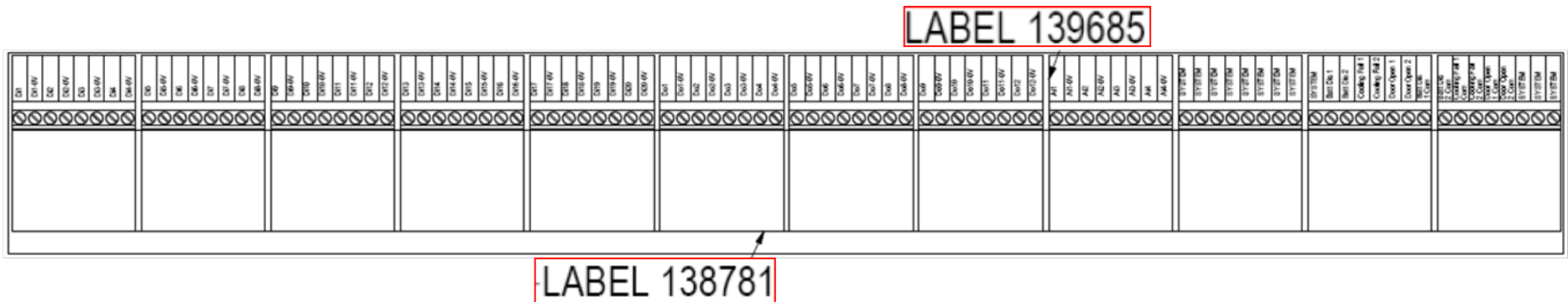
Underneath the divider panel is the 48-pair I/O Distribution Board, the customer interface point for all inputs and outputs for accessory equipment, such as radios, fuel cells, BTS, etc.



The Environmental Control Sub-assembly, located inside the frame on the right side of the enclosure, controls the thermoelectric cooler (TEC) on the door, the heater, and the stir fan.



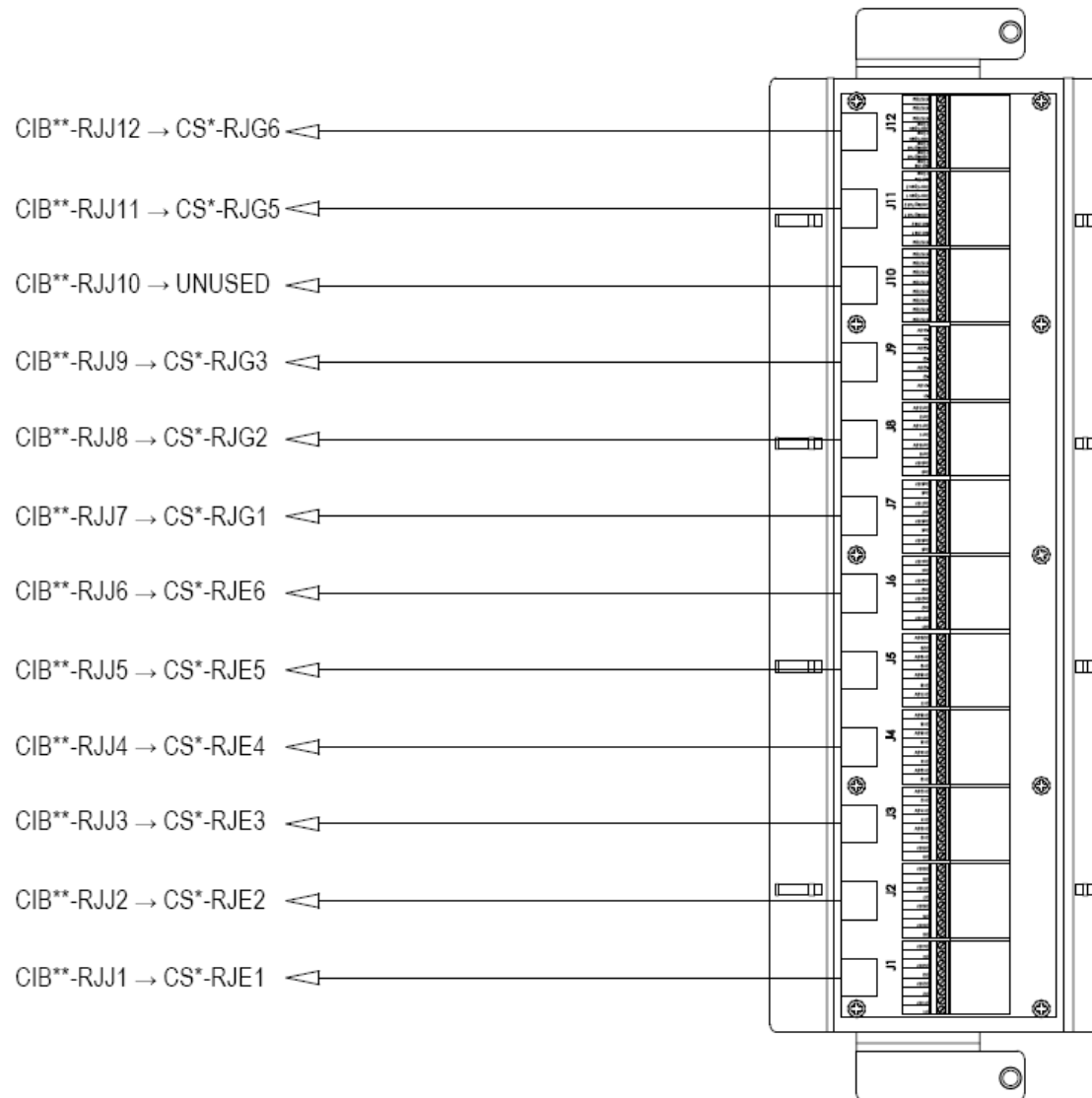
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CABLE START	CUSTOMER INTERFACE BOARD PORT	CIB**-RJJ1	CIB**-RJJ2	CIB**-RJJ3	CIB**-RJJ4	CIB**-RJJ5	CIB**-RJJ6	CIB**-RJJ7	CIB**-RJJ8	CIB**-RJJ9	CIB**-RJJ10	CIB**-RJJ11	CIB**-RJJ12
CABLE END	CONTROL SHELF PORT LOCATION	CS*-RJE1	CS*-RJE2	CS*-RJE3	CS*-RJE4	CS*-RJE5	CS*-RJE6	CS*-RJJ1	CS*-RJJ2	CS*-RJJ3	UNUSED	CS*-RJJ5	CS*-RJJ6

*CS: Controller Shelf. RJ ports referenced are located on the rear of the DC controller shelf.
 *CIB: Customer Interface Board (I/O Distribution Board).

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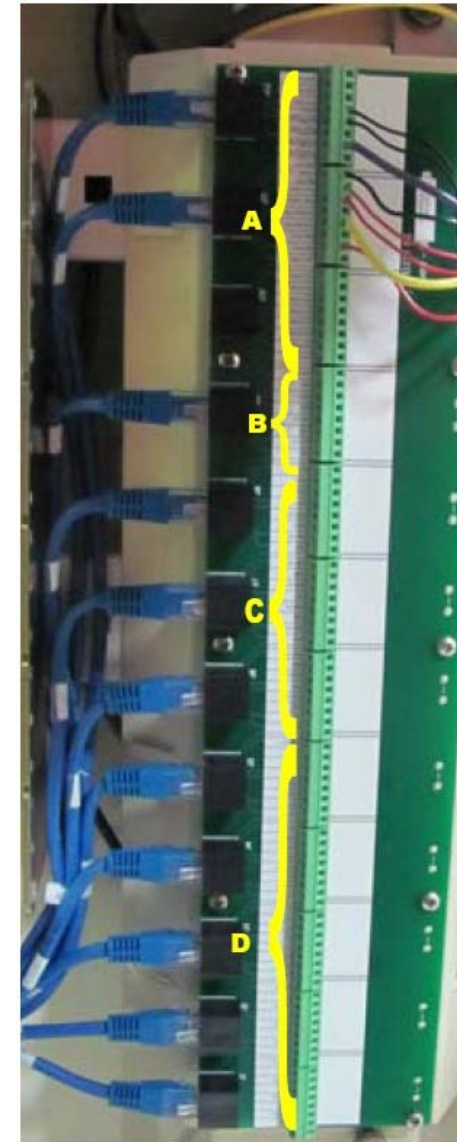
***CS: DC Controller Shelf. RJ ports referenced are located on the rear of the DC Controller Shelf.**

***CIB: I/O Distribution Board (Customer Interface Board).**

A: Administrative Terminations
 B: Analog Terminations
 C: Digital Output Terminations
 D: Digital Input Terminations

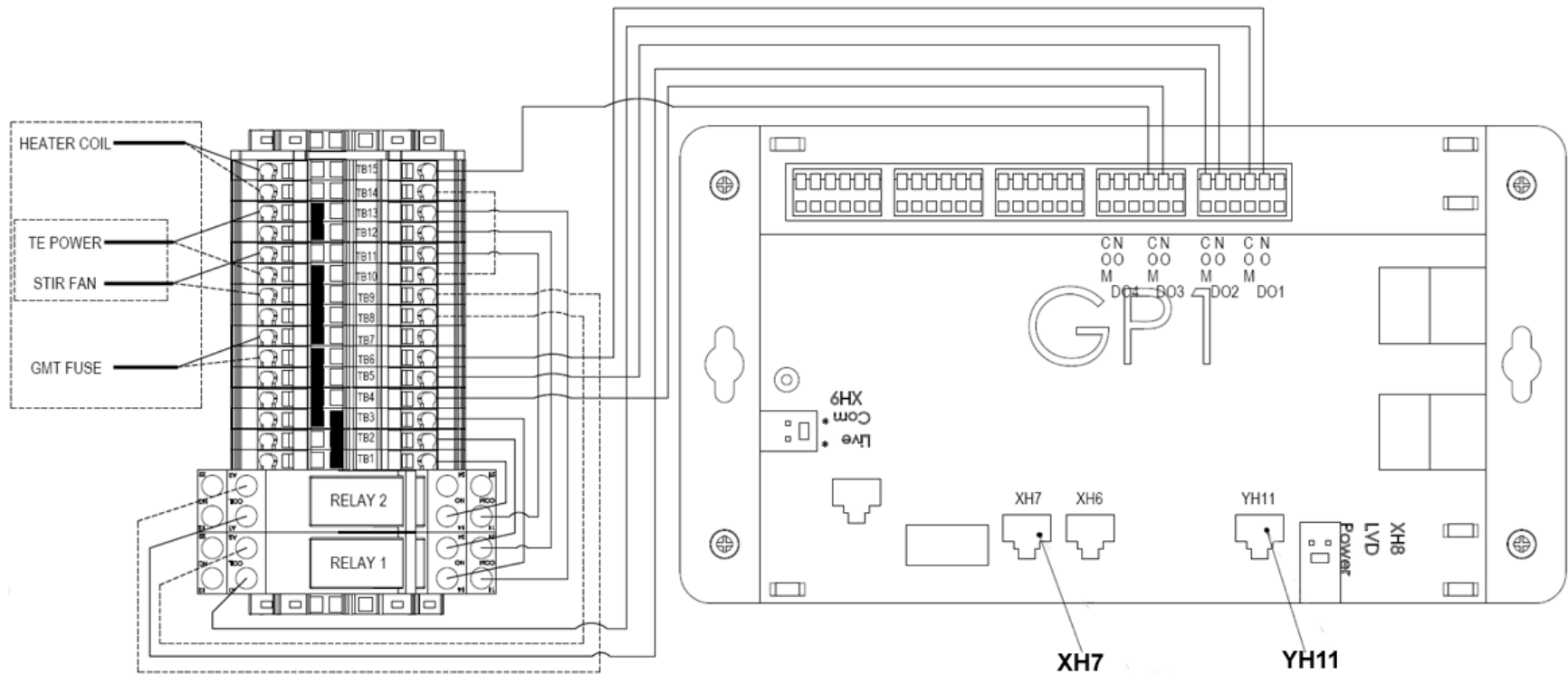
Table 1 - Digital Outputs Table

Status	Name	IOB Number	IOB DO Number	Active State	Group
Enabled	Minor Alarm	2	1	Energized	0
Enabled	Major Alarm	2	2	Energized	0
Enabled	Critical Alarm	2	3	Energized	0
Enabled	AC Power Failure	2	4	Energized	0
Enabled	Door Ajar	2	5	Energized	0
Enabled	High Temperature	2	6	Energized	0

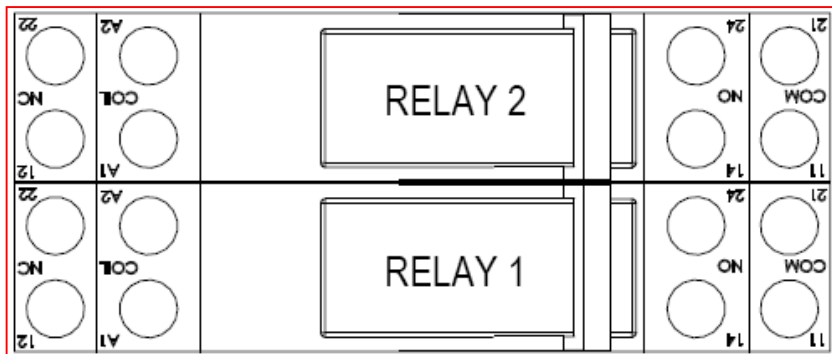
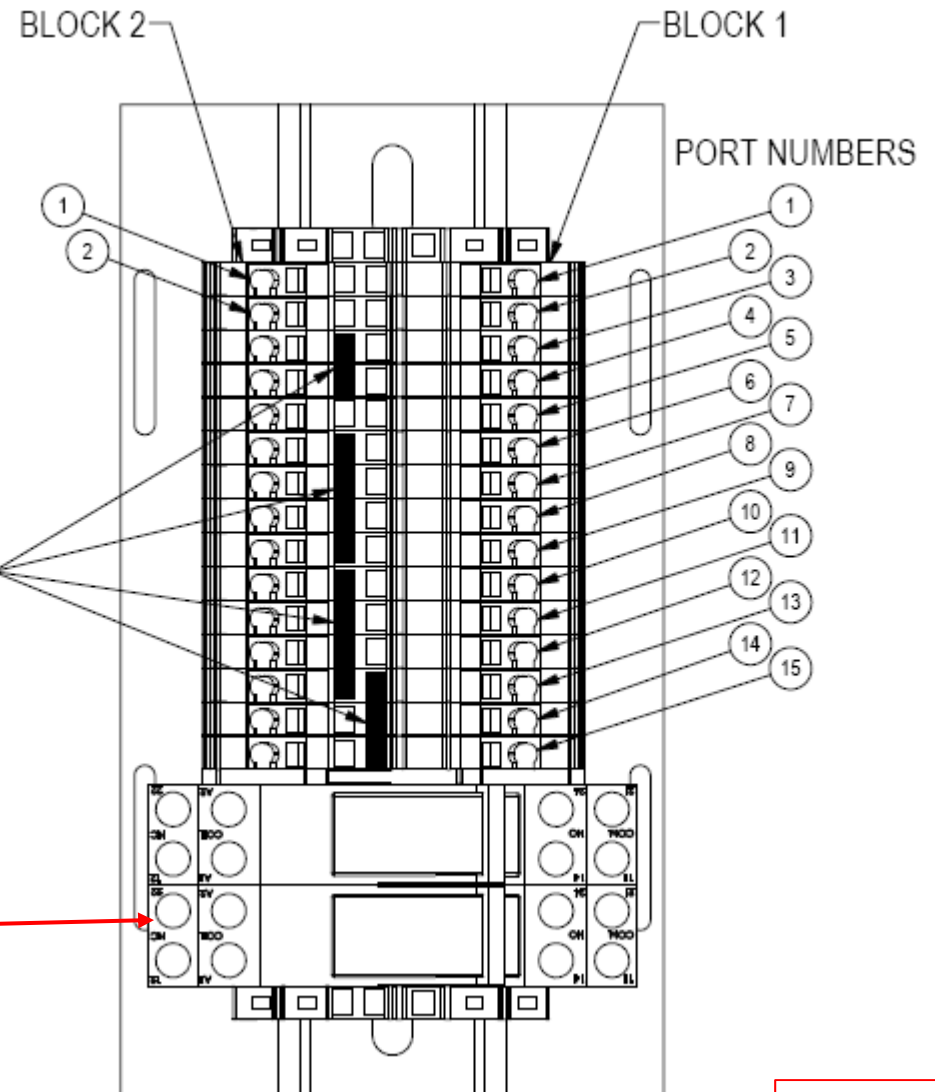
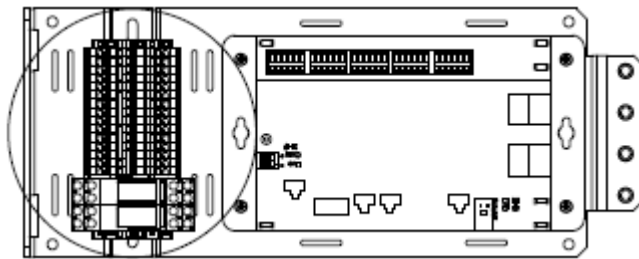


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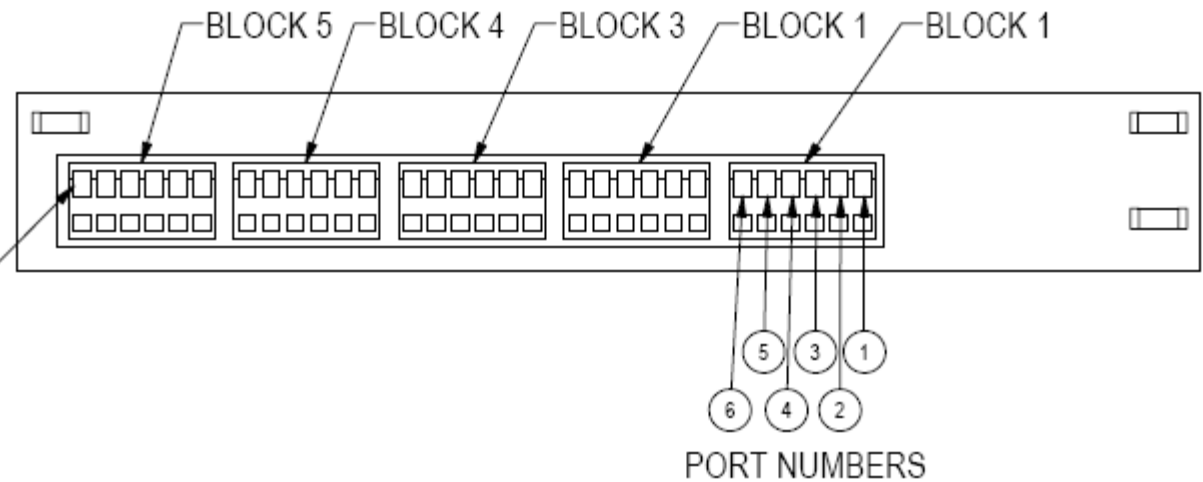
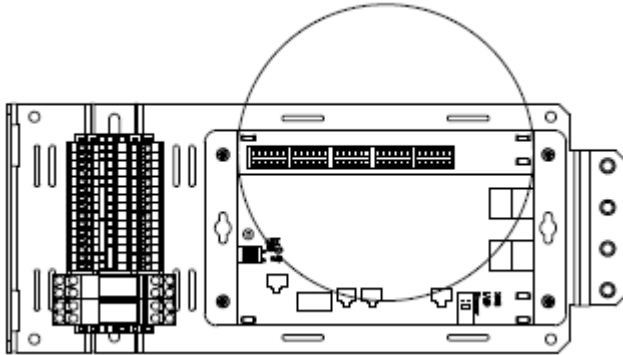
SYSTEM		Do12-0V COM	Di12-0V	
SYSTEM		Do12	Di12	
SYSTEM		Do11-0V COM	Di11-0V	
Door Open 2 Com		Do11	Di11	
Door Open 1 Com		Do10-0V COM	Di10-0V	
Cooling Fail 2 Com		Do10	Di10	
Cooling Fail 1 Com		Do9-0V COM	Di9-0V	
Batt Dis 2 Com		Do9	Di9	
	A: Administrative Terminations			D: Digital Input Terminations
Batt Dis 1 Com		Do8-0V COM	Di8-0V	
Door Open 2		Do8	Di8	
Door Open 1		Do7-0V COM	Di7-0V	
Cooling Fail 2		Do7	Di7	
Cooling Fail 1		Do6-0V COM	Di6-0V	
Batt Dis 2		Do6	Di6	
Batt Dis 1		Do5-0V COM	Di5-0V	
SYSTEM		Do5	Di5	
	B: Analog Terminations			
SYSTEM		Do4-0V COM	Di4-0V	
SYSTEM	Ai4-0V	Do4	Di4	
SYSTEM	Ai4	Do3-0V COM	Di3-0V	
SYSTEM	Ai3-0V	Do3	Di3	
SYSTEM	Ai3	Do2-0V COM	Di2-0V	
SYSTEM	Ai2-0V	Do2	Di2	
SYSTEM	Ai2	Do1-0V COM	Di1-0V	
SYSTEM	Ai1-0V	Do1	Di1	
SYSTEM	Ai1			
				Di13+ are available with the upgrade kit.
				Di1-12 are available with the basic configuration.



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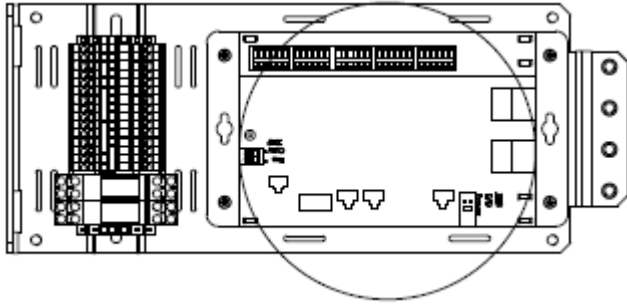


You can find the location of the connection by a decimal listing the block number, followed by the port number.

For example, this is connection "EB*-5-6."

*EB=Environmental Board

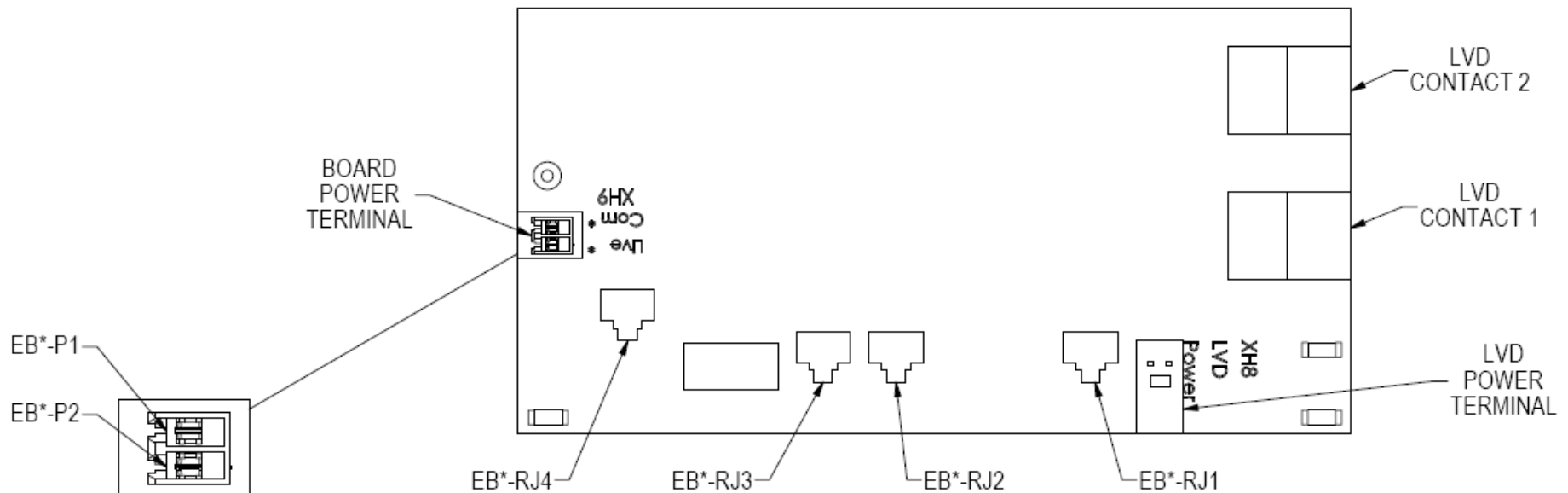
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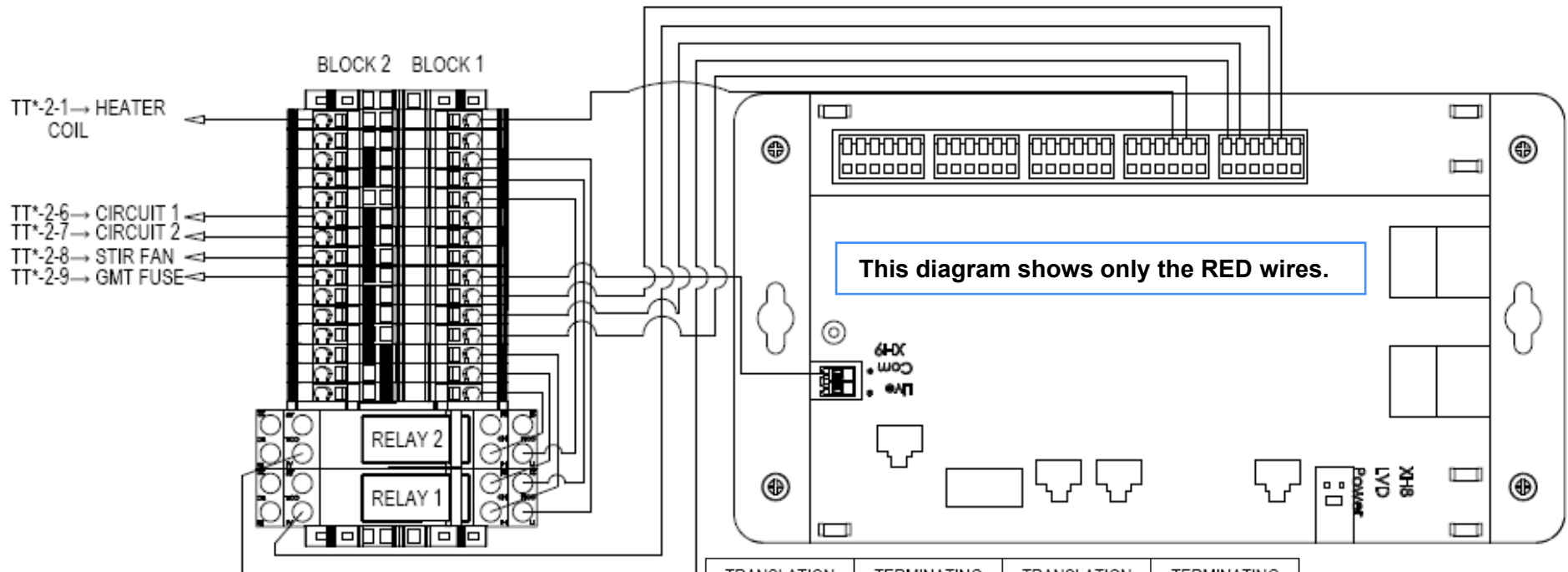
EB*-RJ1 connects to CS**-RJA2 on the rear of the DC Controller Shelf.

*EB=Environmental Board (Controller Assembly)

**CS=Controller Shelf



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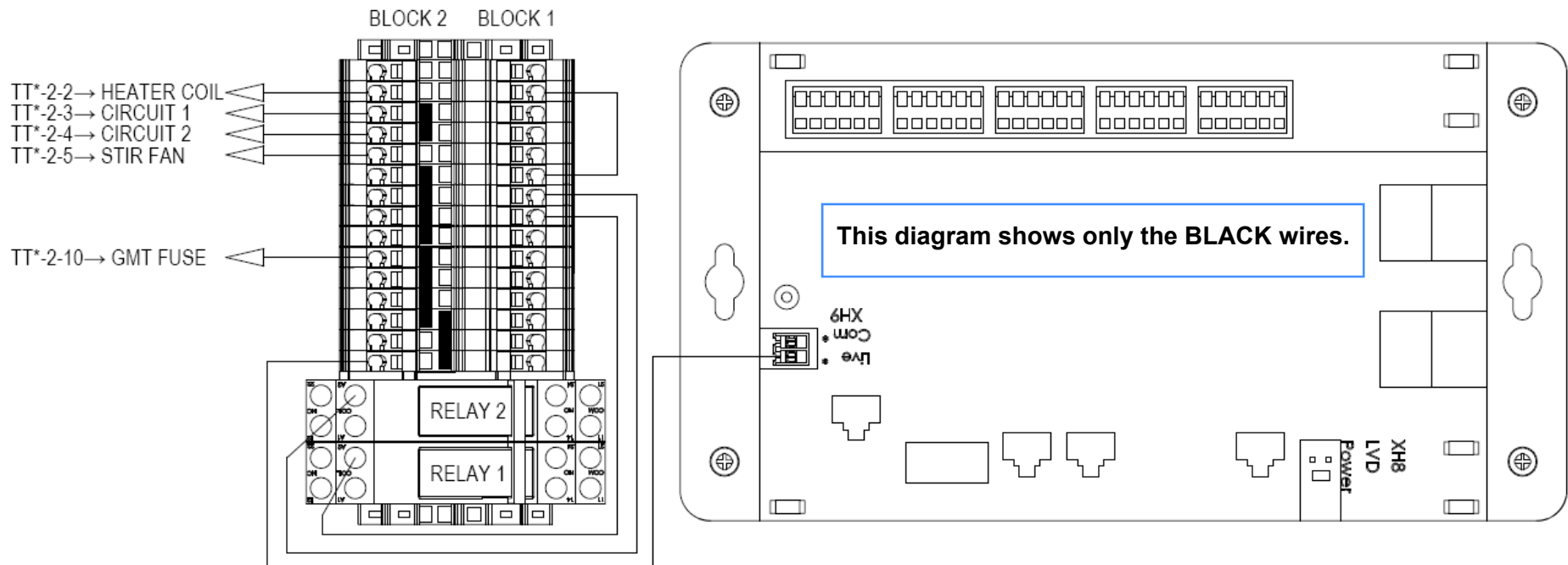


*EB=Environmental Board (Controller Assembly)

**TT=Translation Table

TRANSLATION TABLE TERMINAL	TERMINATING LOCATION	TRANSLATION TABLE TERMINAL	TERMINATING LOCATION
TT*-1-1	EB**-2-3	TT*-1-14	RELAY1-24
TT*-1-3	RELAY1-11	TT*-1-15	RELAY2-14
TT*-1-4	RELAY1-21	TT*-2-1	HEATER COIL (139501)
TT*-1-5	RELAY2-11	TT*-2-6	CIRCUIT 1
TT*-1-9	EB**-P1	TT*-2-7	CIRCUIT 2
TT*-1-10	EB**-1-2	TT*-2-8	STIR FAN (139519)
TT*-1-11	EB**-1-5	TT*-2-9	GMT FUSE (139501)
TT*-1-12	EB**-2-2	RELAY1-A1	EB**-1-3
TT*-1-13	RELAY1-14	RELAY2-A1	EB**-1-6

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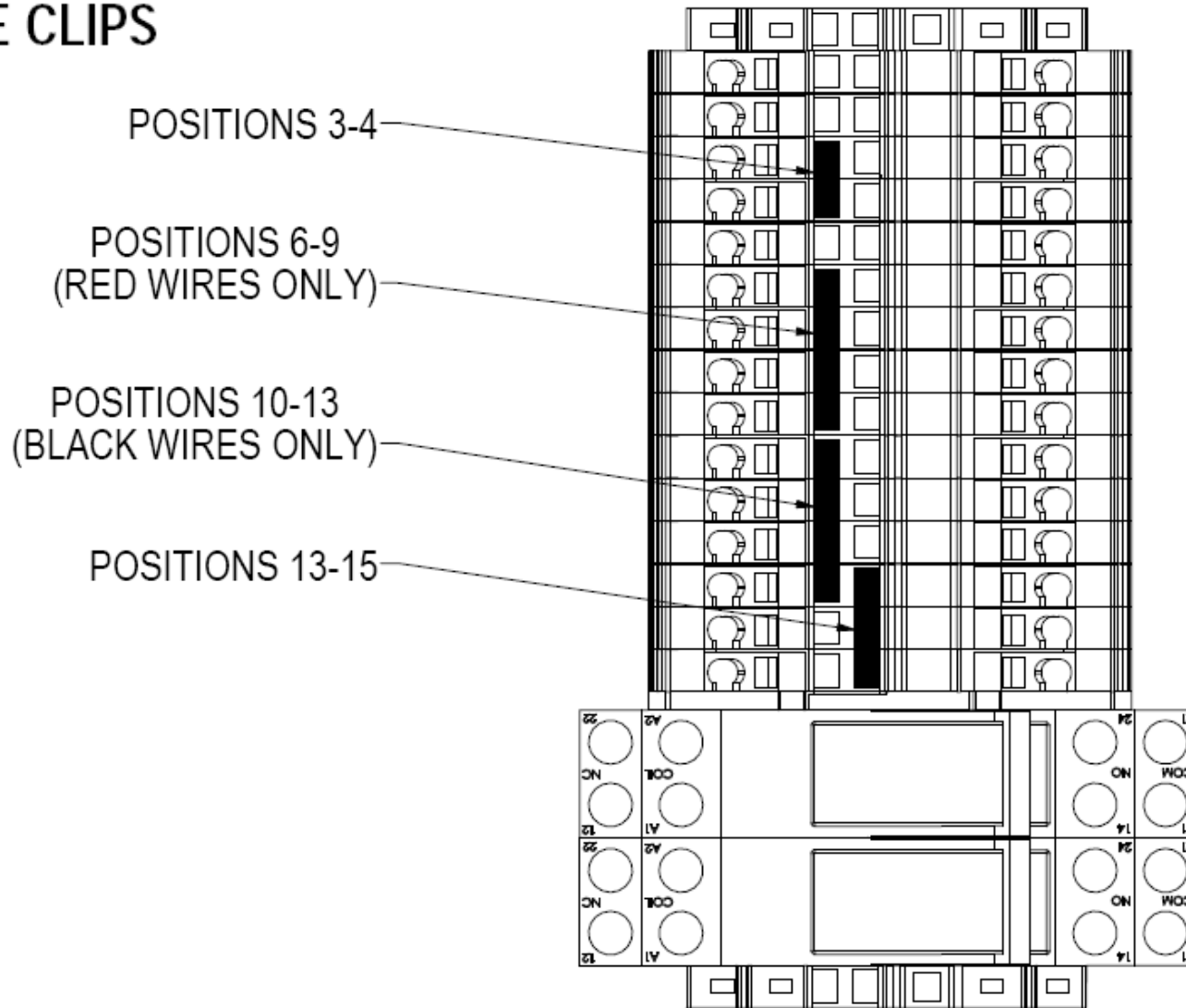
TRANSLATION TABLE TERMINAL	TERMINATING LOCATION	TRANSLATION TABLE TERMINAL	TERMINATING LOCATION
TT*-1-2	TT*-1-6	TT*-2-4	CIRCUIT 2
TT*-1-6	TT*-1-2	TT*-2-5	STIR FAN (139519)
TT*-1-7	EB**-RELAY2-A2	TT*-2-10	GMT FUSE (139501)
TT*-1-8	EB**-RELAY1-A2	TT*-2-15	EB**-P2
TT*-2-2	HEATER COIL (139501)	EB**-RELAY1-A2	TT*-1-8
TT*-2-3	CIRCUIT 1	EB**-RELAY2-A2	TT*-1-7

*EB=Environmental Board (Controller Assembly)

**TT=Translation Table

Continued ->

BRIDGE CLIPS

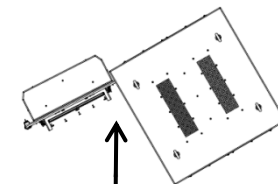


A Ground Fault Interrupter (**GFI**) utility outlet is mounted on the left side of the compartment wall above the battery disconnect circuit breaker for general electrical utility.

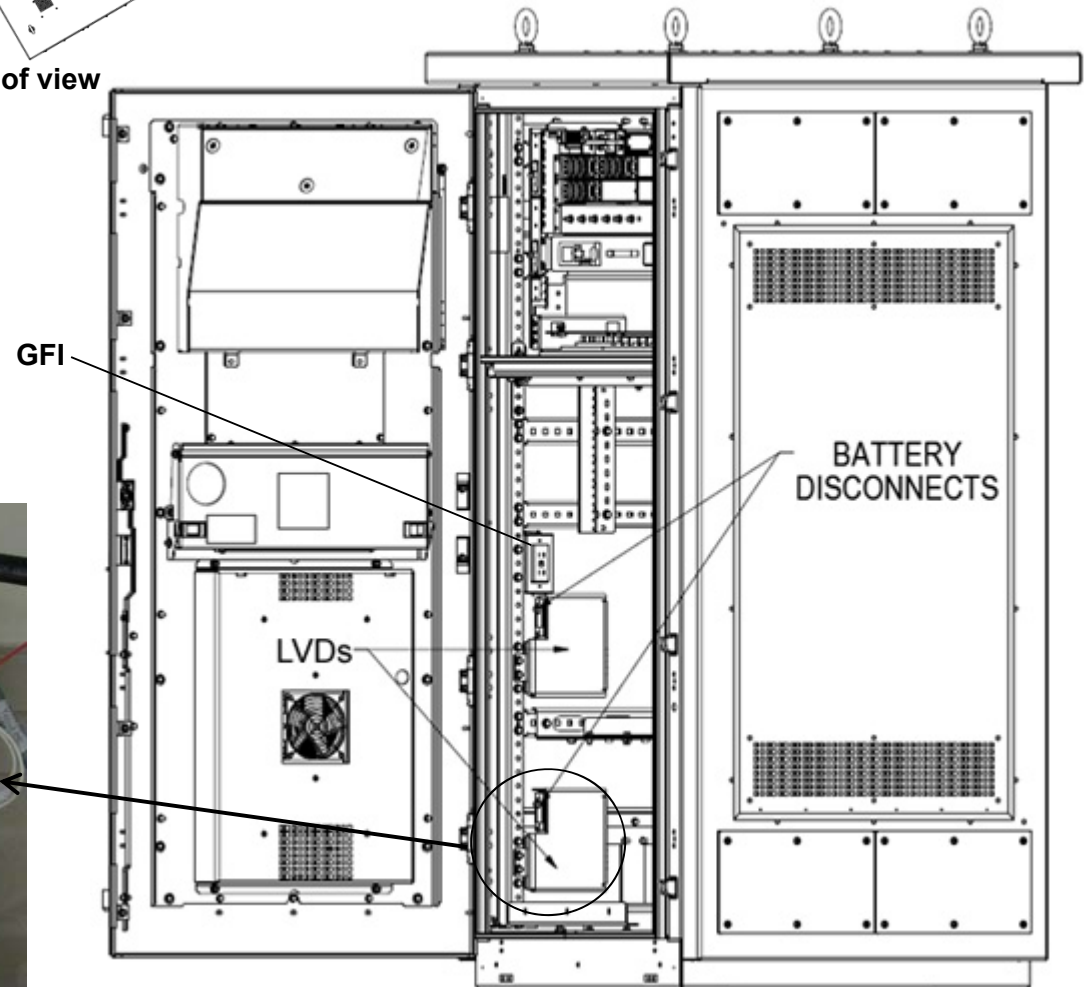
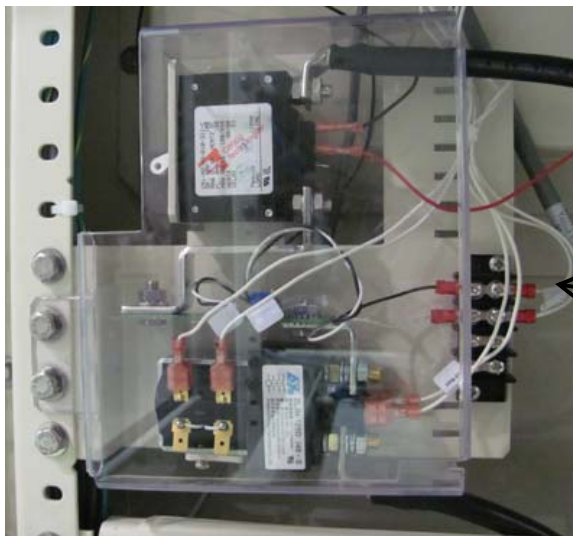
A low-voltage disconnect (**LVD**) assembly contains an LVD contactor and a shunt. The two assemblies are on the left side of the frame. They are designed to protect the batteries.

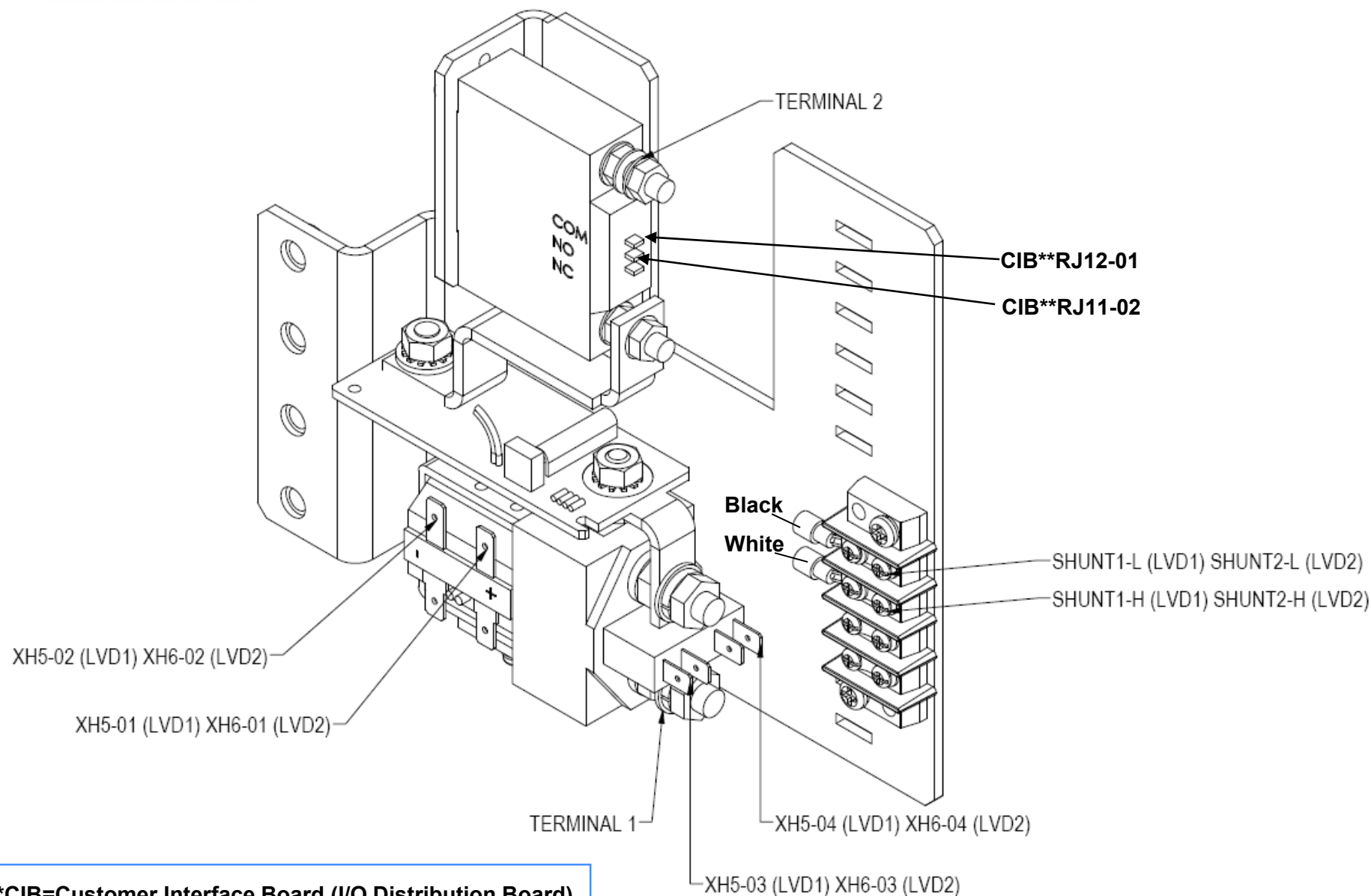
The manual Battery **disconnect breaker** provides overcurrent (surge) protection for the batteries plus a switch where you can easily disconnect the batteries from the active power system.

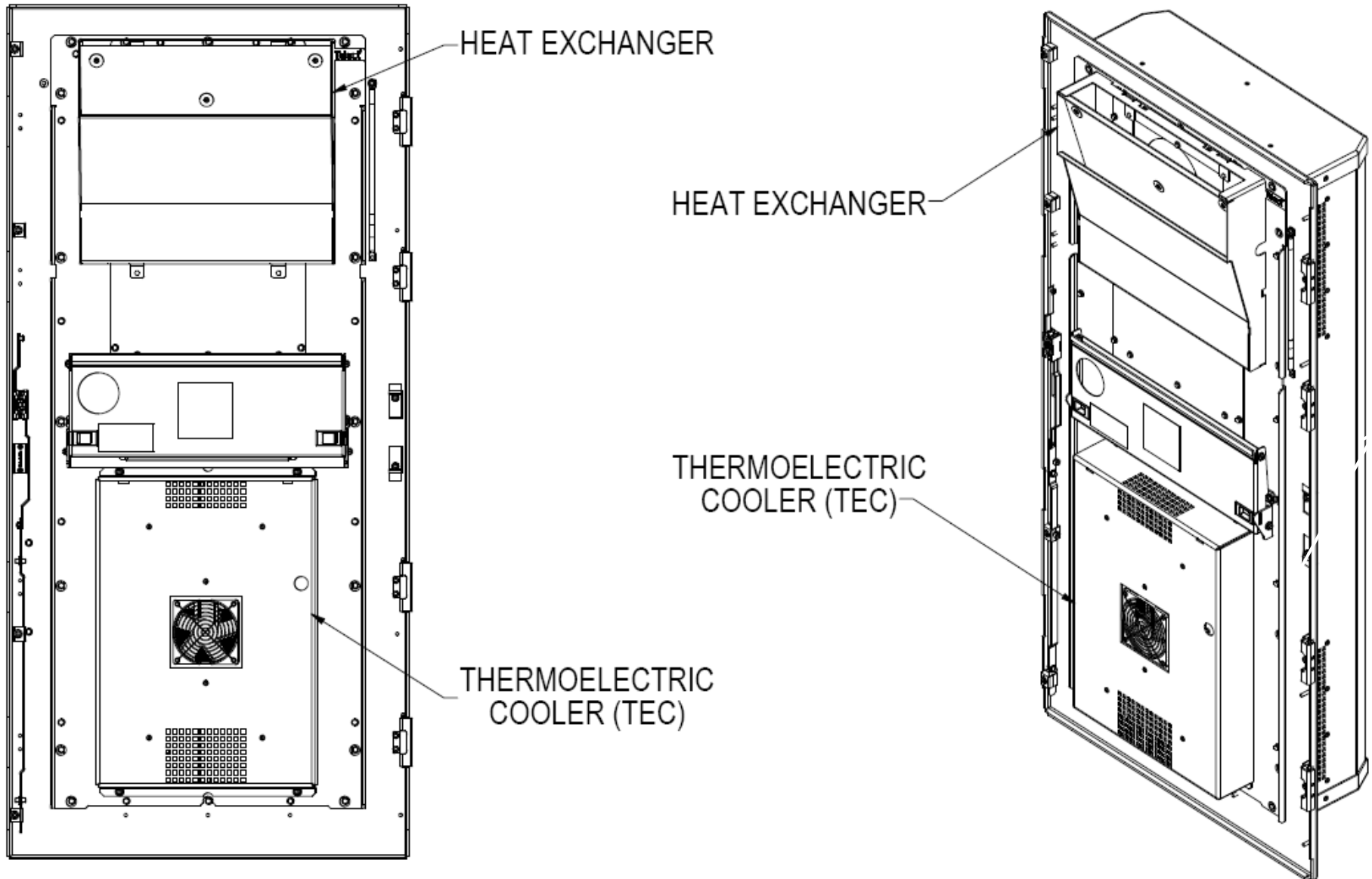
TOP VIEW FOR REFERENCE

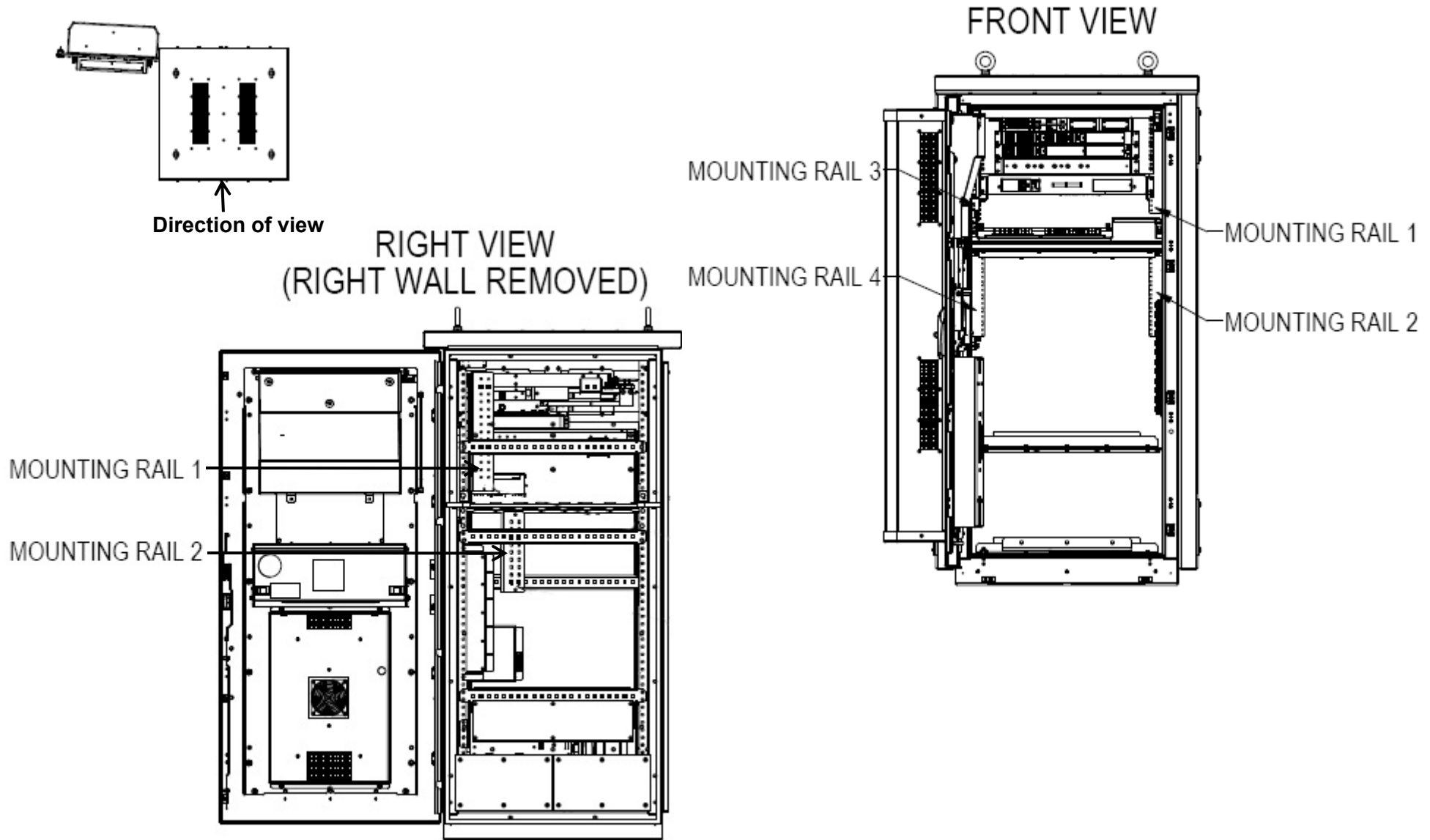


Direction of view



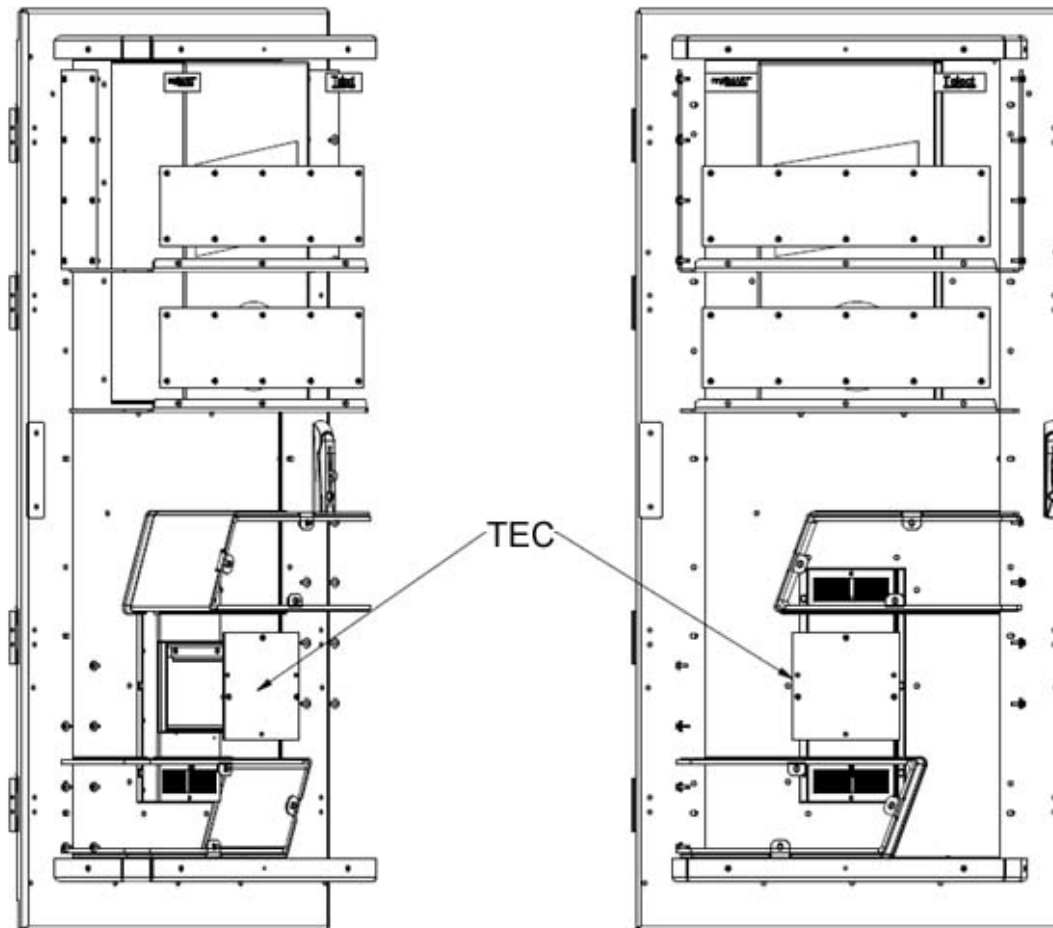




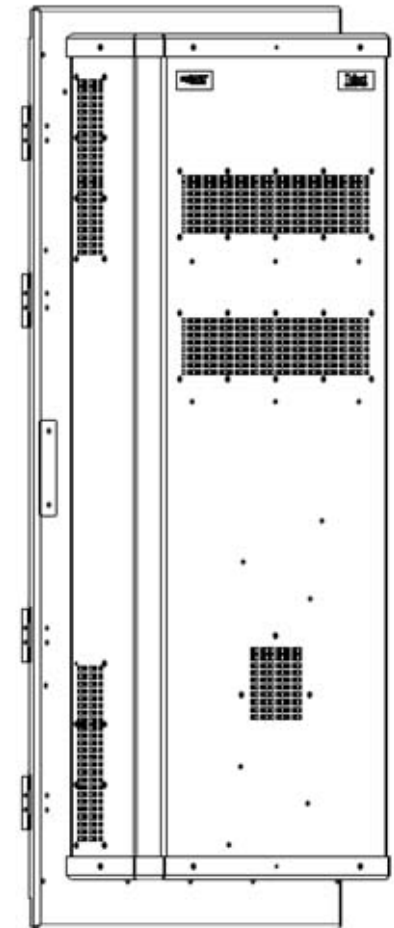


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OUTER SIDE OF DOOR
(HATCH REMOVED)



OUTER SIDE OF DOOR
(WITH HATCH)
FOR REFERENCE



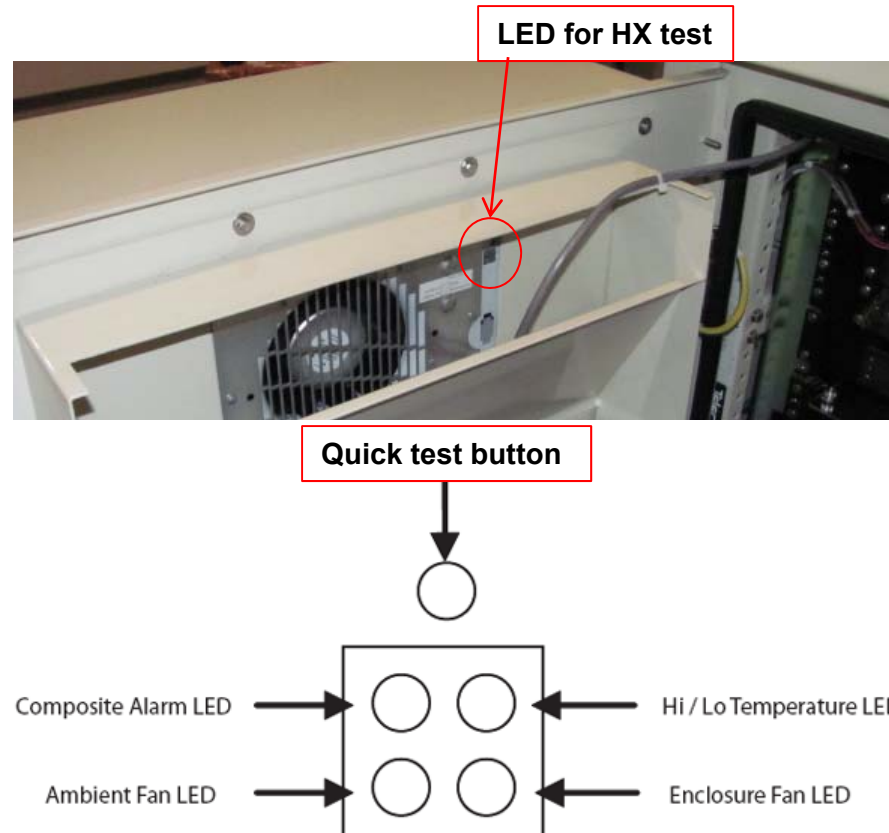
The LED on the top, right-hand side of the heat exchanger, lets you test for proper operation of the components.

To perform the test, with power to the unit on, press the Quick-Test button (located above the LED's on the enclosure side of the unit).

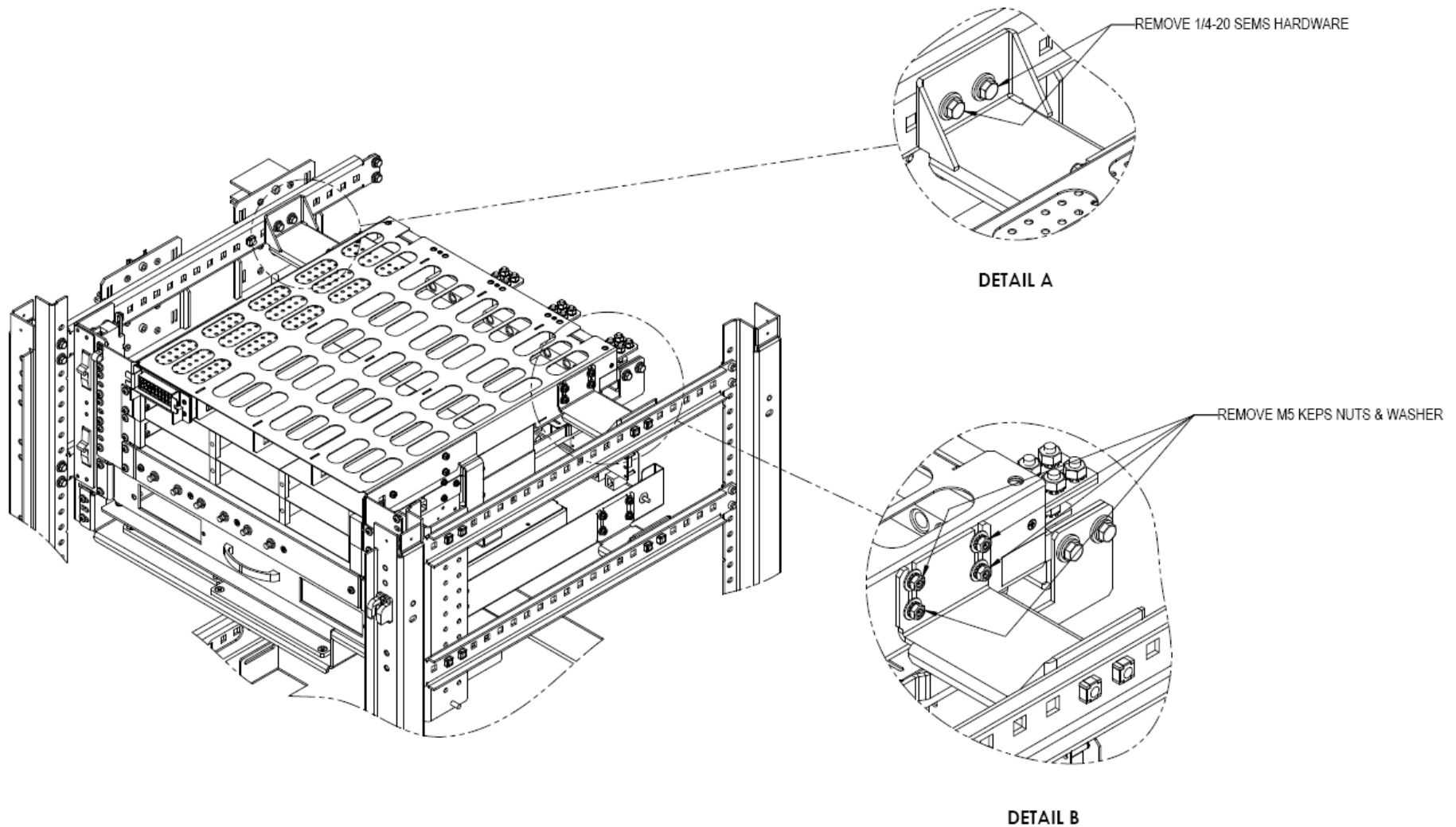
The unit cycles through a series of self-diagnostic tests to check proper operation of components.

Make sure all LED's cycle through to GREEN following the self test. RED indicates a failure.

If the light comes up red, identify which alarm is activated. Note that the composite alarm LED will also turn red if any other alarm activates. See the table below.



Alarm	Possible Cause	Required action
Ambient Fan OR Enclosure Fan	<ul style="list-style-type: none"> •Open motor winding •Stuck air mover motor •Obstructed blades 	Repair or replace defective part.
Hi/Lo Temperature	If the enclosure temperature is outside the nameplate temperature range, the Hi / Lo Temperature alarm will activate.	
Composite Alarm Only	Controller Temperature Sensor Failure	Repair or replace defective part.



A device	note	A	WIRE ID	CONN PIN	Cable Assembly	B	(CONN-PIN)	WIRE ID2	(CONN-PIN)3	Cable Assembly4	C	(CONN-PIN)5	WIRE ID6	(CONN-PIN)7	Cable Assembly8	D	(CONN-PIN)9	WIRE ID10	(CONN-PIN)11	Cable Assembly12	E
SS1		SS1 0V					MP6-36	BROWN	RJ45-09-08	103394-1 (FEMALE)		RJ45-09-08			CABLE#9		CUST I/O BOARD	J9-08		305649	
SS1		SS1 A3					MP6-35	WHT/BROWN	RJ45-09-07	103394-1 (FEMALE)		RJ45-09-07			CABLE#10		CUST I/O BOARD	J9-07		305649	
		Rx9	WHT/BLUE	34	138415		MP6-34	WHT/BLUE	RJ45-10-05	103394-1 (FEMALE)		RJ45-10-05		RJ45-10-08	CABLE#10		CUST I/O BOARD	J10-05		305649	
		Rx9	BLUE	33	138415		MP6-33	BLUE	RJ45-10-04	103394-1 (FEMALE)		RJ45-10-04		RJ45-10-07	CABLE#10		CUST I/O BOARD	J10-04		305649	
SS1		SS1 0V					MP6-32	BLUE	RJ45-09-04	103394-1 (FEMALE)		RJ45-09-04			CABLE#9		CUST I/O BOARD	J9-04		305649	
SS1		SS1 A2					MP6-31	WHT/GREEN	RJ45-09-03	103394-1 (FEMALE)		RJ45-09-03			CABLE#9		CUST I/O BOARD	J9-03		305649	
SS1		SS1 0V					MP6-30	ORANGE	RJ45-09-02	103394-1 (FEMALE)		RJ45-09-02			CABLE#9		CUST I/O BOARD	J9-02		305649	
SS1		SS1 A1					MP6-29	WHT/ORANGE	RJ45-09-01	103394-1 (FEMALE)		RJ45-09-01			CABLE#9		CUST I/O BOARD	J9-01		305649	
SS2	expansion	SS2 DO COM					MP6-28	BROWN	RJ45-08-08	103394-1 (FEMALE)		RJ45-08-08			CABLE#8		CUST I/O BOARD	J8-08		305649	
SS2	expansion	SS2 DO6					MP6-27	WHT/BROWN	RJ45-08-07	103394-1 (FEMALE)		RJ45-08-07			CABLE#8		CUST I/O BOARD	J8-07		305649	
SS2	expansion	SS2 DO COM					MP6-26	GREEN	RJ45-08-06	103394-1 (FEMALE)		RJ45-08-06			CABLE#8		CUST I/O BOARD	J8-06		305649	
SS2	expansion	SS2 DO5					MP6-25	WHT/BLUE	RJ45-08-05	103394-1 (FEMALE)		RJ45-08-05			CABLE#8		CUST I/O BOARD	J8-05		305649	
SS2	expansion	SS2 DO COM					MP6-24	BLUE	RJ45-08-04	103394-1 (FEMALE)		RJ45-08-04			CABLE#8		CUST I/O BOARD	J8-04		305649	
SS2	expansion	SS2 DO4					MP6-23	WHT/GREEN	RJ45-08-03	103394-1 (FEMALE)		RJ45-08-03			CABLE#8		CUST I/O BOARD	J8-03		305649	
SS2	expansion	SS2 DO COM					MP6-22	ORANGE	RJ45-08-02	103394-1 (FEMALE)		RJ45-08-02			CABLE#8		CUST I/O BOARD	J8-02		305649	
SS2	expansion	SS2 DO3					MP6-21	WHT/ORANGE	RJ45-08-01	103394-1 (FEMALE)		RJ45-08-01			CABLE#8		CUST I/O BOARD	J8-01		305649	
SS2	expansion	SS2 DO COM					MP6-20	BROWN	RJ45-07-08	103394-1 (FEMALE)		RJ45-07-08			CABLE#7		CUST I/O BOARD	J7-08		305649	
SS2	expansion	SS2 DO2					MP6-19	WHT/BROWN	RJ45-07-07	103394-1 (FEMALE)		RJ45-07-07			CABLE#7		CUST I/O BOARD	J7-07		305649	
SS2	expansion	SS2 DO COM					MP6-18	GREEN	RJ45-07-06	103394-1 (FEMALE)		RJ45-07-06			CABLE#7		CUST I/O BOARD	J7-06		305649	
SS2	expansion	SS2 DO1					MP6-17	WHT/BLUE	RJ45-07-05	103394-1 (FEMALE)		RJ45-07-05			CABLE#7		CUST I/O BOARD	J7-05		305649	
SS2	expansion	SS2 0V					MP6-16	BROWN	RJ45-05-08	103394-1 (FEMALE)		RJ45-05-08			CABLE#5		CUST I/O BOARD	J5-08		305649	
SS2	expansion	SS2 D14					MP6-15	WHT/BROWN	RJ45-05-07	103394-1 (FEMALE)		RJ45-05-07			CABLE#5		CUST I/O BOARD	J5-07		305649	
SS2	expansion	SS2 0V					MP6-14	GREEN	RJ45-05-06	103394-1 (FEMALE)		RJ45-05-06			CABLE#5		CUST I/O BOARD	J5-06		305649	
SS2	expansion	SS2 D13					MP6-13	WHT/BLUE	RJ45-05-05	103394-1 (FEMALE)		RJ45-05-05			CABLE#5		CUST I/O BOARD	J5-05		305649	
SS2	expansion	SS2 0V					MP6-12	BLUE	RJ45-05-04	103394-1 (FEMALE)		RJ45-05-04			CABLE#5		CUST I/O BOARD	J5-04		305649	
SS2	expansion	SS2 D12					MP6-11	WHT/GREEN	RJ45-05-03	103394-1 (FEMALE)		RJ45-05-03			CABLE#5		CUST I/O BOARD	J5-03		305649	
SS2	expansion	SS2 0V					MP6-10	ORANGE	RJ45-05-02	103394-1 (FEMALE)		RJ45-05-02			CABLE#5		CUST I/O BOARD	J5-02		305649	
SS2	expansion	SS2 D11					MP6-09	WHT/ORANGE	RJ45-05-01	103394-1 (FEMALE)		RJ45-05-01			CABLE#5		CUST I/O BOARD	J5-01		305649	
SS2		SS1 0V					MP6-08	BROWN	RJ45-04-08	103394-1 (FEMALE)		RJ45-04-08			CABLE#4		CUST I/O BOARD	J4-08		305649	
SS1		SS1 D10					MP6-07	WHT/BROWN	RJ45-04-07	103394-1 (FEMALE)		RJ45-04-07			CABLE#4		CUST I/O BOARD	J4-07		305649	
SS1		SS1 0V					MP6-06	GREEN	RJ45-04-06	103394-1 (FEMALE)		RJ45-04-06			CABLE#4		CUST I/O BOARD	J4-06		305649	
SS1		SS1 D19					MP6-05	WHT/BLUE	RJ45-04-05	103394-1 (FEMALE)		RJ45-04-05			CABLE#4		CUST I/O BOARD	J4-05		305649	
SS1		SS1 0V					MP6-04	BLUE	RJ45-04-04	103394-1 (FEMALE)		RJ45-04-04			CABLE#4		CUST I/O BOARD	J4-04		305649	
SS1		SS1 D18					MP6-03	WHT/GREEN	RJ45-04-03	103394-1 (FEMALE)		RJ45-04-03			CABLE#4		CUST I/O BOARD	J4-03		305649	
SS1		SS1 0V					MP6-02	ORANGE	RJ45-04-02	103394-1 (FEMALE)		RJ45-04-02			CABLE#4		CUST I/O BOARD	J4-02		305649	
SS1		SS1 D17					MP6-01	WHT/ORANGE	RJ45-04-01	103394-1 (FEMALE)		RJ45-04-01			CABLE#4		CUST I/O BOARD	J4-01		305649	

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IOE-XXX-XXXX Training Guide: Point-to-Point Connections, continued

A device	note	A	WIRE ID	CONN PIN	Cable Assembly	B	(CONN-PIN)	WIRE ID2	(CONN-PIN)3	Cable Assembly4	C	(CONN-PIN)5	WIRE ID6	(CONN-PIN)7	Cable Assembly8	D	(CONN-PIN)9	WIRE ID10	(CONN-PIN)11	Cable Assembly12
SS1		SS1 0V	BLUE	36	138413		MP5-36	BROWN	RJ45-03-08	103393 (MALE)		RJ45-03-08			CABLE#3		CUST I/O BOARD	J3-08		305649
SS1		SS1 DI6	GREEN	35	138413		MP5-35	WHT/BROWN	RJ45-03-07	103393 (MALE)		RJ45-03-07			CABLE#3		CUST I/O BOARD	J3-07		305649
SS1		SS1 0V	RED	34	138413		MP5-34	GREEN	RJ45-03-06	103393 (MALE)		RJ45-03-06			CABLE#3		CUST I/O BOARD	J3-06		305649
SS1		SS1 DI5	WHITE	33	138413		MP5-33	WHT/BLUE	RJ45-03-05	103393 (MALE)		RJ45-03-05			CABLE#3		CUST I/O BOARD	J3-05		305649
SS1		SS1 0V	VIOLET	32	138413		MP5-32	BLUE	RJ45-03-04	103393 (MALE)		RJ45-03-04			CABLE#3		CUST I/O BOARD	J3-04		305649
SS1		SS1 DI4	BLACK	31	138413		MP5-31	WHT/GREEN	RJ45-03-03	103393 (MALE)		RJ45-03-03			CABLE#3		CUST I/O BOARD	J3-03		305649
SS1		SS1 0V	YELLOW	30	138413		MP5-30	ORANGE	RJ45-03-02	103393 (MALE)		RJ45-03-02			CABLE#3		CUST I/O BOARD	J3-02		305649
SS1		SS1 DI3	ORANGE	29	138413		MP5-29	WHT/ORANGE	RJ45-03-01	103393 (MALE)		RJ45-03-01			CABLE#3		CUST I/O BOARD	J3-01		305649
SS1		SS1 0V	BLUE	28	138413		MP5-28	BROWN	RJ45-02-08	103393 (MALE)		RJ45-02-08			CABLE#2		CUST I/O BOARD	J2-08		305649
SS1		SS1 DI2	GREEN	27	138413		MP5-27	WHT/BROWN	RJ45-02-07	103393 (MALE)		RJ45-02-07			CABLE#2		CUST I/O BOARD	J2-07		305649
SS1		SS1 0V	RED	26	138413		MP5-26	GREEN	RJ45-02-06	103393 (MALE)		RJ45-02-06			CABLE#2		CUST I/O BOARD	J2-06		305649
SS1		SS1 DI1	WHITE	25	138413		MP5-25	WHT/BLUE	RJ45-02-05	103393 (MALE)		RJ45-02-05			CABLE#2		CUST I/O BOARD	J2-05		305649
SS1		SS1 DO COM	VIOLET	24	138413		MP5-24	BLUE	RJ45-07-04	103393 (MALE)		RJ45-07-04			CABLE#7		CUST I/O BOARD	J7-04		305649
SS1		SS1 DO6	BLACK	23	138413		MP5-23	WHT/GREEN	RJ45-07-03	103393 (MALE)		RJ45-07-03			CABLE#7		CUST I/O BOARD	J7-03		305649
SS1		SS1 DO COM	YELLOW	22	138413		MP5-22	ORANGE	RJ45-07-02	103393 (MALE)		RJ45-07-02			CABLE#7		CUST I/O BOARD	J7-02		305649
SS1		SS1 DO5	ORANGE	21	138413		MP5-21	WHT/ORANGE	RJ45-07-01	103393 (MALE)		RJ45-07-01			CABLE#7		CUST I/O BOARD	J7-01		305649
SS1		SS1 DO COM	BLUE	20	138413		MP5-20	BROWN	RJ45-06-08	103393 (MALE)		RJ45-06-08			CABLE#6		CUST I/O BOARD	J6-08		305649
SS1		SS1 DO4	GREEN	19	138413		MP5-19	WHT/BROWN	RJ45-06-07	103393 (MALE)		RJ45-06-07			CABLE#6		CUST I/O BOARD	J6-07		305649
SS1		SS1 DO COM	RED	18	138413		MP5-18	GREEN	RJ45-06-06	103393 (MALE)		RJ45-06-06			CABLE#6		CUST I/O BOARD	J6-06		305649
SS1		SS1 DO3	WHITE	17	138413		MP5-17	WHT/BLUE	RJ45-06-05	103393 (MALE)		RJ45-06-05			CABLE#6		CUST I/O BOARD	J6-05		305649
SS1		SS1 DO COM	VIOLET	16	138413		MP5-16	BLUE	RJ45-06-04	103393 (MALE)		RJ45-06-04			CABLE#6		CUST I/O BOARD	J6-04		305649
SS1		SS1 DO2	BLACK	15	138413		MP5-15	WHT/GREEN	RJ45-06-03	103393 (MALE)		RJ45-06-03			CABLE#6		CUST I/O BOARD	J6-03		305649
SS1		SS1 DO COM	YELLOW	14	138413		MP5-14	ORANGE	RJ45-06-02	103393 (MALE)		RJ45-06-02			CABLE#6		CUST I/O BOARD	J6-02		305649
SS1		SS1 DO1	ORANGE	13	138413		MP5-13	WHT/ORANGE	RJ45-06-01	103393 (MALE)		RJ45-06-01			CABLE#6		CUST I/O BOARD	J6-01		305649
GP1		GP1 0V	BLUE	12	138413		MP5-12	BLUE	RJ45-02-04	103393 (MALE)		RJ45-02-04			CABLE#2		CUST I/O BOARD	J2-04		305649
GP1		GP1 DI6	GREEN	11	138413		MP5-11	WHT/GREEN	RJ45-02-03	103393 (MALE)		RJ45-02-03			CABLE#2		CUST I/O BOARD	J2-03		305649
GP1		GP1 0V	RED	10	138413		MP5-10	ORANGE	RJ45-02-02	103393 (MALE)		RJ45-02-02			CABLE#2		CUST I/O BOARD	J2-02		305649
GP1		GP1 DI5	WHITE	9	138413		MP5-09	WHT/ORANGE	RJ45-02-01	103393 (MALE)		RJ45-02-01			CABLE#2		CUST I/O BOARD	J2-01		305649
GP1		GP1 0V	VIOLET	8	138413		MP5-08	BROWN	RJ45-01-08	103393 (MALE)		RJ45-01-08			CABLE#1		CUST I/O BOARD	J1-08		305649
GP1		GP1 DI4	BLACK	7	138413		MP5-07	WHT/BROWN	RJ45-01-07	103393 (MALE)		RJ45-01-07			CABLE#1		CUST I/O BOARD	J1-07		305649
GP1		GP1 0V	YELLOW	6	138413		MP5-06	GREEN	RJ45-01-06	103393 (MALE)		RJ45-01-06			CABLE#1		CUST I/O BOARD	J1-06		305649
GP1		GP1 DI3	ORANGE	5	138413		MP5-05	WHT/BLUE	RJ45-01-05	103393 (MALE)		RJ45-01-05			CABLE#1		CUST I/O BOARD	J1-05		305649
GP1		GP1 0V	BLUE	4	138413		MP5-04	BLUE	RJ45-01-04	103393 (MALE)		RJ45-01-04			CABLE#1		CUST I/O BOARD	J1-04		305649

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IOE-XXX-XXXX Training Guide: Point-to-Point Connections, continued

A device	note	A	WIRE ID	CONN PIN	Cable Assembly	B	(CONN-PIN)	WIRE ID2	(CONN-PIN)3	Cable Assembly4	C	(CONN-PIN)5	WIRE ID6	(CONN-PIN)7	Cable Assembly8	D	(CONN-PIN)9	WIRE ID10	(CONN-PIN)11	Cable Assembly12	E	Notes
GP1		GP1 D2	GREEN	3	138413	MP5-03	WHT/GREEN	RJ45-01-03	103393 (MALE)		RJ45-01-03				CABLE#1		CUST I/O BOARD	J1-03		305649		
GP1		GP1 0V	RED	2	138413	MP5-02	ORANGE	RJ45-01-02	103393 (MALE)		RJ45-01-02				CABLE#1		CUST I/O BOARD	J1-02		305649		
GP1		GP1 D1	WHITE	1	138413	MP5-01	WHT/ORANGE	RJ45-01-01	103393 (MALE)		RJ45-01-01				CABLE#1		CUST I/O BOARD	J1-01		305649		
						MP3-24																
						MP3-23																
						MP3-22																
						MP3-21																
						MP3-20																
						MP3-19																
SS2	shunt	SS2-XH6	RJ3-PIN8	18	138005	MP3-16	LV-04	18	138318		MP10-06	LV-04	8	138318		MP12-06	SHUNT2-L	8	138323		LVD/SHUNT 2 BLACK	
SS2	shunt	SS2-XH6	RJ3-PIN7	17	138005	MP3-17	LV-03	17	138318		MP10-07	LV-03	7	138318		MP12-07	SHUNT2-H	7	138323		LVD/SHUNT 2 WHITE	
SS2	shunt	SS2-XH6	RJ3-PIN5	16	138005	MP3-16	LV-02	16	138318		MP10-06	LV-02	6	138318		MP12-06	SHUNT1-L	6	138323		LVD/SHUNT 1 BLACK	
SS2	shunt	SS2-XH6	RJ3-PIN4	15	138005	MP3-15	LV-01	15	138318		MP10-05	LV-01	5	138318		MP12-06	SHUNT1-H	5	138323		LVD/SHUNT 1 WHITE	
SS2	shunt	SS2-XH6	RJ3-PIN2	14	138005	MP3-14	S4-12	14	138318		MDS CHASSIS SLOT 4 S4-12											
SS2	shunt	SS2-XH6	RJ3-PIN1	13	138005	MP3-13	S4-11	13	138318		MDS CHASSIS SLOT 4 S4-11											
SS1	shunt	SS1-XH8	RJ2-PIN8	12	138005	MP3-12	S4-10	12	138318		MDS CHASSIS SLOT 4 S4-10											
SS1	shunt	SS1-XH8	RJ2-PIN7	11	138005	MP3-11	S4-09	11	138318		MDS CHASSIS SLOT 4 S4-09											
SS1	shunt	SS1-XH8	RJ2-PIN5	10	138005	MP3-10	S3-12	10	138318		MDS CHASSIS SLOT 3 S3-12											
SS1	shunt	SS1-XH8	RJ2-PIN4	9	138005	MP3-09	S3-11	9	138318		MDS CHASSIS SLOT 3 S3-11											
SS1	shunt	SS1-XH8	RJ2-PIN2	8	138005	MP3-08	S3-10	8	138318		MDS CHASSIS SLOT 3 S3-10											
SS1	shunt	SS1-XH8	RJ2-PIN1	7	138005	MP3-07	S3-09	7	138318		MDS CHASSIS SLOT 3 S3-09											
GP1	shunt	GP1-XH6	RJ1-PIN8	6	138005	MP3-06	S2-12	6	138318		MDS CHASSIS SLOT 2 S2-12											
GP1	shunt	GP1-XH6	RJ1-PIN7	5	138005	MP3-05	S2-11	5	138318		MDS CHASSIS SLOT 2 S2-11											
GP1	shunt	GP1-XH6	RJ1-PIN5	4	138005	MP3-04	S2-10	4	138318		MDS CHASSIS SLOT 2 S2-10											
GP1	shunt	GP1-XH6	RJ1-PIN4	3	138005	MP3-03	S2-09	3	138318		MDS CHASSIS SLOT 2 S2-09											
GP1	shunt	GP1-XH6	RJ1-PIN2	2	138005	MP3-02	S1-12	2	138318		MDS CHASSIS SLOT 1 S1-12											
GP1	shunt	GP1-XH6	RJ1-PIN1	1	138005	MP3-01	S1-11	1	138318		MDS CHASSIS SLOT 1 S1-11											
GP1	LVD1-4	GP1_XH4-4	BLUE	24	137987	MP2-24	GPX64	24	138318		MP10-12		12	138318		MP12-12		12	138323		LVD 2 AUX NO	
GP1	LVD1-3	GP1_XH4-3	GREEN	23	137987	MP2-23	GPX63	23	138318		MP10-11		11	138318		MP12-11		11	138323		LVD 2 AUX NO	
GP1	LVD1-2	GP1_XH4-2	RED	22	137987	MP2-22	GPX62	22	138318		MP10-10		10	138318		MP12-10		10	138323		LVD 2 COIL (-)	
GP1	LVD1-1	GP1_XH4-1	WHITE	21	137987	MP2-21	GPX61	21	138318		MP10-09		9	138318		MP12-09		9	138323		LVD 2 COIL (+)	
GP1	LVD2-4	GP1_XH5-4	BLUE	20	137987	MP2-20	GPX64	20	138318		MP10-04		4	138318		MP12-04		4	138323		LVD 1 AUX NO	
GP1	LVD2-3	GP1_XH5-3	GREEN	19	137987	MP2-19	GPX63	19	138318		MP10-03		3	138318		MP12-03		3	138323		LVD 1 AUX NO	
GP1	LVD2-2	GP1_XH5-2	RED	18	137987	MP2-18	GPX62	18	138318		MP10-02		2	138318		MP12-02		2	138323		LVD 1 COIL (-)	
GP1	LVD2-1	GP1_XH5-1	WHITE	17	137987	MP2-17	GPX61	17	138318		MP10-01		1	138318		MP12-01		1	138323		LVD 1 COIL (+)	
DCPDM		+VFB COMMON	BLACK	16	137987	MP2-16	VFN-COM	16	138318		TERMINATES AT CHASSIS RTN BUS											
DCPDM		-VFB LIVE	BLACK			FUSE TERM					DCPDM											
DCPDM		FUSE TERM	BLACK	15	137987	MP2-15	VFB-LIVE	15	138318		TERMINATES AT CHASSIS SUPPLY BUS											
GP1		XH21_COM	YELLOW	14	137987	MP2-14	S4-06	14	138318		MDS CHASSIS SLOT 4 S4-06											
GP1		XH21_NO	ORANGE	13	137987	MP2-13	S4-05	13	138318		MDS CHASSIS SLOT 4 S4-05											
GP1		XH20_COM	BLUE	12	137987	MP2-12	S4-04	12	138318		MDS CHASSIS SLOT 4 S4-04											
GP1		XH20_NO	GREEN	11	137987	MP2-11	S4-03	11	138318		MDS CHASSIS SLOT 4 S4-03											
GP1		XH19_COM	RED	10	137987	MP2-10	S3-06	10	138318		MDS CHASSIS SLOT 3 S3-06											
GP1		XH19_NO	WHITE	9	137987	MP2-09	S3-05	9	138318		MDS CHASSIS SLOT 3 S3-05											
GP1		XH18_COM	YELLOW	8	137987	MP2-08	S3-04	8	138318		MDS CHASSIS SLOT 3 S3-04											
GP1		XH18_NO	ORANGE	7	137987	MP2-07	S3-03	7	138318		MDS CHASSIS SLOT 3 S3-03											
GP1		XH17_COM	BLUE	6	137987	MP2-06	S2-06	6	138318		MDS CHASSIS SLOT 2 S2-06											
GP1		XH17_NO	GREEN	5	137987	MP2-05	S2-05	5	138318		MDS CHASSIS SLOT 2 S2-05											
GP1		XH16_COM	RED	4	137987	MP2-04	S2-04	4	138318		MDS CHASSIS SLOT 2 S2-04											
GP1		XH16_NO	WHITE	3	137987	MP2-03	S2-03	3	138318		MDS CHASSIS SLOT 2 S2-03											
GP1		NOT USED		2	137987	MP2-02		2	138318													
GP1		NOT USED		1	137987	MP2-01		1	138318													
MDS		MDS CHASSIS SLOT 4	S4-08	8		CHASSIS RTN BUS																
MDS		MDS CHASSIS SLOT 4	S4-07	7		CHASSIS RTN BUS																
MDS		MDS CHASSIS SLOT 3	S3-08	8		CHASSIS RTN BUS																
MDS		MDS CHASSIS SLOT 3	S3-07	7		CHASSIS RTN BUS																
MDS		MDS CHASSIS SLOT 2	S2-08	8		CHASSIS RTN BUS																
MDS		MDS CHASSIS SLOT 2	S2-07	7		CHASSIS RTN BUS																
GP1	CICUIT BRKR																					
GP1	TRIP/FUSE FAIL	YH3	WHT/ORANGE	1	138233	MP1-01	MP1-1	1	138318		MP9-09		9	138318		MP11-09	RIO-05	9	138322		RJ45-11-02 & 11-03 NOT USED RJ45-11-04 & 11-05 RJ45-11-06 & 11-07 RJ45-11-08, 12-01 Thru 12-05	
GP1	BATT DISC OPEN	YH3	ORANGE	2	138233	MP1-02	MP1-2	2	138318		MP9-10		10	138318		MP11-10	RIO-06	10	138322			
GP1	12V OUT	YH3	GRN/WHT	3	138233	MP1-03	MP1-3	3	138318		MP9-11		11	138318		MP11-11	RIO-07	11	138322			
GP1	COOLING/FAN FAIL	YH3	BLUE	4	138233	MP1-04	MP1-4	4	138318		MP9-12		12	138318		MP11-12	RIO-08	12	138322			
GP1	DOOR OPEN	YH3	BLUE/WHT	5	138233	MP1-05	MP1-5	5	138318		MP9-13		13	138318		MP11-13	RIO-09	13	138322			
GP1	CRCT COMMON	YH3	GRN	6	138233	MP1-06	MP1-6	6	138318		MP9-14		14	138318		MP11-14	RIO-10	14	138322			
GP1	NOT USED	YH3	BRN/WHT	7	138233	NOT USED																
GP1	SYS COMMON																					
GP1	PROTECTED	YH3	BRN	8	138233	MP1-08	COMMON	8	138318		MP9-15		15	138318		MP11-15	RIO-COM	15	138322		NOT USED	
MDS		MDS SLOT 1 S1-01	S1-01	1	138318	MP9-01		1	138318		MP11-01		1	138322		MP11-01	RIO-01	1	138322		TO RIO-05	
MDS		MDS SLOT 1 S1-02	S1-02	2	138318	MP9-02		2	138318		MP11-02		2	138322		MP11-02	RIO-COM1	2	138322		TO RIO-10	
MDS		MDS SLOT 2 S2-01	S2-01	1	138318	MP9-03		3	138318		MP11-03		3	138322		MP11-03	RIO-02	3	138322		TO RIO-05	
MDS		MDS SLOT 2 S2-02	S2-02	2	138318	MP9-04		4	138318		MP11-04		4	138322		MP11-04	RIO-COM2	4	138322		TO RIO-10	
MDS		MDS SLOT 3 S3-01	S3-01	1	138318	MP9-05		5	138318		MP11-05		5	138322		MP11-05	RIO-03	5	138322		TO RIO-05	
MDS		MDS SLOT 3 S3-02	S3-02	2	138318	MP9-06		6	138318		MP11-06		6	138322		MP11-06	RIO-COM3	6	138322		TO RIO-10	
MDS		MDS SLOT 4 S4-01	S4-01	1	138318	MP9-07		7	138318		MP11-07		7	138322		MP11-07	RIO-04	7	138322		TO RIO-05	
MDS		MDS SLOT 4 S4-02	S4-02	2	138318	MP9-08		8	138318		MP11-08		8	138322		MP11-08	RIO-COM4	8	138322		TO RIO-10	