



1.0 NOTES:


1.1 IN ORDER TO COMPLY WITH CERTIFICATION FOR POTENTIALLY EXPLOSIVE ATMOSPHERES, THOSE ITEMS LISTED MUST BE USED ONLY AS SHOWN.


 1.2 WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS 1, ZONE 2, IIB.


 1.3 WARNING - EXPLOSION HAZARD - DO NOT USE CONNECTOR(S) UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS.

 1.4 WIRING BY FIELD PERSONNEL.

 1.5 CUSTOMER SUPPLIED EQUIPMENT MUST NOT USE OR GENERATE MORE THAN 250V WITH RESPECT TO GROUND.

 1.6 CUSTOMER SUPPLIED EQUIPMENT MUST BE CERTIFIED FOR USE IN THE CLASSIFIED HAZARDOUS LOCATION IN WHICH IT IS INSTALLED.

 1.7 CUSTOMER SUPPLIED EQUIPMENT MUST BE INSTALLED ACCORDING TO THE MANUFACTURERS INSTALLATION INSTRUCTIONS AND LOCAL AND NATIONAL ELECTRICAL CODES.

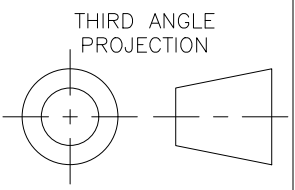

 1.8 RADIO SPECIFICATION: CUSTOMER SUPPLIED RADIO MUST BE ATEX CERTIFIED FOR USE IN A POTENTIALLY EXPLOSIVE ATMOSPHERE. APPLICABLE STANDARDS ARE: IEC 60079-0 AND IEC 60079-15. RADIO RATINGS MUST BE Ex nA (II, IIB, IIC) (T6, T5, T4), TAMB=-40°C ≤ TA ≤ 60°C. RADIO INPUT POWER: 10.5VDC TO 16VDC, 2A MAX. RADIO MUST BE INSTALLED IN PRODUCT BY FACTORY PRIOR TO SHIPMENT TO CUSTOMER.

 1.9 DC POWER SUPPLIES PROVIDING CHARGE CURRENT MUST BE LIMITED TO 15VDC 30W MAXIMUM.

1.10 ALL CONDUIT FITTINGS/CABLE GLANDS USED FOR INSTALLATION MUST BE SUITABLE TO MAINTAIN IP54 ENVIRONMENTAL PROTECTION RATING FOR COMPLETED INSTALLATION.

1.11 WARNING - EXPLOSION HAZARD - ELECTROSTATIC CHARGING HAZARD. AVOID BUILD UP OF ELECTROSTATIC CHARGES UPON KEYPAD AND DISPLAY WINDOW DURING MAINTENANCE OR CLEAN UP. CLEAN WITH WET CLOTH ONLY.

END PRODUCT APPROVED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES.
NO CHANGES ALLOWED WITHOUT APPROVAL OF AUTHORIZED PERSON(S)
IDENTIFIED BY DRAWING 2101982-AI.

DO NOT SCALE DRAWING	 <p>THIRD ANGLE PROJECTION</p>	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: DECIMAL ANGULAR .XX ± -- ± -- .XXX ± ---	PRODUCT LINE	LEVEL	 TOTALFLOW Products					
			TOTALFLOW®	3						
		DESIGN		DATE	INSTALLATION, X SERIES, ATEX, ZONE 2					
		D. ADAMS		11/10/27						
		DRAWN								
		B. LEMEN		11/10/27						
		CHECKED								
		D. ADAMS		11/10/27						
		APPROVED			SCALE	SIZE	DOC TYPE	DRAWING NO.	REV	SHEET
		D. ADAMS		11/10/27	NONE	B	CD	2104152-CD	AE	1 OF 21

2.0 SPECIFICATION

2.1 MODEL NO. CONFIGURATION



MODEL 6210S	1	2	3	4	5	-	-	8	9	10	11	-	-	14	20	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-		
MODEL 6213S	1	2	3	4	5	6	-	8	9	10	11	12	13	14	20	25	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	
MODEL 6410S	1	2	3	4	5	6	-	8	9	10	11	12	13	-	20	25	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	50	59	90		
MODEL 6411S	1	2	3	4	5	6	-	8	9	10	11	12	13	14	20	25	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	50	59	90		
MODEL 6413S	1	2	3	4	5	6	-	8	9	10	11	12	13	-	20	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	-	43	50	59	90	
MODEL 6414S	1	2	3	4	5	6	-	8	9	10	11	12	13	14	20	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	-	43	50	59	90	
MODEL 6713S	1	2	3	4	5	6	-	8	9	10	11	12	13	-	20	25	26	27	28	29	30	31	32	33	34	-	-	-	-	-	-	-	43	50	59	90	
MODEL 6714S	1	2	3	4	5	6	-	8	9	10	11	12	13	14	20	25	26	27	28	29	30	31	32	33	34	-	-	-	-	-	-	-	43	50	59	90	
MODEL 6490S	1	2	3	-	5	6	-	8	9	10	-	12	13	14	20	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	-	43	50	59	90	
MODEL 6790S	1	2	3	-	5	6	-	8	9	10	-	12	13	14	20	25	26	27	28	29	30	31	32	33	34	-	-	-	-	-	-	-	43	50	59	90	
MODEL 6890S	1	2	3	-	5	6	-	8	9	10	-	12	13	14	20	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	50	59	90
MODEL 6270S	1	2	-	-	5	-	-	8	-	10	-	12	13	-	-	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MODEL 6470S	1	2	-	-	5	-	-	8	-	10	-	12	13	-	-	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MODEL 6770S	1	2	-	-	5	6	-	8	-	10	-	12	13	-	-	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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| 1. CERTIFICATION | 29. I/O MODULE POSITION | NO. 1 |
| 2. ENCLOSURE | 30. ↑ | NO. 2 |
| 3. ELECTRONIC BOARD | 31. ↑ | NO. 3 |
| 4. AMU ASSEMBLY | 32. ↑ | NO. 4 |
| 5. BATTERY OPTION | 33. | NO. 5 |
| 6. CHARGING SOURCE | 34. | NO. 6 |
| 8. MOUNTING KIT (CERTIFICATION NOT APPLICABLE) | 35. | NO. 7 |
| 9. REMOTE COMM 1 | 36. | NO. 8 |
| 10. SPECIAL (CERTIFICATION NOT APPLICABLE) | 37. | NO. 9 |
| 11. RTD PROBE ASSY | 38. | NO. 10 |
| 12. COMMUNICATION MTG KIT (CERTIFICATION NOT APPLICABLE) | 39. | NO. 11 |
| 13. COMMUNICATION OPTION | 40. | NO. 12 |
| 14. PULSE OPTION | 41. ↓ | NO. 13 |
| 20. REMOTE COMM 2 | 42. I/O MODULE POSITION | NO. 14 |
| 25. LEVELMASTER P.T.R. SWITCH OPTION | 43. KEYPAD OPTION | |
| 26. PRODUCT IDENTIFIER (CERTIFICATION NOT APPLICABLE) | 50. XFC/XRC FIRMWARE (CERTIFICATION NOT APPLICABLE) | |
| 27. VALVE CONTROL OPTION | 59. WIFI ANTENNA OPTIONS | |
| 28. I/O MODULE MTG KIT | 90. MAN/MACHINE INTERFACE OPTION | |
| | 100. APPROVED OPTIONAL EQUIPMENT (NOT PART OF MODEL NO.) | |

MARKINGS -
ATEX AND UKCA CERTIFIED PRODUCTS ARE MARKED WITH THE FOLLOWING:

"YYYY" DESIGNATES
THE YEAR PRODUCT
WAS MANUFACTURED.

ABB TOTALFLOW Products
MADE IN U.S.A.
7051 Industrial Blvd. Bartlesville, OK 74006 800-442-3097 www.abb.com/totalflow

Ex nA IIB T3 Gc IP54
SIRA 10ATEX4138X CSAE 21UKEX4228X "YYYY"
INSTALL PER DRAWING 2104152-CD

UK CA **CE** **Ex** II 3 G

WARNING: ELECTROSTATIC HAZARD - SEE INSTRUCTIONS 2104152-CD
SUBSTITUTION OF COMPONENTS MAY IMPAIR SAFETY

AMBIENT TEMPERATURE: -40°C ≤ TAMB ≤ +60°C
POWER REQUIRED: NOMINAL SOLAR PANEL, 12V 30W MAX OR
AC-DC OR DC-DC POWER SOURCE 14-15VDC 30W MAX

123456789012345 SERIAL NO: 1234ABCD1234ABCD01
SAFETY CERT: S

2104153-001

SCALE	SIZE	DOC TYPE	DRAWING NO.	REV	SHEET
NONE	B	CD	2104152-CD	AE	3 OF

1 CERTIFICATION

S Ex nA IIB Gc, T3, IP54, T_{AMB} = -40° TO 60° UK CA CE Ex II 3 G SIRA 10ATEX4138X APPEND: "CSAE 21UKEX4228X"

2 ENCL ASSY W/DISPLAY

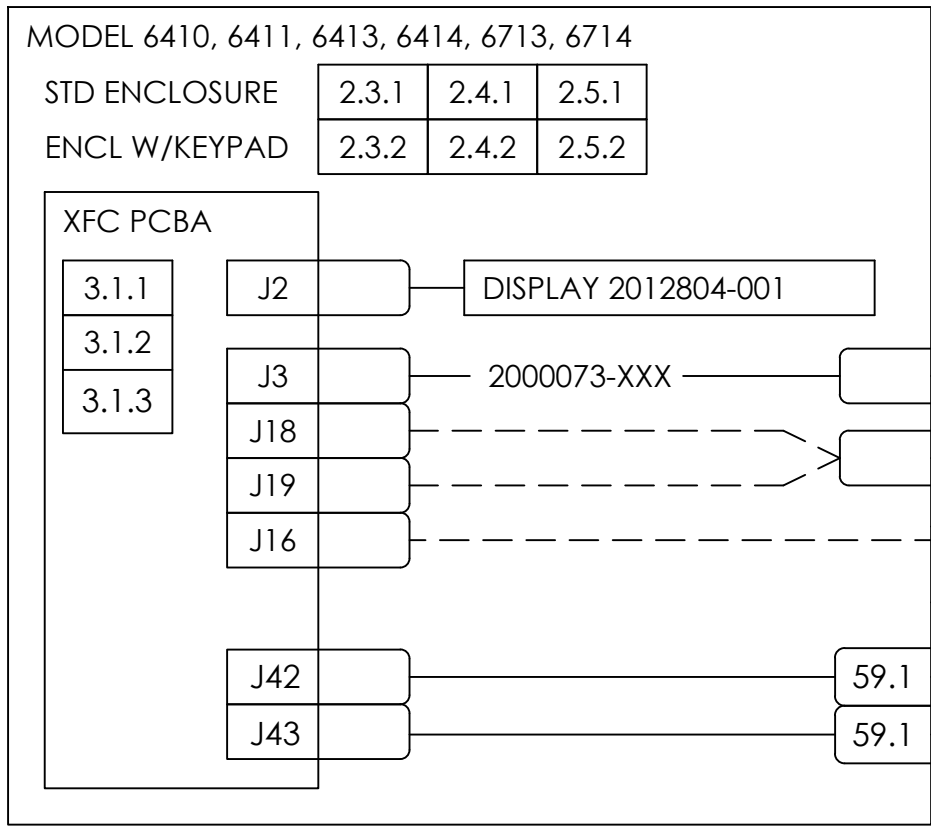
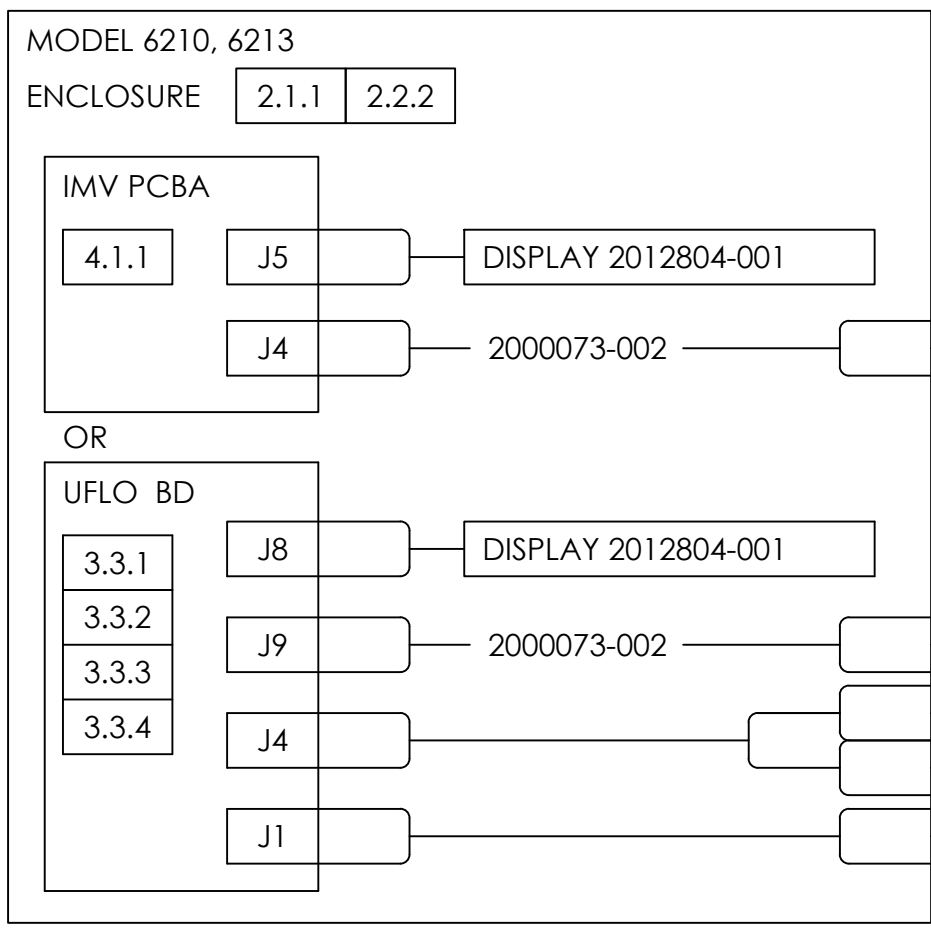
- 2.1 6210 ENCLOSURE
 - 2.1.1 2100997-001 ENCL W/2102975-002 STD DOOR (HOFFMAN)
- 2.2 6213, 6270 ENCLOSURE
 - 2.2.1 REMOVED
 - 2.2.2 2104452-001 ENCL W/2101771-005, -007 STD DOOR (HOFFMAN)
- 2.3 6410, 6411 ENCLOSURE
 - 2.3.1 2102989-003 ENCL W/2102975-002 STD DOOR (HOFFMAN)
 - 2.3.2 2102989-003 ENCL W/2103062-002 KEYPAD DOOR (HOFFMAN)
- 2.4 6413, 6414, 6470, 6490 ENCLOSURE
 - 2.4.1 2103068-001 ENCL W/2101771-007 STD DOOR (HOFFMAN)
 - 2.4.2 2103068-001 ENCL W/2101751-003 KEYPAD DOOR (HOFFMAN)
- 2.5 6713, 6714, 6770, 6790 ENCLOSURE
 - 2.5.1 2102976-003 ENCL W/2102977-002 STD DOOR (HOFFMAN)
 - 2.5.2 2102976-003 ENCL W/2102978-002 KEYPAD DOOR (HOFFMAN)
- 2.6 6890 ENCLOSURE
 - 2.6.1 2100462-005 ENCL W/2100463-004 STD DOOR (HOFFMAN)
 - 2.6.2 2100462-005 ENCL W/2100463-005 KEYPAD DOOR (HOFFMAN)

- 3 ELECTRONIC BOARD OPTIONS
 - 3.1 XFC PCBA ASSY
 - 3.1.1 2102838-002 XFC-G4 MOTHER BD W/2102427-001 OR 2103639-001,-002 EC 2410 PROCESSOR CARD
 - 3.1.2 2100204-004 CB195 PCBA
 - 3.1.3 2105733-001 XFC G5 MOTHER BD W/2105708-001 APU AM335X PROCESSOR CARD
 - 3.2 XRC PCBA ASSY
 - 3.2.1 2103022-002 XRC-G4 MOTHER BD W/2102427-001 OR 2103639-001,-002 EC 2410 PROCESSOR CARD
 - 3.2.2 2100355-003 RTU CB195 PCBA
 - 3.2.3 2105825-001 XRC G5 MOTHER BD W/2105708-001 APU AM335X PROCESSOR CARD
 - 3.3 UFLO PCBA ASSY
 - 3.3.1 2104356-001 UFLO G4 IMV PCBA W/2102427-001 OR 2103639-001,-002 EC 2410 PROCESSOR CARD
 - 3.3.2 2104939-001 AM335X G5 UFLO PCBA
 - 3.3.3 2108238-(001 THRU 008) OSC335X C-SIP G5 UFLO PCBA
 - 3.3.4 2108246-(001 THRU 008) OSD335x G5 UFLO PCBA

- 43 KEYPAD OPTION
 - 43.1 2100498-002 PROGRAMMED KEYPAD ASSEMBLY

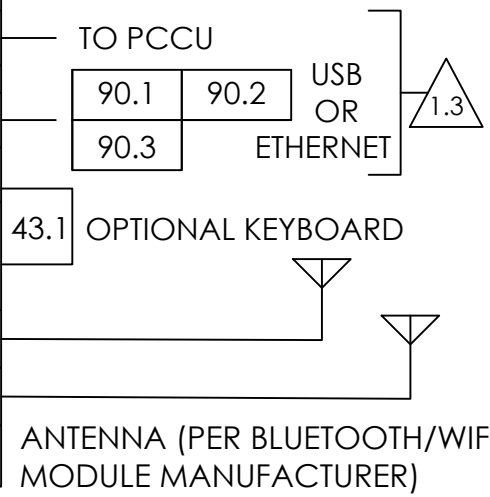
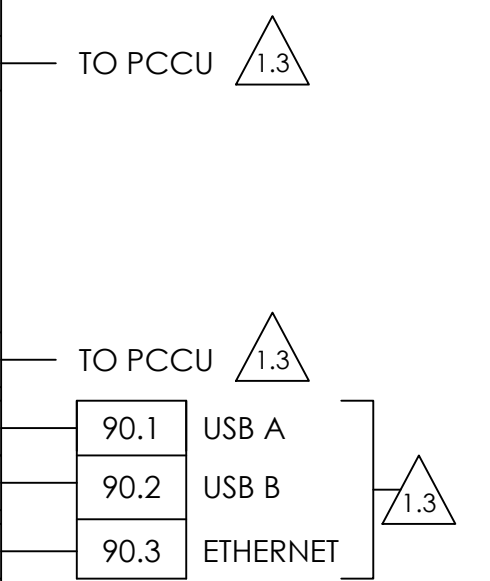
- 59 WIFI/BLUE TOOTH ANTENNA
 - 59.1 WIFI/BLUE TOOTH ANTENNA

- 90 MAN/MACHINE INTERFACE OPTION
 - 90.1 USB TYPE A CONN (1802999-001) W/CAP (1803005-001)
 - 90.2 USB TYPE B CONN (1803001-001) W/CAP (1803005-001)
 - 90.3 ETHERNET, CAT 5E CONN (1803071-001) W/CAP (1803005-001)



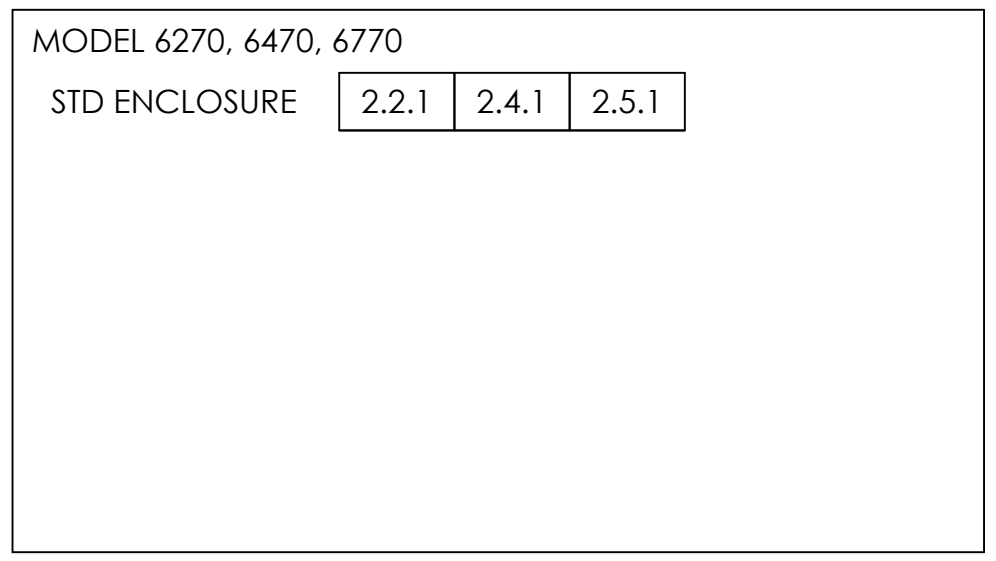
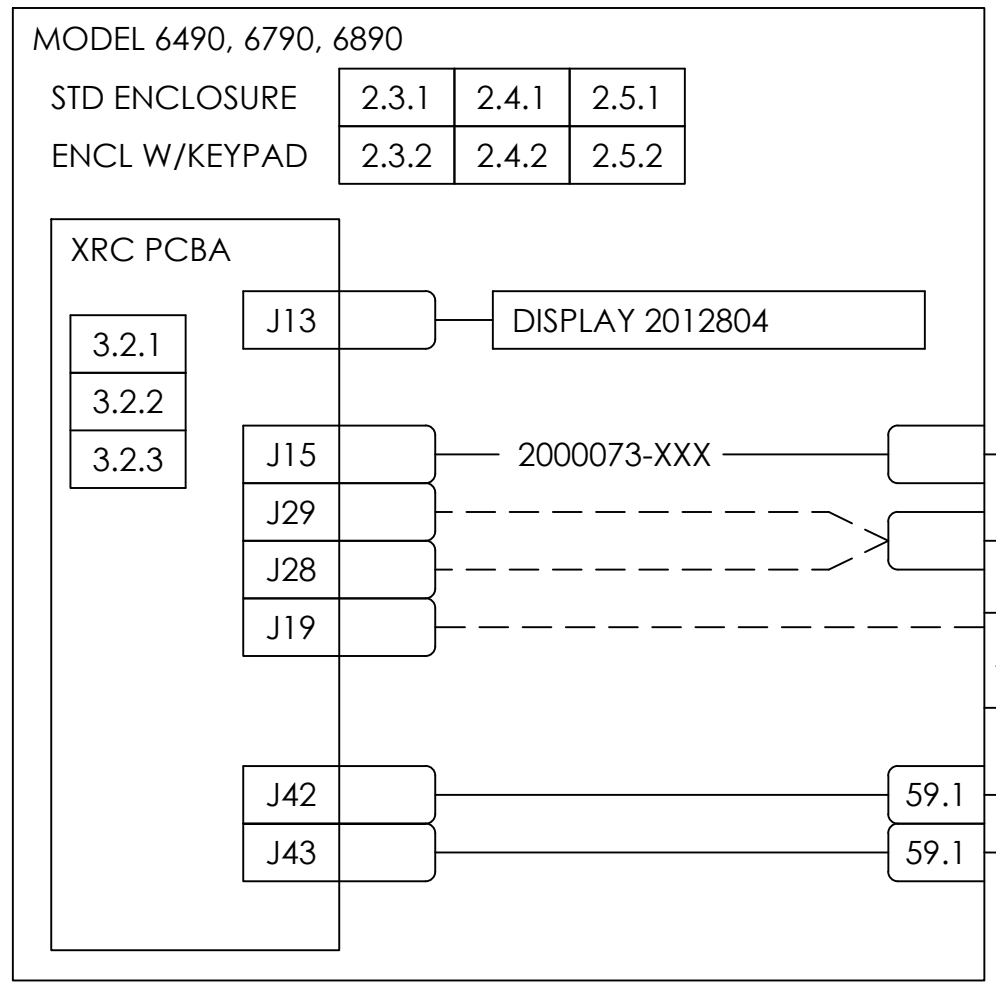
HAZARDOUS AREA CLASS I, ZONE 2, II B

HAZARDOUS AREA CLASS I, ZONE 1, II B CLASS I, ZONE 2, II B OR NON-HAZARDOUS AREA



HAZARDOUS AREA
CLASS I, ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS
AREA



4 XIMV, IMV, AMU ASSEMBLY

4.1 ELECTRONIC BD

4.1.1	2100767-004	UFLO (IMV) PCBA
4.1.2	2102924-001	XIMV DUAL RANGE PCBA
4.1.3	2015293-002	AMU PCBA (S & F)
4.1.4	2103641-001, -002	RAW SENSOR BUFFERED SIGNAL DIGITIZING PCBA
4.1.5	2104742-002/-003	RAW SENSOR BUFFERED SW.RTD REF PCBA

4.2 MULTIVARIABLE TRANSDUCER

4.2.1	2102127-XXX	XDCR DP/AP OPTIMIZED ABB MINDEN T2000M
4.2.2	2102949-XXX	XDCR DP FOXBORO IAMV W/BSHG
4.2.3	2103101-XXX	XDCR DP LIQUID FOXBORO IAMV W/BSHG

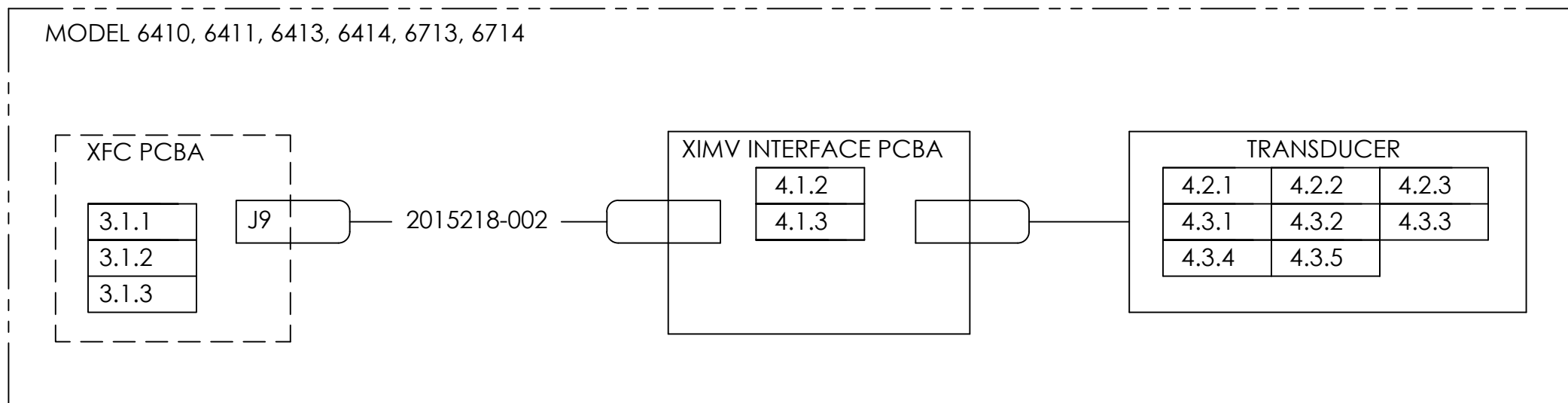
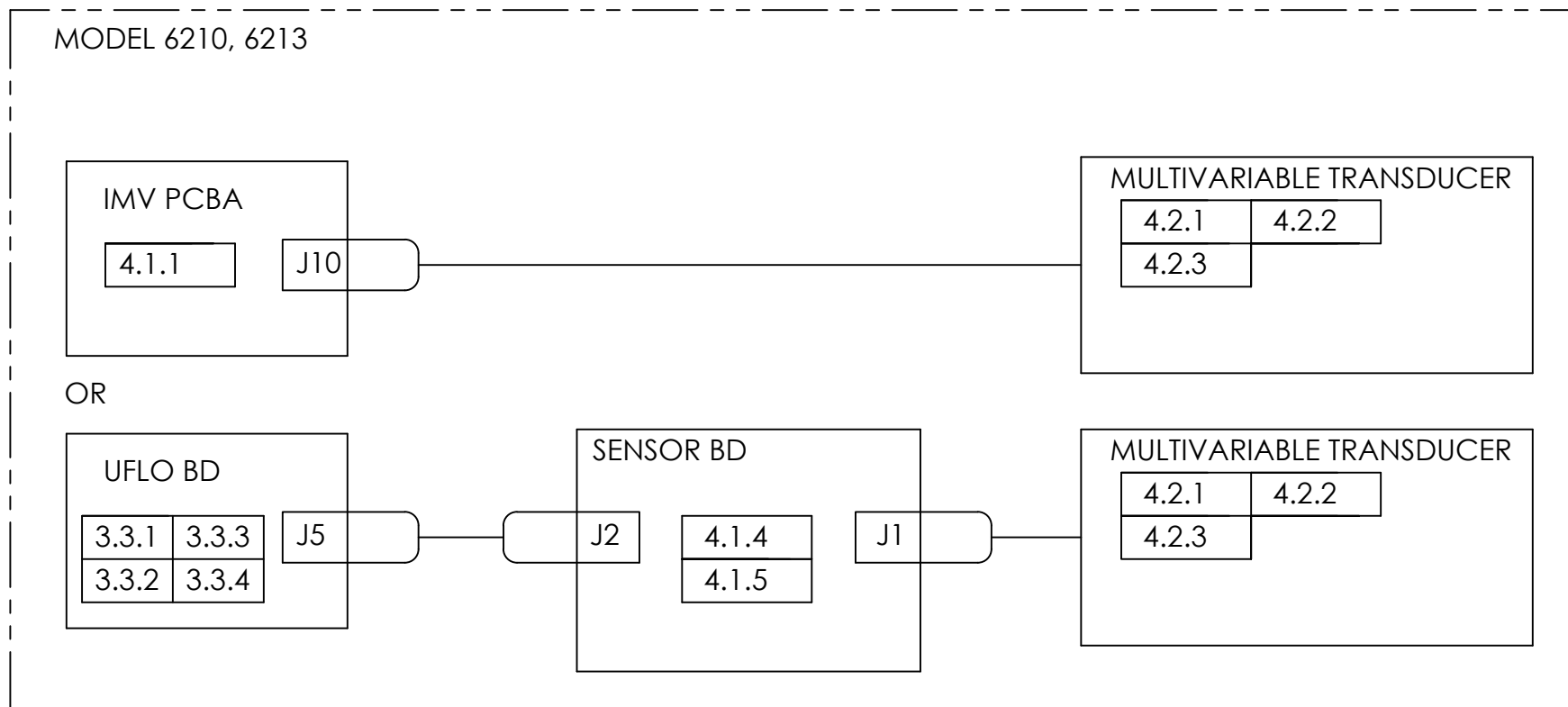
4.3 AP TRANSDUCER

4.3.1	2015103-001	100 PSIA SENSYM ICT	1234-L889-100, DRUCK PDCR 1000-8277-100
4.3.2	2015103-002	500 PSIA SENSYM ICT	1234-L889-500, DRUCK PDCR 1000-8277-500
4.3.3	2015103-003	1500 PSIA DRUCK PDCR	1000-8277-1500
4.3.4	2015103-005	2000 PSIA DRUCK PDCR	1000-8277-2000
4.3.5	2015103-006	3500 PSIA DRUCK PDCR	1000-8277-3500

4

HAZARDOUS AREA
CLASS I , ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS
AREA



5 BATTERY OPTION

5.1 BATTERIES

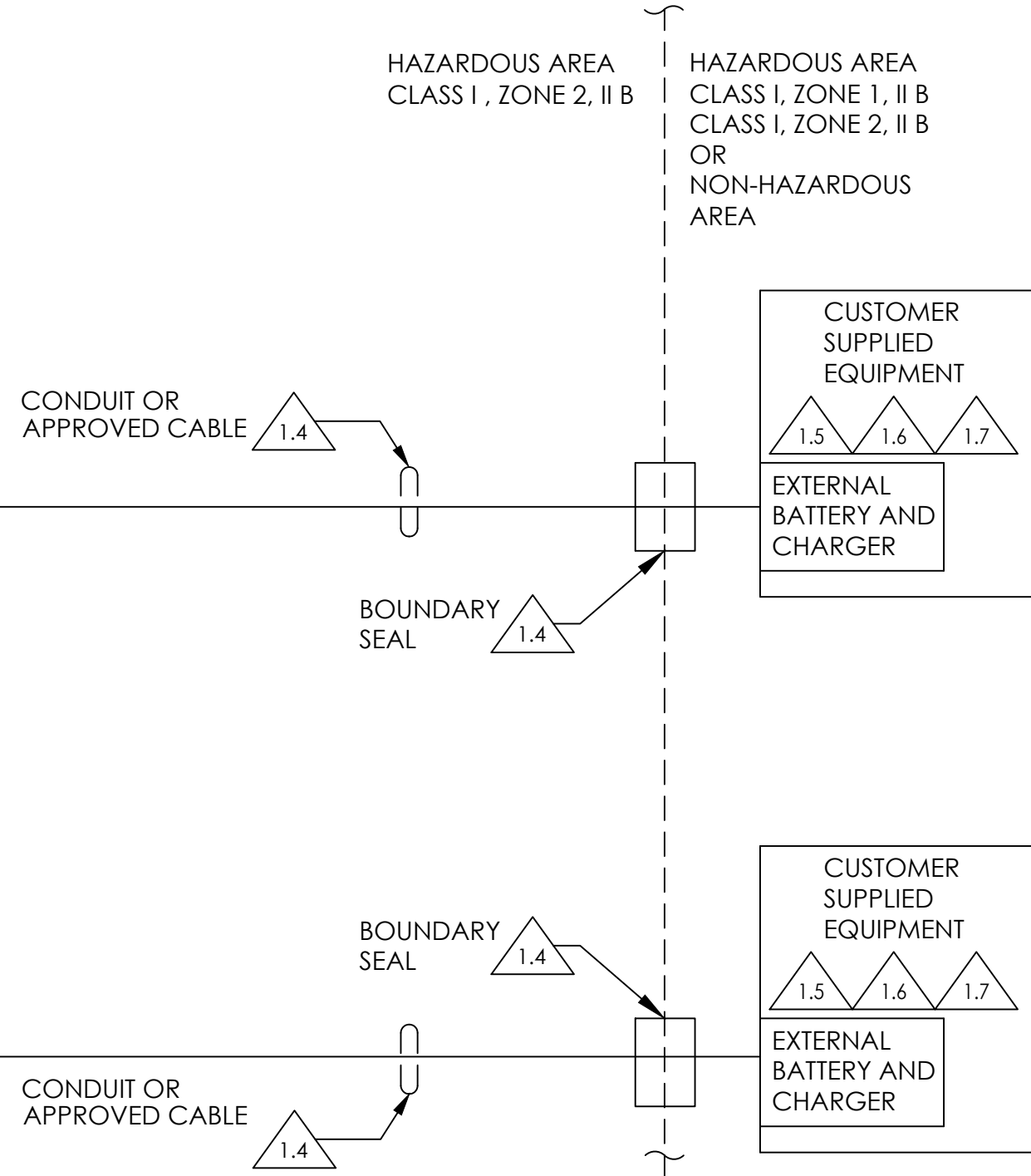
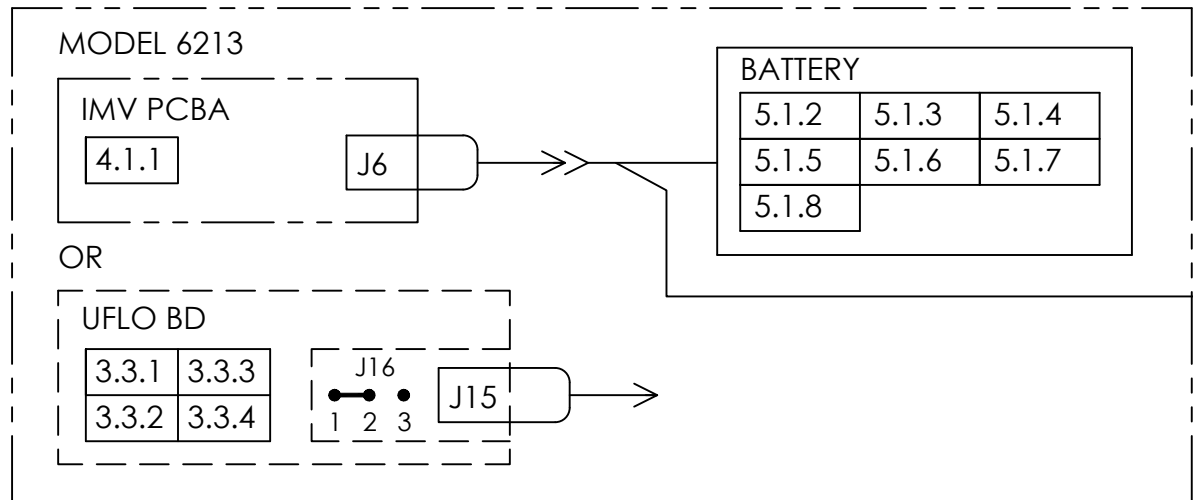
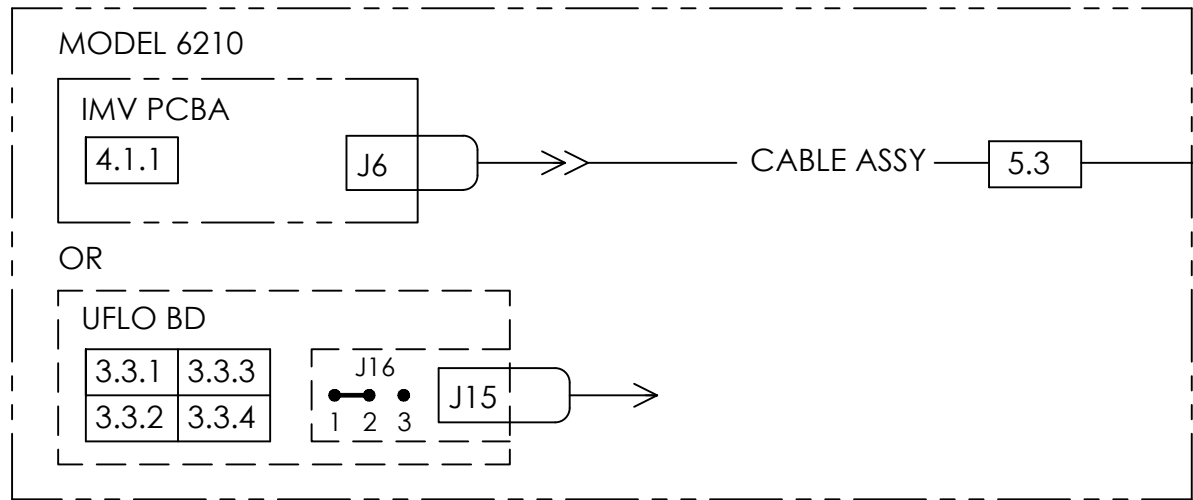
5.1.1	— WITHOUT BATTERY	
5.1.2	— 12V, 8.0 AH CYCLONE	(2015113-003)
5.1.3	— 12V, 16.0 AH GENESIS G16EP OR XE16	(2015052-003)
5.1.4	— 12V, 13.0 AH GENESIS G13EP OR XE13	(2015052-002)
5.1.5	— 12V, 12.0 AH POWER-SONIC PS12120	(2015052-006)
5.1.6	— 12V, 18.0 AH POWER-SONIC PS12180	(2015052-007)
5.1.7	— 12V, 7.0 AH POWER-SONIC PS12070	(2015052-009)
5.1.8	— 12V, 24 AH GENESIS NP24-12 FR	(2015052-014)

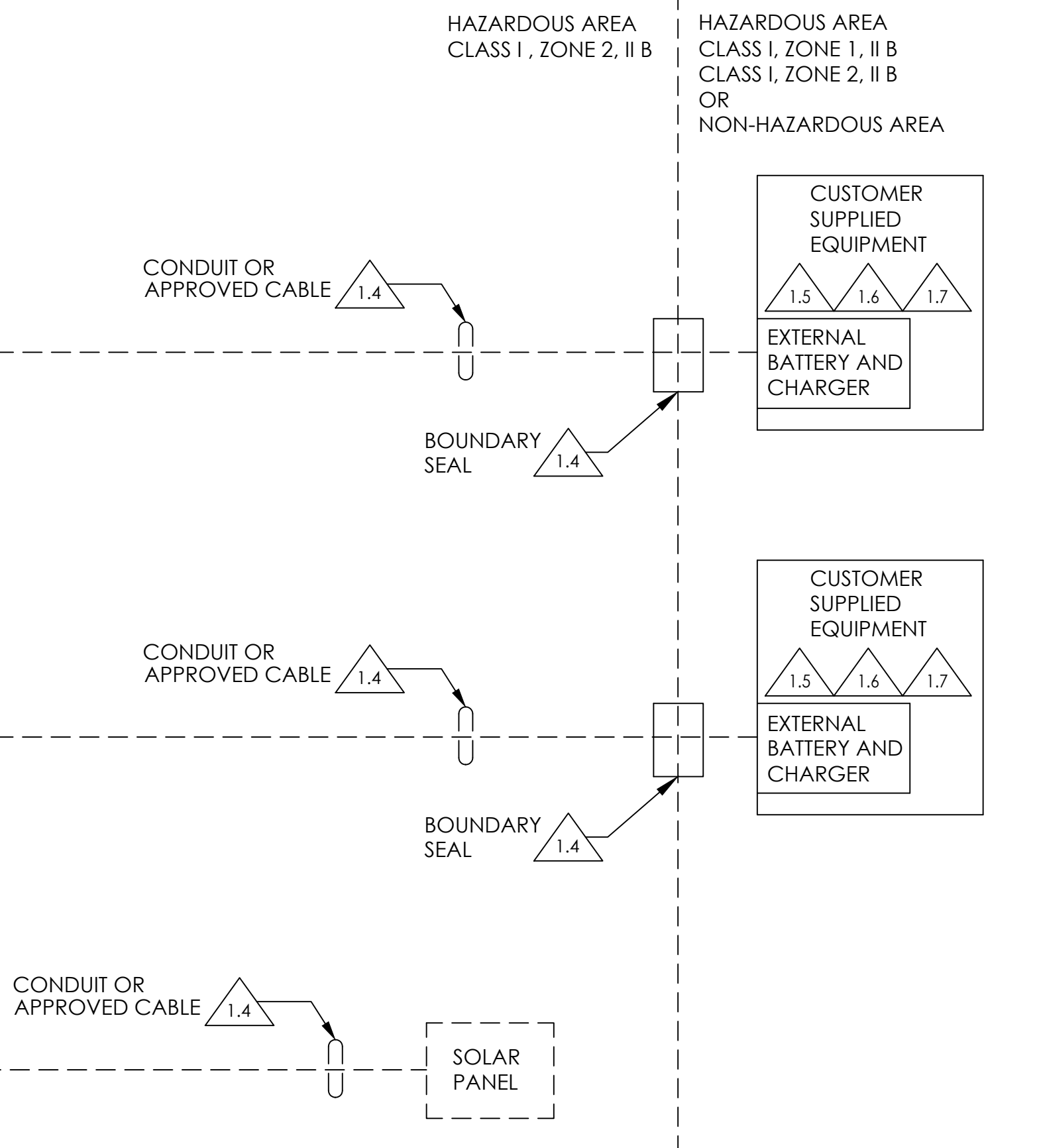
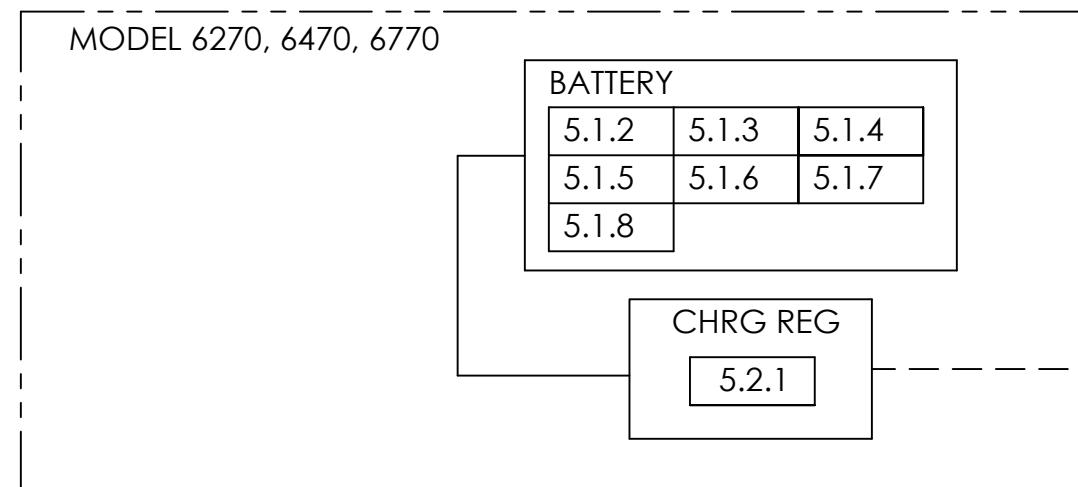
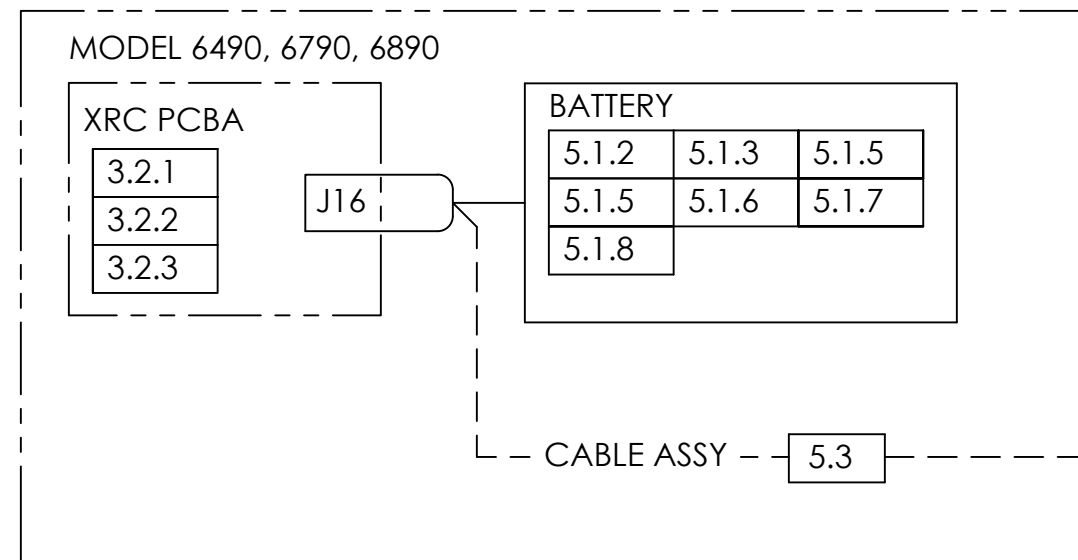
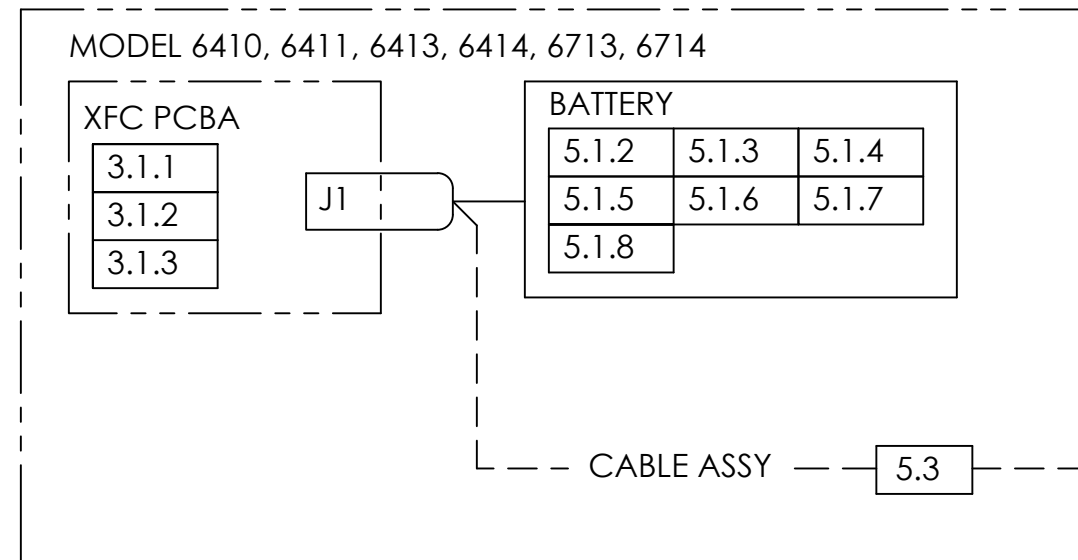
5.2 CHARGER REGULATOR

5.2.1	— SCI ASC #12/8-A CHARGER REGULATOR	(1489000-001)
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5.3 CABLE ASSY, EXTERNAL BATTERY

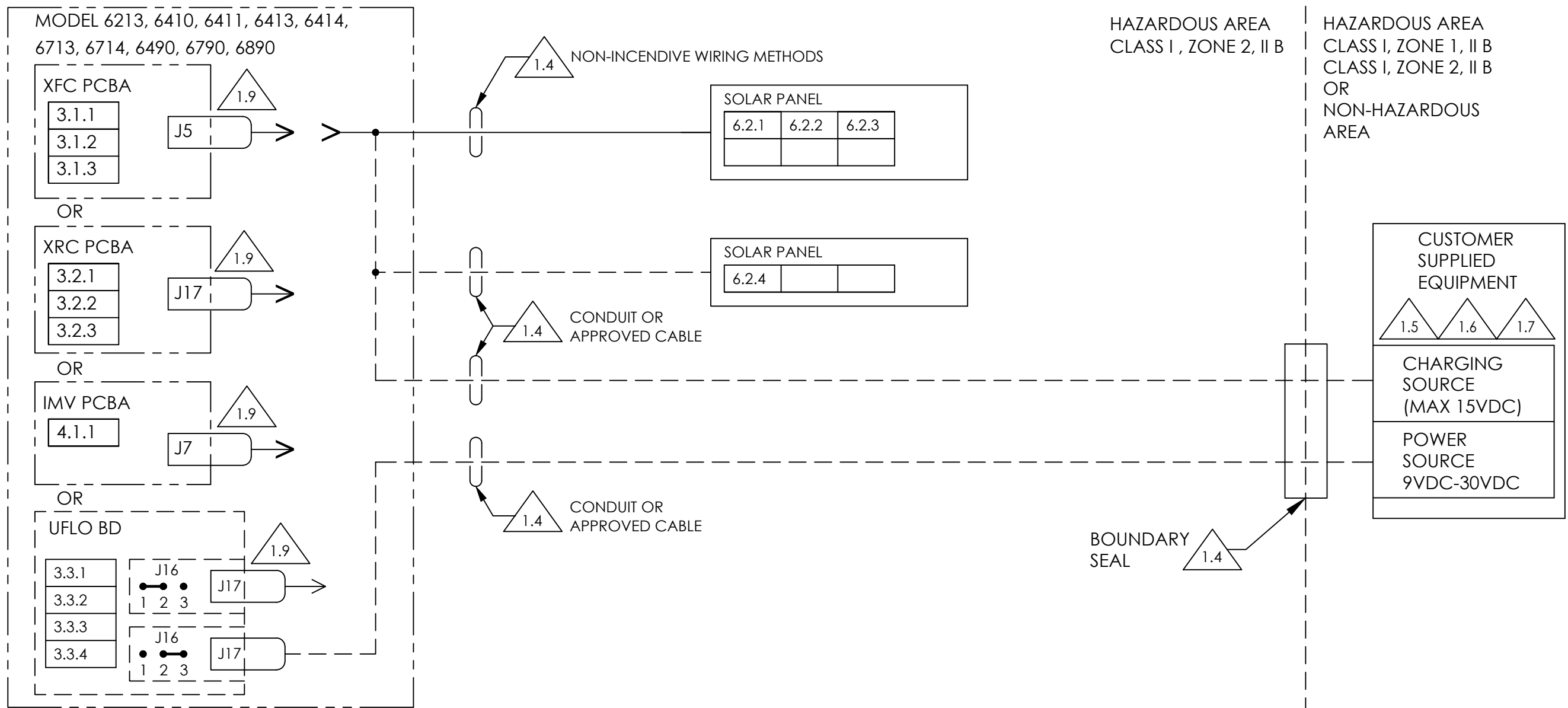
(2015433-001)





6 CHARGING SOURCE OPTION

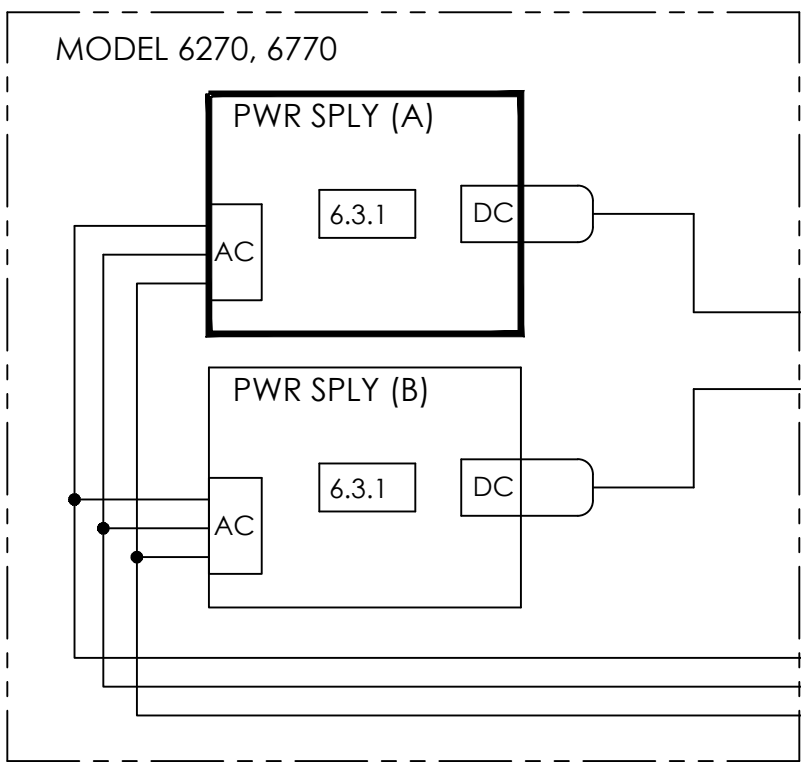
- 6.1 WITHOUT CHARGING SOURCE
- 6.2 SOLAR PANELS
 - 6.2.1 SOLAR PANEL, 12V, 5W 135 FT MAX CABLE LENGTH, BP SOLAR SX-305 M, KYOCERA KS-5
 - 6.2.2 SOLAR PANEL, 12V, 10W 135 FT MAX CABLE LENGTH, BP SOLAR SX-310 M, KYOCERA KS-10
 - 6.2.3 SOLAR PANEL, 12V, 20W 135 FT MAX CABLE LENGTH, BP SOLAR SX-320 J, KYOCERA KS-20
 - 6.2.4 SOLAR PANEL, 12V, 30W 135 FT MAX CABLE LENGTH, BP SOLAR SX-330 J
- 6.3 PWR SPLY, AC IN/DC OUT
 - 6.3.1 AC PWR SPLY, 100-240 VAC IN, 24 VDC OUT, PHOENIX QUINT, 2938866
- 6.4 PWR SPLY, ACCESSORY
 - 6.4.1 FUSED TERMINAL, 6.3A MAX, PHOENIX UK5-HESI, (1800693-001) WITH CERAMIC, 5 X 20 mm FUSE
 - 6.4.2 POWER DISTRIBUTION BLOCK (1800518-001)
 - 6.4.3 CONNECTOR, TERMINAL BLOCK, PHOENIX 0404017 (1800519-001)



SCALE	SIZE	DOC TYPE	DRAWING NO.	REV	SHEET
NONE	B	CD	2104152-CD	AE	11 OF

HAZARDOUS AREA
CLASS I , ZONE 2, II B

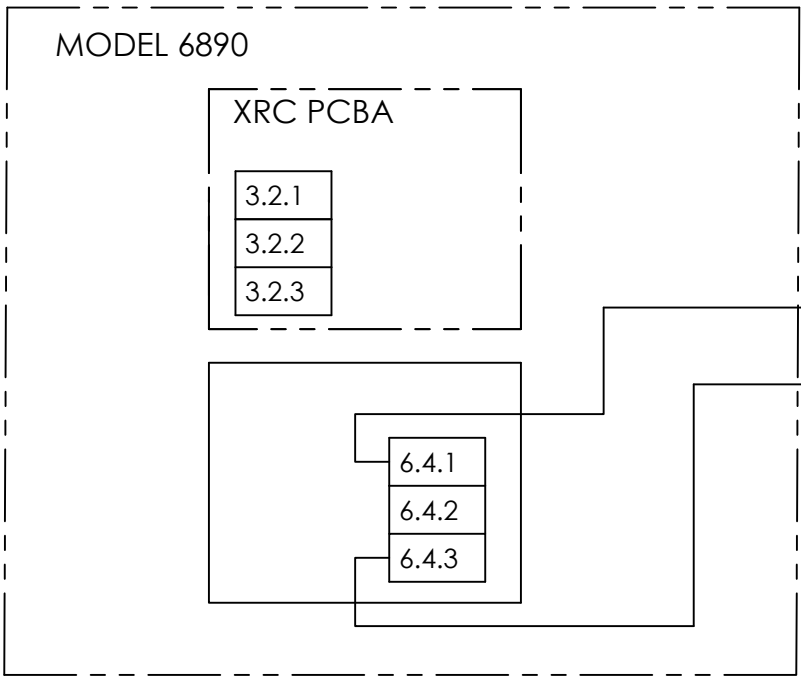
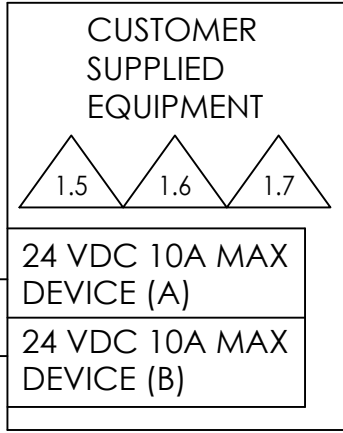
HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS
AREA



1.4 CONDUIT OR APPROVED CABLE

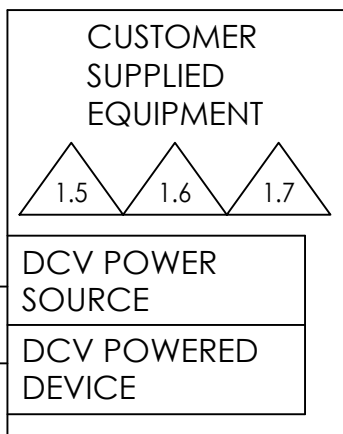
1.4 CONDUIT OR APPROVED CABLE

BOUNDARY SEAL 1.4



1.4 CONDUIT OR APPROVED CABLE

BOUNDARY SEAL 1.4

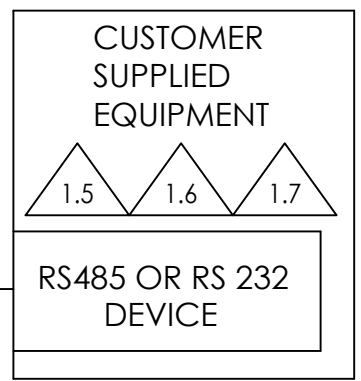
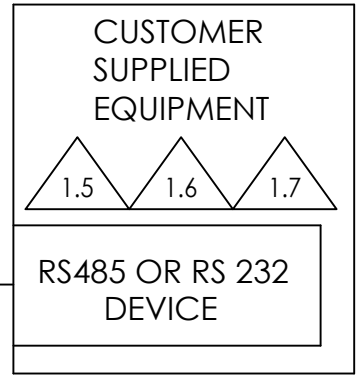
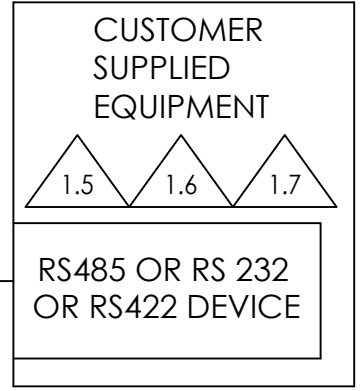
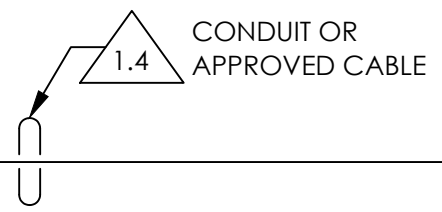
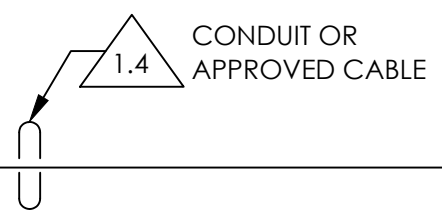
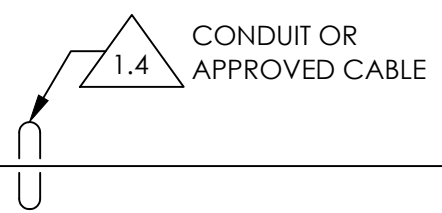
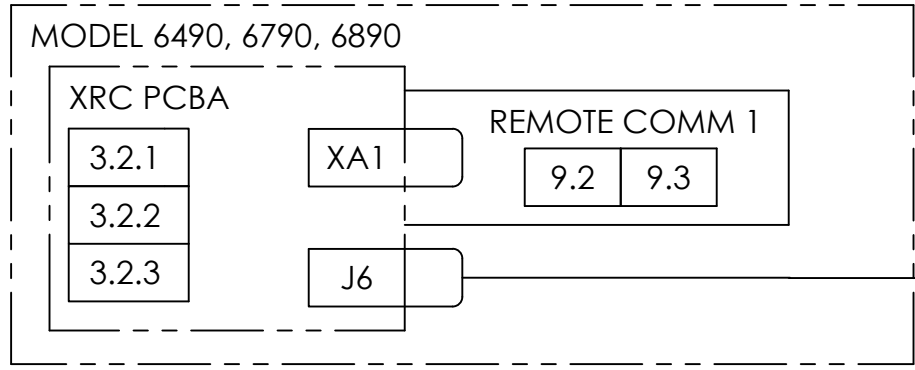
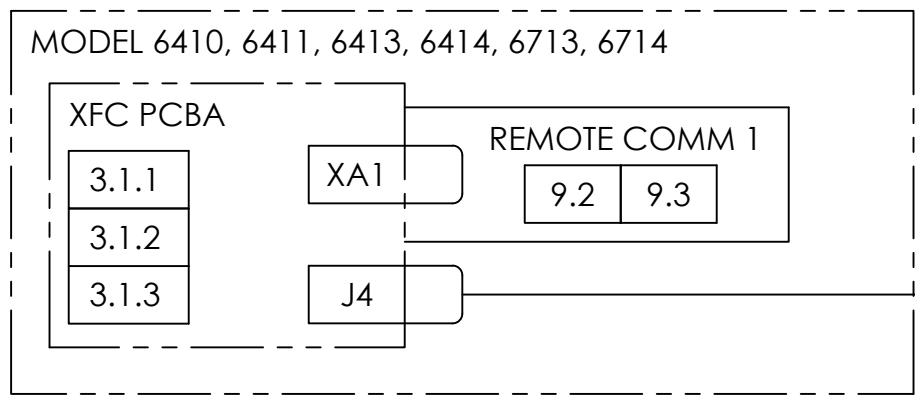
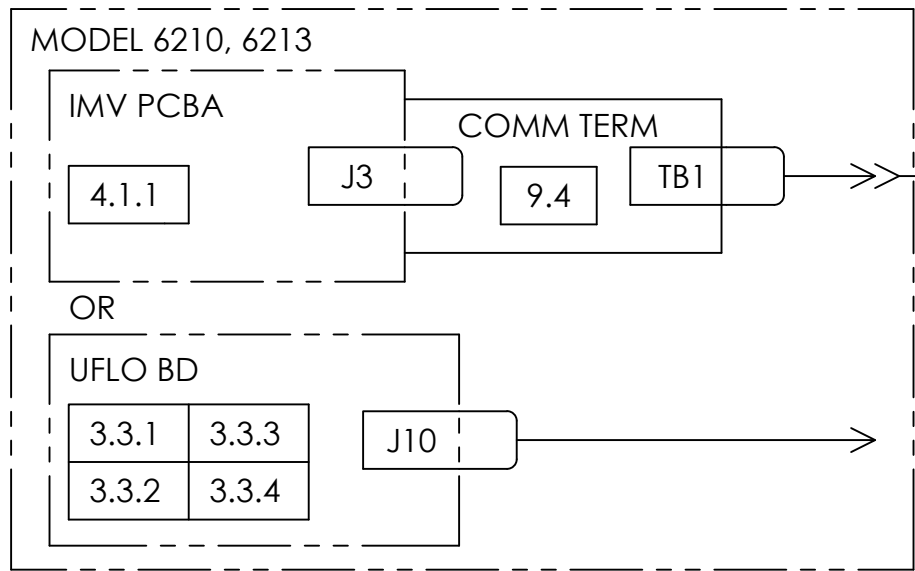


9 REMOTE COMM 1

- 9.1 WITHOUT MODULE
- 9.2 RS485 COMM MODULE (2015193-006)
- 9.3 RS232 COMM MODULE (2015192-005)
- 9.4 UFLO COMM TERM WITH I/O PCBA (2101059-001/-002/-003)

HAZARDOUS AREA
CLASS I, ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS AREA

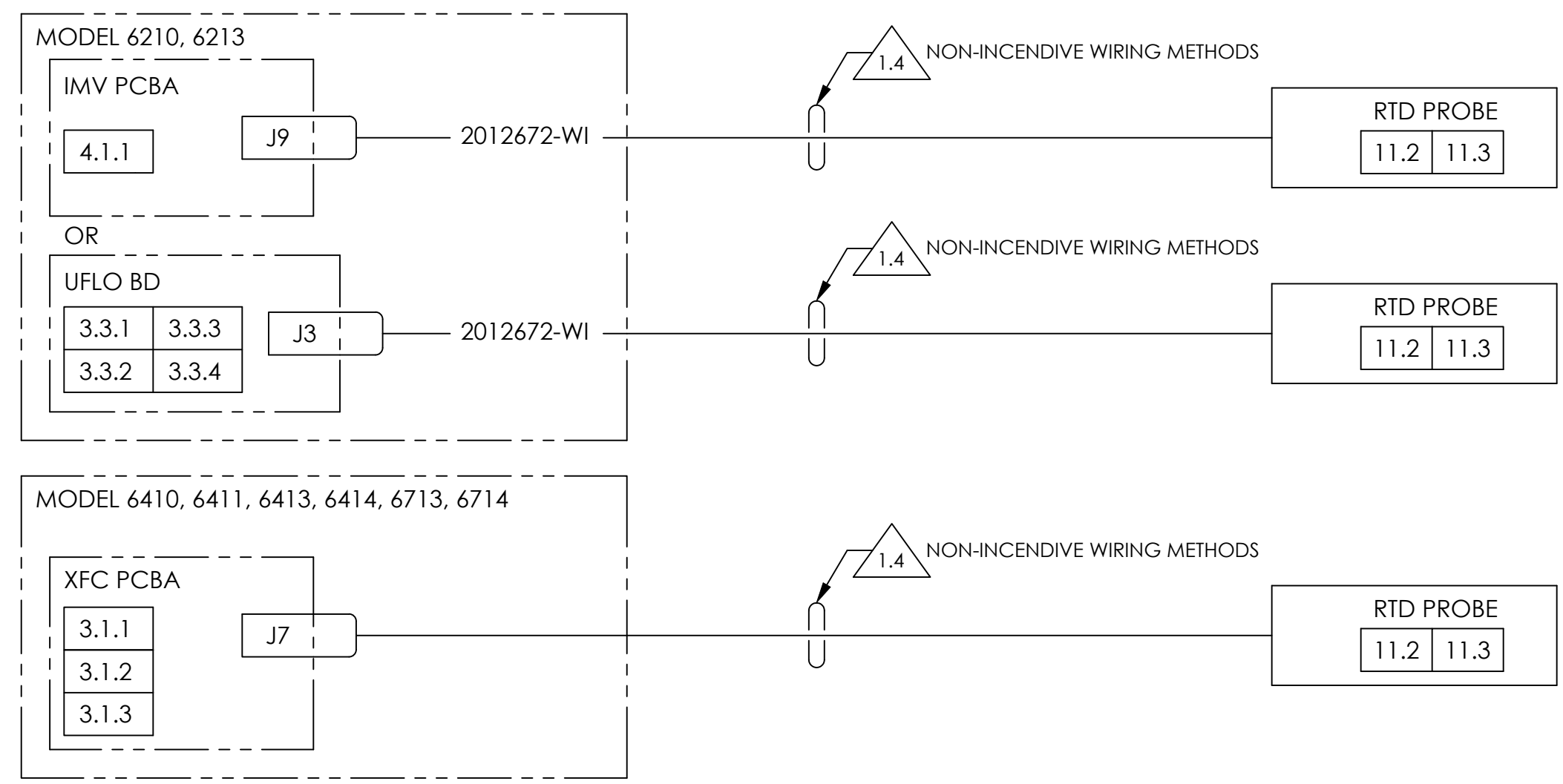


11 RTD PROBE OPTION

- 11.1 WITHOUT RTD
- 11.2 2011905-001 THRU -005 & -001 THRU -016 RTD PROBE, SST ARMOR, 50FT MAX
- 11.3 2011905-021 THRU -026 RTD PROBE, SST MESH, 50FT MAX

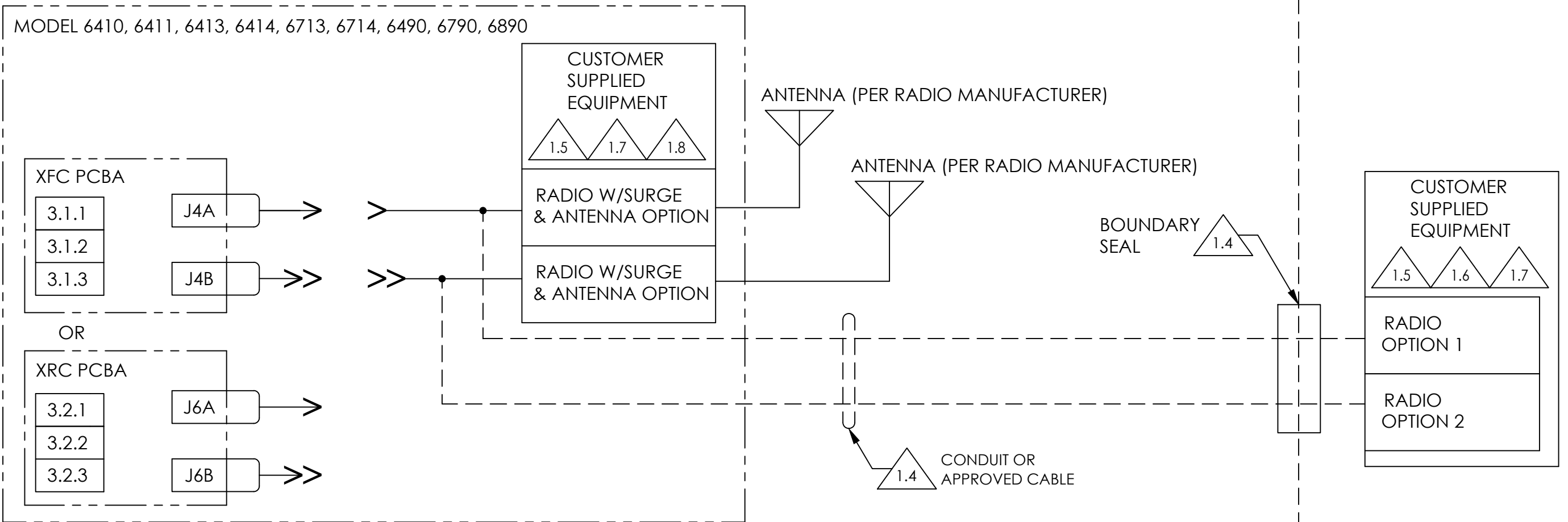
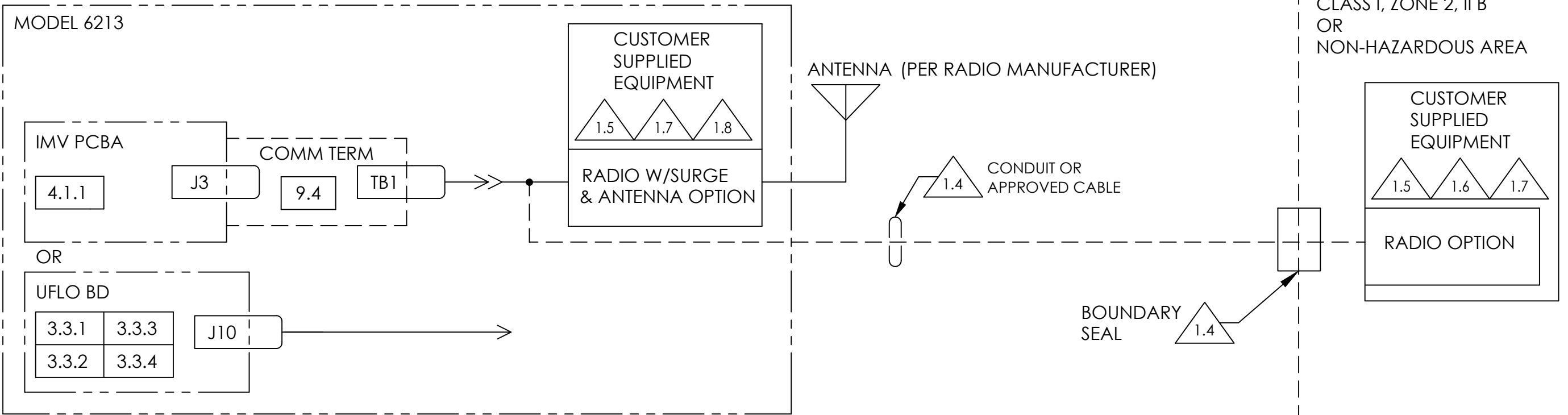
HAZARDOUS AREA
CLASS I, ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS
AREA



HAZARDOUS AREA
CLASS I, ZONE 2, II B

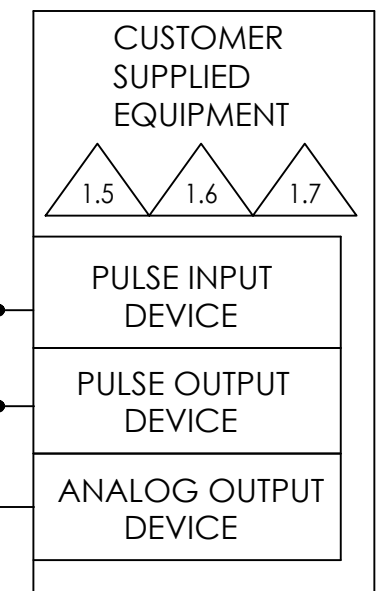
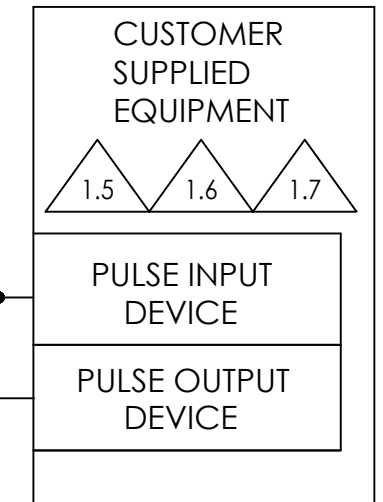
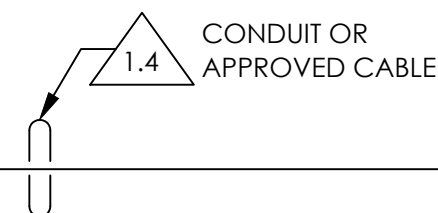
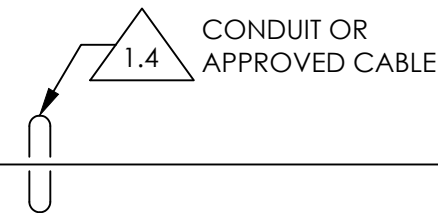
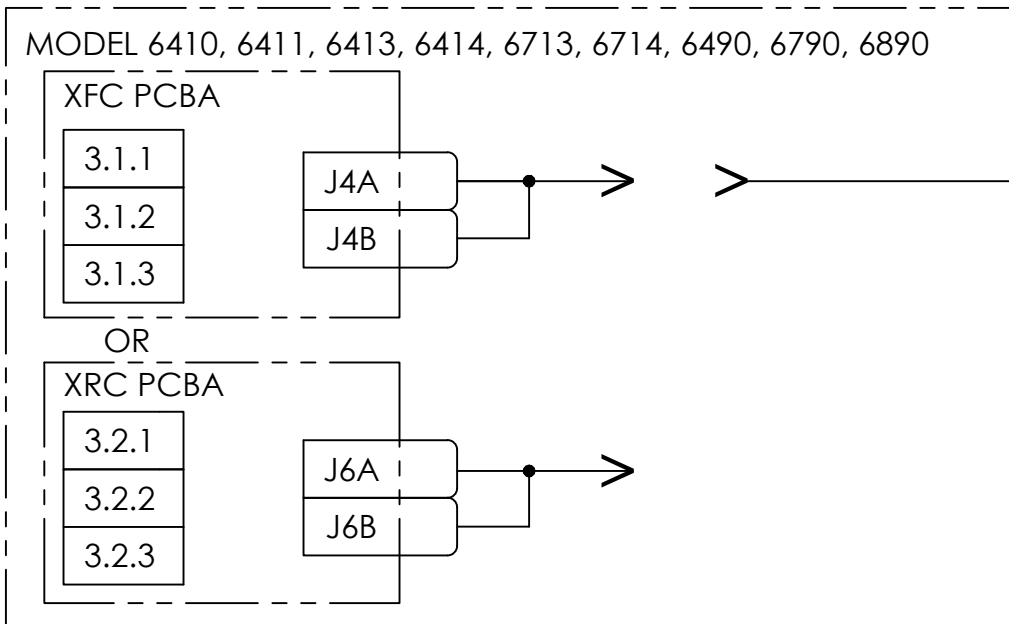
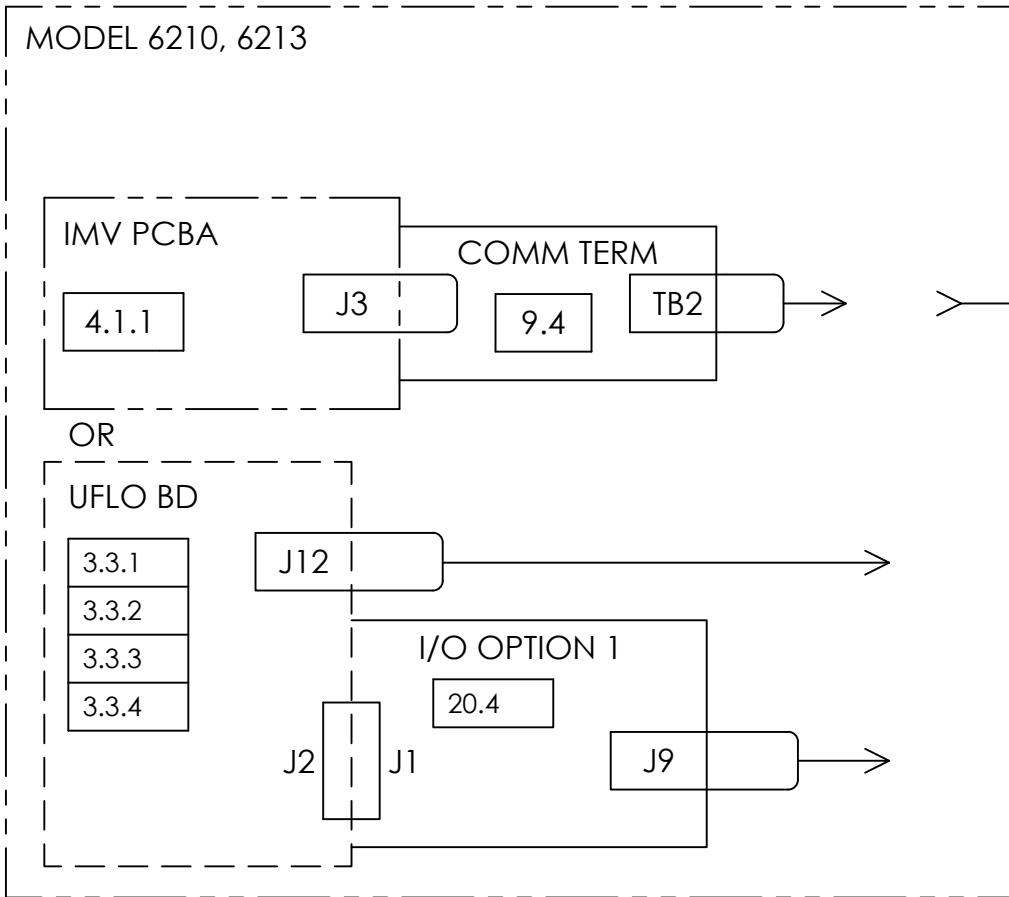
HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS AREA



14 PULSE OPTIONS

HAZARDOUS AREA
CLASS I, ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS AREA



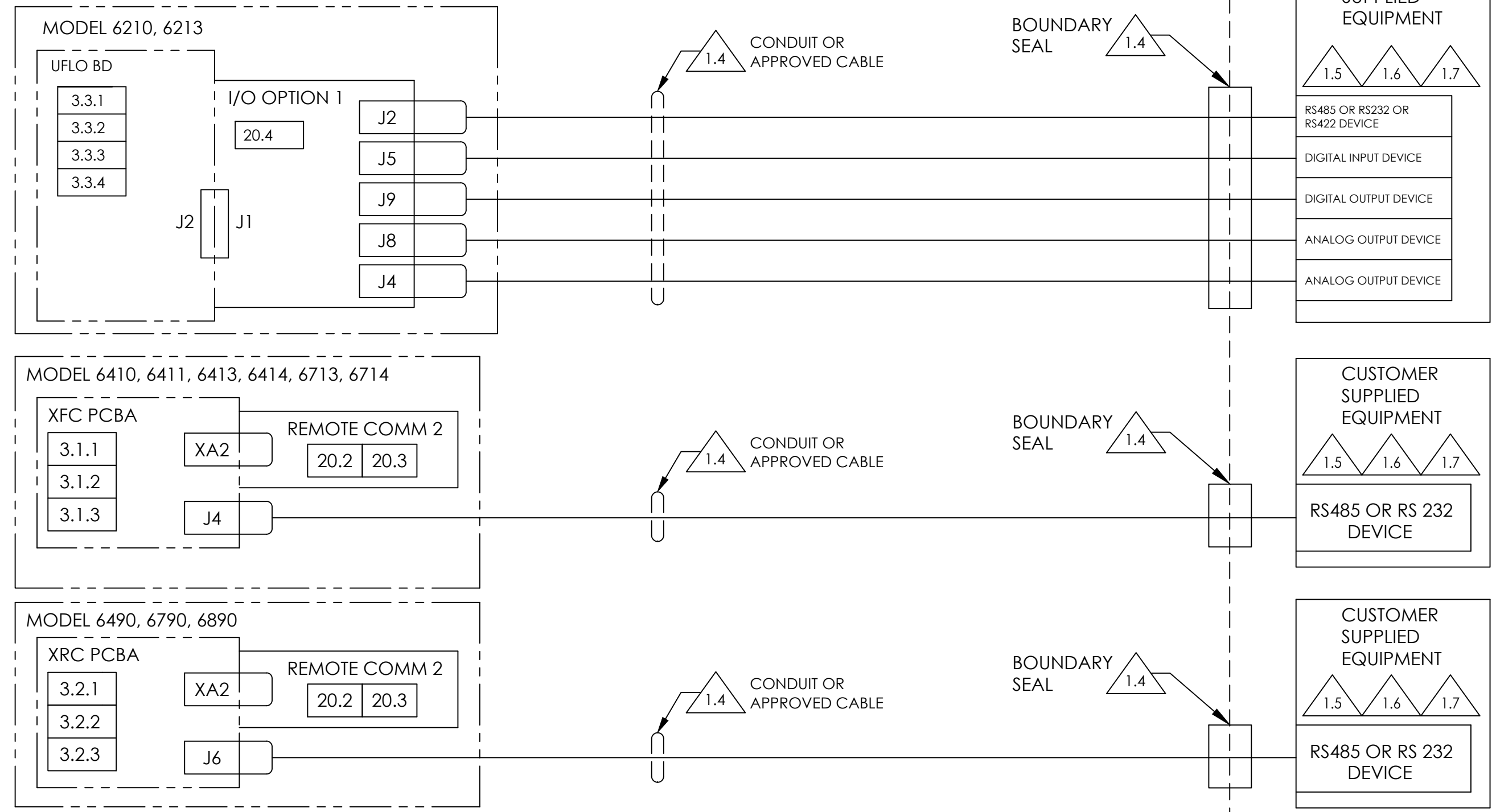
SCALE	SIZE	DOC TYPE	DRAWING NO.	REV	SHEET
NONE	B	CD	2104152-CD	AE	16 OF

20 REMOTE COMM 2

- 20.1 WITHOUT MODULE
- 20.2 RS485 COMM MODULE (2015193-006)
- 20.3 RS232 COMM MODULE (2015192-005)
- 20.4 2104395-001 I/O OPTION 1 (COMMUNICATIONS) PCBA

HAZARDOUS AREA
CLASS I, ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS AREA



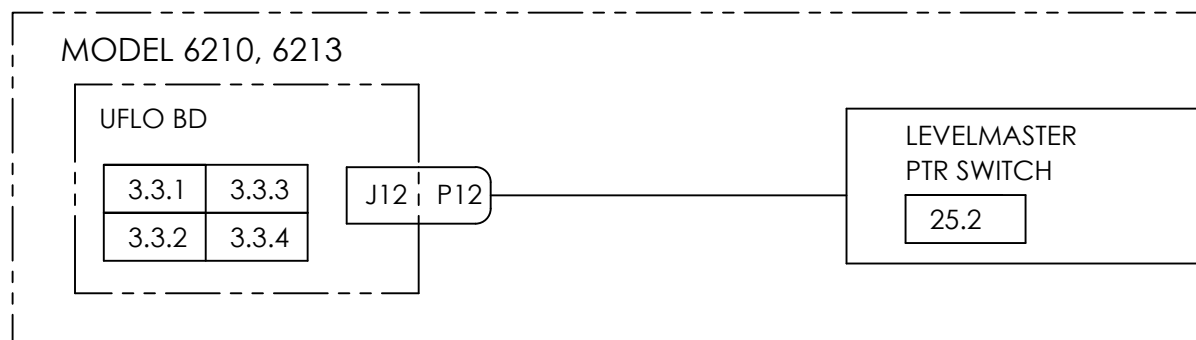
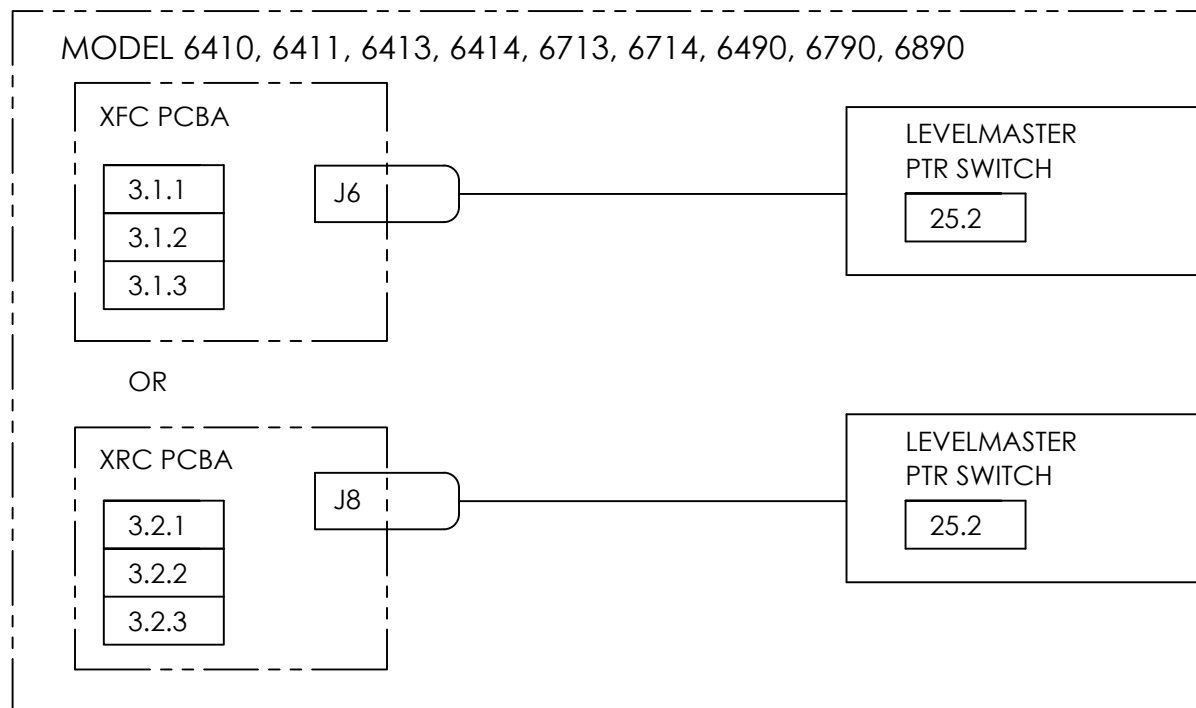
25 LEVELMASTER PTR SWITCH OPTION

25.1 WITHOUT OPTION

25.2 LEVELMASTER PTR SWITCH, NORMALLY OPEN (2100238-XXX)

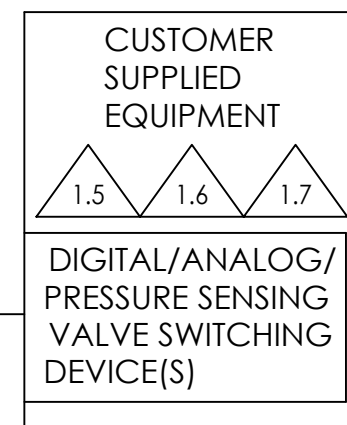
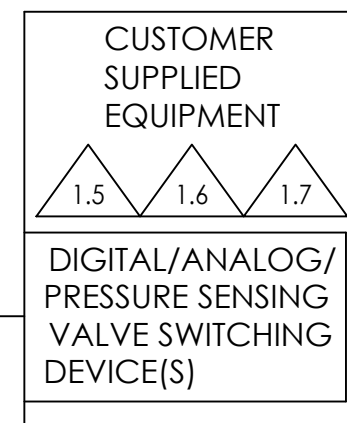
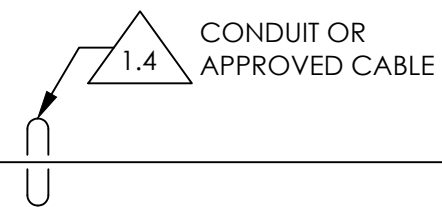
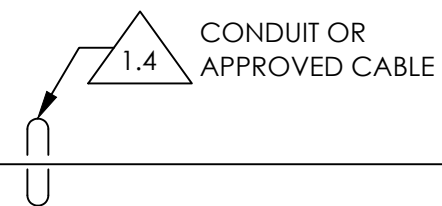
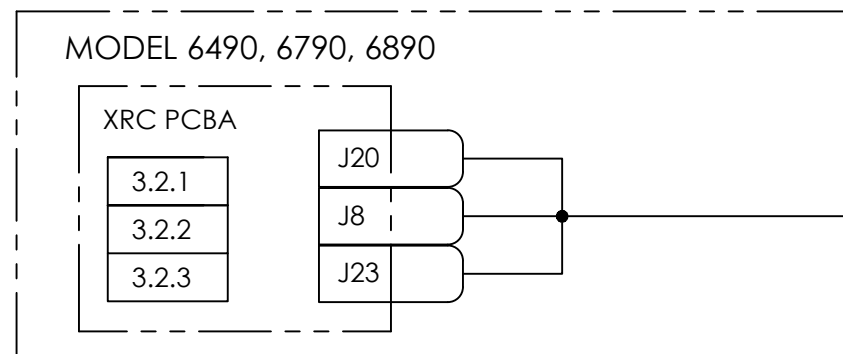
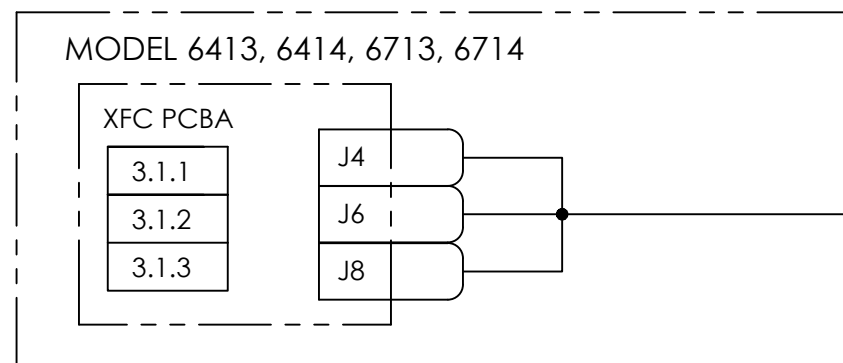
HAZARDOUS AREA
CLASS I, ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS
AREA



HAZARDOUS AREA
CLASS I, ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
OR
NON-HAZARDOUS
AREA



28 I/O MODULE KIT

28.1	W/O OPTION
28.2	I/O MODULE MTG KIT (MAXIMUM 3 MODULES, ANY COMBINATION FOR MODELS 6413, 6414, 6490)
28.3	I/O MODULE MTG KIT (MAXIMUM 6 MODULES, ANY COMBINATION FOR MODELS 6713, 6714, 6790)
28.4	I/O MODULE MTG KIT (MAXIMUM 14 MODULES, ANY COMBINATION FOR MODEL 6890)
28.5	TFIO I/O MODULES
28.5.1	2100543-008, -009, 8/COMBO DIGITAL
28.5.2	2100415-005, 4/AO (4-20 mA)
28.5.3	2100421-003, COMM INTERFACE
28.5.4	2100418-005, 8/AI (TYPE II)
28.5.5	2100412-007, VALVE CONTROL INTERFACE
28.5.6	2101018-004, 4/100 OHM RTD
28.5.7	2100869-004, 4 THERMOCOUPLE

29	THRU	31	I/O MODULE POSITIONS 1 OR UP TO 3 (FOR 6413, 6414, 6490)
29	THRU	34	I/O MODULE POSITIONS 1 OR UP TO 6 (FOR 6713, 6714, 6790)
29	THRU	42	I/O MODULE POSITIONS 1 OR UP TO 14 (FOR 6890)

HAZARDOUS AREA
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HAZARDOUS AREA
CLASS I, ZONE 2, II B

HAZARDOUS AREA
CLASS I, ZONE 1, II B
CLASS I, ZONE 2, II B
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NON-HAZARDOUS
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