



GENERAL NOTES:

1. BOTH HV & LV ELECTRODE EARTH BONDS ARE PVC COVERED COPPER, FOR THE FIRST RUN UP TO THE DEEP EARTH ELECTRODE.
2. ALL EARTHING CONDUCTORS SHALL BE THOROUGHLY CLEANED AND DEBURRED AT CONNECTION POINTS BEFORE CONNECTION.
3. TRANSFORMER TANK, PADMOUNT ENCLOSURE, AND HV CABLE SCREEN SHALL BE CONNECTED TO HV EARTH BAR.
4. NEUTRALS OF LV CABLES AND TRANSFORMER NEUTRAL TO BE CONNECTED TO NEUTRAL BAR ON THE LV BOARD.
5. EACH EARTHING CONNECTION MADE TO AN EARTHING BAR MUST BE FIXED WITH A SEPARATE M12 BOLT. AS REQUIRED THE EARTH BAR MAYBE EXTENDED WITH ADDITIONAL COPPER BAR OF AT LEAST THE SAME SIZE, FIXED WITH TWO M12 BOLTS.
6. ALL EARTHING FASTENERS MUST BE STAINLESS STEEL.
7. EARTHING CONDUCTORS CONNECTING THE ELECTRODES TO THE SUBSTATION MUST MAINTAIN A MINIMUM 150mm CLEARANCE BELOW THE INSTALLED GRADING RING.
8. SEPARATION BETWEEN BURIED EARTHING AND NON-BONDED METALLIC EQUIPMENT IS REQUIRED. SEPARATION DISTANCE IS SPECIFIED IN THE PARTICULAR DESIGN FOR THE SUBSTATION.
9. ADDITIONAL DEEP EARTH ELECTRODES MAY BE REQUIRED AS PER EARTHING DESIGN FOR THE PARTICULAR SUBSTATION.
10. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
11. EARTHING CONDUCTORS ENTERING THE SUBSTATION MUST BE A MINIMUM 70MM² COPPER CABLE. COPPER BAR OR STRAP MUST NOT BE USED.
12. EARTHING MUST BE ASSESSED, DESIGNED AND VALIDATED IN ACCORDANCE WITH THE EVOENERGY EARTHING DESIGN MANUAL- PO07127.
13. EARTHING CONDUCTORS MUST BE LABELLED IN ACCORDANCE WITH THE EVOENERGY EARTHING DESIGN MANUAL - PO07127.
14. TYPICAL CONNECTION SHOWN- REFERENCE INTERFACE TABLE FOR ACTUAL PART.
15. EXCESS JOINTING COMPOUND APPLIED TO EARTHING CONNECTIONS MUST BE REMOVED AFTER INSTALLATION.
16. PRE APPLIED JOINTING COMPOUND IN EARTHING CONNECTIONS MUST BE REMOVED PRIOR TO INSTALLATION WHEN INSTALLING INTO AN AQUATIC ENVIRONMENT.
17. CONSTRUCTION TEAM/ COMMISSIONING OFFICER MUST ENSURE SUBSTATION IS NOT IN CMEN CONFIGURATION- CMEN CONFIGURATION IS DETAILED ON OTHER ASSEMBLIES.

GRADING RING NOTES:

1. SITE EXCAVATION DETAILS PROVIDED IN DRAWING D303-0010.
2. TWO CONNECTION POINTS ARE REQUIRED BETWEEN THE EARTH GRADING RING AND THE HV EARTH BAR IN CASE ONE CONNECTION FAILS.
3. GRADING RING IS TO BE INSTALLED 1000mm FROM EACH FACE OF THE SUBSTATION SHELL.
4. IF THE SUBSTATION IS UPGRADED THE GRADING RING DISTANCE MUST BE CHECKED AND MOVED IF REQUIRED TO ACHIEVE 1000mm DISTANCE TO SUBSTATION SHELL.

ITEM	UA TYPE	DESCRIPTION	STOCK CODE	QTY	DRAWING NO
1	P	EARTHING ROD, dia 13 x 1440mm, COPPER CLAD STEEL, EXTENDABLE, NO CLIP	1161222	4	D110-0001
2	P	CONDUCTOR, AERIAL, HDBC, 70mm ² , 19/2.14 (19/083)	1068830	25m	D102-0005
3	P	LUG, SHEAR-BOLT, 25-95mm ² , M13 BOLT HOLE, TINNED ALUMINIUM	1193219	4	D103-0022
4	P	SETScrew, M12 x 40mm, HEX HEAD, S/STEEL, GR 316	1143281	4	D111-0034
5	P	NUT, HEX, M12, S/STEEL, GR 316	1138492	4	D104-0020
6	P	WASHER, FLAT, M12, S/STEEL, GR 316	1197389	4	D111-0028
7	P	WASHER, BELLVILLE, M12, S/STEEL, GR 304	1197466	4	D111-0041
8	S	SA, EARTHING, DEEP EARTH ELECTRODE FOR STATIONS	-	2	D303-0006
9	S	SA, EARTHING, ADDITIONAL DEEP EARTH ELECTRODE FOR STATIONS	-	AR	D303-0013
10	I	INTERFACE, EARTHING PARTS, CONNECTIONS, CONNECTORS AND ACCESSORIES	SELECT	10	D199-0001

C	CMEN OPTION REMOVED	JJP	WJC	25/06/2014
D	UPDATED AS PER UOM PROJECT	JJP	WNI	11/02/2016
E	C CRIMP, NOTES, IMAGE, BOM	BAN	WNI	26/11/2019
F	NOTES AMENDED, TITLE BLOCK CHANGED	NAA	WJC	27/01/2021

3D

BOM

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Old Drawing No. and Revisions:	Rev

STANDARD CONSTRUCTION, DISTRIBUTION
 UNDERGROUND, STATIONS,
 SA, EARTHING, SEPARATE EARTHING HV AND LV
 PADMOUNT SUBSTATION

Scale:	1:20	Date:	2/06/2014	Sheet No.:	1/1
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A1	D303-0009				Rev