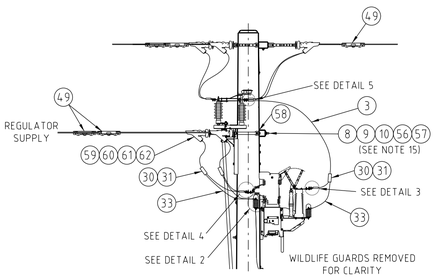
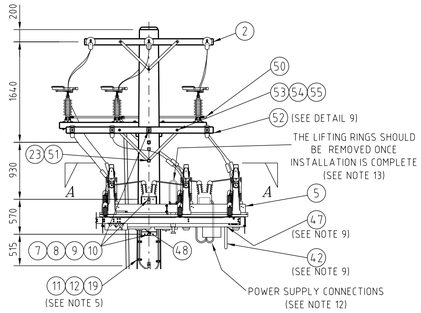
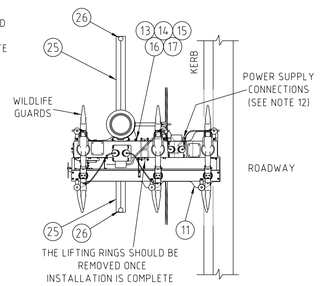


SIDE VIEW

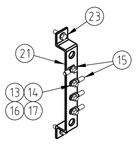


FRONT VIEW

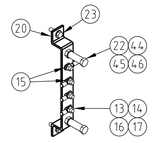
ARRANGEMENT 2
WITH CCT OVERHEAD CONDUCTORS
SCALE 1:50



SECTION A-A
SCALE 1:50

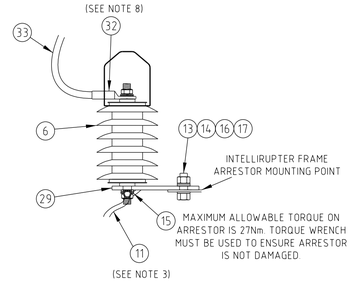


ITEM 21
TOP EARTH BAR

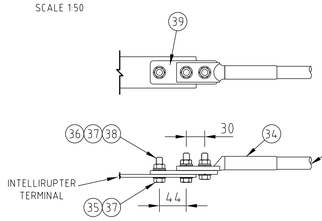


ITEM 20
BOTTOM EARTH BAR

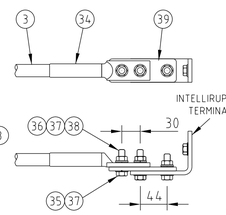
DETAIL 1
SCALE 1:10



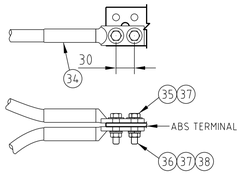
DETAIL 2
SURGE ARRESTER CONNECTIONS



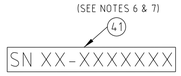
DETAIL 3
SCALE 1:5



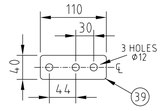
DETAIL 4
SCALE 1:5



DETAIL 5
SCALE 1:5



DETAIL 6
INTELLIRUPTER SIGN
SCALE 1:5

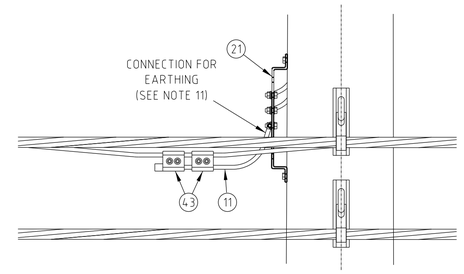


DETAIL 8
SCALE 1:5

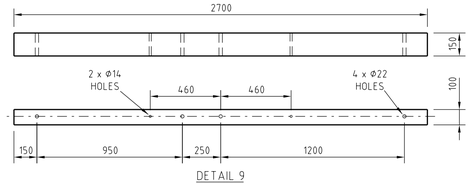
SIDE VIEW

FRONT VIEW

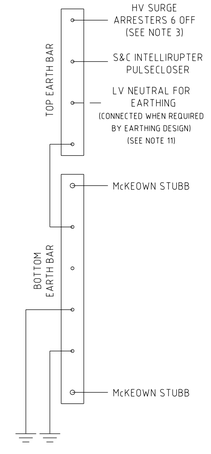
ARRANGEMENT 1
WITH BARE OVERHEAD CONDUCTORS
SCALE 1:50



DETAIL 7
LV ABC NEUTRAL CONNECTION
SCALE 1:10



DETAIL 9
REGULATOR SUPPLY CROSSARM
SCALE 1:20



EARTHING SCHEMATIC

NOTES :

1. THE MINIMUM 11kV PHASE TO EARTH CLEARANCE IS 200mm. THE MINIMUM 11kV PHASE TO PHASE CLEARANCE IS 280mm.
2. IF LV MAINS EXIST, THE LV MAINS ATTACHMENT POINT IS TO BE DETERMINED BASED ON THE GROUND CLEARANCE REQUIREMENTS WHILST GIVING CONSIDERATION TO AUSGRID'S ELECTRICAL SAFETY RULES MINIMUM SAFE WORKING DISTANCES. WHERE BARE LV MAINS EXIST, THEY SHALL BE CONVERTED TO ABC FOR AT LEAST ONE SPAN EITHER SIDE OF THE INTELLIRUPTER. IF LV MAINS ARE PRESENT ON THE POLE, A 1-80 LV ABC INTERMEDIATE CONSTRUCTION MUST BE USED.
3. HV SURGE ARRESTERS ARE TO BE EARTHED BY DAISEY CHAINING AND ELECTRICALLY BONDING TO THE TOP EARTH BAR USING 70mm² PVC INSULATED CONDUCTOR (ITEM 11).
4. DANGER SIGNS (ITEM 18) ARE TO BE INSTALLED ON BOTH FRONT AND REAR OF THE POLE. SIGNS MUST BE BENT AROUND POLE BEFORE SECURING.
5. ALL EARTHING CABLES ARE TO BE SECURED TO THE POLE WITH SADDLES (ITEM 12) BEFORE ENTERING POLE EARTHING CABLE HOLES.
6. THE INTELLIRUPTER SERIAL NUMBER SIGN (ITEM 41) IS TO BE BENT AROUND POLE BEFORE SECURING. IT IS TO BE MOUNTED ON THE SAME POLE FACE AS THE INTELLIRUPTER 1800mm ABOVE GROUND LEVEL AT ALL SITES. THE SIGN IS TO BE MADE FROM 25mm HIGH UV STABLE WEATHERPROOF LETTERING AND CAN UTILISE POLE NUMBERING METHODS OR SIMILAR.
7. THE INTELLIRUPTER IS TO BE LABELLED IN ACCORDANCE WITH NS158 TABLE 4.6 - "RECLOSERS & SECTIONALISERS". THE POLE NUMBER IS TO BE INSTALLED IN ACCORDANCE WITH NS148.
8. INSTALL MEDIUM WALLED MASTIC LINED BLACK HEATSHRINK OVER THE BARE LUG BARREL AND CABLE INSULATION.
9. THE ANTENNA USED MUST HAVE AN RF INDUSTRIES N-243 N ADAPTER M2M BARREL FITTED.
10. THE INTELLIRUPTER SHOULD BE MOUNTED SO THAT THE BOTTOM OF THE DISCONNECTOR OPERATING MECHANISM IS NOT MORE THAN 8 METRES ABOVE THE GROUND TO ALLOW FOR MANUAL OPERATION.
    EXCEPTIONS TO THIS MAY BE ACCEPTABLE IF LONGER OPERATING STICKS HAVE BEEN APPROVED FOR USE IN THE AREA.
11. IF THE SITE SPECIFIC EARTHING DESIGN REQUIRES THE LV MAINS NEUTRAL TO BE CONNECTED TO THE INTELLIRUPTER EARTHING SYSTEM AND IF LV MAINS EXIST IN CLOSE PROXIMITY TO THE POLE, DETAIL 7 SHOULD BE USED FOR THE CONNECTION. IF TWO LV MAINS CABLES ARE ON THE POLE, ONLY ONE LV MAINS CABLE IS TO BE CONNECTED.
12. AFTER INSTALLATION OF THE POWER MODULE, CONNECTIONS TO THE POWER SOCKET ON THE INTELLIRUPTER BODY AND THE VOLTAGE TRANSFORMER TERMINAL BLOCK ARE TO BE MADE VIA THE FLEXIBLE CONDUIT, SOCKETS AND CABLE SUPPLIED. REFER TO THE MANUFACTURER'S TECHNICAL DOCUMENTATION FOR FURTHER INFORMATION.
13. AFTER INSTALLATION ON THE POLE IS COMPLETED, THE LIFTING RINGS ARE TO BE REMOVED FROM THE INTELLIRUPTER.
14. POLE STEPS SHOULD ONLY BE INSTALLED ON POLES WHERE ACCESS FOR NORMAL MAINTENANCE VEHICLES CANNOT BE MAINTAINED FOR THE LIFE OF THE POLE. IF POLE STEPS ARE INSTALLED, THEY ARE TO COMPLY WITH THE REQUIREMENTS OF NETWORK STANDARD NS128.
15. THE LOAD AND DEVIATION ALLOWABLE ON THE EYEBOLT IS TO BE DETERMINED FROM DRG: 520324.
16. REFER TO DESIGNER SAFETY REPORT D20/368369 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	STOCK CODE	ARR-1 QTY	ARR-2 QTY
63	STEP - POLE (FOR COMPOSITE POLES) (SEE NOTE 14)	244223	184743	A/R	A/R
62	COVER - STRAIN CLAMP		144543	3	3
61	CLAMP - CONDUCTOR STRAIN, FOR CCT180 CLAMP - CONDUCTOR STRAIN, FOR CCT120 CLAMP - CONDUCTOR STRAIN, FOR CCT80		176313 144527 144535	3	3
60	INSULATOR - STRAIN ROD		144550	3	3
59	LINK - SAG, 70kN (PLP PART No. CTSLEW-070-1)		PURCHASE	3	3
58	BLOCK - GAIN, ALUMINIUM, 100mm		146274	1	1
57	WASHER - LIP, M24, GALVANISED	518081	176912	2	2
56	EYEBOLT - M20 x 200mm, GALVANISED	513653	H37881	3	3
55	WASHER - CONICAL, M12, GALVANISED	518082	H39639	2	2
54	WASHER - FLAT, M12, GALVANISED	518081	177982	4	4
53	BOLT & NUT - M12 x 180mm, HEX., GALVANISED	515466	46888	2	2
52	CROSSARM - 2700 x 150 x 100mm, HARDWOOD (SEE DETAIL 9)		H23761	1	1
51	BRACE - CROSSARM, FLAT, 690mm, GALVANISED	514385	H17738	2	2
50	CONSTRUCTION - AIR BREAK SWITCH, 12/24kV, MID POLE OPERATED, 2-455	175902		1	1
49	COVER - CCT, EARTHING POINT		144741	3	9
48	MODEM - SIERRA WIRELESS RV50X		185100	1	1
47	ADAPTER - RF, RF INDUSTRIES N-243		PURCHASE	1	1
46	WASHER - SPRING, M16, STAINLESS STEEL	518082	96149	2	2
45	WASHER - FLAT, M16, STAINLESS STEEL	518081	H39621	2	2
44	SCREW - SET, M16 x 40mm, HEX., STAINLESS STEEL	515467	H38413	2	2
43	CONNECTOR - INSULATION PIERCING, 95-150 LV ABC/95-150 (SEE NOTE 11)		176591	2	2
42	ANTENNA - CELLULAR, BENELEC 02461 (SEE NOTE 9) ANTENNA - CELLULAR, PANORAMA LPB-7-27-NJ (SEE NOTE 9)		PURCHASE 185408	1	1
41	SIGN - INTELLIRUPTER, SERIAL NUMBER (SEE NOTE 6)			1	1
40	CONSTRUCTION - LV, OVERHEAD, ABC, INTERMEDIATE, 1-80 (SEE NOTE 2)	206544		1	1
39	FLAG - CONVERSION, 38 x 6.35mm, TINNED COPPER (SEE DETAIL 7)			6	6
38	WASHER - SPRING, M10, STAINLESS STEEL	518082	50120	24	24
37	WASHER - FLAT, M10, STAINLESS STEEL	518081	49411	48	48
36	NUT - M10, HEX., STAINLESS STEEL	515467	H39401	24	24
35	SCREW - SET, M10 x 30mm, HEX., STAINLESS STEEL	515467	45088	24	24
34	LUG - COMPRESSION, BI-METALLIC, 2 x M10 HOLES (TO SUIT CONDUCTOR)	514053		15	15
33	CONDUCTOR - 19/1.53(35mm²) COPPER, LDPE, SINGLE CORE, PVC SHEATHED, BLACK		H14578	A/R	A/R
32	LUG - COMPRESSION, COPPER, Ø14mm HOLE (TO SUIT 35mm² CABLE)		H20501	6	6
31	COVER - CLAMP, PARALLEL GROOVE, 3-BOLT		144576	6	6
30	CLAMP - PARALLEL GROOVE, BI-METALLIC, 3-BOLT		176491	6	6
29	PLATE - TINNED COPPER (33kV UGOH TERMINATION PLATE)	116989	91132	6	6
28	CONNECTOR - COMPRESSION, COPPER (70mm² CONDUCTOR TO Ø15mm ROD)		H31699	A/R	A/R
27	COUPLER - EARTH ELECTRODE (TO SUIT Ø15mm ROD)		H31649	A/R	A/R
26	ELECTRODE - DRIVEN EARTH, Ø15mm x 1800mm		H31631	A/R	A/R
25	STRIP - CABLE, COVER, 150mm WIDE		151100	A/R	A/R
24	SCREW - COACH, EYE, M6, GALVANISED		PURCHASE	1	1
23	SCREW - COACH, M12 x 100mm, GALVANISED		H40484	5	5
22	STUBB - EARTH, McKEOWN	520088	H108415	2	2
21	BAR - EARTH, TOP, FLAT, TINNED COPPER, 50.8mm x 6.3mm (SEE DETAIL 1)	222406	182110	1	1
20	BAR - EARTH, BOTTOM, FLAT, TINNED COPPER, 50.8mm x 6.3mm (SEE DETAIL 1)	222406	182110	1	1
19	SCREW - SELF DRILLING, #12 x 45mm		175567	A/R	A/R
18	SIGN - DANGER, HIGH VOLTAGE (SEE NOTE 4)		H47012	2	2
17	NUT - M12, HEX., STAINLESS STEEL	515467	8987	A/R	A/R
16	WASHER - SPRING, M12, STAINLESS STEEL	518082	143859	A/R	A/R
15	LUG - COMPRESSION, COPPER, Ø14mm HOLE (TO SUIT 70mm² CABLE)		74831	A/R	A/R
14	WASHER - FLAT, M12, STAINLESS STEEL	518081	49429	A/R	A/R
13	SCREW - SET, M12 x 30mm, HEX., STAINLESS STEEL	515467	H38528	A/R	A/R
12	SADDLE - CABLE, 12mm, DOUBLE SIDED, GALVANISED		176494	A/R	A/R
11	CONDUCTOR - 19/2.14(70mm²) COPPER, PVC COVERED, BLACK (SEE NOTE 3)		60111	A/R	A/R
10	WASHER - FLAT, M20, GALVANISED	518081	177986	5	5
9	WASHER - CONICAL, M20, GALVANISED	518082	H39655	5	5
8	WASHER - SQUARE, 75 x 75 x 6mm (Ø22mm HOLE)	518081	H39231	8	8
7	BOLT & NUT - M20, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466		3	3
6	ARRESTER - SURGE, 9kV, 10kA, POLYMERIC DISTRIBUTION TYPE, 12mm TOP & BOTTOM STUD (COMPLETE WITH BIRDCAP)		111948	6	6
5	INTELLIRUPTER - S&C, PULSECLOSER (WITH POWER MODULE)		183071	1	1
4	CLAMP - PARALLEL GROOVE, 3-BOLT (TO SUIT CONDUCTORS)	514099		6	
3	CONDUCTOR - CCT (TO SUIT PHASE CONDUCTORS)			A/R	A/R
2	CONSTRUCTION - 11kV, OVERHEAD, 2-11CCT (EXCLUDING BRIDGES)	174962			1
	CONSTRUCTION - 11kV, OVERHEAD, 2-11 (EXCLUDING BRIDGES)	513915		1	
1	POLE - COMPOSITE, 24kN (AS REQUIRED) (SUITABLE FOR POLE MOUNTED EQUIPMENT)	244231 SH3	PURCHASE	1	1

EQUIPMENT WEIGHTS	
INTELLIRUPTER	460kg
AIR BREAK SWITCH	135kg

AN EARTHING DESIGN MUST BE UNDERTAKEN FOR EACH SITE. THE EARTHING SHOWN ON THIS DRAWING IS INDICATIVE ONLY

ASSOCIATED DRAWINGS	
20mm EYEBOLT LOADING & DEVIATION GRAPH	520324
11kV POLE MOUNTED VOLTAGE REGULATOR WITH CONTROLLING INTELLIRUPTER	224227
11kV S&C INTELLIRUPTER PULSECLOSER WITH BY-PASS AIR BREAK SWITCH	244230 SH2
11kV S&C INTELLIRUPTER PULSECLOSER	244230 SH1
11kV INTELLIRUPTER FOR CONTROLLING VOLTAGE REGULATOR COMPOSITE POLE DRILLING DETAILS	244231 SH3

CAD DRAWING DO NOT MANUALLY AMEND

AMENDMENTS

NETWORK STANDARD
Ausgrid
145 NEWCASTLE RD WALLSEND, NSW 2287

SCALE	AS SHOWN
DESIGNED	PHILLIP JONES
DRAWN	PATRICIA RIOS
CHECKED	RHYSS HAMILTON
APPROVED	GLENN FORD
DATE	15/10/20
PROJECT NUMBER	STD
PROJTRAK NUMBER	-

STANDARD CONSTRUCTION
11kV S&C INTELLIRUPTER PULSECLOSER
MOUNTED ON A COMPOSITE POLE
FOR CONTROLLING A POLE MOUNTED REGULATOR
GENERAL ARRANGEMENT

SIZE	DRAWING No	SHEET	AMD
A1	244230	03	0

20110901