



ITEM	DESCRIPTION	REF DRG
1	UNISTRUT MOUNTED COMBINED MULTIPLE CONDUIT SUPPORT / PULLEY MOUNTING BRACKET	B1-16500
2	CORNER PULLEY MOUNTING BRACKET	B1-16500
3	MULTIPLE CONDUIT SPACER SUPPORT BRACKET	B1-16500
4	WALL MOUNTED PULLEY MOUNTING BRACKET	B1-16500
5	Ø 16 x 0.6 STAINLESS STEEL TUBE	B1-16500
6	Ø 20 x 0.6 STAINLESS STEEL TUBE (HOUSING FOR PULL-OUT HANDLE FOOTPATH ACCESS)	B1-16500
7	UNISTRUT MOUNTED CORNER PULLEY MOUNTING BRACKET	B1-16500
8	PULLOUT HANDLE FOR HV SWITCH TRIPWIRE	B1-16500
9	SINGLE CONDUIT SUPPORT BRACKET	B1-16500
10	MULTIPLE CONDUIT SUPPORT BRACKET	B1-16500
11	SINGLE WALL MOUNTED CONDUIT SUPPORT BRACKET	B1-16500
12	MULTI-CABLE JOINING LINK	B1-16500
13	P1377 'U' SHAPE FITTING HOT DIPPED GALV. (TO JOIN P1000 UNISTRUT)	B1-18894
14	SUPPORT BRACKET HOT DIPPED GALV.	B1-16500
15	DOORWAY ACCESS (HORIZONTALLY MTD) PULLOUT HANDLE MOUNTING BRACKET WITH PULLEY	B1-16500
16	OPERATING CRANK WHEEL	A2-10578
17	Ø16 SPRING STEEL CLIP	B1-18894
18	Ø20 COPPER SADDLE	B1-18894
19	WORM DRIVE HOSE CLAMP SS FOR Ø 16	B1-18894
20	M12 SS MASONRY ANCHOR COMES WITH NUT & WASHER	B1-18894
21	TRIPWIRE Ø4 FLEXIBLE SS WIRE ROPE 6/19 CONSTRUCTION	B1-18894
22	WALL SPACER (LENGTH AS REQUIRED) Ø 16 x 1.6 SS TUBE	B1-18894
23	Ø16 COPPER SADDLE	B1-18894
24	RAMSET OR EQUIV. 5mm EASY DRIVE NYLON MASONRY ANCHOR WITH SS NAIL	B1-18894
25	Ø4 SS SNAP HOOK	B1-18894
26	SWAGING WITH FERRULES OR 2 OFF x 3mm WIRE ROPE GRIPS	B1-18894
27	P1010 M12 UNISTRUT NUT ZP	B1-18894
28	M12 x 25 HEX HD GALV. SET SCREW	B1-18894
29	M12 GALV. FLAT WASHER	B1-18894
30	P1008 M10 UNISTRUT NUT ZP	B1-18894
31	M10 x 25 HEX HD SS SET SCREW	B1-18894
32	M10 SS FLAT WASHER	B1-18894
33	P1000 UNISTRUT HOT DIPPED GALV.	B1-18894
34	P1325 UNISTRUT 90° ANGLE HOT DIPPED GALV.	B1-18894
35	M12 HEX HD NUT GALV.	B1-18894
36	PULLOUT HANDLE HV SWITCH NUMBER TRIP INDICATION LABEL (SEE NOTE 6)	B1-16500
37	PULLOUT HANDLE DISTANCE LABEL (eg DANGER 4 METRES)	B1-16500
38	PULLEY RONSTAN OR EQUIVALENT SINGLE VERTICAL TURNING BLOCK WITH BLACK SS CHECKS	B1-16500
39	PULLEY RONSTAN OR EQUIVALENT SINGLE TURNING BLOCK WITH FLAT BASE BLACK SS	B1-16500
40	M5 x 15 BRASS CH HD SET SCREW	B1-16500
41	M5 BRASS HEX HD NUT	B1-16500
42	M5 BRASS FLAT WASHER	B1-16500
43	FLOAT SWITCH BRACKET HOT DIP GALV.	B1-16500

REFERENCE DRAWINGS

SYDNEY CBD SUBSTATIONS ISOLATING SWITCH OPERATING WHEEL FOR PULL-OUT GEAR DETAILS	A2-10578
SYDNEY CBD SUBSTATIONS EMERGENCY PULL-OUT GEAR OPERATING EQUIPMENT DETAILS	B1-16500

- NOTES**
- PULLOUT HANDLES ARE LOCATED AT SUBSTATIONS OR CONTROL POINT EXTERNAL ENTRY POINTS FOR EMERGENCY SWITCH ISOLATION. HANDLES ARE TO BE MOUNTED ON THE WALL BEHIND A LADDER FOR HATCHCOVER ENTRY OR APPROX. 1.3 METRES ABOVE FLOOR FOR DOOR ENTRY ARRANGEMENTS. MULTIPLE PULLOUT HANDLES ARE REQUIRED WHEN THE ENTRANCE CHAMBER SERVICES MULTIPLE SUBSTATIONS AND/OR CONTROL POINTS. HANDLES ARE TO BE CLEARLY LABELED. REF NOTE 6 & DRG B1-16500.
 - TRIPWIRE (ITEM 21) TO BE SECURED AT EACH END USING SS BULLDOG CLAMPS OR SUITABLY SWAGED WITH FERRULES (ITEM 26). SEE TRIPWIRE TERMINATION DETAILS. BARE ENDS OF WIRE TO BE PROTECTED WITH PLASTIC INSULATION TAPE OR EQUIVALENT.
 - ALL ITEMS TO BE POSITIONED SO AS TO ALLOW UNRESTRICTED MOVEMENT OF THE TRIPWIRE ASSEMBLY CONNECTED FROM PULLOUT HANDLE TO THE SWITCH ISOLATING HANDLE. DISTANCE BETWEEN ITEMS 12, 25 & 26 LINKAGES AND ITEMS 5 & 9 TO BE GREATER THAN THE SWITCH HANDLE MOVEMENT REQUIRED TO TRIP THE SWITCHES.
 - SUPPORT BRACKET (ITEM 14) MAY BE CEILING MOUNTED, WALL MOUNTED OR MOUNTED UNDER BEAMS AND SPACED AT APPROXIMATELY 1800mm CENTRES. THE BRACKETS TO BE POSITIONED TO ENSURE ALIGNMENT OF THE PULLEYS DIRECTLY ABOVE THE SWITCH HANDLES. (SEE NOTE 3)
 - THE LAYOUT SHOWN IS TYPICAL ONLY. EACH SITE IS TO BE TREATED INDIVIDUALLY & THE MOST EFFECTIVE LAYOUT USED TO ENSURE EASE OF OPERATION OF THE PULLOUT GEAR.
 - LABEL (ITEM 37) IS FIXED TO THE HANDLE OF EACH PULL-OUT GEAR TO SHOW THE DISTANCE THE HANDLE SHOULD BE PULLED TO ISOLATE THE SWITCHGEAR. eg 'DANGER 4 METRES' LABEL (ITEM 36) IS TO BE FIXED TO THE WALL ADJACENT TO THE HANDLE TO INDICATE THE SUBSTATION OR CONTROL POINT SWITCHGEAR WHICH WILL BE ISOLATED. THE LABELS ARE TO BE NOMINAL SIZE 100mm x 50mm, ENGRAVED TRAFFOLYTE, OR LAMINATED ADHESIVE BACKED TAPE ON RED PVC SHEET OF MINIMUM THICKNESS 1.5mm. LETTERS ARE TO BE WHITE ON RED BACKGROUND. MINIMUM LETTER HEIGHT IS TO BE 15mm. LABELS ARE TO BE IN ACCORDANCE WITH NETWORK STANDARD NS-158 PART 4.6 (TABLE OF LABELLING MATERIALS, FIXING AND POSITIONING).
 - TRIPWIRE FROM PULLOUT HANDLE SIDE TO OPERATOR CRANK WHEEL (ITEM 16) TO BE WOUND AROUND LARGE DIAMETER PULLEY 4 TIMES BEFORE BEING SECURED. TRIPWIRE FROM OPERATOR CRANK WHEEL TO ISOLATING SWITCH SIDE TO BE WOUND AROUND SMALL DIAMETER PULLEY 2 TIMES BEFORE BEING SECURED. DURING OPERATION OF THE PULLOUT HANDLE, THE TRIPWIRE IS WOUND OFF THE CRANK WHEEL LARGE DIA PULLEY AND WOUND ONTO THE CRANK WHEEL SMALL DIA PULLEY.

AMENDMENTS		AMENDMENTS				
AMD	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
3	23/09/2003	FLOAT SWITCH MOUNTING BRACKET (ITEM 43) ADDED. WAS MARK 15 ON AMENDMENT 1	C. SAWDY	P.H.	P.H.	P.H.
4	10/09/2013	NEW AUSGRID BORDER & LOGO ADDED.	R. LAALAA	T.L.	T.L.	T.L.
5	19/05/2021	CONSTRUCTION ISSUE. NOTE ADDED TO SECTION.	A. SPITERI	J.MESSIH	K.GALLEN	K.GALLEN

NETWORK STANDARD
Ausgrid
24-28 Campbell Street
SYDNEY NSW 2000

ISSUED FOR
CONSTRUCTION

SCALE	1:5, 25
DESIGNED	-
DRAWN	KYM STEPHENSON
CHECKED	GEORGE ANTONIOU
APPROVED	PHIL HUDSON
DATE	10.07.2003
TRIM REF	
PROJECT NUMBER	ES99-15-4-14

SYDNEY CBD TYPE SUBSTATIONS
AND CONTROL POINTS
EMERGENCY PULL OUT GEAR
OPERATING EQUIPMENT
TYPICAL ARRANGEMENT

ISSUED FOR
CONSTRUCTION

PROJECT NUMBER: ES99-15-4-14
DRAWING No: 18894
SHEET 1
AMD 5
SIZE B1

