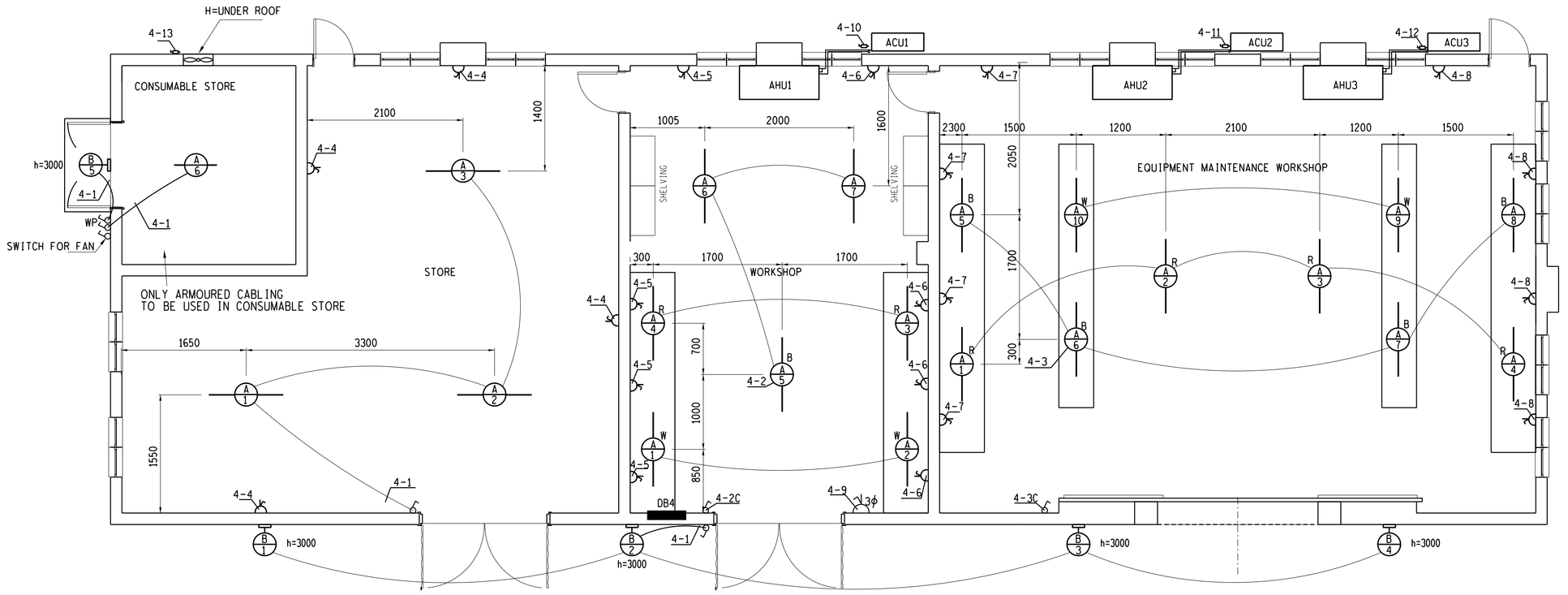
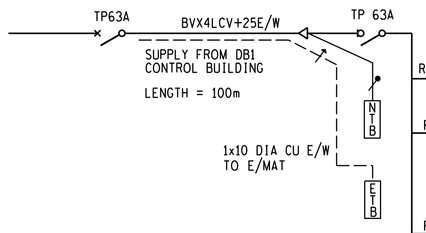


LABEL: DB4 230V AC

SCHEMATIC DIAGRAM FOR DB4 MAINTENANCE WORKSHOP TO SANS SPECIFICATION 11180. FLUSH MOUNTED TYPE BOARD
COLOUR-GREY G29 TO SANS 11091 WITH DOOR.

ELU & MCB'S	CONDUCTOR SIZE mm^2 / CONDUIT SIZE mm	CIRC No	LABEL	POINT No	LOAD
					CONN=3091OW EST=22258W
			LOCAL SWITCH		
R SP15A	2 x 2,5 + 2,5 E/W 20 PVC ATTACHED TO LIPPED CHANNEL	4-1	LIGHTS	1-5	300W
RWB TP 10A TP 10A	4 x 2.5 + 1 x 2.5 E/W 20	4-2	LIGHTS	1-6	870W
	2 x 1.5 + 2.5 E/W 20	4-2C	CONTROL		
RWB TP 10A TP 10A	4 x 2.5 + 1 x 2.5 E/W 20	4-3	LIGHTS	1-6	870W
	2 x 1.5 + 2.5 E/W 20	4-3C	CONTROL		
TP&N60A ELU NT R SP20A	2 x 4 + 2.5 E/W 20 PVC	4-4	PLUGS	1-4	2000W
W SP20A	2 x 4 + 2.5 E/W 20 PVC	4-5	PLUGS	1-4	2000W
B SP20A	2 x 4 + 2.5 E/W 20 PVC	4-6	PLUGS	1-4	2000W
B SP20A	2 x 4 + 2.5 E/W 20 PVC	4-7	PLUGS	1-4	2000W
B SP20A	2 x 4 + 2.5 E/W 20 PVC	4-8	PLUGS	1-4	2000W
RWB SP30A	4 x 6+ 2.5 E/W 25 PVC	4-9	WELDING PLUG	1-1	10000W
RWB TP20A	BVX4ECV+2,5E/W IN TRUNKING	4-10	ACU/AHU1	1-1	3020W
RWB TP20A	BVX4ECV+2,5E/W IN TRUNKING	4-11	ACU/AHU2	1-1	3020W
RWB TP20A	BVX4ECV+2,5E/W IN TRUNKING	4-12	ACU/AHU3	1-1	3020W
R SP20A	BVX4CCV IN TRUNKING	4-13	FAN 1	1-1	1000W



VOLTAGE : 400/230V AC
BREAKING CAPACITY : 3kA
CURRENT In : 39 A

NOTES;

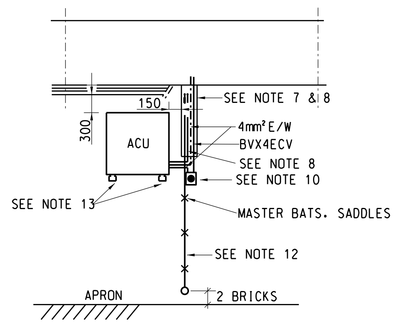
1. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH:
   1.1. SANS 10142
   1.2. MODEL PREAMBLES FOR TRADES SECTION 'S' ELECTRICAL WORK.
2. ALL WIRING SHALL BE INSTALLED WITHIN 20 DIAMETER PVC CONDUIT
3. MOUNTING HEIGHTS A.F.F.L:
   3.1. SOCKET OUTLETS - 1350 A.F.F.L
4. LUMINAIRES PLAN REF. 'A' SHALL BE SURFACE MOUNTED TO CEILING.
5. SOCKET OUTLETS SHALL BE FLUSH MOUNTED
6. MANUFACTURER'S DRAWINGS & FACTORY INSPECTIONS:-
   6.1. DRAWINGS OF BOARDS SHOWING THE VIEW WITH SECTION & EQUIPMENT ARRANGEMENT WITH TYPE, RATING, LABELS & GLAND PLATES SHALL BE SENT FOR APPROVAL BEFORE COMMENCEMENT OF MANUFACTURER. ON THREE PHASE BOARDS THE CIRCUIT BREAKERS SHALL BE ARRANGED IN 3 ROWS (ONE ROW PER PHASE) WITH A SEGREGATION OF CIRCUITS SUPPLIED FROM SECTION CB'S/ELU
   6.2. LABELLING.
      a. THE CONSECUTIVE NUMBERING FOR THE LABELLING UNDER THE DEVICES SHALL BE PROVIDED, THE LEGEND CARD SHALL BE SUPPLIED WITH THE BOARD WITH SUITABLE POCKETS ON THE INSIDE OF THE DOOR
      b. FOR INFORMATION ON THE LEGEND CARD SEE DETAIL 'A'
      c. THE LEGEND CARD SHALL ALSO BE SHOWN ON THE MAKER'S DRAWING
   6.3. THE TITLE BLOCK ON THE MAKER'S DRAWING SHALL BE AS PER DETAIL 'B'
   6.4. FACTORY INSPECTIONS:
      a. THE DISTRIBUTION BOARDS SHALL BE INSPECTED BEFORE SHIPMENT
      b. AN APPLICATION FOR THE INSPECTION SHALL BE SENT TO THE PROJECT MANAGER
7. POWER/CONTROL CABLES AND REFRIGERANT PIPES IN ROOF SPACE IN CONTROL ROOM SHALL BE INSTALLED IN TRUNKING WITH COVERS
8. POWER/CONTROL CABLES AND REFRIGERANT PIPES ON OUTSIDE WALLS SHALL BE INSTALLED IN TRUNKING WITH COVERS
9. TRUNKING SHALL BE FABRICATED FROM 1mm SHEET STEEL, MEASURING 127x76,2 WITH CLIP-ON COVER. CORROSION PROTECTION: HOT-DIPPED GALVANISED TO SANS 1763. EXPOSED SURFACES ON OUTSIDE WALL SHALL BE BEIGE EPOXY-POWDER COATING
10. CONTROL CABLES FROM REMOTE CONTROL UNITS TO HANDLING UNIT SHALL BE SURFACE MOUNTED WITHIN WHITE MINI TRUNKING ON WALL
11. LIGHT DUTY CABLE TRAYS SHALL BE INSTALLED IN ROOF VOID WITH OVERALL WIDTH 50mm FOR CABLES & EARTH WIRE RUNNING FROM TRUNKING TO THE UNITS
12. DRAIN PIPE FROM HANDLING UNITS SHALL BE POLYCOP PIPE WITH SUITABLE CONNECTOR, TYPE JG SPEEDFIT OR CONNEX, BETWEEN POLYCOP AND UNIT DRAIN PIPES. PVC TAPE IS NOT ACCEPTABLE. WATER SHALL BE DISCHARGED TO THE APRON SLAB (PIPE SHALL RUN IN TRUNKING, & ON OUTSIDE WALL FIXED ON MASTER BATS SADDLES & DISCHARGED 2 COURSE OF BRICKS ABOVE APRON SLAB & 200mm FROM WALL
13. MOUNTING BRACKETS FOR OUTDOOR UNITS SHALL BE CANTILEVER SUPPORT ARMS TYPE OL-CAO FROM O-LINE OR EQUAL WITH STAINLESS STEEL BOLTS/WASHERS/NUTS
14. ALL AIRCONDITIONING UNITS SHALL BE INSTALLED AS PER MANUFACTURERS INSTALLATION INSTRUCTIONS
15. ALL OUTDOOR WEATHER PROOF(WP) SWITCHES SHALL BE IP65.

SCHEDULE OF LUMINAIRES WITH LAMPS, & OTHER ELECTRICAL EQUIPMENT

PLAN REF	DESCRIPTION	SUPPLIERS	CAT No
A	SURFACE LED LUMINAIRE. COLOUR TEMP. 4000K. END CAPS TO BE INCLUDED. BODY COLOUR WHITE.	VOLTEX LIGHTING	RAIL-37W-LED
B	60W LED HIGH PERFORMANCE LUMINAIRE, WITH WALL MOUNTED BRACKET	GENLUX LIGHTING	GEN 1
C	HIGH PERFORMANCE LED LUMINAIRE. HOUSING GRP FIBRE GLASS REINFORSED POLYESTER, WITH EPOXY COATED POWDER GREY. COLOUR TEMP. 4000K.	NORDLAND LIGHTING	NLED-EX-98W
2	2x16A 3 PIN 250V INDUSTRIAL SURFACE TYPE SOCKET OUTLET IN BOX 83x119x50	CRABTREE OR EQUAL	
6	16A 250V ONE LEVER ONE WAY SURFACE LIGHT SWITCH IN BOX 75x75x48	CRABTREE OR EQUAL	

AIR CONDITIONING UNITS AND FAN SCHEDULE:

PLAN REF	DESCRIPTION	COOLING CAPACITY	SUPPLIER	No A/C UNIT
ACU/AHU 1 TO 3	UNDER CEILING SPLIT TYPE, WITH HEATPUMP	10KW	MITSUBISHI	PCA-RP100KAQ PUHZ-RP100YKA
FAN 1	WALL MOUNTED EXTRACTOR FAN EXPLOSION PROOF 6 AIR CHANGES PER HOUR.		LUFT FANS	FAN-FAC23/4 LOUVRE SHUTTER GRM350



TYPICAL FRONT VIEW OF ACU's 1-3
N.T.S

ELECTRICAL LEGEND:
(IN ACCORDANCE WITH NRS002)

- SOCKET OUTLET WITH SINGLE POLE SWITCH 3 PIN 16A 230V (WP FOR WEATHERPROOF)
- LIGHT SWITCH SINGLE POLE 16A 230V (WP FOR WEATHERPROOF)
- CIRCUIT BREAKER
- SWITCH-DISCONNECTOR

REV	REVISION DESCRIPTION	DRAWN	CHKD	AUTH	DATE	REFERENCE DRAWINGS

APPROVED BY — DATE 9-9-2020
CHECKED BY — DATE 9-9-2020
DRAWN BY — DATE 9-9-2020
SCALE 1:50

Eskom

Eskom Holdings SOC Ltd
Reg No 2002/015527/30

WESKUSFLEUR

MAINTENANCE WORKSHOP
LIGHTING AND ELECTRICAL LAYOUT

©

WKOE11P01-SE-D52 | SHEET NUMBER 0 | REVISION 0

SIZE A1 ORIGINAL

AOL