

LEGEND



VOLTMETER



ENERGY METER



CONTACT



MOLDED CASE CIRCUIT
BREAKER MOTORIZED



AMMETER



VOLTAGE
SELECTOR SWITCH



SWITCH

2-POLE MINIATURE
CIRCUIT BREAKER

CURRENT
TRANSFORMER



UNDER(ZERO) VOLTAGE RELAY



SIGNAL LAMP



EARTH FAULT RELAY



REVISION MARK



EARTH



OVER VOLTAGE RELAY



FUSE SWITCH, 2POLE.

NOTE:

- 1-THE QUANTITY, SIZE AND RATINGS ARE PRELIMINARY AND SHALL BE COMPLETED AND FINALIZED AT DETAIL DESIGN STAGE BY EPC CONTRACTOR SUBJECT TO CLIENT/CONSULTANT APPROVAL.
- 2-AT LEAST 20% SPARE OF EACH FEEDER TYPE SHALL BE CONSIDERED IN ADDITION TO FUTURE FEEDERS.
- 3-ALL CIRCUIT BREAKERS SHALL BE EQUIPPED WITH AUXILIARY CONTACT(S).
- 4-LVDC SINGLE LINE DIAGRAM SHALL BE SHOWN IN OPERATOR WORKSTATION WITH DYNAMIC COLORS
- 5-ALL MEASURING VALUES(VOLTAGE, CURRENT, REACTIVE POWER, ACTIVE POWER, FREQUENCY, POWER FACTOR, ENERGY, TEMPERATURE AND ETC) SHALL BE MONITORED THROUGH HMI AND ALL NECESSARY EQUIPMENT SUCH AS TRANSUDCERS(OF VOLTAGE, CURRENT AND ETC TYPE) SHALL BE CONSIDERED.
- 6-SHORT CIRCUIT CAPACITY OF BUSBAR ARE THE MIN-VALUES, AND ARE FINALIZED DUE TO ACTUAL CALCULATIONS.
- 7-THE CONTRACTOR SHALL PROVIDE SUB-DISTRIBUTION BOARDS AS REQUIRED SUBJECT TO CLIENT/CONSULTANT APPROVAL.
- 8-ALL MCBs FOR FUTURE EXTENSION AND CORRESPONDENT SPACE, ACCORDING TO GENERAL SINGLE LINE DIAGRAM, SHALL BE SUPPLIED IN MAIN LVDC PANELS IN CONTROL BUILDING.
- 9-ALL NECESSARY MCB's FOR OUTPUT FEEDERS SHALL BE PROVIDED.(PER CB/DS/ES MOTOR, TRIP1, TRIP2, CLOSE, MAIN/BACKUP AND ETC.)
- 10-THE EXISTING PHILOSOPHY SHOULD BE FOLLOWED ON WIRING AND DISTRIBUTION.
- 11-ALL SIGNALS REQUIRED TO CONTROL THE AC/DC SYSTEM SHOULD BE CONSIDERED BY SAS.
- 12-110VDC BATTERY CHARGERS SHALL BE THYRISTOR CONTROLLED, SUITABLE FOR PARALLEL OPERATION WITH EACH OTHER SHARING THE LOAD, COMPLETE WITH ALL THE ACCESSORIES.
- 13-THE RECTIFIERS SHALL BE FED FROM THE LVAC MAIN SWITCHGEAR. DOUBLE WOUND TRANSFORMERS SHALL BE PROVIDED AT THE INPUT SIDE OF RECTIFIER TO PREVENT GALVANIC CONNECTION BETWEEN THE DC AND AC SYSTEM
- 14-THE INCOMINGS AND COUPLER CIRCUIT BREAKERS SHALL BE INTERCHANGEABLE WITH EACH OTHER.
- 15-THE CUBICLES SHALL BE COMPLETELY SELF-SUPPORTING, MADE OF A REQUIRED NUMBER OF STANDARDIZED, PREFABRICATED, VERTICAL SECTIONS BOLTED TOGETHER TO FORM INDOOR METAL CLAD, DUST-PROOF RIGID UNIT, DEGREE OF PROTECTION IP51. THE CUBICLES SHALL BE FREE STANDING, EQUIPPED WITH BOTTOM FRAMES SUITABLE FOR BOLTING TO THE FLOOR. SHEET STEEL THICKNESS SHALL NOT BE LESS THAN 2 mm.
- 16-THE INTERLOCK SYSTEM SHALL BE IMPLEMENTED TO MAKE THE ENTIRE SYSTEM WORK PROPERLY.

REFERENCE DRAWINGS					
Drawing No:		Title			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
APPROVED:	APPROVED WITH COMMENTS	NOT APPROVED	FOR INFORMATION	PROJECT CONSISTANT	PROJECT MANAGER
DATE:		SIGNATURE/NAME:	
 Kenya Electricity Transmission Company Limited		KENYA ELECTRICITY TRANSMISSION COMPANY LTD			
 Incorporated in the Republic of Kenya		COLOENCO CONSULTING LIMITED			
PROJECT:					
KENYA TRANSMISSION NETWORK IMPROVEMENT PROJECT (KTRNIP).					
PROJECT DRAWING NO:		PROJECT NO:			
NAME:		KABARENETI 132/33KV SUBSTATION			
PREPARED:		DRAWN:			
FJ		29/05/2022			
CHECKED:		REV:			
Y.JOSH		29/05/2022			
APPROVED:		110V DC SINGLE LINE DIAGRAM			
S.DESHMUKH		29/05/2022			
LEGEND & NOTE					
REVISIONS	NO.	NAME	DATE		
SCALE: 1:600		DWG NO:		REV.:	