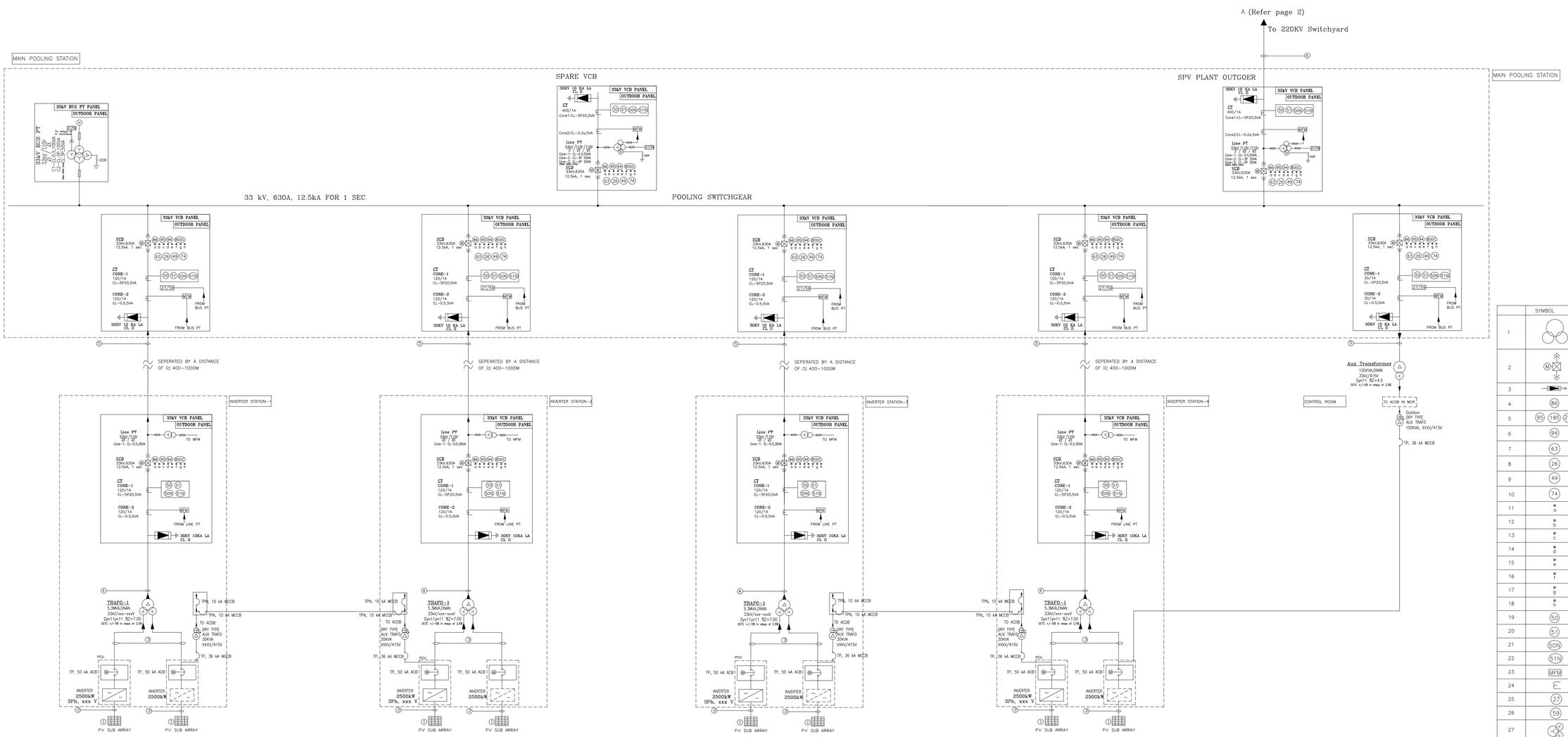
FIRST ANGLE PROJECTION

ALL DIMENSIONS ARE IN mm

DRAWING NO.



	SYMBOL	DESCRIPTION
1		INVERTER TRANSFORMER
2		VCB (OUTDOOR PANEL) 33kV,630A 12.5kA, 1 sec
3		SURGE DIVERTER, 30kV/10kA Cl II
4	86	MASTER TRIP RELAY
5	95 195 295	TRIP CIRCUIT SUPERVISION RELAY
6	94	ANTI PUMPING RELAY
7	63	BUCHHOLZ RELAY
8	26	MAGNATIC OIL LEVEL GAUGE
9	49	WINDING TEMP INDICATOR AND OIL TEMP INDICATOR
10	74	PRESSURE RELIEF DEVICE
11	a	VCB ON
12	b	VCB OFF
13	c	SPRING CHARGE
14	d	AUTO TRIP
15	e	TRIP CIRCUIT HEALTHY
16	f	SERVICE POSITION
17	g	TEST POSITION
18	h	DC FAILURE
19	50	INST OVER CURRENT RELAY
20	51	IDMT OVER CURRENT RELAY
21	50N	NEUTRAL INSTANTANEOUS OVER CURRENT RELAY
22	51N	IDMT EARTH FAULT RELAY
23	MFM	MULTI FUNCTION METER
24		CURRENT TRANSFORMER
25	27	UNDER VOLTAGE RELAY
26	59	OVER VOLTAGE RELAY
27		POTENTIAL TRANSFORMER
28		FUSE
29		LIGHTNING ARRESTOR
30	87T	TRANSFORMER DIFFERENTIAL RELAY
31		ISOLATOR WITH EARTH SWITCH
32	50LBB	LOCAL BREAKER BACKUP RELAY
33	ABT	TARIFF ENERGY METER
34	80DC	DC FAILURE INDICATION
35		INVERTER, 2500kW (Containerised system)

NOTE :

① * STRING to SMB: 1.8KV, 1RX1CX4 SQMM (for each +ve/-ve input) TINNED FLEXIBLE COPPER CONDUCTOR, EBXL XLPO INSULATED & SHEATHED SOLAR GRADE CABLE

② * SMU to PCU: 3.3KV, 1RX1CX400 SQMM (for each +ve/-ve input) ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMOURED, PVC OUTER SHEATHED DC POWER CABLE

③ * PCU to TRANSFORMER: 3.3KV 6RX1CX400 SQMM (per phase) ALUMINIUM CONDUCTOR, XLPE INSULATED, UNARMOURED, PVC OUTER SHEATHED LT POWER CABLE

④ * TRANSFORMER to VCB Panel: 33kV(E), 1RX1CX240sqmm (per phase) ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMOURED, PVC OUTER SHEATHED CABLE

⑤ * INVERTER STATION to MAIN POOLING STATION: 33kV(E), 1RX1CX240sqmm (per phase) ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMOURED, PVC OUTER SHEATHED CABLE

⑥ * MAIN POOLING STATION to 220KV SWITCHYARD: 33kV(E), 1RX1CX240sqmm (per phase) ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMOURED, PVC OUTER SHEATHED CABLE

*CABLE SIZES MENTIONED ARE INDICATIVE ONLY, ACTUAL SIZES WILL BE AS PER CABLE SIZING CALCULATIONS

INVERTER VOLTAGE AND ACB RATING SHALL BE AS PER THE INVERTER MANUFACTURER'S STANDARD DESIGN. INVERTER VOLTAGE SHALL RANGE BETWEEN 590V TO 690V TENTATIVELY.

DRY TYPE AUXILIARY TRANSFORMER WILL BE PROVIDED IN EACH INVERTER STATION. VOLTAGE RATIOON SHALL BE AS PER PCU VOLTAGE

PCUS SHALL BE CONTAINERISED SYSTEM, SCADA SHALL BE OUTDOOR AND SMBS WILL BE PROVIDED WITH WIRELESS COMMUNICATION.

VCB BREAKERS SHALL BE OUTDOOR PANELS

REV.	DATE	ALTERED	CHECKED	APPROVED
04	22.09.20	SP	SP	PR
03	10.08.20	SP	SP	PR
02	16.07.20	SP	SP	PR
01	22.06.20	SP	SP	PR

NAME OF CUSTOMER/PROJECT

PROJECT : 20 MWp SOLAR PV PLANT

CUSTOMER: NTPC, GANDHAR

BHARAT HEAVY ELECTRICALS LIMITED.
ELECTRONICS DIVISION, BANGALORE

	NAME	SIGN.	DATE
DRN	SP		05.06.20
CKD	SP		05.06.20
APPD	PR		05.06.20

DEPT. SC&PV

CODE 439

FOR UNSPECIFIED-TOLERANCES REFER ED 0230499

SCALE | WEIGHT(Kg) | REF. TO ASSY. DRG. | ITEM NO. | No.OF ITEM | No.OF VAR

TITLE

SINGLE LINE DIAGRAM-AC

DRAWING NO. 5734-004-PVE-P-005

REV. 04

SHEET NO. 01 NO. OF SHEETS 02

A1 SIZE

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INVENTORY NO. | SIGN. & DATE | REF. DRG.NO.