TDDP.1–GOA

NOTES

1. 33 kV VT RATIO $\frac{33,000}{\sqrt{3}} : \frac{110}{\sqrt{3}} // \frac{110}{\sqrt{3}}$ V — 50VA/0.5/1.9VF , 50VA/3P/1.9VF

2. 33 kV CT RATIO

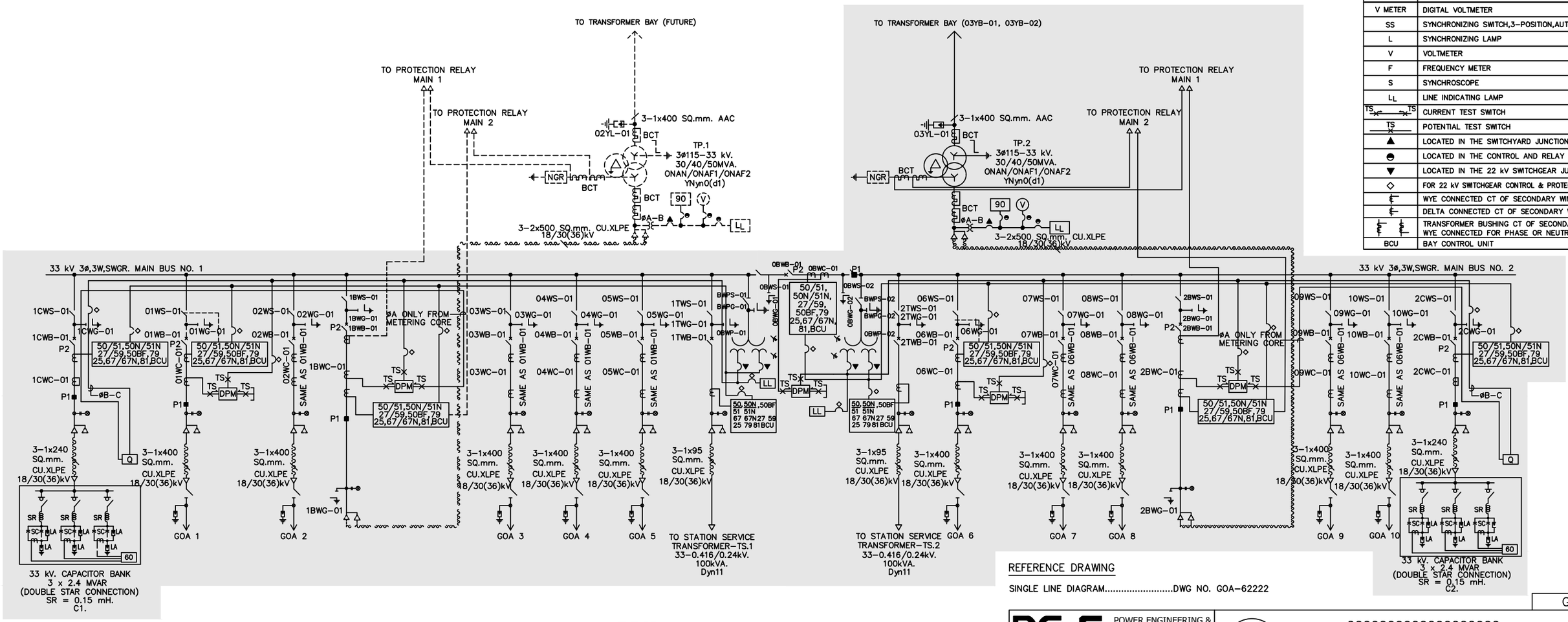
1200/1000/600	: 1/1/1 A	– FOR INCOMING BREAKER	20VA/5P20, 20VA/0.5FS5, 20VA/5P20
1200/1000/600	: 1/1 A	– FOR TIE BREAKER	20VA/0.5FS5 , 20VA/5P20
1200/600	: 1/1 A	– FOR LOW SIDE TRANSFORMER BUSHING CT	20VA/5P20 , 20VA/0.5FS5
1200/600	: 1/1 A	– FOR NEUTRAL TRANSFORMER BUSHING CT	20VA/5P20 , 20VA/5P20
400/300	: 1/1 A	– FOR OUTGOING 33 kV	20VA/0.5FS5 , 20VA/5P20
400/300	: 1/1 A	– FOR CAPACITOR BANK	20VA/0.5FS5 , 20VA/5P20
100	: 1 A	– STATION SERVICE TRANSFORMER	5VA/5P20

***PARTICULAR REQUIREMENT FOR ALL 5P20 CLASS CT's CURRENT RATIO ERROR AT 100% OF RATED CURRENT < 0.5%

3. THE DEDICATED PROTECTIVE RELAY FOR 33 kV. SWITCHGEAR SHALL BE STANDARDIZED WHICH CAN BE EITHER USED FOR INCOMING, BUS COUPLER, OUTGOING FEEDERS OR CAPACITOR BANK FEEDER.

4. EACH DIGTAL POWER METER (DPM) SHALL BE COMMUNICATED WITH AUTOMATIC METER READING (AMR) APPLICATION SERVER VIA SWITCH NETWORK.

DEVICES	EXPLANATION
21, 21N	DISTANCE TIME–STEP PHASE AND GROUND DISTANCE RELAY
67	DIRECTIONAL PHASE OVERCURRENT RELAY
67N	DIRECTIONAL GROUND OVERCURRENT RELAY
25	SYNCHROCHECK RELAY
79	AUTOMATIC RECLOSING RELAY
50 BF	BREAKER FAILURE RELAY
50 / 51	NON–DIRECTIONAL INSTANTANEOUS AND TIME PHASE OVERCURRENT RELAY
50N / 51N	NON–DIRECTIONAL INSTANTANEOUS AND TIME GROUND OVERCURRENT RELAY
51GB	NON–DIRECTIONAL GROUND BACKUP OVERCURRENT RELAY
87T	TRANSFORMER DIFFERENTIAL RELAY
87REF	TRANSFORMER RESTRICTED EARTH FAULT RELAY THIS RELAY SHALL BE INCORPORATED IN THE TRANSFORMER DIFFERENTIAL RELAY (87T)
87B1,87B2	BUS DIFFERENTIAL RELAY
87L	LINE CURRENT DIFFERENTIAL RELAY
95B1,95B2	BUSBAR SUPERVISION RELAY FOR BUS WIRE SUPERVISION FOR 87B1 AND 87B2
27,59	UNDER/OVER VOLTAGE RELAY
90	AUTOMATIC VOLTAGE REGULATOR
50 ARC	ARC DETECTOR RELAY FOR ARC PROTECTION SYSTEM
81	UNDER FREQUENCY RELAY
60	CAPACITOR CURRENT UNBALANCE SENSING RELAY
Q	POWER FACTOR CONTROLLER
DPM	DIGITAL POWER METER
DIM	DISTRIBUTED I/O MODULE (PROVIDED IN CSCS)
V METER	DIGITAL VOLTMETER
SS	SYNCHRONIZING SWITCH,3–POSITION,AUTO–OFF–MAN
L	SYNCHRONIZING LAMP
V	VOLTMETER
F	FREQUENCY METER
S	SYNCHROSCOPE
LL	LINE INDICATING LAMP
TS	CURRENT TEST SWITCH
TS	POTENTIAL TEST SWITCH
▲	LOCATED IN THE SWITCHYARD JUNCTION BOX
◓	LOCATED IN THE CONTROL AND RELAY BOARD
▼	LOCATED IN THE 22 kV SWITCHGEAR JUNCTION BOX
◇	FOR 22 kV SWITCHGEAR CONTROL & PROTECTIVE CIRCUITS
	WYE CONNECTED CT OF SECONDARY WINDING
	DELTA CONNECTED CT OF SECONDARY WINDING (IF ANY)
	TRANSFORMER BUSHING CT OF SECONDARY WINDING, WYE CONNECTED FOR PHASE OR NEUTRAL
BCU	BAY CONTROL UNIT



REFERENCE DRAWING

SINGLE LINE DIAGRAM.....DWG NO. GOA–62222

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SCOPE OF TDDP.1

SCOPE OF TDDP.2

PEA APPROVE		ENGINEERING CERTIFICATION	
SIGNATURE		SIGNATURE	
NAME		NAME	นิกร เจริญสุข
DATE		LICENCE No. (EXPIRE DATE)	วฟก1190 (18 มิ.ค. 2566)

GOA–M

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???????? ????????? ?????????	สถานีไฟฟ้าคลองแงะ จ.สงขลา	???????? ????
??????? ????? ????????????	มิเตอร์ และรีเลย์ไดอะแกรม	????????? NONE
?????? ???? ????????	KHLONG NGAE SUBSTATION, SONGKHLA PROVINCE	????????? GOA–62228
?????????????????????? ?????????	METERING AND RELAYING DIAGRAM	??????2 ???????? 2 ???