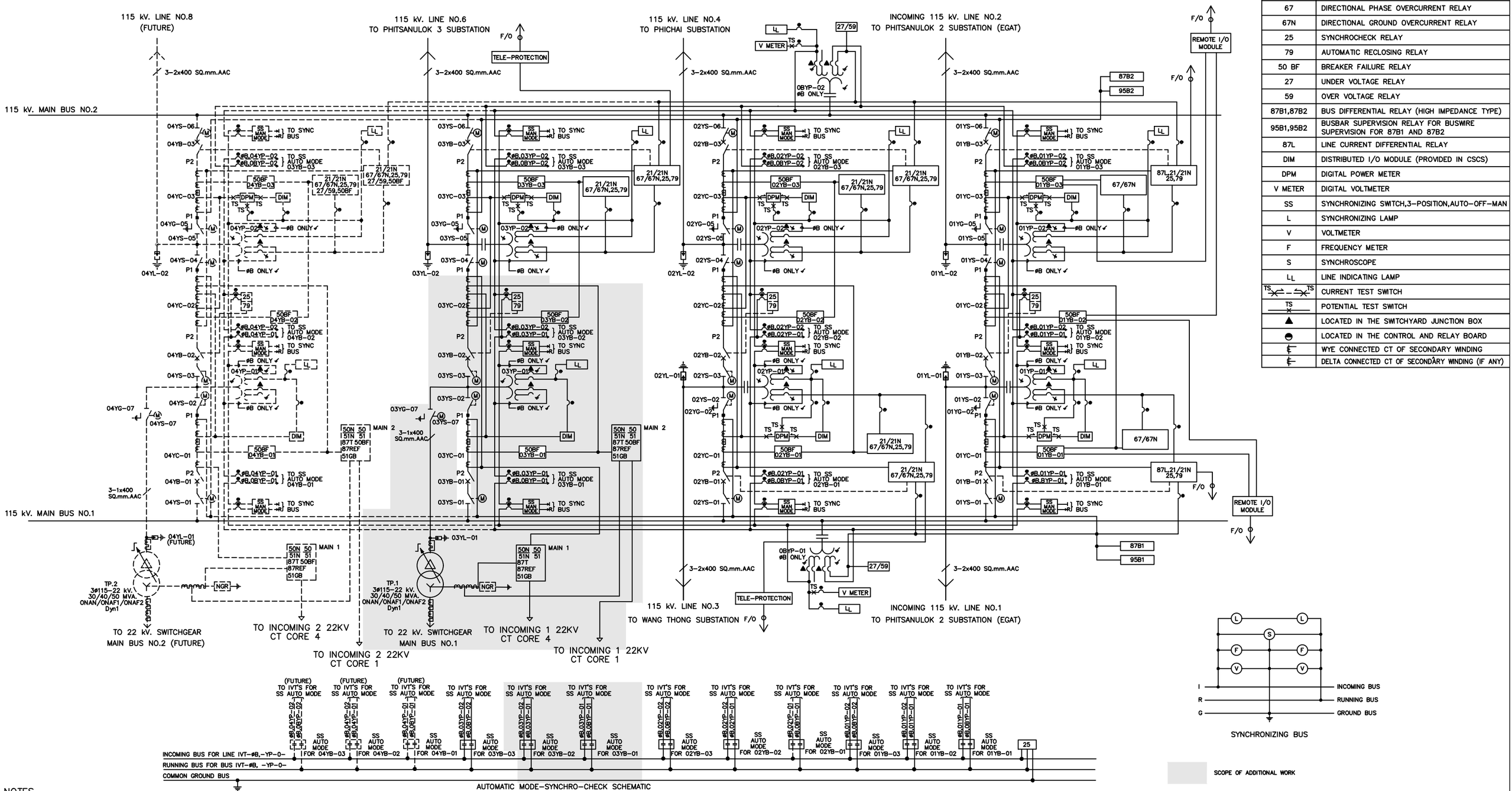
TDDP.1 PLD (ADD)

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
27	UNDER VOLTAGE RELAY
59	OVER VOLTAGE RELAY
87B1,87B2	BUS DIFFERENTIAL RELAY (HIGH IMPEDANCE TYPE)
95B1,95B2	BUSBAR SUPERVISION RELAY FOR BUSWIRE SUPERVISION FOR 87B1 AND 87B2
87L	LINE CURRENT DIFFERENTIAL RELAY
DIM	DISTRIBUTED I/O MODULE (PROVIDED IN CSCS)
DPM	DIGITAL POWER METER
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
	WYE CONNECTED CT OF SECONDARY WINDING
	DELTA CONNECTED CT OF SECONDARY WINDING (IF ANY)



NOTES

1. 115 kV. IVT RATIO	$\frac{115,000}{\sqrt{3}} : \frac{115}{\sqrt{3}}$ / 115 // $\frac{115}{\sqrt{3}}$ / 115 V	50VA/0.2/1.5VF, 50VA/3P/1.5VF (SIMULTANEOUS BURDEN 100 VA)
2. 115 kV. CVT RATIO	$\frac{115,000}{\sqrt{3}} : \frac{115}{\sqrt{3}}$ / 115 // $\frac{115}{\sqrt{3}}$ / 115 V	200VA/0.5/1.5VF, 200VA/3P/1.5VF (SIMULTANEOUS BURDEN 400 VA)
3. 115 kV. CT RATIO (_YC-01, _YC-03)	2000/1500/1200/800/500/300 : 1/1/1/1/1 A	20VA@300/1A/5P20 FOR RELAYING 20VA@300/1A/0.5Fs5 FOR METERING
4. 115 kV. CT RATIO (03YC-02)	2000/1500/1200/800/500/300 : 1/1/1/1/1/1 A	20VA@300/1A/5P20 FOR RELAYING 20VA@300/1A/0.5Fs5 FOR METERING

5. A LINE CURRENT DIFFERENTIAL RELAY AND A REMOTE I/O MODULE OF CIRCUIT BREAKER FAILURE FUNCTION FOR INCOMING LINE SHALL BE USED WITH AN OPTICAL FIBER CABLE AS A COMMUNICATION LINK AND SHALL BE DIRECTLY CONNECTED TO THE JOINT BOX (PROVIDED BY EGAT) AT EGAT SUBSTATION.

6. SYNCHRONIZING SCHEMATIC
   - 6.1. 0-YP-0- SHOWN THUS, REFER TO INCOMING IVT DESIGNATIONS.
   - 6.2. 0BYP-0- SHOWN THUS REFERS TO RUNNING BUS IVT FOR BUS No.1 OR No.2
   - 6.3. ΦB ONLY ✓ SHOWN THUS, REFERS TO THE SECONDARY WINDING OF IVT FOR PHASE "B" AND USING FULL TAP WINDING 115V FOR SYNCHRONIZING SYSTEM WITH ONE END OF THE WINDING CONNECTED WITH COMMON GROUND BUS.
   - 6.4 MANUAL SYNCHRONIZING BY SYNCHROSCOPE SHALL UTILIZE INCOMING AND RUNNING SECONDARY VOLTAGES OF METERING CORES FROM "PHASE B" FOR BOTH IVT'S.
   - 6.5 AUTOMATIC SYCHRONISM VERIFICATION BY SYNCHRO CHECK RELAY (25) SHALL UTILIZE INCOMING AND RUNNING SECONDARY VOLTAGES OF RELAYING CORES FROM "PHASE B" FOR BOTH IVT'S.
7. THE DEDICATED PROTECTION RELAY FOR 22 KV SWITCHGEAR SHALL BE STANDARDIZED WHICH CAN BE EITHER USED FOR INCOMING, OUTGOING FEEDERS OR CAPACITOR BANK FEEDER.
8. EACH DIGITAL POWER METER (DPM) SHALL BE COMMUNICATED WITH AUTOMATIC METER READING (AMR) APPLICATION SERVER VIA SWITCH NETWORK.
9. FOR 115 kV. SYSTEM PROTECTION, THE SYSTEM SHALL BE DOUBLE MAIN PROTECTION SYSTEM(MAIN1&2) AND BE DIFFERENT IN PRODUCT/MANUFACTURER.

REFERENCE DRAWING

SINGLE LINE DIAGRAM.....DWG NO. FA1-011/62025

PLD-M

กองออกแบบสถานีไฟฟ้า ฝ่ายงานสถานีไฟฟ้า	การไฟฟ้าส่วนภูมิภาค	ใช้แทนแบบ —
ผู้เขียน ฉัตรวิตินทร์	ผู้ว่าการ (แทน)	ถูกแทนโดยแบบ —
ผู้สำรวจ ฉัตรวิตินทร์		เขียนเสร็จวันที่ 2 พ.ค. 2562
วิศวกร	สถานีไฟฟ้าพิษณุโลก 4 (ลานไก่) (เพิ่มเติม)	แก้แบบวันที่ —
หัวหน้าแผนก วรเวช	มิเตอร์และรีเลย์โดอะแกรม	มิติเป็น —
ผู้อำนวยการกอง		มาตราส่วน —
ผู้อำนวยการฝ่าย (แทน)	PHITSANULOK 4 SUBSTATION (ADD)	แบบเลขที่ FA4-011/62045
รองผู้ว่าการวิศวกรรม	METERING AND RELAYING DIAGRAM	แผ่นที่ 1 ของจำนวน 2 แผ่น