

	PT PLN (PERSERO)	Doc. No.	TJBB/01/02/2018/026
	Transmisi Jawa Bagian Barat	Valid.	Februari 2018
DAFTAR SETELAN RELE PROTEKSI GIS 150 KV PONDOK KELAPA			

1. Proteksi : Penghantar 150 KV arah Gis Gandaria

Jenis relai	: Distance Relay		
Merek/Tipe relai	: ALSTHOM / MICOM P443		
LOKASI	: GIS PONDOK KELAPA		
PROTEKSI	: GIS GANDARIA		
L1, L2	: 6.6+9.39	km ,	6.6+9.39 km
L3, L4	: 6.6+9.39	km ,	6.6+9.39 km
Penghantar	: OHL-150kV-DRAKE 2X468.5mm	+	OHL-150kV-ACSR-ZEBRA 2X429mm
CCC	: 1560 A		1990 A
Z0	: 0.188	+ j	0.767 Ω /km
Z1	: 0.038	+ j	0.256 Ω /km
Z2	: 0.038	+ j	0.256 Ω /km
Z3	: 0.038	+ j	0.256 Ω /km
Z4	: 0.038	+ j	0.256 Ω /km
XT	: 12.5 % ; 60 MVA	:	46.875 Ω (at 150 kV side)
CT	: 1600	A /	1 A
PT	: 150	KV /	100 Volt
SCHEME	: PUTT		

Address	Name	Value	Address	Name	Value
CB CONTROL					
07.0C	Single Pole A/R	Enabled	07.11	CB Status Input	52B 1 pole
07.0D	Three Pole A/R	Disabled			
CONFIGURATION					
09.03	Active Settings	Group 1	09.21	Supervision	Enabled
09.07	Setting Group 1	Enabled	09.23	System Checks	Enabled
09.0B	Distance	Enabled	09.24	Auto-Reclose	Enabled
09.12	Broken Conductor	Enabled	09.2B	Measure't Setup	Visible
09.18	PowerSwing Block	Enabled	09.2E	Setting Values	Secondary
CT AND VT RATIOS					
0A.01	Main VT Primary	150.0 kV	0A.07	Phase CT Primary	1600 A
0A.02	Main VT Sec'y	100.0 V	0A.08	Phase CT Sec'y	1.000 A
0A.03	CS VT Primary	150.0 kV	0A.0F	CS Input	BN
0A.04	CS VT Secondary	100.0 V	0A.10	Main VT Location	Line
MEASURE'T SETUP					
0D.01	Default Display	Power	0D.05	Measurement Mode	0
0D.02	Local Values	Secondary	0D.09	Distance Unit	Kilometres
0D.03	Remote Values	Secondary	0D.0A	Fault Location	Distance
OPTO CONFIG					
11.01	Global Nominal V	110/125V	11.80	Characteristic	Standard 60%-80%
GROUP 1 LINE PARAMETERS					
30.01	Line Length	15.99 km	30.07	Mutual Comp	Disabled
30.03	Line Impedance	4.407 Ohm	30.0B	Phase Sequence	Standard ABC
30.04	Line Angle	81.51 deg	30.0C	Tripping Mode	1 and 3 Pole
30.05	kZN Res Comp	0.687	30.10	Line Charging Y	2.000 mS

1 / 4	Daftar Setelan Rele Proteksi	Dibuat : AMD	Diperiksa : RPP	Disetujui : AJI
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GROUP 1 DISTANCE SETUP

31.0C	Setting Mode	Advanced			
31.10	PHASE DISTANCE		31.D1	CVT Filters	Passive
31.11	Phase Chars.	Mho	31.D2	SIR Setting	2.098
31.20	Zone 1 Ph Status	Enabled	31.D3	Load Blinders	Enabled
31.30	Zone 2 Ph Status	Enabled	31.D4	Z< Blinder Imp	26.15 Ohm
31.40	Zone 3 Ph Status	Enabled	31.D5	Load/B Angle	45.00 deg
31.70	GROUND DISTANCE		31.D6	Load Blinder V<	15.00 V
31.71	Ground Chars.	Quad	31.D7	Dist. Polarizing	1.000
31.80	Zone 1 Gnd Stat.	Enabled	31.E0	DELTADIRECTIONAL	
31.90	Zone 2 Gnd Stat.	Enabled	31.E1	Dir. Status	Disabled
31.A0	Zone 3 Gnd Stat.	Enabled			

GROUP 1 DIST. ELEMENTS

32.01	PHASE DISTANCE				
32.02	Z1 Ph. Reach	3.525 Ohm	32.5B	Z1 Sensit Ignd>1	50.00 mA
32.03	Z1 Ph. Angle	81.51 deg	32.60	Z2 Gnd. Reach	6.346 Ohm
32.09	Z1 Sensit. Iph>1	50.00 mA	32.61	Z2 Gnd. Angle	81.51 deg
32.10	Z2 Ph. Reach	6.346 Ohm	32.63	Z2 Dynamic Tilt	Disabled
32.11	Z2 Ph. Angle	81.51 deg	32.65	kZN2 Res. Comp.	0.684
32.17	Z2 Sensit. Iph>2	50.00 mA	32.66	kZN2 Res. Angle	-7.86 deg
32.20	Z3 Ph. Reach	10.576 Ohm	32.69	R2 Gnd Resistive	25.17 Ohm
32.21	Z3 Ph. Angle	81.51 deg	32.6B	Z2 Sensit Ignd>2	50.00 mA
32.28	Z3 Sensit. Iph>3	50.00 mA	32.70	Z3 Gnd. Reach	10.576 Ohm
32.50	GROUND DISTANCE		32.71	Z3 Gnd. Angle	81.51 deg
32.51	Z1 Gnd. Reach	3.525 Ohm	32.73	Z3 Dynamic Tilt	Disabled
32.52	Z1 Gnd. Angle	81.51 deg	32.75	kZN3 Res. Comp.	0.684
32.53	Z1 Dynamic Tilt	Disabled	32.76	kZN3 Res. Angle	-7.86 deg
32.55	kZN1 Res. Comp.	0.684	32.79	R3 Gnd. Res. Fwd	29.61 Ohm
32.56	kZN1 Res. Angle	-7.86 deg	32.7C	Z3 Sensit Ignd>3	50.00 mA
32.59	R1 Gnd Resistive	21.39 Ohm			

GROUP 1 SCHEME LOGIC

34.01	BASIC SCHEME		34.60	AIDED SCHEME 2	
34.08	Zone1 Tripping	Phase And Ground	34.61	Aid. 2 Selection	Disabled
34.09	tZ1 Ph. Delay	0 s	34.80	Trip On Close	
34.0A	tZ1 Gnd. Delay	0 s	34.81	SOTF Status	Enabled PoleDead
34.10	Zone2 Tripping	Phase And Ground	34.82	SOTF Delay	30.00 s
34.11	tZ2 Ph. Delay	0.4 s	34.83	SOTF Tripping	000011 (Z1 Z2)
34.12	tZ2 Gnd. Delay	0.4 s	34.84	TOR Status	Enabled
34.18	Zone3 Tripping	Phase And Ground	34.85	TOR Tripping	000011 (Z1 Z2)
34.19	tZ3 Ph. Delay	1.6 s	34.86	TOC Reset Delay	100.0 ms
34.1A	tZ3 Gnd. Delay	1.6 s	34.88	TOC Delay	200.0 ms
34.40	AIDED SCHEME 1		34.80	Z1 Extension	
34.41	Aid. 1 Selection	PUR	34.B1	Z1 Ext Scheme	Disabled
34.43	Aid.1 Dist. Dly	0 s	34.C0	Loss of Load	
34.42	Aid 1 Distance	Phase and Ground	34.C1	LOL Scheme	Disabled

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Tgl: 06-03-2018

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GROUP 1 POWER SWING BLK.

3D.01	PSB Status	Blocking	3D.15	Zone 4 Gnd. PSB	Blocking
3D.03	Zone 1 Ph. PSB	Blocking	3D.20	PSB Unblocking	Disabled
3D.05	Zone 2 Ph. PSB	Blocking	3D.22	PSB Reset Delay	200.0 ms
3D.07	Zone 3 Ph. PSB	Blocking	3D.23	OST Mode	OST Disabled
3D.09	Zone P Ph. PSB	Blocking	3D.24	Z5	8.814 Ohm
3D.0B	Zone 4 Ph. PSB	Blocking	3D.26	Z5'	-8.814 Ohm
3D.0D	Zone 1 Gnd. PSB	Blocking	3D.28	R5	22.231 Ohm
3D.0F	Zone 2 Gnd. PSB	Blocking	3D.2A	R5'	-22.231 Ohm
3D.11	Zone 3 Gnd. PSB	Blocking	3D.2C	Blinder Angle	80.00 deg
3D.13	Zone P Gnd. PSB	Blocking			

GROUP 1 SUPERVISION

46.01	VTS Mode	Measured + MCB	46.0E	Inrush Detection	Enabled
46.02	VTS Status	Blocking	46.0F	I>2nd Harmonic	20.00 %
46.03	VTS Reset Mode	Auto	46.10	WEAK INFEEED BLK	
46.04	VTS Time Delay	5.000 s	46.11	WI Inhibit	Disabled
46.05	VTS I> Inhibit	2.00 A	46.30	CT SUPERVISION	
46.06	VTS I2> Inhibit	200.00 mA	46.31	CTS Mode	Disabled

GROUP 1 SYSTEM CHECKS

48.14	VOLTAGE MONITORS		48.1D	CS2 Status	Disabled
48.15	Live Voltage	52.00 V	48.22	CS Undervoltage	52.00 V
48.16	Dead Voltage	11.50 V	48.23	CS Overvoltage	64.0 V
48.17	CHECK SYNC.		48.24	CS Diff Voltage	6.000 V
48.18	CS1 Status	Enabled	48.25	CS Voltage Block	V<
48.19	CS1 Phase Angle	15.00 deg	48.26	SYSTEM SPLIT	
48.1A	CS1 Slip Control	Frequency	48.27	SS Status	Disabled
48.1B	CS1 Slip Freq	0.167 Hz			

GROUP 1 AUTORECLOSE

49.05	Single Pole Shot	1	49.0C	AR CBHealthyTime	5.000 s
49.06	Three Pole Shot	1	49.0F	Reclaim Time	40.00 s
49.07	1 Pole Dead Time	1.000 s	49.3A	Dead Time Start	Protection Op
49.08	Dead Time 1	3.000 s			

GROUP 1 BROKEN CONDUCTOR

37.01	Broken Conductor	Enabled	37.03	I2/I1 Time Delay	60.00 s
37.02	I2/I1 Setting	0.2			

Catatan:

- Setting ini berlaku saat kondisi gandar bay miniatur 1 dijumpur dengan konduktor miniatur bay pondok kelapa.
- Pastikan untuk TP distance, SF6 dan CBF telah dirubah menjadi ke arah GIS Pondok Kelapa.

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