


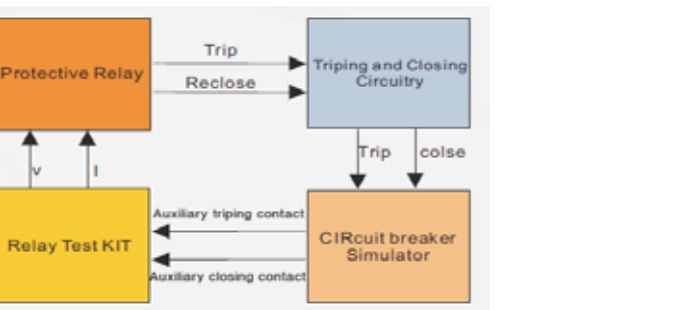



Optional Accessories


- External analog recording unit (AR-7D)**


The optional AR-7D analog recording unit can be installed on the top side. The voltage and current record range is 0-300V(ac/dc) and 0-30A (ac/dc) respectively.
- Current Booster (Phpc01)**


Phpc01 current booster is designed to supply high compliance voltage even at small current range, suitable for testing high burden electromagnetic current relays.
- GPS synchronization (PGPS02)**


It provides GPS synchronization signal in PPS (pulse per second) or PPM (pulse per minute) for synchronized test. Trigger time can be set for end-to-end test application.
- Circuit breaker simulator(PSS01)**


Working together with PONOVO relay testing device, PSS01 is to be used to simulate the circuit breaker operation for checking the relay scheme performance. Complicated software settings can be avoided by using this simple accessory.
- Scanning Head (PACB108)**


The passive optical scanning head PACB108 detects the status of an LED, that is either an optical pulse output from an energy meter or the binary status of a protective relay or other similar optical source.
- Multi-kits Synchronization**


Multi-kits synchronization can help customer using two or more kits to generate current or voltage in the same time also control the phase between the two instruments.

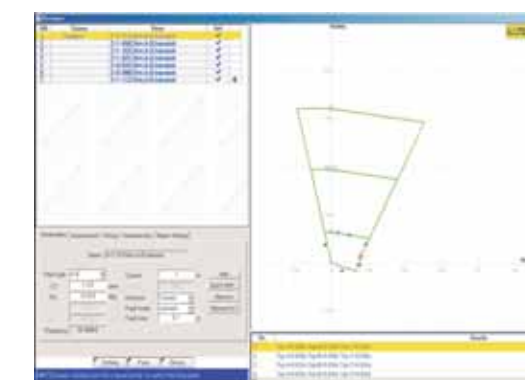
To more PW460

PowerTest Relay Test Software



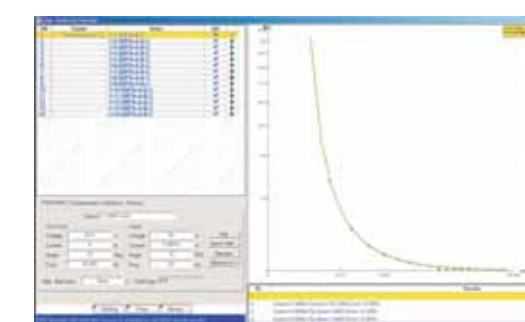
Differential

Different model is suitable for use the 6 output current channels' relay tester, which is applied on transformer, generator and bus bar etc. differential protection equipment test. Because of adopting the 6 currents output, it realizes the two sides three phases test between relay tester and relay equipment.



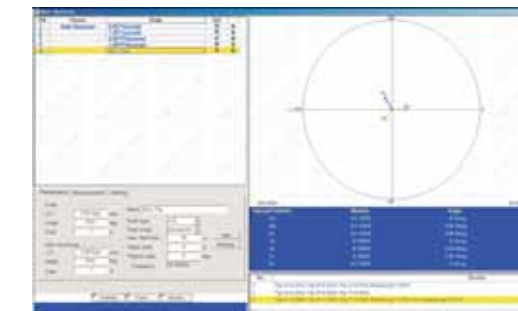
Inverse time overcurrent

This model realizes the directional over-current test and non-directional over-current test. This module also include: testing positive sequence, negative sequence and zero sequence instantaneous time over-current, over-heat protection inverse time over-current or the customized "Current/Time" operation characteristic.



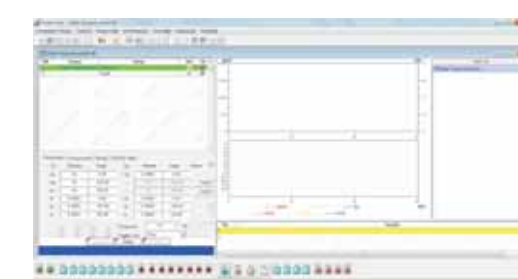
Auto-reclosing

Auto-reclosing module is the specific module which is applied to test the reclose function. This module can realize that relay automatic reclosing without checking voltage, checking the synchronization setting, reclose set time checking and automatic evaluating of testing results.



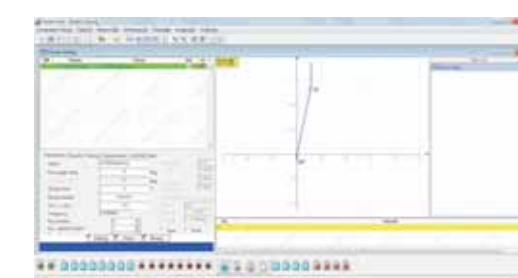
State Sequence

In the State-Sequence module, the relay tester can output multiple continuous state sequences. This module can help user to do customized test.



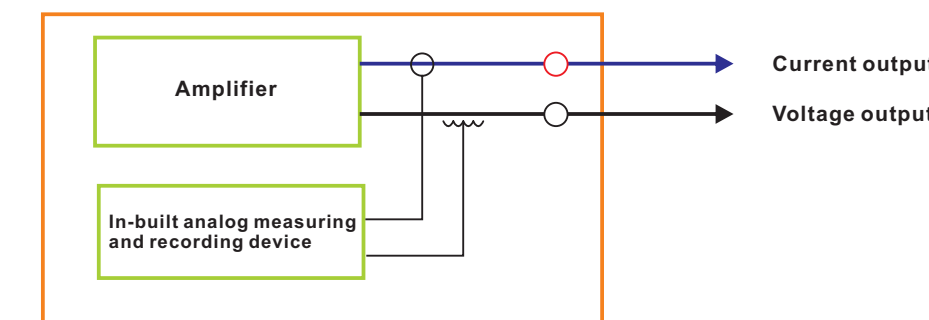
Power swing

Power swing module is applied to simulate the power system swing and test the generator losing synchronization and normal network splitting equipment.



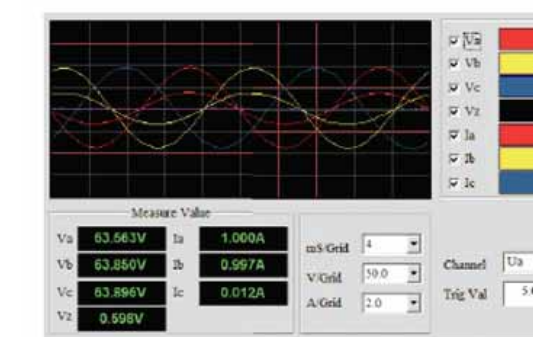
In-built analog monitoring & recording unit

This in-built analog monitoring and recording unit samples the actual current/voltage outputs and real-time output waveform can be displayed in the software. This makes it easy to check the correctness of wiring before the test and observe the output during the test process



Principle

Real-time output waveform display helps the fast trouble shooting of wiring and test circuitry before test is actually started. User can also use this provision to analyze the external signals, such as phase angle, power, harmonic, etc.



Real-time outputs display

IEC 61850 Function

PW460 provides analog voltage/current signal to relay and the GOOSE message from relay is received and interpreted by relay test equipment.



PONOVO Template Service

PONOVO provides relay test templates based on relay model from different relay manufactures. With the use of template the relay test work can be simplified greatly. Each relay test template is one independent file which can be opened in PowerTest relay test software. Registered users can download the relay templates from PONOVO website. The following are some typical relay templates for some popular relays from relay manufactures.

ABB	AREVA	Schneider Electric	SIEMENS	TOSHIBA		
LZ96	CAG17	P127	P921	SEPAM 10	7RW600	GRB100
REG100	CAG37	P141	P922	SEPAM 80	7SA6XX	GRD110
REL511	CDD	P142	P923	SEPAM 2000	7SA511	GRD140
REL531	CDG 11	P143	P940	SEPAM S42	7SA513	GRD150
MSOC	CTIG	P144	P941	T20	7SA518	GRF100
RAZFE	CTIGM	P145	P942		7SA519	GRL100
REB670	CTMFM	P241	P943		7SA522	GRL150
REC670	CTMM	P242	P943		7SD5	GRT100
REF542	CTNM	P243	PVMM	SR489	7SD52	GRZ100
REG216	CTT	P342	Quadromho	SR745	7SD63	
REL300	CTTM	P343	SKE	F650	7SJ61	
REL316	CTU	P344	SKD	SR750	7SJ63	PCS-902
REL350	DIFB	P345	VAGM22	GT60	7SJ80	PCS-915
REL352	EAP3100-350	P430	VAPM	D60	7SJ600	PCS-931
REL356	Generic Mho	P437		DLPD L90	7SL24	PCS-993
REL511	KBCH	P433		G30	7SS52	PCS-9611
REL512	KCEU 141 241	P435			7ST6	
REL521	KVFG	P436			7UM61	
REL531	LFZP	P438			7UM62	MRA4
REL561	LFZR	P441			7UM512	MRDT4
REL650	LGPG	P442			7UM515	MR14
REL670	MBCH	P443			7UM516	MRM
RET521	MCGG	P444			7UT6xx	MRN
RET670	MFVUM	P445			7UT51	
REZ1	Micromho	P521			7UT512	SIFANG
SPAC150C	MVAPM	P543			7UT6127VE61	326GD
SPAC310C	MWTU	P544			7VE63	
TPU2000R	Optimho	P545			ARGUS 1	
P111		P546			DCD121A	F_PRO
P115		P547			DCD125A	L_PRO
P120		P631				T_PRO
P121		P632				
P122		P633				
P123		P634				
P124		P642				
P125		P643				
P126		P645				

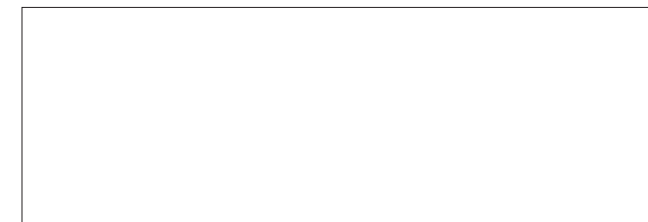
Making your work easier is my work!

Do you want to know a new friend?
Here is PW460, Your good assistant on relay testing.



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PW460 Relay tester

Universal testing system PW460 (6*15A, 4*300V) can test all types of protective relays, including modern IEC61850 based relays. Other test works, such as transducer, energy meter, indication meter, etc., can also be done easily. It's the ideal test device for all power utilities, power plants, relay manufactures, panel manufactures, research institutes, Universallities, testing companies, etc.

Product Features

- In-built monitoring and recording
- Large output power
- High accuracy
- Support IEC61850-9-1/2 based test
- Multi-kits synchronization interface
- Current booster interface for testing high burden relay

