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- Launch of PM605A, the universal calibrator and test system
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- Launch of L336i, the compact relay test system with 6 currents and 4 voltages and has a weight of 8.6kg
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- Launch of TD4000A, which can continuously supply 4000A DC current for testing DC type CT

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- Launch of new generation Nf801 portable Fiber Digital relay tester with 8 fiber optical ports
- Launch of SSCS, the solid state composite switch for improving the performance of capacitor bank control
- Launch of LVRT (Low voltage ride through)

2007:
- Launch of APF (Active Power Filter)

2008:
- Launch of STATCOM (Static compensator)

2009:
- Launch of Merging Unit (MU) Tester
- Launch of NF802 Intelligent Relay Tester
- Launch of PNS610 digital signal analyzer

2010:
- Launch of PW40i, new 3-phase relay test set especially for G59 testing solution

2011:
- Launch of STATCOM

2012:
- Launch of SMU (Substation Management Unit)

2013:
- Launch of PNS610 digital signal analyzer

2014:
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Optional Accessories

**Phpc01 current booster** is designed to supply high compliance voltage even at small current range, suitable for testing high burden electromagnetic current relays. 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.

**GPS synchronization** (PGPS02/PGPS04i) 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.

**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.

**Circuit breaker simulator** (PSS01) is a multi-functional time synchronization device that integrates with GPS time synchronization, IRIG-B(DC-TTL/DC-RS422/optical) outputs, IRIG-B(DC-TTL/DC-RS422/fiber) pulse input, 1PPS/1PPM(DC-TTL/DC-RS232/fiber) pulse output, timing set of whole trigger points, real-time clock auto-generating and other relevant functions.
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2012: Launch of NF802 Intelligent Relay Tester

2013: Launch of PNS610 digital signal analyzer

2014: Launch of PW40i, new 3-phase relay test set sepcially for G59 testing solution

Optional Accessories

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- **GPS synchronization (PGPS02)** 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)** 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.

About us

PONOVO POWER CO., LTD has been focusing on providing professional solutions to over 5000 clients in the fields of intelligent testing and power quality control.

- **IEC61850 Test Solutions**
- **Professional Solution Provider For The Power World**
- **Amplifier for Power Simulation Application**
- **Protek Relay Test Solutions**
- **IEC61850 solution**

PONOVO POWER CO., LTD.
No.139 Jinghai Third Road, BDA, Beijing, China. 100176
Tel.: +86 (10) 59089666
Fax.: +86 (10) 59089999
www.relaytest.com
Products introduction

- PW336i Universal Test System
  - In-built output monitoring and recording function
  - Auxiliary DC (0-300V)
  - Adjustable threshold for binary inputs
  - 4 counter inputs, 12 low level outputs
  - 6×20A
  - 4×150V

- PW460 Universal Test System
  - IEC61850 test optional
  - Auxiliary DC (0-300V)
  - Adjustable threshold for binary inputs
  - 4×150V
  - 6×15A

- L336i Universal Test System
  - IEC61850 test optional
  - DC measuring inputs
  - Auxiliary DC (24V, 110V, 220V)
  - 3×40A
  - 4×300V

- POM2-3243 Universal Test System
  - 4 binary inputs and 1 binary outputs
  - Auxiliary DC (0-300V)
  - 8 binary inputs and 8 binary outputs
  - 6×20A
  - 6×15A

- NF802 Intelligent Relay Tester
  - 12 independent Low level output
  - IRIG-B code interface
  - 1×1000Aac/7000VA

- PCT 200 Series CT/PT Test System
  - Can Import Test Templates
  - Local control with LCD
  - 8 binary inputs and 4 binary outputs
  - Auxiliary DC (24V, 110V, 220V)
  - 6×15A

- T200A Universal Tester
  - 12independent Low level output
  - IRIG-B code interface
  - 6×300V

- PNS610 Portable Analyzer
  - GPS Synchronization interface, IRIG-B code interface
  - 1 pairs binary inputs, 1 pairs binary outputs
  - 4 Ethernet optical ports, 2 ST Serial optical ports
  - 7.0 inch touch screen

- PowerTest Relay Test Software
  - Auto-reclosing module
  - Power swing module
  - State Sequence module
  - Inverse time overcurrent and zero-sequence inverse-time over-current, definite-synchronization setting, reclose set time checking and difference between system and unit, checking the realize that relay automatic reclosing with checking the generator and power grid swing splitting device.

- SEL167
  - REL670
  - REL561
  - REL511
  - REC670
  - REB670
  - RAZFE
  - MSOC
  - REL511
  - LZ96
  - VAMP 265
  - VAMP 255
  - P120
  - P111
  - Optimho
  - MWTU
  - Micromho
  - MFVUM
  - CTT
  - CTNM
  - CTMM
  - PCT210
  - P344
  - P342
  - P443
  - P442
  - P441
  - P633
  - VAGM22
  - Quadromho
  - PVMM
  - PPX
  - P921
  - SEPAM 2000
  - F650
  - SEPAM 80
  - Sr489
  - L90
  - G30
  - DLPD
  - SEL587
  - GT60
  - C100
  - PAV250Bi
  - PAV120Bi
  - PAV250Bip
  - P921
  - 7SS52
  - 7SJ63
  - 7SD63
  - 7SD52
  - 7SD5
  - 7SA519
  - 7SA511
  - 7SA519
  - SEL311L
  - SEL311C

- Amp. for Real Time Digital Simulator
  - 4 binary inputs and 1 binary outputs
  - Auxiliary DC (0-300V)
  - 8 binary inputs and 4 binary outputs
  - 6×15A
  - 6×300V

- PONOVO Template Service
  - Provides test templates based on various functions and relay manufacturers. The test templates cover relay testing, protection, monitoring, and communication, ensuring accurate and comprehensive relay testing.

- More Templates can be downloaded from our website www.relaytest.com
PW336i Universal Test System
- In-built output monitoring and recording function
- DC measuring inputs
- Adjustable threshold for binary inputs
- 8 binary inputs and 4 binary outputs
- 6×30A
- 4×300V

PW460 Universal Test System
- IEC61850 test optional
- Simulation system
- In-built output monitoring and recording function
- 4 counter inputs, 12 low level outputs
- 8 binary inputs and 8 binary outputs
- 6×15A
- 4×300V

IEC61850 test optional
- Simulation system
- In-built output monitoring and recording function
- 4×300V

S40A Universal Test System
- 3×40A
- Auxiliary DC (0-300V)
- Adjustable threshold for binary inputs
- 8 binary inputs and 4 binary outputs
- 3×300V

POM2-3243 Universal Test System
- 4×300V
- 12 independent Low level output
- IRIG-B code interface
- GPS Synchronization interface
- IEEE 1588 synchronization
- In-built voltmeter and ammeter
- One test can get all CT parameters
- 1×1000Aac/7000VA
- 1×250Aac, 1×20A ac/dc, 1×200mA ac/dc
- 6×32A
- 4×300V

Test Equipment
- T1000 Primary Injection
- 12 independent Low level output
- IRIG-B code interface
- GPS Synchronization interface
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- In-built voltmeter and ammeter
- One test can get all CT parameters
- 1×250Aac, 1×20A ac/dc, 1×200mA ac/dc
- 6×32A
- 4×300V

PNS610 Portable Analyzer
- Characteristic Tester
- GPS Synchronization interface, IRIG-B code interface
- Receiving and sending IEC61850-9-1/2 and IEC60044-7/8
- Available programmable upgrade, all in one Micro SD card
- 4 Ethernet optical ports, 2 ST Serial optical ports
- unbalanced current 0.01  mA—10 mA
- network message communication
- Warning, Detecting and excluding, etc for the convertor station and testing DC current characteristic measurement
- High accuracy: frame lost rate: 0%
- Support IRIG-B
- IEC61850 - 8 - 1 GOOSE signal
- PowerTest Relay Test Software
- Auto-reclosing
- Fault detection module & the special model allows setting in various system scenarios
- Motor sequence
- Motor command module: can control the output frequency and phase angle
- Motor parameter setting: Speed and frequency can be realized, realizing the testing of motor parameters
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**PW466i Universal Test System**

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- IEC61850 test optional
- DC measuring inputs
- Adjustable threshold for binary inputs
- 8 binary inputs and 8 binary outputs

**POM2-3243 Universal Test System**

- IEC61850 test optional
- DC measuring inputs
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- 8 binary inputs and 8 binary outputs

**S40A Universal Test System**

- In-built output monitoring and recording function
- IEC61850 test optional
- DC measuring inputs
- Adjustable threshold for binary inputs
- 3×40A

**L336i Universal Test System**

- Can Import Test Templates
- Local control with LCD
- 4 binary inputs and 4 binary outputs

**T1000 Primary Injection and T200A Universal Tester**

- IRIG-B code interface
- GPS Synchronization interface
- Measuring received fiber optical power

**PCT series: PCT 200Ai  PCT 200i**

- Available programmable upgrade, all in one Micro SD card
- 1×1000Aac/7000VA
- 1×250Vac/750VA
- 1×250Aac, 1×20A ac/dc, 1×200mA ac/dc

**TD series DC Current Tester**

- Measuring received fiber optical power
- Receiving and sending IEC61850-9-1/2 and IEC60044-7/8

**PNS630 Handheld IEC61850 Analyzer**

- Available programmable upgrade, all in one Micro SD card
- 1 pairs binary inputs, 1 pairs binary outputs
- unbalanced current 0.01  mA—10 mA

**PONOVO Template Service**

- PONOVO provides test templates based on dozens of different relay manufacturers. With the usual templates, you can simulate multiple types of operations of the relay equipment. Registered users can also upload their own test templates to PONOVO’s TestTutor. Each relay test template is one independent file which can be opened in PowerTest relay test system. 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.

**PowerTest Relay Test Software**

- Auto-reclosing
- Fault recording
- Breaker operation
- Test between relay tester and relay equipment.

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- Amplifier for Real Time Digital Simulator
  - Transformer Type
  - Power Type
  - Output
  - Control
- Power Test Relay Test Software
  - Start Page
  - Differentiator
  - State Sequence
  - Power Setting

**Test Equipment**

- 12 independent Low level output
- PCT series: PCT 200Ai  PCT 200i
- IRIG-B code interface
- GPS Synchronization interface
- Measuring received fiber optical power

**TD series testing equipment consists of control unit and DC high current output unit. It outputs**

- Active components: unbalanced current 0.01  mA—10 mA
- Simulation of reactor, capacitor and resistor characteristics.

**PCS-902H**

- Reactive Characteristic Measurement
- Auto-reclosing
- Fault recording
- Breaker operation
- Test between relay tester and relay equipment.

**VAMP 265**

- Active components: unbalanced current 0.01  mA—10 mA
- Characteristic Measurement
- Auto-reclosing
- Fault recording
- Breaker operation
- Test between relay tester and relay equipment.

**PCS-9611**

- Active components: unbalanced current 0.01  mA—10 mA
- Characteristic Measurement
- Auto-reclosing
- Fault recording
- Breaker operation
- Test between relay tester and relay equipment.
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2013:
- Launch of PNS610 digital signal analyzer

2014:
- Launch of PW40i, new 3-phase relay test set specifically for G59 testing solution

Optional Accessories

- **Current Booster (Phpc01)**
  - Phpc01 current booster is a magneto-static high compliance voltage source at small current range, suitable for testing high burden electromagnetic current relays.

- **GPS synchronization (PGPS02/PGPS04i)**
  - PGPS02/PGPS04i is a multi-functional time synchronization device that integrates with GPS time synchronization, IRIG-B(DC-TTL/DC-RS422/optical) outputs, IRIG-B(DC-TTL/DC-RS422/fiber)pulse input, 1PPS/1PPM(DC-TTL/DC-RS232/fiber) pulse output, timing set of whole trigger points, real-time clock auto-generating and other relevant functions.

- **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.
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Circuit breaker simulator

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