


PITE

PITE TECH. INC.

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PITE

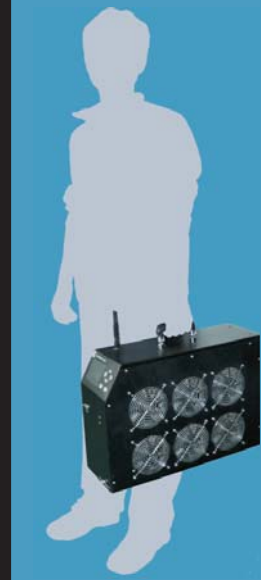
PITE TECH. INC.

Professional for:

- Battery Test Equipment
- Meter Test Equipment
- Power Quality Analyzer
- Ground Fault Locator
- AC Load Bank




www.pitetech.com



PITE TECH. INC. Profile

PITE is a high-tech company which is dedicated to preventative maintenance for stationary battery and power system. It is composed of PITE and Haiyan Electric Meter Co. Ltd with total employees of around 200. PITE TECH. INC. was started in the year 2001 with its main business focused on manufacturing of battery test equipments and solutions of DC system. Today it is the leading manufacturer of battery test equipment and electrical measurement tools in China. The 39 years old branch Haiyan Electric Meter Co. Ltd was acquired by PITE TECH. INC. in the year 2011. It is among the first companies in the China to make meter test bench and it is now leader in its line in China.

Our products include but are not limited to the whole range of test equipments for stationary battery (battery internal resistance tester, battery load bank, DC power supply, battery online monitor, and battery charger/discharger), power quality analyzer, Power meter calibration, DC ground fault locator and locomotive examination. All products are strictly accredited by the international quality standards of ISO 9001: 2008.

As a professional manufacturer, we always cast ourselves as a down-to-earth doer who concerns about its products improvement and customers satisfaction. Our R & D team is always committed to the development of new advanced products that are up-to-day. Meanwhile, PITE products are cost effective with reliable performance, competitive price and more customized selection.

PITE has been a great support to telecom, power utility and railway station industry for years, which has built its good reputation in China. PITE is now an active player in the global market for battery testing, electrical measurement and locomotive examination with our great success and rich experience in domestic market.

Content

PITE 3915/PITE 3918 Battery Tester

Cost effective tester for battery regular measurement
Ideal for conductance and resistance measurement

PITE's Solution

Regular maintenance and test is a "must-have" procedure for standby batteries. It is also recommended by IEEE latest standard for maintenance and testing of standby batteries. The excellent performance of PITE 3915/PITE 3918 for testing cell internal resistance/conductance and voltage will help you eliminate the weak batteries and ensure their performance.

Features

- PITE 3915 for internal resistance and PITE 3918 for conductance measurement, customized solutions.
- Wide test range: 5~6000Ah, compatible for cell of 1.2V, 2V, 6V and 12V
- Smart and portable hand-held device, rugged and easy-to-go
- Colorful touch screen with optional operations of keyboard and touch screen
- Simultaneously test voltage and internal resistance/conductance
- Fast testing for battery and string in seconds with testing data auto saving
- Strong anti-interference in high current with stable and accurate performance
- Low testing frequency, effectively avoid interference from capacitive resistance
- Direct USB drive for software update and data transfer to computer
- Powerful PC management software, convenient for data storage and analysis
- Big memory for testing data storage of more than 3000 cells
- Buzzer alarm function and over voltage protection
- Auto-calibration function before testing enhances the testing accuracy
- Build-in reference value and self-defined value for comparison of testing result
- Optional function: can wirelessly transfer data to IT system via GPRS model

Technical Parameters

Resistance range (Conductance range)	0.00mΩ~ 100mΩ (100-19990 Siemens)
Voltage range	0.000V ~16V
Min test resolution	
-Voltage	1mv
-Resistance	0-999μΩ: 1 μΩ 1-9mΩ: 10μΩ(0.01mΩ) 10-99mΩ: 100 μΩ(0.1mΩ)
-Conductance	(0.01S)
Test accuracy	
-Voltage	±0.2%rdg ±6dgt
-Resistance	0μΩ-250μΩ: 8%±6dgt 250μΩ-500μΩ: 3%±6dgt 500μΩ-100mΩ: 1%±6dgt
-Conductance	2000S--10S: 2% 4000S--2000S: 4% ∞--4000S: 9%
Power supply	Li-ion battery (7.2V 2400mAh)
Working time	More than 5 hours
Measuring data memory	>3000 cells
Operation environment	0℃ to 40℃, 90% R.H
Measuring cells per string	1≤cells≤254
LCD display	320*240 pixel, 3.5" TFT screen
Net weight	2 kg
Dimension	L210*W110*H60 mm

NOTE:PITE 3915 for internal resistance and PITE 3918 for conductance measurement.

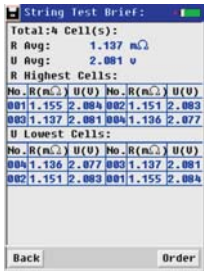
Pin Type Probe

Carrying Bag

Functional Display

Self-defined parameter

Vivid testing result



String test summary

PITE PC Software

PITE Data View software provides smart solutions for data analyzing, battery condition tracking and report printing. This software is also compatible with PITE's other battery test equipments including battery load bank and data logger.

PITE 3926C Battery Data Logger

Wireless Monitor for string voltage, cell voltage, current and temperature
Customized Configuration…

PITE 3926C could be used individually to reflect battery status or used together with PITE's other battery test equipments like battery charger and DC load bank. For different battery systems, it has customized configuration from 12V to 480V or upper. And it has easy expansion for all UPS systems.

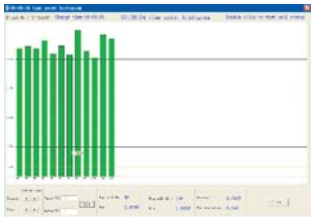
Feature

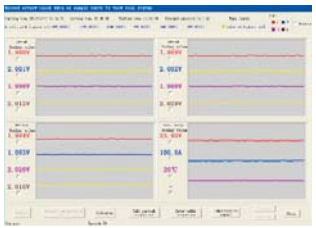
- Small weight modular design and very easy to install and operate
- It tests all battery types of 1.2V, 2V, 6V and 12V
- Simple wireless communication between batteries and PC software
- Simultaneously monitor cell voltage, string voltage, current & temperature
- Data auto saving in PC, no need for data transfer
- Work with battery charger or load bank to reflect battery status
- One cell DAC is connected with multiple batteries, save your time and money
- Could be used as temporary voltage monitoring or as permanent battery monitor
- Direct powered by battery, no need for extra power supply
- Sampling rate is customer programmed for real time monitor and report generation

Technical Parameters

Item	Testing Range	Accuracy
Cell voltage	0~16V	±0.5%
String voltage	0~480V (or customized)	±0.5%
Current testing	0~1000A (customized CT)	±1%
Temperature measurement	-25~55℃	±1℃
Power supply	Cell DAC	DC12V±15% from battery
	String DAC	DC12V±15% from battery
	Wireless communication modular	DC5V±5% from PC
PC software	Two functions: Monitor and data management	
Communication	Radio Frequency	
Communication distance	100m (not blocked)	
Communication frequency	433MHz	
Weight	0.15 kg/per module	
Size	121×113×40 mm	
Warning for	Communication disconnection, Over voltage and Low voltage	
Working environment	Temperature: 0~55℃ Relative humility: ≤85%RH	

String DAC





PC Software

Composition

String DAC>>>
It monitors string voltage, string current and ambient temperature. Each String DAC will come with a customized current sensor for testing string current. Each PITE 3926C Data Logger will only need ONE String DAC.

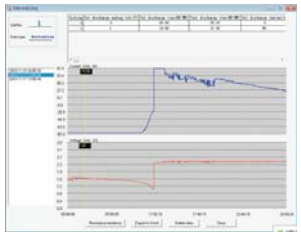
Cell DAC>>>
It monitors voltage of each cell. Depending on different battery systems, each PITE 3926C model will require different amount of Cell DACs.

Communication terminal>>>
Connected with PC to collect data from Cell DACs and String DAC

Order information

Model	For Battery System	Amount of Cell DAC
DL48	48V	with 2 Cell DACs
DL110	110V	with 5 Cell DACs
DL110-1	110V	with 8 Cell DACs
DL220	220V	with 10 Cell DACs
DL220-1	220V	with 16 Cell DACs
DL380	380V	with 16 Cell DACs
DL380-1	380V	with 3 Cell DACs

NOTE:
1.All above standard units also include 1 string DAC, 1 communication terminal, 1 RS232-USB converter and PITE 3926C Data View software.
2.All standard units are for measurement cell types of 2V, 6V and 12V. Measurement of 1.2V batteries is optional. PITE also offer specific Cell DAC for measurement 12V cells only. One of such DAC can hook up with 12 cells of 12V.
3.More customized configuration available upon request



PC Software

Specification

Power supply:	AC220V or 110V
LCD display:	320*240 pixels
Com port:	USB
Internal memory:	16MB
External memory:	4GB (USB)
Temperature:	5℃～50℃
Humidity:	5%～90%RH
Dimension:	395*370*200 mm
Weight:	10Kg (main unit)
Standard:	CE marking EMC standard LVD EN60335

PITE 3932T Battery Charger/Discharger

Three units in one: Charger, Discharger & Activator
Small solution for single cell

It is a compact unit for regular maintenance of single cell, especially for old cell. It plays three roles for complete solutions: charger, discharger and activator, which will facilitate your maintenance for batteries. The three functions could be used individually or comprehensively. When used comprehensively, lag-out battery will experience low-volt constant current charging and discharging singly or in multi-circles (1~99). By activating the disabled Active-Material on battery electrode plate, it amends the battery malfunction caused by chemical failure and thus boosts the capacity of old battery. Battery activation is very significant for resources utilization and efficiency increasing.

Features

- Touch screen and keypad operation
- Small size, portable and user-friendly
- Applicable to single cell of 1.2V, 2V, 6V and 12V
- 3 functions in one: charging, discharging and activation
- These functions could be used separately or comprehensively
- All-rounded and accurate testing results with vivid waveforms
- Could charge/discharge battery singly and circularly for many times
- Long-time monitoring of the battery condition
- Safety circuits prevent damage to battery
- Direct USB drive for data transfer to PC
- Powerful PC software for testing data analysis and report printing
- Simple and fast for software update
- Meaningful for resources utilization and efficiency increasing

Technical Parameters

Parameters	Measure Mode	Resolution	Accuracy
Charging current	1-50A(cell: 1.2V) 1-100A (cell: 2V) 1-30A (cell: 12V) 1-30A(cell: 6V)	1A	1%
Discharge current	1-25A(cell: 1.2V) 1-100A(cell: 2V) 1-30A(cell: 12V) 1-30A(cell: 6V)	1A	1%
Total charge voltage	0.9V-1.44V(1.2V) 1.7-2.4V (2V) 5.4-7.2V (6V) 10.2-15V (12V)	0.1V	0.25%
Total discharge voltage	0.9V-1.44V(1.2V) 1.7-2.4V(2V) 5.4-7.2V(6V) 10.2-15V(12V)	0.1V	0.25%

PITE 3970 Battery Charger

PITE 3970 adapts the third generation high-power switch model andstate-of-art technique of soft-off. Thanks to its high efficiency and reliability, it is now widely applied in different areas like telecom and power utility for all standby battery strings.

Feature

- User friendly artwork, easy access to all components by operators.
- Light weight designing, convenient for transportation
- State-of-art technique of soft-off which decreases switch deterioration by 40%
- Strong to provide DC auxiliary supply during emergencies for protection and control equipments in case of DC system failure.
- Comply with requirements as in IEC 60146-1-1
- Ventilation channel and circuit with dustproof structure
- Accurate display for output voltage, current and other working status on LCD screen
- Build-in CPU, automated management for battery charging
- Auto calculation for changed time and changed capacity
- Auto transforming from equalized charging to float charge
- It could be combined with extra units for higher output power
- DC power supply for relay protection equipment in experiment and adjustment
- Capable to provide DC power supply for ground fault detection in DC circuit branch
- Could be used as DC power supply in maintenance and examination of power project
- Thermal protection, auto stop in overheating and auto start when temperature recover to be normal
- Over-voltage protection and under-voltage warning function, suitable for unattended charging for substation batteries
- Protected from abnormal AC supply transient and surges
- No reverse current from the battery or load feeding the charger

Parameters

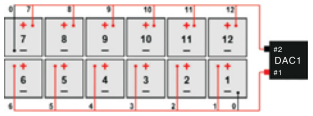
Temperature:	-10℃ ~ 40℃ (operation) -25℃ ~ 55℃ (storage)
Altitude:	<2000 M
Humility:	<95% (daily), <90% (monthly)
Input volt:	sinusoidal wave, -15%nom~20％nom
Memory:	16MB (internal), 4GB (external USB)
Reliability:	MTBF≥100000
Noise:	≤55dB
Cooling:	Force air cooling

Output Range	Index	
	P1140	P2240
Output nom voltage	110V	220V
Voltage range	90V～132 V	180-288V
Output nominal current	40A	40A
Current limit	0～105% nominal output current	
Volt-stabilization accuracy	±0.2%	
Current-stabilization accuracy	±0.2%	
Ripple coefficient	±0.05（rms），±0.2%（peak）	
Soft start time	3~8s	

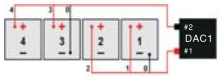
Charger Input	Range
Input voltage	380V(-15%, +20%), 3p
Input Frequency	50Hz±10%
Input current	25A
Power factor	0.93 (Full load)
Overall efficiency	93% (Full load)

NOTE: More customized models available upon request.

Connection for 1.2V or 2V cells:



Connection for 12V cells:



PITE 3980 Battery Load Banks

—The customer-tailored battery load bank

PITE 3980 series customized DC load banks feature unique design and excellent performance that will facilitate your work for battery maintenance. It covers different types of batteries (1.2V, 2V, 6V and 12V). With different customer-tailored models, it covers a wide discharge range from 12V to 480V for users from different industries. With optional DAC, discharge values of each cell could be monitored on the LCD display and computer simultaneously by using the PITE PC software.

Features

- Small weight, portable unit, convenient for onsite test
- Optional wireless DAC enables real-time PC monitor for measurement
- It sets 4 conditions for discharge auto shut-down:
  Discharge time, discharge capacity, string voltage and cell voltage
- Continued discharge available when previous discharge is stop abnormally
- Parallel connection of two units for higher discharge current
- Can work with other load banks for assistant discharge
- Can monitor measurement of other load banks or battery charger
- Accurate data measurement and vivid waveforms
- Auto sorting for lag-out batteries during discharging
- Safe circuits avoids damage to battery during measurement
- Powerful management software for data analysis and report printing
- Automatic protection upon over-heating and overload
- Thermal cut-off and automatic overload protection

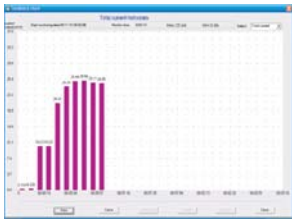
Optional Data Acquisition Case (DAC)

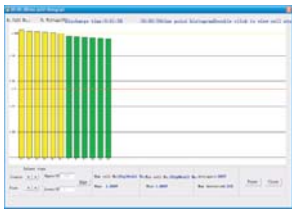
DAC is optional for wireless communication with PITE 3980 main unit and PC. The new insulation-protected DAC is rugged and capable to measure all type of batteries (1.2V, 2V, 6V and 12V). One DAC could be connected with 12 cells of 1.2V, 2V or 4 cells of 12V (or 6V).

Technical Parameters

Mains Voltage	1). AC 220V/110V, 50/60Hz; 2). DC (optional for some models)
For battery type	1.2V, 2V, 6V and 12V
Discharging Current	Accuracy: 1% Resolution: 0.1A
Discharge voltage range	48V: 10-55.2V 110V*: 10-127V 220V*: 10-254V 380V: 10-437V
Discharge voltage	Accuracy: 0.5% Resolution:0.1V
Sampling interval	5s –1min
Discharge pattern	Constant current
Memory	16MB (internal), 4GB (external USB)
Display	128*64 pixel LCD
Temperature	0℃～40℃
Humidity	5%～90% Relative humidity
Standard	CE marking, EMC standard
Dimension & Weight (main unit)*	400*177*280 mm (Size: S, 11kg) 520*202*355 mm (Size: M, 16kg) 555*225*435 mm (Size: L, 21kg) 603*400*740 mm (Size: XL, 43kg) 740*400*730 mm (Size: XXL, 52kg)

Note*:
1) Dimension and weight depend on different models. Please refer to brochure of each model for details.
2) In some countries, 110V is replaced by 120V (10-144V). And 220V is replaced by 240V (10V-288V).





PITE 3980 PC Software

PITE PC Software

It has two functions: Wireless monitor and data analysis

Order Information

PITE offers different models of battery load bank to fit almost all users who need battery discharge. For telecom, power and other industries, we have the regular customized models of load bank as below:

Area of Use	Model	Discharge Range	Code	NOTE *
Telecom	24V/48V 200A	Current: 0-200A Voltage: 10V-55.2V	LB-2482	With DAC
			LB-2482-1	W/O DAC
	24V/48V 300A	Current: 0-300A Voltage: 10V-55.2V	LB-2483	With DAC
			LB-2483-1	W/O DAC
	48V 300A	Current: 0-300A Voltage: 10V-55.2V	LB-4830	With DAC
			LB-4830-1	W/O DAC
Power	110V/220V 100A	Current: 0-100A Voltage: 10V-132V 10V-264V	LB-1121	With DAC
			LB-1121-1	W/O DAC
	110V 200A	Current: 0-200A Voltage: 10V-132V	LB-1120	With DAC
			LB-1120-1	W/O DAC
	220V 100A	Current: 0-100A Voltage:10V-264V	LB-2210	With DAC
			LB-2210-1	W/O DAC
Telecom & Power	48V/110V 100A	Current: 0-100A Voltage:10V-55.2V 10V-132V	LB-4811	With DAC
			LB-4811-1	W/O DAC
	48V/220V 100A	Current: 0-100A Voltage: 10V-55.2V 10V-264V	LB-4821	With DAC
			LB-4821-1	W/O DAC
Big UPS	380V 50A	Current: 0-50A Voltage: 10V-437V	LB-3850	With DAC
			LB-3850-1	W/O DAC
	480V 20A	Current: 0-20A Voltage: 10-552V	LB-4802	With DAC
			LB-4802-1	W/O DAC
Wide Voltage Range	12V-80V 200A	10V-13.8V (12V): 0-100A 10V-27.6V (24V) : 0-200A 10V-41.4V (36V) : 0-200A 10V-55.2V (48V) : 0-200A 10V-92V (80V) : 0-200A	LB-2348	With DAC
			LB-2348-1	W/O DAC
	12V-220V 200A	10V-13.8V (12V): 0-50A 10V-27.6V (24V): 0-100A 10V-41.4V (36V): 0-150A 10V-55.2V(48V): 0-200A 10V-132V(110V): 0-75A 10V-264(220V): 0-150A	LB-2415	With DAC
			LB-2415-1	W/O DAC

*NOTE:
- More customized models will be available upon request.
- In some countries, above 110V is replaced by 120V (10V-144V) and 220V is replaced by 240V (10V-288V).
- Data Acquisition Case (DAC) is optional to all models mentioned above.
- All standard DACs are designed to test 2V, 6V and 12V batteries. Measurement for 1.2V cells is optional.
- PITE also offer special DAC for 12V cells ONLY. One of such DAC can hook up with 12 cells of 12V.
- This is just general info of PITE 3980 series battery load bank, for detailed models, please refer to their catalogs respectively.

PITE 3986 Charger/Discharger Complex

Not only a Charger or Load Unit for Battery String...

It is complex unit with one-stop-solution for battery maintenance. With charging and discharging for the same battery string, it will greatly simplify your maintenance for batteries. Extra functions like wireless online monitoring and battery activation will enable you to know your batteries comprehensively.

Features

- Suitable for all standby batteries: 1.2V, 2V, 6V and 12V
- Multi-function in one unit: it uses 3-phase charging, constant current discharging and battery string activation
- Multi-condition for operation auto-stop: time out, maximum capacity, minimum voltage threshold (for battery or string)
- Lag-out batteries could be automatically sorted out, and activation function is used to enhance their performance
- Optional wireless DAC enables real-time PC monitor for all data
- State-of-the-art technique of soft-off for battery charging
- Graphical display, showing test result with curves
- Over voltage protection and under voltage warning function
- Thermal protection, auto stop in overheating and auto start in normal temperature
- Powerful data view software for complex data analysis and report printing
- Various models applicable to different areas of industry like telecom and power utility

Technical Parameter

Parameter	Testing Range	Resolution & Accuracy
Total discharge voltage	10～288V (Nom: 220V) 10～126.5V (Nom: 110V) 10～58V (Nom: 48V)	Resolution: 0.1V Accuracy: 0.5%
Total charge voltage output	176～288V (Nom: 220V) 90～143V (Nom: 110V) 40～57.6V (Nom: 48V)	Resolution: 0.1V Accuracy: 0.5%
Charge/discharge cell voltage	0.000V～16.00V	Resolution: 0.1V Accuracy: 0.5%
Operating Time	0～99h 59m	

Specification

Mains: 100-240VAC, 50/60Hz or AC 380V, 3 phase
Memory:: 16MB (internal), 4GB (external USB)
Temperature: 0℃～40℃ (Operating)
Humidity: 5%～90% Relative Humidity
Display: 128*64 pixel LCD screen
Standard: CE market, EMC standard, LVD 60335

Optional Data Acquisition Case (DAC)

DAC is optional for wireless communication with PITE 3986 main unit and PC. The new insulation-protected DAC is rugged and capable to measure all type o f batteries (1.2V, 2V, 6V and 12V). One DAC could be connected with 12 cells of 1.2V, 2V or 4 cells of 12V (or 6V).

Ordering Information

CODE	Description	Dimension & Weight (main unit)
DCC-22001	For battery 220 VDC Discharge current: 0-50A Charge current: 0-30A	L550*W440*H565mm32kg
DCC-11001	For battery 110 VDC Discharge current: 0-100A Charge current: 0-40A	L550*W250*H450mm32kg
DCC-4801	For battery 48 VDC Discharge current: 0-150A Charge current: 0-50A	L401*W177*H368mm19kg
DCC-4802	For battery 48 VDC Discharge current: 0-200A Charge current: 0-100A	L550*W250*H450mm21kg

PITE 3980J AC Load Bank

Model: ACL-40 (40kW)

- Compact and easy to operate
- Reliable load element
- Over-volt and temperature protection
- 0-40kw continuous adjustable

Feature

- High rate testing for voltage, current and transient voltage waveform for generator and UPS units
- Big TFT touch screen, easy operation and vivid display of testing data and waveform
- Power continuously adjustable from 0 to 40kW with current from 0 to 60A
- Discharge time customized as 0-99 hours with resolution of 1 minute
- Can set different current, end-up time, discharge power and voltage threshold (upper or lower limit)
- Has emergency stop button
- Auto stop discharge when three phase voltage is over high
- Auto stop discharge when three phase voltage is over low.
- Has over current short circuit protection
- Warning and auto stop upon any fans failure

Technical Parameter:

Voltage Test: Test range: 220V/480VAC, 3Ø
Accuracy:±0.5%
Resolution:0.1V
Current Test: Test range: AC 0~60A
Accuracy: ±1%
Resolution: 0.1A
Working power: 110V±10% 60Hz, 220V±10% 50Hz
Load input voltage: 220V/480VAC, 3Ø
Cooling: Force air cooling
Communication: USB
Displa: TFT touch screen, 320*240 pixel
Dimension(main body): 492*352*176 (mm)
Weight: 53KG
Memory capability: 64M Flash

Note: Other models of AC Load Bank like 60kW, 100kW and so on are available upon request.

PITE 3551T Three Phase Meter Tester

It is multi-functional in field testing for power meters and metering units of all wirings. Testing functions include: metering unit and power meter. With these function, it is widely used in power utility, substation, telecom machine room and the alike for power consumption examination, circuit breakage inspection, power abnormality analyzing, asset management and industrial production management.

Feature

- Smart, portable and easy touch-screen (TFT) operation
- Single-phase and three-phase measurement, two in one
- Combination of electricity meter tester and power quality analyzer
- Online monitor for real-time data testing and comparison
- Safe and quick measurement for electricity anti-theft
- Test result playback on screen and transferable to PC for report printing
- User-friendly interface and vivid screen display, simplify on-site testing power meters

Technical specification

Voltage signal input: Direct input
- Resistance: >2MΩ, 20pF
- Testing range: 10~700Vrms
- Peak voltage: 1000V
- Power consumption: <0.5VA/phase

Current input circuit
- Indirect input, with different current clamps
- Testing range: 20Arms, 500Arms, 1000Arms
- Power consumption: <2.0VA/phase

Frequency range: 40 Hz ~70Hz

Measurement accuracy: 0.5

Screen and memory
- Screen: 320×240, 3.5' TFT LCD touch-screen
- Internal Memory: 16 MB Flash
- External Memory: 4GB
- Com port: USB port

Power supply:7.2V 2400mAh rechargeable Li-ion battery
- Power adaptor: AC100~240V/DC16.8V-1A adaptor
- Main unit: 0.7kg, 277×169×36mm
- Working temperature: -20~40℃
- Relative humility: 5~90%RH
- Insulation: >2MΩ, AC1500V/50Hz, 1 min

Optional 100A current clamp

Scanning head

Other Specification

Item	Range	Accuracy
Voltage	10～700Vrms	±0.3%
Current	Optional for 20A, 60A,100A, 500A and 1000A CT	±0.3%
Frequency	40～70Hz	±0.01Hz
Phase	0～360°	±0.5°
Active power	----------	±0.5%
Reactive power	----------	±1.0%
Active energy	----------	±0.5%
Reactive energy	----------	±1.0%
Power factor	0.00～1.00	±0.005
Harmonics	Voltage harmonics: 1～50 Current harmonics:1～50	Volt harmonics: ±0.01(%f) Current harmonics: ±0.5%
Impulse constant	FL = 36000×(5/Ie)P/kW•h Ie: CT range	

Function

Functions	Description
Meter measurement	Three phase metering unit Three phase power meter Single phase metering unit Single phase power meter High-volt power meter
CT ratio	Test CT ratio and phase deviation
Online monitor	1)Active energy, reactive energy, harmonic active, harmonic reactive and power factor in low-volt with load 2)Active energy, reactive energy, harmonic active, harmonic reactive, power factor of power meter in different voltage rate. 3)Fundamental harmonic and all harmonics loads
Harmonic	1-50 current harmonics and voltage harmonics, THD, harmonic content
Wire connection	Help judge if wire connection with meter is correct or not.

PITE 9353 Three-phase Kwh meter Test-bench

39 Years Experience and Expertise on Meter Test Equipment

Features

- Modular design allows customized configurations on hardware and software, customer-friendly and future-proof
- Quick connection devices according to IEC or ANSI standards are available, which allow fast suspension and connection of meters
- Able to test all types of three phase mechanical meters and electronic meters, able to test meters with RF wireless communication module, able to test the meters with different constants at the same time
- Modes of test: Full-automatic, semi-automatic, or manual tests for shunting, starting, basic errors, standard deviation and etc.
- There are error calculation reset buttons on error testing panel of each meter position; error of each meter is shown on LED display timely.
- Auto searching color mark on the rotation disk, time saving for measurement of shunting and starting
- Measure voltage, current of each phase, phase/phase difference, active/reactive/apparent power of each phase, total active/reactive/apparent power, total power factor, frequency, etc. with real time display of vector graph
- Self-testing function for all phases power, total power stability, symmetry of 3 phase voltage and current
- Register testing function, apply for testing various kinds of electronic meters, via RS-232/RS485, Optical probe and/or RF-wireless communication
- Powerful PC software for data analyzing, waveform playback and detailed report exportation
- Auto protection upon malfunctions & auto restore in case of over-current, over-voltage, short-circuit

Technical Specifications

Accuracy Class: 0.05, 0.1 or 0.03 as option

Output Voltage: Ranges (RG)3 x (57.7V, 100V, 220V, 380V) Adjustment range: 0 ~ 120% RG Resolution: 0.01% Distortion: ⩽ 0.5% Stability: ⩽ 0.05%/120s @ PF=1.0 Capacity drop on each meter under test: ⩾ 20VA	Output current: Adjustment range: 0 ~ 120A Resolution: 0.01% Distortion: ⩽ 0.5% Stability: ⩽ 0.05%/120s @ PF=1.0 Capacity drop on each meter under test: ⩾ 50VA
Output Phase angle: Adjustment range: 0° ~ 360° Resolution: 0.01°	Output frequency Adjustment range: 45Hz ~ 65Hz Resolution: 0.001Hz

Register testing functions:

- Fully automatic testing
- Can test all kinds of meters: Elster, Landisgyr, EDMI, EMH, ANSI & Chinese meters

Number of positions: Customizing on demand from end-user
(6, 10, 12, 20, 24, 30, 48 ...)

Others:

Power supply: 220V or 3×220V/380V±10%, 50/60Hz±10%
Ambient conditions: Temperature 50C ~ 400C
Relative humidity: up to 90%

PITE 9153 Single-phase Kwh Meter Test Bench

Features

- Modular design allows customized configurations on hardware and software, customer-friendly and future-proof
- Quick connection devices according to IEC or ANSI standards are available, which allow fast suspension and connection of meters
- Able to test all types of single phase mechanical meters and electronic meters, able to test meters with RF wireless communication module, able to test the meters with different constants at the same time
- Modes of test: Full-automatic, semi-automatic, or manual tests for shunting, starting, basic errors, standard deviation and etc.
- There are error calculation reset buttons on error testing panel of each meter position; error of each meter is shown on LED display timely.
- Auto searching color mark on the rotation disk, time saving for measurement of shunting and starting
- Measures parameters of voltage, current, power factor, phase and frequency with real time display of vector graph
- Register testing function, apply for testing various kinds of electronic meters, via RS-232/RS485 and/or RF-wireless communication
- Powerful PC software for data analysis, waveform playback and detailed report exportation
- Auto protection upon malfunctions & auto restore in case of over-current, over-voltage and short-circuit

Technical Specifications

Accuracy: Class 0.1, 0.05, or 0.03 as option

Output Voltage:
Adjustment range: 0 ~ 264V
Resolution: 0.01%
Distortion: ⩽ 0.5%
Stability: ⩽ 0.1%/120s @ PF=1.0
Capacity drop on each meter under test: ⩾ 20VA

Output current:
Adjustment range: 1mA ~ 120A
Resolution: 0.01%
Distortion: ⩽ 0.5%
Stability: ⩽ 0.1%/120s @ PF=1.0
Capacity drop on each meter under test: ⩾ 50VA

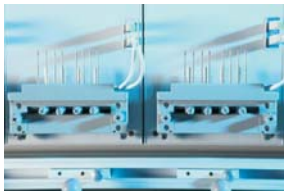
Output Phase angle:
Adjustment range: 0° ~ 360°
Resolution: 0.01°

Output frequency
Adjustment range: 45Hz ~ 65Hz
Resolution: 0.001Hz

Register testing functions:
- Fully automatic testing
- Can test all kinds of single phase meter

Number of positions: Customizing on demand from end-user (6, 10, 12, 20, 24, 30, 48 ...)

Others
Power supply: 220V or 3×220V/380V±10%, 50/60Hz±10%
Ambient conditions: Temperature 50C ~ 400C
Relative humidity up to 90%



PITE 3561 Power Quality Analyzer

- Smart measurement and analysis for 3-phase/4-wire system
- Compatible with EN50160 with testing frequency up to 1000Hz

Why PITE?

An Easy-to-use power quality tools is a "must-have" for any person who maintains or troubleshoots three phase power. PITE three-phase power quality meters help you locate, predict, prevent and troubleshoot problems in power distribution systems. We offer a full range of trouble-shooters for the prevention and analyzing of the power quality problem. It is not only your problem solver, but also money saver.

Features

- Portable design and colorful touch screen
- Applied to standard of EN 50160
- Could test 3-phase volt, null line volt, 3-phase current, null line current, etc.
- Up to 50 times harmonic testing with frequency spectrum graph
- Power testing: 3-phase apparent power, active power, reactive power, power factor, and 3-phase electric power.
- 3-phase unbalance testing with vivid chart
- Record at least 40 times of surge current
- Testing for wave motion, short-time flicker and long-time flicker
- Record up to 40 times of sag and swell
- Could have long-time record for basic (stable) power quality parameter. Recording time interval adjustable between 1 second and 30 minutes.
- Digital oscilloscope, checking waveform for voltage and current signal
- With PITE Data View software for convenient analyzing of testing result

Technical Parameter

- LCD: 5.7" 320 x 240 TFT touch screen
- Input Impedance: >2MΩ, 20pF
- Measurement Range: Vrms 10～1000V
- Current: 5A, 10A, 100A, 1000A, 1500A and 3000A (with customized current clamps)
- Frequency: 30Hz～1000Hz
- Harmonic Measurement: 1～50th
- Inrush Current: 2000A
- Peak Voltage: 1000V
- Internal Memory: 16MB
- External Memory: 4GB
- Communication Port: USB
- N.W.(main unit): 1.2 kg
- Battery: 14.4V 2000mAh Durable for 5 hours after full charge

Optional Current Clamps

CT available:
10A, 100A, 500A, 1000A, 1500A, 3000A and so on. It is customized per customers' requirement.

PITE

Feature

Specifications	Range	Accuracy
Voltage, Current & Frequency	Voltage: 10~700V (true rms) Current: 0.5~3000A (true rms, with relevant CT) Neutral current: 0.5~25A (true rms) Current peak: 0-3000A Voltage peak: 0-1000V Crest factor: 0-10 Frequency: 30~1000Hz	Voltage: ±0.5% Current: ±0.5% Frequency: ±0.01Hz NOTE: Take L1 frequency as total measurement frequency.
Harmonics	Voltage: Total harmonic +1~50th Current: Total harmonic +1~50th K-factor: 0-10	Voltage: ±0.1(%r) Current: ±1% ±0.5%
Harmonic Power	Total harmonic: +1~30th Total active harmonic power: ∑P Total reactive harmonic power: ∑Q Total positive active harmonic power: +∑P Total negative active harmonic power: -∑P Total positive reactive harmonic power: +∑Q Total negative reactive harmonic power: -∑Q	±0.5%
Inter-harmonics	Voltage: total inter-harmonic +1~20th Current: total inter-harmonic +1~20th K-factor	Voltage: ±0.1(%r) Current: ±1% ±0.5%
Power & Energy	Active power: 0.05~700KW Apparent power: 0.05~700KVA Reactive power: 0.05~700KVAR Power factor: 0.00~1.00 Active energy: 0.01~10000kWh Apparent energy: 0.01~10000kVAh Reactive energy: 0.01~10000kVARh Average power factor: 0.00~1.00	Active power: ±1% Apparent power: ±1% Reactive power:±1% Power factor: ±0.005 Active energy: ±1% Apparent energy: ±1% Reactive energy: ±1%h Average power factor: ±0.005
Unbalance	Fundamental voltage: 10~700V (true rms) Fundamental current: 0.5~1000A (True rms) Fundamental frequency: 40~70Hz Phase angle: 0~360o Unbalance: 0.0%~100%	Voltage: ±0.5% Current: ±0.5% Frequency: ±0.01Hz Phase angle: ±0.3 o Voltage unbalance: ±0.2% NOTE: Take L1 frequency as total measurement frequency.
Data Recording	Data logging for: 3 phase voltage, current, null current, voltage harmonic (THD and 1~25 harmonics), current harmonics (THD and 1~25 harmonics), unbalance, KW, KVA, KVAR, PF, flicker and fluctuation	Time interval: 1s~30min adjustable Time duration: <960 hours
Sags(Dips)/ Swells	Voltage sag, swells and instant interruption Event listed: Start time, ending time, duration (≥20ms) and voltage magnitude(rms1/2)	Maximal event recorded: 40 times Time:±10ms
Fluctuation	Voltage fluctuation:0.1%~10.0%	≤ ± 5%
Flicker	1min flicker, short-time(10min) and long-time(2h) flicker	1 minute short-time: ≤ ± 5.5% 10 minutes short time: ≤ ± 5% 2 hours long-time: ≤ ± 5%
Inrush	Inrush current, duration, Arms ½,expected time, Max. Amp, Min. Amp, Threshold Amp	±10ms
Transient	Voltage transient based on 120% above of nominal voltage	Capture rate: 98.7% Minimal detect duration: 20μs
Power wave	Active power, reactive power, and apparent power semi-wave & power tendency of 1 min, 3 min & 5 min.	Semi-wave power reading±0.5%
Scope	3-phase voltage, 4-wire current, null voltage & null current waveform	Max frequency: 200KHz Min frequency: 100Hz

Functional signal receiver

Dual-clamp with 2 conductor sizes

PITE 3836 Ground Fault Locator

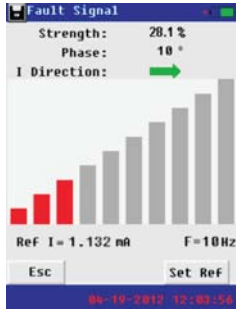
- Fast location for ground fault in different DC systems
- Strong anti-interference when system is working online
- Innovative dual-range current detector with direction sensitivity
- Multi-way for location: Current direction, signal strength & phase angle

Why PITE 3836?

Cost can be tremendous upon bad insulation or grounding in the power system. It may even cause power break-off which is costly to repair. Therefore, fast localization and elimination of grounding faults will be significant for electricians and technicians. It is also required by DIN VDE 0100-410 (VDE 0100-410): 2007-06 chapter 411.6.3.1 and IEC 60364-4-41 chapter 413.1.5.4. PITE 3836 is developed to fast detect, track and locate virtual grounding faults on DC systems. This spares you from hours of unnecessary troubleshooting and helps to increase the reliability of your electrical equipment. It is widely used in locomotive, telecom, power utilities, etc

Feature

- Patented technology, pinpoint current leakage fault with grounding resistance lower than 1MΩ
- Innovative dual-clamp for signal receiver, each clamp has two sizes of opening jaw for different conductors
- One pair of clamp working together, effective cancel capacitive interference when DC system is online
- Precise current direction (positive or reversed) indicating for leaking current help fast locate the faulty grounding
- Signal receiver can set reference in different points for signal comparison, very fast for fault orientation
- Digital signal processing technology for detecting grounding resistance and capacitive resistance
- With built-in band pass filter to bypass different interference signals in the ambient environment.
- No disconnection of the electrical installation, ground fault location is carried out during operation
- Signal-generator with adjustable output voltage (24V~1000V) and for different DC systems
- Low current signal output, secure for the system under measurement.
- Multi-ways to indicate ground fault: sensitive current direction, phase angle, comparison of signal strength.



Multi-ways to find ground fault

Technical Parameter

Ground fault location	Output voltage: 24V, 48V, 110V, 220V, 500V and 1000V Output frequency: 10Hz Output current limitation: 5mA & no limit (max: 25mA) Fault location sensitivity: ⩽ 1MΩ Current detect sensitivity of AC/DC circuit: ⩾ 0.5mA Current sensor: φ8 and φ20, two clamps with dual-range
Power supply	Signal generator: 3500mAh/16.8V rechargeable Li-ion battery Input: 100-240V, 50/60Hz, output: DC16.8V/2A Signal receiver: 2400mAh/7.2V rechargeable Li-ion battery Charger input AC220V/110V, output:DC8.4V300mA
Power consumption	⩾4 hours
Memory	16MB
Display	Signal generator: 320x240 pixel 3.5″ LCD screen Signal receiver: 240×320 pixel 3.5″ LCD touch screen
Working temperature	-10℃~55 ℃
Dimension	L420*W340*H14mm
Weight	7.0 kg

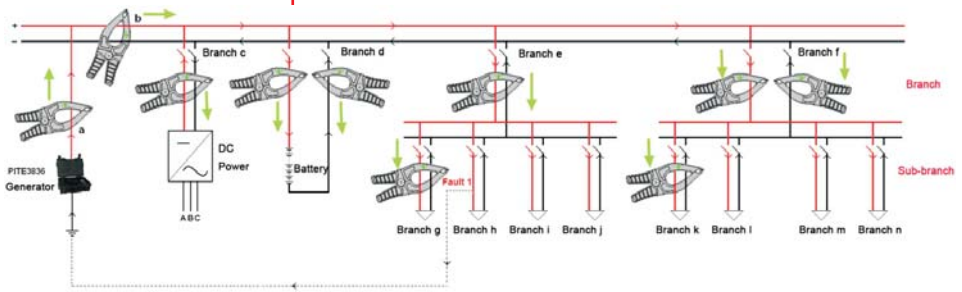
How does it work?

PITE 3836 uses comprehensive ways to pinpoint the faults with the following working rules:

1)Signal generator has two testing leads connected with DC system. And it injects a low-frequency current signal with direction to the DC system. This signal will flow from testing lead to circuit, outflow from the faulty grounding point and finally flow back to the signal generator. This makes a return circuit that will be useful for signal tracing in the next step.

2)Signal receiver will trace this current signal with the help of current direction judgment. Direction of current signal always goes to the faulty point. With one clamp on two busbars or two clamps respectively on two busbars, it could work effectively with strong anti-interference when system is online.

3)Strength and phase angle of current signal will have big changes before and after the grounding fault. They also help pinpoint the fault.



PITE's global presence