



PDC15k

High DC Primary Current Injection Test Set

Professional Railway Transportation Testing Solution

Mobile Type with Light-weight Multi-function Local Operation System

PONOVO POWER CO., LTD.
www.ponovo.net





PDC15k High DC Primary Current Injection Test Set

PDC15k High DC Primary Current Injection Test Set adopts high-frequency inversion and linear amplification principle to realize the high DC current output capability.

PDC15k is modular designed with changeable modules, single module is small in size and light in weight, users can flexibly select current modules according to on-site needs. Multi-functions completed by local control software. With high accuracy and quick response, PDC15k could be used for testing different characteristics of DC circuit breaker release, such as trip current value and time, DC resistance, etc. It could be used in Special high-voltage DC converter station, railway stations and fields and also in the lab.

PDC15k provides a more reliable site testing solution for DC circuit breaker in the railway power supply system.



Functions

- DC CB Operating current value test (Tripping current value).
- DC CB Operating time test (Tripping time).
- DC CB internal resistance, contact resistance measurement.

Features

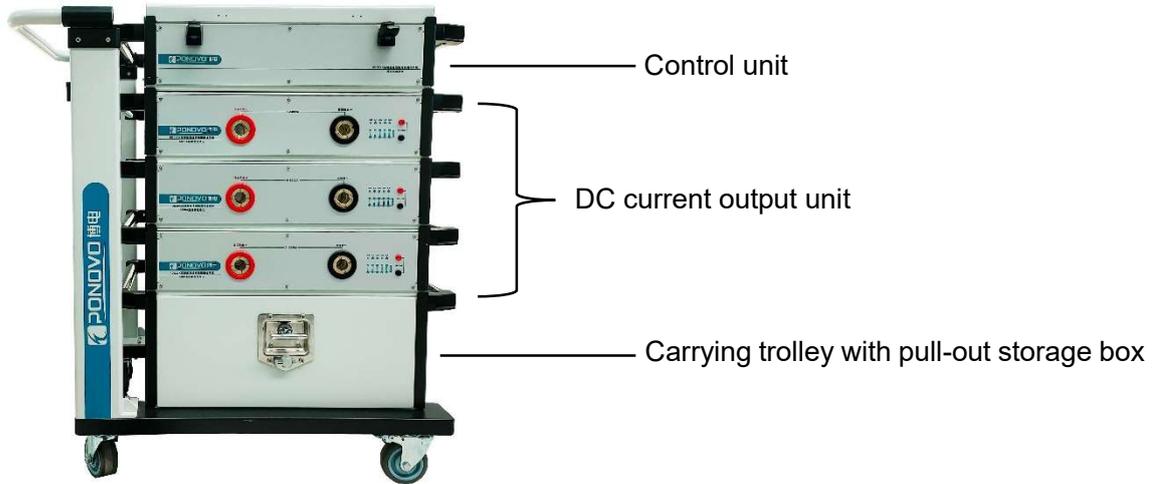
- Mobile design, carried by a portable cart with four wheels, small size and light weight, can be separated and transported independently.
- Adopts supercapacitor storage energy, need a few seconds to charge power for current output, no impact to the power grid and a thin power supply cord is enough.
- High accuracy, quick response, small ripple.
- Local operation system with user-friendly design, easy to use. Automatic finalize all testings after test parameters set.
- Automatically generating test report with all test results.



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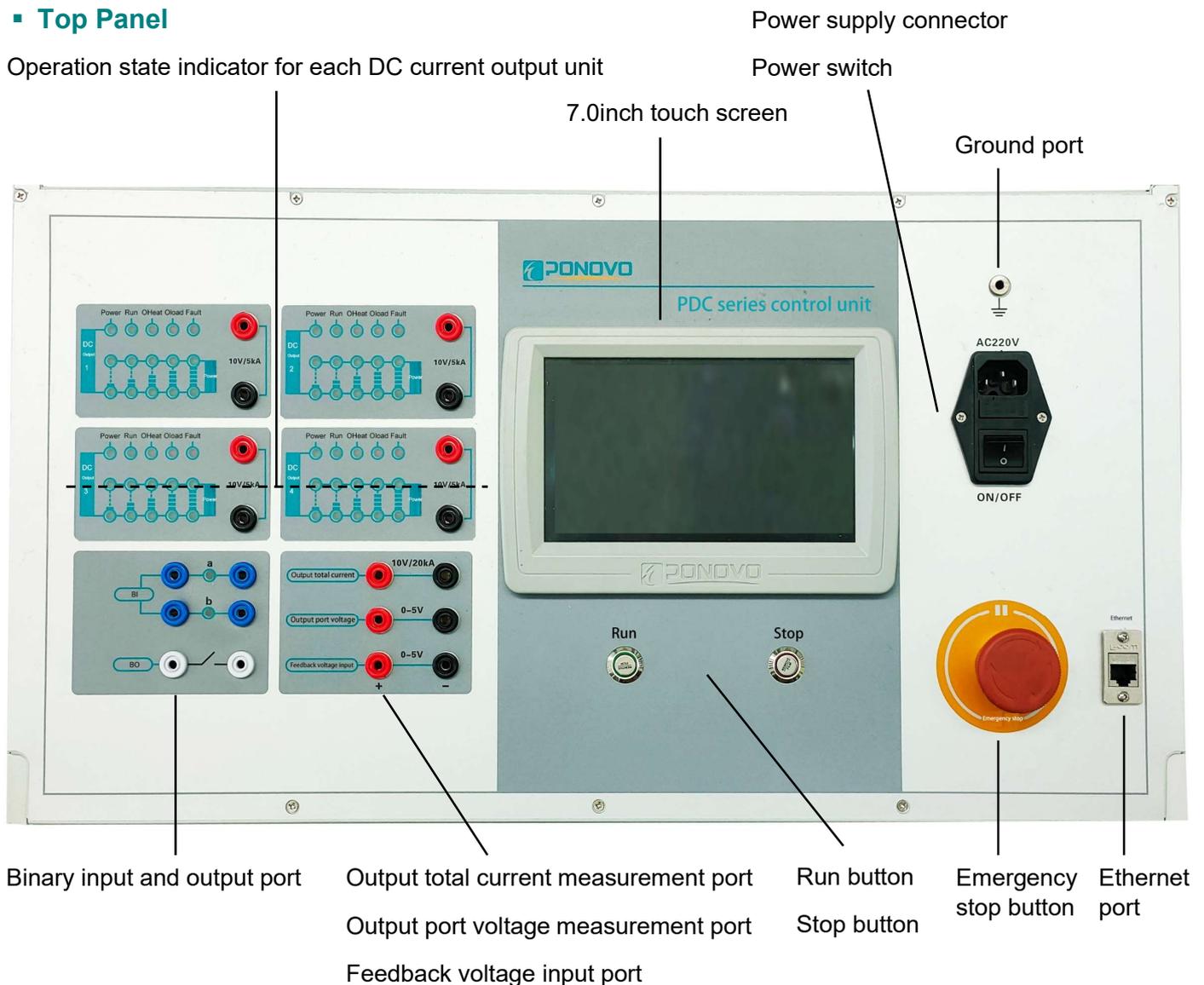
Composition and panels

PDC15K is composed of 1 system control unit, 3 DC current output unit and a portable cart.



Control unit

Top Panel



PDC15k High DC Primary Current Injection Test Set

▪ Rear Panel



Control port 1: connect with DC current output unit 1

Control port 2: connect with DC current output unit 2

Control port 3: connect with DC current output unit 3

Control port 4: reserved in PDC15K

DC current output unit

▪ Front Panel

Power on/off indicator, Run indicator, Overheat indicator, Overload indicator and fault indicator



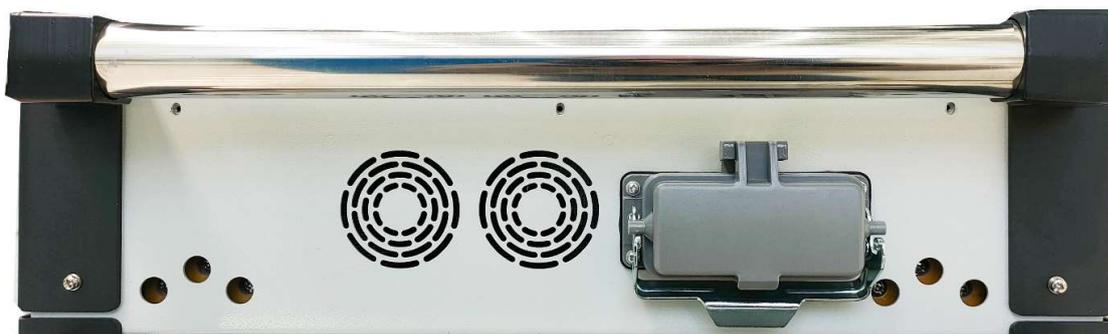
DC current output +

DC current output -

Remaining charging power indicator

Measurement port of output current

▪ Right Panel



Control port: connect with Control unit

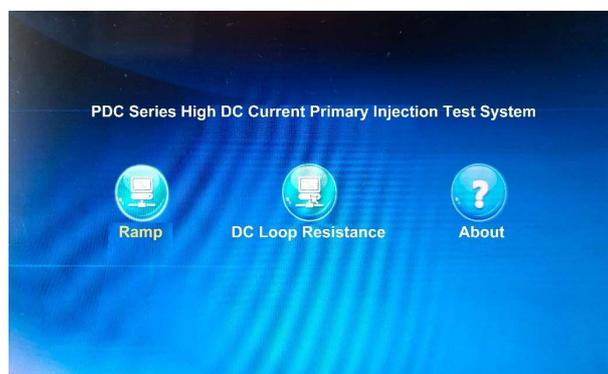
Portable cart



Software Introduction

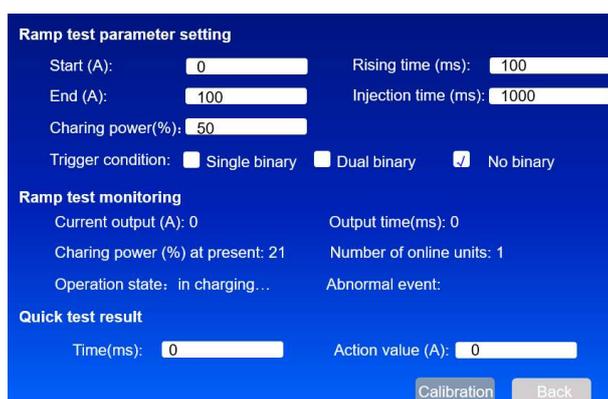
Main interface

- ❖ The main interface has three function menus: Ramp test, DC loop impedance test and About information.
- ❖ Ramp test can output current in incremental mode to test the DC circuit breaker action current, action time, etc.
- ❖ DC loop impedance test can do contact resistance and loop resistance test.
- ❖ About is some basic information of this test system.



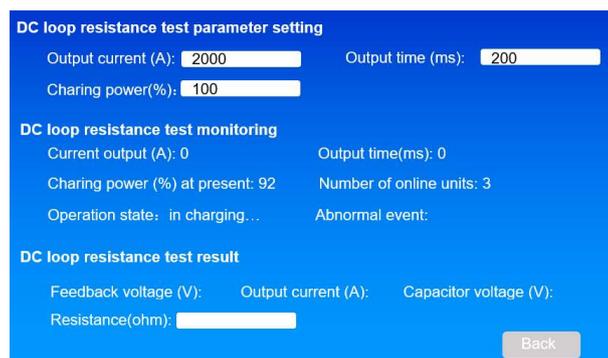
Ramp test interface

- ❖ Including Ramp test parameter setting, Ramp test monitoring and Quick test result display.
- ❖ Ramp test parameter setting can set start value, end value, rising time and output time, etc.
- ❖ Ramp test monitoring can read output current, output time, charging power and the operation state of each unit, etc.
- ❖ Quick test result can show the trip time and trip value.



DC loop resistance test interface

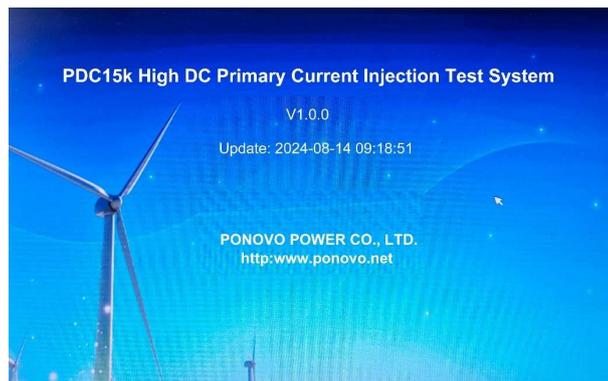
- ❖ Including DC loop resistance test parameter setting, test monitoring and test result display.
- ❖ Parameter setting can set output current, output time, etc.
- ❖ Test monitoring can read output current, output time, charging power and the operation state of each unit, etc.
- ❖ Test result can read the feedback voltage, output current, capacitor voltage and the test resistance value.



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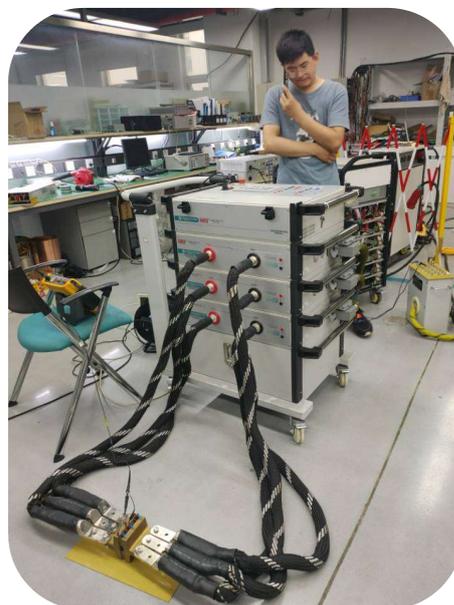
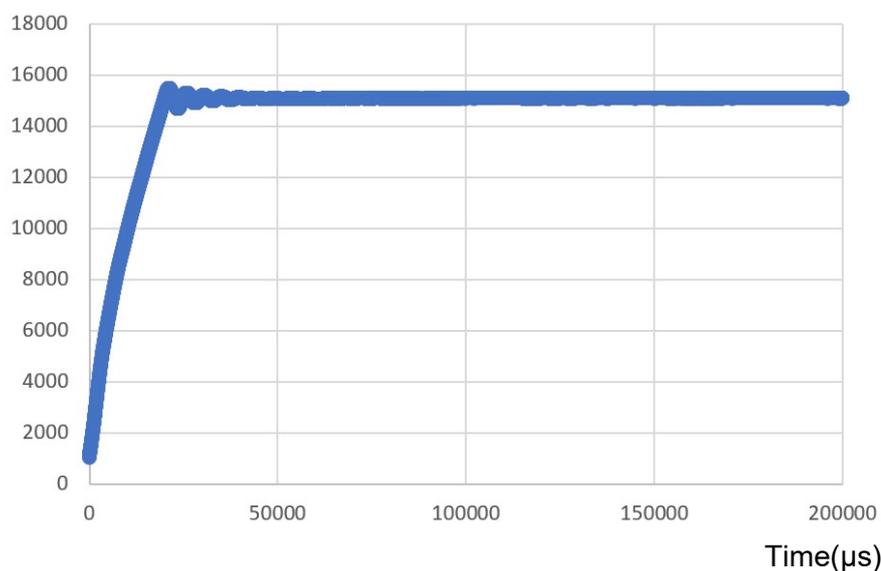
About information

- ❖ About information includes software Version, Release Date, Model and company information.



15KA Current Output Waveform

Output (A)



Specifications

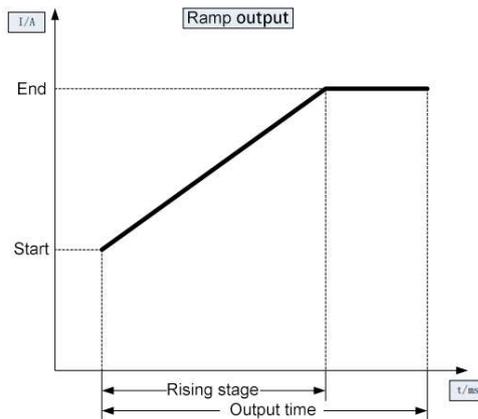
General	
Power supply	Single phase 220VAC/50Hz, range -10%~+10%
Power supply input power	<2KVA
Output voltage range	0~5V
DC current output range	0~15000A
Load capacity	3.5V/15000A 950ms 4V/10000A 3 seconds 4.5V/5000A 10 seconds
Accuracy at output current range	±1% (3000A~15000A); 30A (0~3000A)
Current output ripple	<0.5%
Current output generating duration	10ms~1000ms can be setting
Stability	<0.1%

PDC15k High DC Primary Current Injection Test Set

General

Current output mode

Automatic ramp output



Control unit

Quantity	1 piece
Weight	23kg
Dimension	760×185×640mm(W×H×D)
Display screen	7-inch touch screen
1 Ethernet port	Manufacturer-specific software update interface

DC current output unit

Quantity	3 pieces
Weight	28kg per unit
Dimension	760×155×640mm(W×H×D)
Current output	5000A/unit

Portable cart

Quantity	1 piece
Weight	44kg
Dimension	1000×1020×600mm(W×H×D)
Composition	contains four universal wheels and a storage box for cables

Binary inputs

Number	2 pairs of independent inputs
Input characteristics	Dry contact or with voltage(30V~250V), automatic polarity recognition
Accuracy of timing	±1ms(0.001~1s), ±0.1%(1~999.999s)

Binary outputs

Number	1 pair
Contact rating	250V DC/0.5A, 250V AC / 8A

DC Loop resistance test

Resistance range	0-50000μΩ
Accuracy error	1.0 class
Testing current	100A-15000A

Environmental conditions

Operation temperature	0~+40 ° C
Storage temperature	-25 ° C ~+70 ° C
Relative humidity	5~90% non - condensing
Atmospheric pressure	86kPa ~ 106kPa
Protection	IP22

Professional Solution Provider For The Power World

Since 2001, Ponovo Power has been focusing on providing professional solutions to over 5000 clients in the fields of intelligent testing and power quality control in China and aboard



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