

HF-RT-214

Protection Relay Secondary Injection Tester



This Protection Relay Secondary Injection Tester outputs adjustable three-phase voltage and current signals to simulate power system faults. It comprehensively tests all types of protective relays, boasting high precision, stable output and convenient operation for substation debugging and maintenance.

Key features

- Current and voltage output accuracy up to 0.05%, smooth waveform and excellent stability to meet all kinds of testing requirements.
- Handheld compact design with light overall weight for easy carrying and field transportation.
- Modular internal structure mostly built with imported components, ensuring stable and reliable output performance.
- Brand-new chassis and operation panel layout with multiple shortcut keys for efficient and convenient operation.
- 10.1-inch high-definition capacitive touch screen enables intuitive touch control operation.

Technical specifications

Parameter	Value
AC Current	Range 4×0~12A per phase
Accuracy	±0.1mA (0~0.2A); ±0.05% (0.2A~12A)
Resolution	1mA
Maximum Output Power	4×12A, ≥20VA per phase
Current Rise/Fall Time	<100us
Total Harmonic Distortion	<0.1% (0.2A ~ I _{max})
Frequency Range	10Hz ~ 1kHz
Amplitude Frequency Characteristic	±0.05%~±0.5% (10Hz~1kHz)
Continuous Output	Up to 12A long-term continuous output
Alarm Protection	Automatic detection & alarm for overheating, overload, waveform distortion and open circuit
AC Voltage	Output Range 4×0~130V per phase
Accuracy	±2mV (0V~4V); ±0.05% (4V~130V)
Resolution	10mV (10V~130V)
Maximum Output Power	4×130V, ≥35VA per phase
Voltage Rise/Fall Time	<100us
Total Harmonic Distortion	≤0.1% (2V~130V)
Frequency Range	10Hz ~ 1kHz
Amplitude Frequency Characteristic	±0.05%~±0.5% (10Hz~1kHz)
Output Mode	Continuous output under rated conditions
Alarm Protection	Automatic detection & alarm for overheating, overload, distortion and short circuit
Current-Voltage Synchronization Error	≤10us
Frequency	Sine Signal Range 10Hz~1000Hz; <1mHz (10Hz~450Hz)
Accuracy	<10mHz (450Hz~1000Hz)
Resolution	0.01Hz

Parameter	Value
Extra Function	Supports superposition of arbitrary 2~21 order harmonics below rated amplitude
Phase Angle	Adjustment Range 0 ~ 359.99°
Accuracy	±0.1°
Resolution	0.01°
DC Current	Output Range 4×0~10A
Accuracy	±1mA (0~0.2A); ±0.5% (0.2A~10A)
Resolution	1mA
DC Voltage	Output Range 4×0~150V per phase
Accuracy	±2mV (0~2V); ±0.2% (2V~150V)
Resolution	1mV (0~10V); 10mV (10V~150V)
Digital Input Contacts	Quantity 4 pairs
Technical Feature	Adaptive no-voltage/potential contacts; flip range: DC 20~250V, with electrical isolation
Digital Output Contacts	Quantity 4 pairs
Contact Type	Fast breaking contacts (response time <100us)
DC Load Capacity	Max. 300V DC, Max. 0.3A
Interface Configuration	USB Port 2 ports
Synchronization Interface	Built-in GPS module, IRIG-B ST optical port
Time Synchronization Terminal	B code / PPS terminal, phoenix terminal socket
Power Supply	Charging Input DC 17V~24V, 50/60Hz, 1.5A
Built-in Power Source	Large-capacity lithium battery; compatible with external spare battery & power bank
HDMI Port	Function 1 HDMI port, supports screen projection for training & teaching
Display & Physical Size	Touch Screen 10.1-inch capacitive LCD touch screen
Overall Dimension	317mm × 243mm × 86mm (Width×Height×Depth)
Net Weight	3.1kg

Compliance and documents

Applicable standards	[TO BE CONFIRMED] standard applied to this model
Calibration certificate	[TO BE CONFIRMED]
Optional accessories	[TO BE CONFIRMED]

Warranty and support

12-month warranty on every exported instrument. English operation manual and remote video guidance at commissioning. T/T, L/C at sight and deposit terms for bulk orders; sea, air or rail shipping.