

KINGSINE

Specialize in Electric Power Testing



All-in-one Design

KINGSINE

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Introduction to Enterprise

Established in 1999, KINGSINE are the top leading factory supplier for designing and providing the Portable Electrical T&M Instruments and Power Management Solutions in China. With ISO 9001:2008 certified Quality Management teams of Research & Development, Production and Marketing.

With 18 years of steady & honorable development, there are thousands of users who recommend KINGSINE brand and product; so far KINGSINE establish its branch office in HongKong, India etc. to offer direct technical service and after service in local and neighbourhood area. Our products sell to over 70 countries in America, Europe, Oceania, Asia and Africa. Most importantly, KINGSINE products can help clients improving their working efficiency and greatly reducing their asset purchase budget.

KINGSINE integrates all precision processing and advancing manufacture method around mainly on:

1. Protection Relay Test Set
2. Power Management System
3. Standard Power Source
4. Multifunctional Power Meter
5. Engybrick Module Power Meter



Contents

Universal Relay Test Set	01
Fiber Digital Relay Tester	09
Comparison Among Relay Tester	11
KRT Relay Test Software	12
Standard Power Source	13
Power Meter Series	15
Engybrick Module Power Meter	17
Certificates	19
Applications Case	20



Universal Relay Test Set



K3163i Universal Relay Test Set **NEW**

All-in-one hardware design complying with IEC61850 SV & GOOSE

- Digital signal output complying with IEC61850-9-1 / IEC61850-9-2 protocols.
- Synchronize with GPS, IRIG-B.
- Suitable testing for all kinds of Electromagnetic relays, Microcomputer relays, digital relays.

Voltage Outputs	
Output Range	4×310V ac(L-N);2×620V ac(L-L);3×350V dc(L-N)
Accuracy	AC:<0.03%Rd+0.02Rg Typ./<0.07%Rd+0.03Rg Guar. DC:±10mV@<5V,±0.5%@≥5V
Current outputs	
Output Range	6×32A ac(L-N);6×64A ac(2L-N);1×100A ac(6L-N);3×20A dc(L-N)
Accuracy	AC:<0.03%Rd+0.02Rg Typ./<0.15%Rd+0.05Rg Guar. DC:±5mA@<1A,±0.5%@≥1A
Aux. DC Voltage Source	
Range	0~350V @ 180W max
Accuracy	0.5% Rg Guar.
Others	
Frequency Range	DC~1KHZ, 3KHZ Transient
Phase Range	0°~360°
Binary Input	
Quantity	8 pairs
Binary Output	
Quantity	4 pairs (Semiconductor type & Relay Type)
Synchronization	
Synchronization mode	GPS, SMA type antenna connector / IRIG-B
Optional Modules	
Transducer Calibrator	Hardware is ready, to be activated
Standard Meter	Require extra PCB pre-installed in factory only
Transient Recorder	Require extra PCB pre-installed in factory only
Energy Meter Calibration	Hardware is ready, to be activated
IEC61850 SV & GOOSE	Hardware is ready, to be activated

K31 Series Ordering Ref.

Model	Current Outputs	Voltage Outputs
K3166i	6×32A@450VA max / 3×64A@850VA max	7×310V@90VA max
K3163i	6×32A@450VA max / 3×64A@850VA max	4×310V@124VA max
K3130i	3×32A@450VA max	4×310V@124VA max

Universal Relay Test Set



K30 Series Relay Test Set

Universal Relay Test Set

- Graphical test modules and templates for testing of various relays
- Quick relay testing facility in Manual mode
- Shot / Search / Check, Point & Click testing
- RIO / XRIO import & export facility

Voltage Outputs

Output Range	4×300V ac(L-N);2×600V ac(L-L);3×300V dc(L-N)
Accuracy	AC:±2mV@0.2~2Vac;<0.03%Rd+0.01Rg Typ./<0.07%Rd+0.03Rg Guar. DC:±10mV@0.05V~5Vdc,±0.5%@5V~300V dc

Current Outputs

Output Range	6×30A ac(L-N);3×60A ac(2L-N);1×100A ac(6L-N);3×20A dc(L-N)
Accuracy	AC:±1mA@0.2A-0.5Aac;<0.05%Rd+0.02Rg Typ./<0.15%Rd+0.05Rg Guar. DC:±5mA@0.2A~1A dc,±0.5%@1A~20A dc

Aux. DC Voltage Source

Range	0~300V@ 120W max
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Others

Frequency Range	5~1000HZ
Phase Range	-360°~+360°

Binary Inputs

Quantity	8 pairs
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Binary Outputs

Quantity	4 pairs
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Synchronization

Synchronization mode	GPS, SMA type antenna connector
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Optional Modules

Transducer / Energy Meter / Recorder & Standard Meter

K30 Series Ordering Ref.

Model	Current Outputs	Voltage Outputs
K3066i	6×30A@450VA max / 3×60A@850VA max	7×300V@90VA max
K3063i	6×30A@450VA max / 3×60A@850VA max	4×300V@120VA max
K3030i	3×30A@450VA max	4×300V@120VA max

Universal Relay Test Set



K68 Series Relay Test Set

Three-Phase Relay Test Set

- Auto / Manual Test on: DC Test, AC Test, Distance Test, Harmonic Test, Frequency protection Ramp Test.
- Optional PC Control Software: Differential / Advanced distance / State sequence etc.

AC Voltage Outputs	
Range	4-phase AC(L-N),4×0~300V ; 2-phase AC(L-L),2×0~600V
Accuracy	±2mV(0.2V-2V) / ±0.1%(2V-300V)
AC Current Outputs	
Range	3-phase AC(L-N),3×0~35A ; 1-phase AC(L-N),1×0~105A
Accuracy	±1mA(0.2A-1A) / ±0.1%(1A-35A)
Others	
Frequency Range	1~1000Hz
Phase	Range: -360°~360°; Accuracy: <0.2°
DC Outputs	
Voltage	Range: 0~300V / 180W Accuracy: ±25mV(0.5V~5V); ±0.5%(5V~300V)
Current	Range: 0~20A / 300W Accuracy: ±5mA(0.2A~1A); ±0.5%(1A~20A)
Aux. DC Voltage Source	
Range	0~300V / 0.6A
Binary Input	
Quantity	8 pairs
Binary Output	
Quantity	4 pairs
Harmonic	
Stacking Times	2~9 times

K68 Series Ordering Ref.

Model	Model	Current Outputs	Voltage Outputs
K68	K68	3×35A	4×130V
	K68i	3×35A	4×300V

Universal Relay Test Set



K60 Series Relay Test Set

Universal Relay Test Set (Lightweight <18kg)

- High 9.7" TFT LCD screen with resolution
- Perform full function tests in same KRT software screen with or without external laptop
- Small size & Lightweight

Voltage Outputs

Output Range	4×300V ac(L-N);2×600V ac(L-L);3×300V dc(L-N)
Accuracy	AC:±2mV@0.2~2Vac;<0.03%Rd+0.01Rg Typ./<0.07%Rd+0.03Rg Guar. DC:±10mV@0.05V~5Vdc,±0.5%@5V~300V dc

Current Outputs

Output Range	6×30A ac(L-N);3×60A ac(2L-N);1×100A ac(6L-N);3×20A dc(L-N)
Accuracy	AC:±1mA@0.2A-0.5Aac;<0.05%Rd+0.02Rg Typ./<0.15%Rd+0.05Rg Guar. DC:±5mA@0.2A~1A dc,±0.5%@1A~20A dc

Aux. DC Voltage Source

Range	0~300V@ 120W max
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Others

Frequency Range	5~1000HZ
Phase Range	-360°~ +360°

Binary Inputs

Quantity	8 pairs
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Binary Outputs

Quantity	4 pairs
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Synchronization

Synchronization mode	GPS, SMA type antenna connector
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Optional Modules

Transducer Calibrator / Energy Meter Calibration / Standard Meter

K60 Series Ordering Ref.

Model	Current Outputs	Voltage Outputs
K6066i	6×30A@450VA max / 3×60A@850VA max	7×300V@90VA max
K6063i	6×30A@450VA max / 3×60A@850VA max	4×300V@120VA max
K6030i	3×30A@450VA max	4×300V@120VA max

Fiber Digital Relay Tester



KF910 Fiber Digital Relay Tester

Able to test the numerical IEDs relays according to IEC61850-9-1, IEC61850-9-2, IEC60044-7/8 etc.

- Displayed by embedded 9.7 inch TFT LCD screen with 1024×768 resolution; Inbuilt keyboard and mouses make it easy operation for user and provide excellent user experience for intelligence substation
- Subscribe and simulation GOOSE message
- Inbuilt GPS module, fiber IRIG-B code synchronization and IEEE1588 time synchronization function

Fiber Optic Communication Interface

Port Number	4 / 8 / 12 / 16 pairs optional
Port Type	LC

FT3 Port

Port Number	4 / 8 / 12 / 16 for sending, 2 for receiving
Port Type	ST

Binary Input

Quantity	8 pairs
Binary Input	Dry contacts / 0~300Vdc (Binary input reversal potential can be set)

Binary Output

Quantity	8 pairs
Binary Output 1~4	Potential relay contacts (software controlled) AC: Vmax:250V/Imax:3A; DC: Vmax:250V/Imax:1A
Binary Output 5~8	fast contact, open collector; response speed:100us; DC Break capacity: 5-15V/5mA, 10mA max; AC not permit

Time Synchronization

GPS	Support, Built-in integration
IRIG-B	Support, port type ST
IEEE1588	Support, port type LC

Other Port

RJ45	2 pcs
USB	2 pcs
RS232	2 pcs

Low-level Single Analog Output





Output Channel	13 channels
Set Range	AC: 0~8Vrms (Valid value); DC: 0~8V

Power Supply

Nominal Voltage	100~240V(AC)
Allow Voltage	100V~260V (AC) or 127V~350V(DC)
Nominal Frequency	50Hz
Allow Frequency	40~60Hz
Current Consumption	3A(max)
Connection Type	Standard AC socket 60320

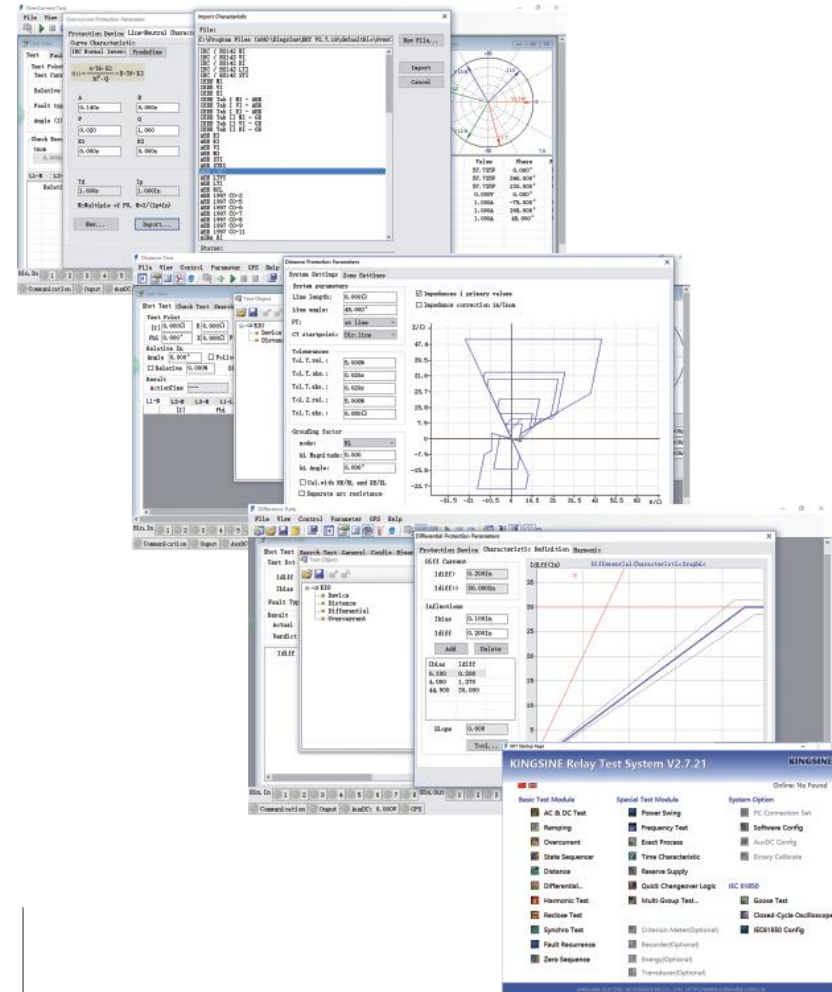
Comparison Among Relay Tester

Comparison among K10,K60,K30 & K31 Series

Item	K1063i	K6063i	K3063i	K3163i
				
Functions	Be able to test all type of traditional relays	Be able to test all type of traditional relays	Be able to test all type of traditional relays	Be able to test all type of traditional relays & complying IEC61850 SV and GOOSE
Weight	24KG	18KG	17.5KG	17.5KG
Low-level Output	N/A	N/A	N/A	13 channel low-level output, 0~8Vrms
Amplifier	6×30A, 4×300V	6×30A, 4×300V	6×30A, 4×300V	6×32A, 4×310V
Display	6.4" TFT 640×480	9.7" LED 1024×768	N/A	N/A
End-to-End	External GPS, optional	In-built GPS	In-built GPS	In-built GPS & IIRIG-B
OS	WinCE, Local or PC control	WinXPE, Local or PC control, same operation interface	PC control	PC control
Energy Meter Calibration	N/A	Optional Accuracy:0.2%	Optional Accuracy:0.2%	Optional Accuracy:0.1%
Transducer Calibration	N/A	Optional Accuracy:0.2%	Optional Accuracy:0.2%	Optional Accuracy:0.05%
Criterion Meter	N/A	Optional Accuracy:0.2%	Optional Accuracy:0.2%	Optional Accuracy:0.1%
Transient Recorder	N/A	Optional, 30 seconds Max.	Optional, 30 seconds Max.	Optional, 50 seconds Max.

KRT Relay Test Software

- Testing library consist of RIO files
- No limited to number of PC / Users



Standard Power Source



KS833 Series Standard Power Source

AC/DC Standard Source And Calibrator

- Open protocol for software self-programming
- 3-phase Harmonic standard power
- Analog/Digital meters calibration
- Transducer and Energy meter calibration

Output & Measuring AC Voltage	
Available Ranges	10V,30V,100V,300V,750V,auto-shift
Accuracy	0.05%Rg
Output & Measuring AC Current	
Available Ranges	100mA,1A,5A,10A,25A,auto-shift
Accuracy	0.05%Rg
Output & Measuring AC Frequency	
Frequency Range	45.000~65.000Hz
Accuracy	0.01%Rd
Output & Measuring AC Phase Angle	
Phase Angle Range	0.00°~359.99°
Accuracy	0.05°
Output & Measuring AC Power Factor	
Output Range	-1~0~+1
Output & Measuring Harmonic	
Harmonic Setting	2~31
Harmonic Content	Voltage, Current≤30% (as against fundamental)
Output & Measuring DC Voltage	
Available Ranges	100mV,1V,10V,30V,100V,750V
Accuracy	0.02%Rg
Output & Measuring DC Current	
Available Ranges	1mA,10mA,100mA,1A,5A,10A,25A
Accuracy	0.05%Rg

KS8 Series Ordering Ref.

Function modules	Models			
	KS833	KS823	KS813	KS803
AC Standard Source	√	√	√	√
Harmonic Standard Source	√	√	√	√
DC Standard Source	√	√	√	-
Instrument Calibration	√	√	-	-
Power Meter Calibration	√	-	-	-
Transducer Calibration	√	-	-	-

Remark: "-" stand for not supporting functions, "√" stand for the standard configuration

Power Meter Series



Multifunctional Power Meter

- Three-Phase Digital Power Meter
- Three-Phase Network Power Meter
- Three-Phase Electric Monitoring Meter
- Single Phase Digital Power Meter
- Single Phase Network Meter

Three-Phase Power Meter



PMC200 (Size: 96×96×72mm)



PMC180 (Size: 96×96×72mm)
PMC180N (Size: 110×75×72mm)



PMC72L (Size: 72×72×95mm)



PMC96L (Size: 96×96×102mm)

Single Phase Power Meter



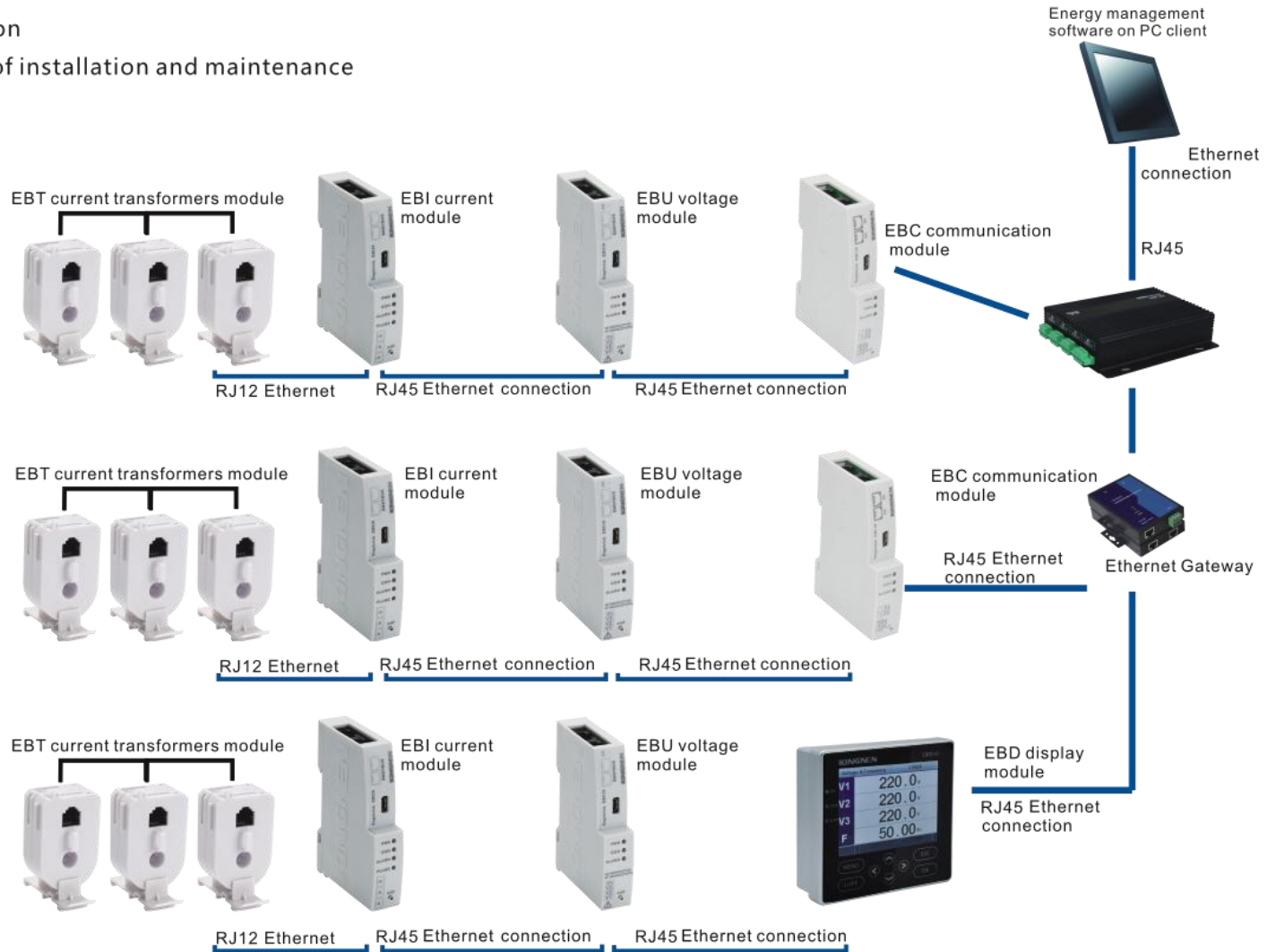
PMC100 (Size: 96×48×95.5mm) / PMC100N (Size: 75×55×120mm)

Engybrick Module Power Meter

Engybrick Distributed Intelligent Power Monitoring Module

- Easy Installation
- Convenience of installation and maintenance
- Cost saving

Energy Management System



Certificates

Application Case

