

# The World's Lightest High-Power Universal Relay Tester





The most costperformance 3-phase relay tester (Class:0.1) **KT210** 



The lightest portable CT/PT Analyzer

KS833



The most reliable 3-phase electrical calibration tool for lab use(Class:0.05)

**KFA300** 



Ultra-light hand-held 3-phase protection relay tester

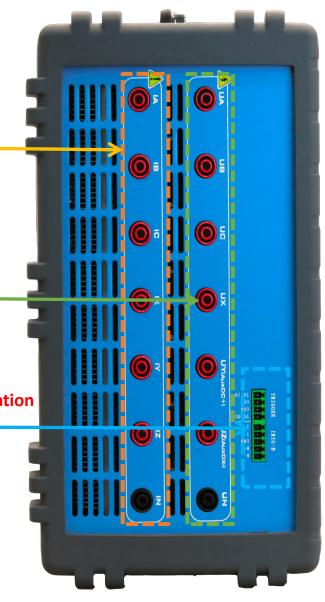
## **KF86P Universal Relay Test Set**

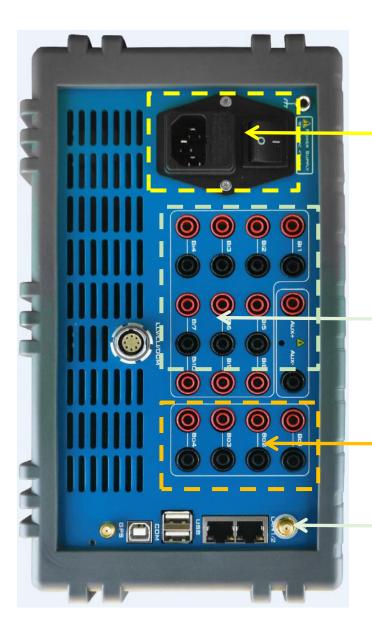


Current output 6×35A\425VA 3×70A\670VA 1×100A\1000VA

Voltage output 6×310V\105VA 3×620V\175VA

Time Synchronization
IRIG-B Fiber
IRIG-B Electric
External trigger synchronization





Power Supply & Switch 85V~265V (AC) 127V~350V(DC)

10 Pairs Binary input 0 V∼300Vdc Or dry contact (Binary input turn over potential can be programmable)

4 Pairs Binary Output Vmax: 250V (AC) / Imax: 8 A

GPS Port for End-to-End Test Ethernet port for communication Serial port for debug 2 USB port for report and update





- Super portable test equipment applied in both smart substation and traditional substation all over the world
- Meticulously designed by KINGSINE, a leading Chinese technology company with over 24 years in the market and a leading supplier of test and measurement equipment to the Chinese government;

**Important information:**, Compact 6-phase relay test set with high accuracy & full solution (complying IEC61850 sampled value and GOOSE), fully meet all the requirements for detection and debugging of IEC61850 IEDs, Merge Units, station control systems and traditional protection relays

KF86 adopts Multi-Core SOC. avoiding the troublesome communication process caused by using data bus to exchange data

C1 C3

Core 1

Data Simulation Core 2

Command Process

Core 3

Communication Computer

The KF86 system is highly integrated, allowing it to fully meet the testing and commissioning requirements for:

- Protection relays;
- Measuring and control devices;
- smart terminals;
- Merge units;
- Intelligent substation control systems.

## **KF86P Universal Relay Test Set**





High Precision and Control of Electrical Quantities



Free training



Cutting edge technology



Lifetime Technical Support



It allows testing Protection Relays (Digital, Electromechanical...), Merge Unit, Meters.....



**Tutorials and Video Lessons** 



**Complete Software for Test Automation** 



3 Year Warranty, extendable to 5 years



12 Independent Analog Channels



Integrated Wi-Fi Module



Variable DC Battery Simulator



Time Synchronization Protocol



10 Pairs Digital Inputs (Dry or "Wet Contact")
4 Pairs Digital Outputs



Integrated GPS/BDS Timing Module



# IEC 61850

- Automatically import SCL files (SCD, ICD, CID, NPI) to perform automatic setup of sampled values and GOOSE information and save sample values and GOOSE configuration information as a configuration file for testing;
- Support graphical display of SCD files, graphically display IED interconnect relationship and virtual terminal connection.

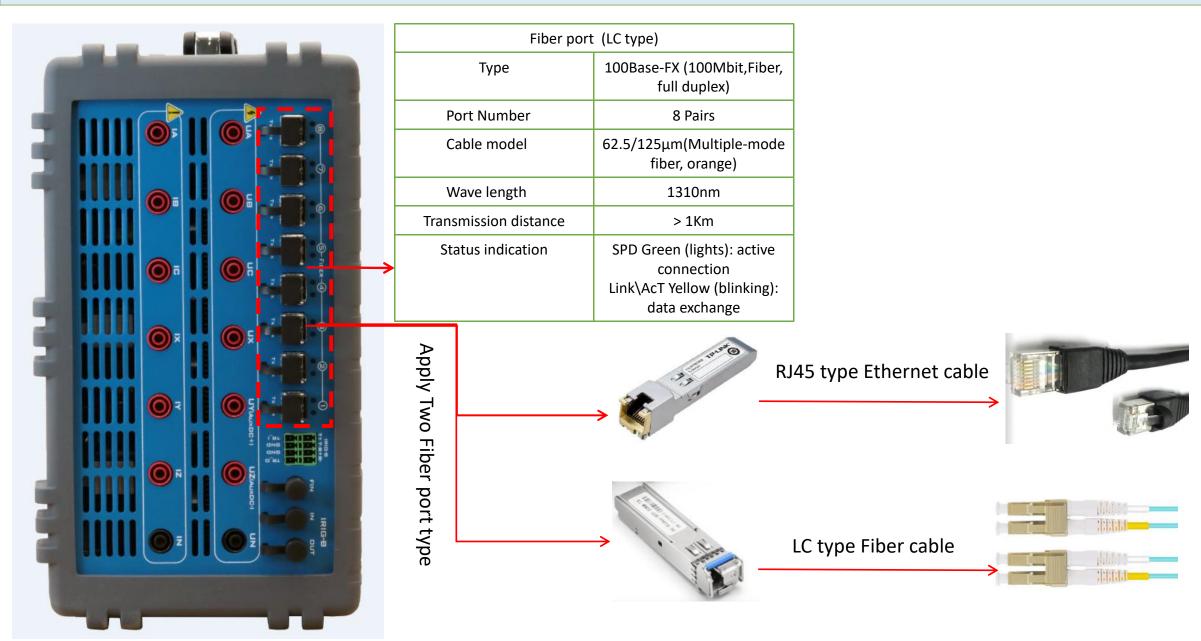




- Supports subscribing, publishing GOOSE messages;
- Multiple GOOSE control block messages can be subscribed/published;
- Automatically detects optical digital signals from MU, protection device and intelligent operation box, and realizes the function of automatic setting of sampling value and GOOSE information

- Simultaneously inject analog signals and IEC61850 Sampled Value Messages;
- Up to 36 channels freely defined by the user;
- The channel quality of the outgoing SV message can be set and the simulation unit can be simulated and debugged





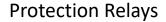




# Simple and Powerful software

Ideal for testing various equipment such as:





- Digital
- Electromechanical
- Static



**Power Meters** 



Transducers



And many others





# **Automation - Test Modules**



AC Test



Ramping



StateSequencer



Harmonic



Frequency



Overcurrent



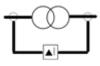
ZeroSequence



Differential



Harmonic Restraint



Differential Configuration



Distance



Power Swing

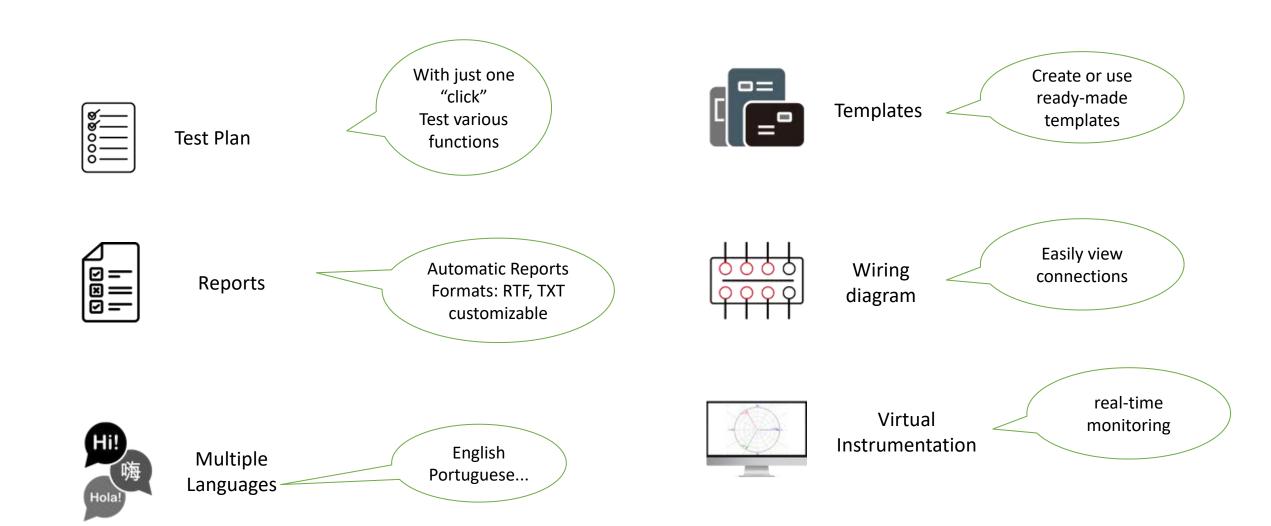


Reclose



Synchronizer







# "COM" Concept

## **C** = Connect and Configure



- IP definition;
- Connection status...



- Definition of system parameters;
- Digital I/O definition;
- Definition of Goose and Sampled Value channels;



- Identification of analog channels and digital I/O
- Aux channel voltage level selection.
   DC (if necessary)

## O = Test Object

- Defines the object's nominal and fault conditions
- Characteristics of the protection function to be tested;
- General information of the protected electrical system...

## M = Test Module

- Defines characteristics of Faults
- Time delays (Pre-fault time, fault time and post-fault time);



- Trigger Logic for Binary Inputs and Outputs;
- Visual Graphics defining test failures;
- Different views like: Vector View, Report View, Connection View, Time View etc.

## **KF86P Universal Relay Test Set**



Kingsine Electric Automation Co., Ltd. has been specializing in Research & Development, production and sales of Electric Testing & Measurement Instruments since 1999 foundation who is also honored as the High-tech enterprise certification and Software enterprise certificate recognized by China authority. With about high development speed every year, Kingsine win the Chinese top manufacturer for electric test equipment the domestic relay-tester market.

### **Research & development:**

Kingsine also own the strong technicians and experts and is capable of providing electric power test solution in conformity with customer's specifications, With his creative All-in-One design idea and many patents, Kingsine's product has been well approved and recommended by China National Institute of Metrology and power research institutes of each provincial as well as CE certificate.

### **Marketing & Service:**

Now Kingsine's products are approved by over 80 countries worldwide in many industries of electrical power, metallurgy, petrochemical, railway mining and relative scientific research institution as well as same trade of meter and protective relays factories, and getting the warm welcome from the world large Electricity & Energy Exhibition such as POWER-GEN International of USA, Middle East Electricity of Dubai, HANNOVER MESSE of Germany and FIEE Electrical of Brazil. Its Relay-Tester is suitable working for many world famous relay protection devices such as ABB, SIMENS, ALSTOM, TOSHIBA, SCHNEIDER, AREVA, SEL, GE etc and Kingsine also give the full service with his distribution net from many countries partners of European, Asia and Middle East.

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#### Manufacture:

With ISO 9001:2000 certified and Located the High-tech Zone downtown of Shenzhen neighbor Hong Kong, Kingsine integrates all precision processing and advancing manufacture method around mainly on Protection Relay Test Set, Standard Power, Power Calibrator, RTU-Tester & Multifunctional Power Meter, which ensure his products with 3-year quality warranty on free repair.

