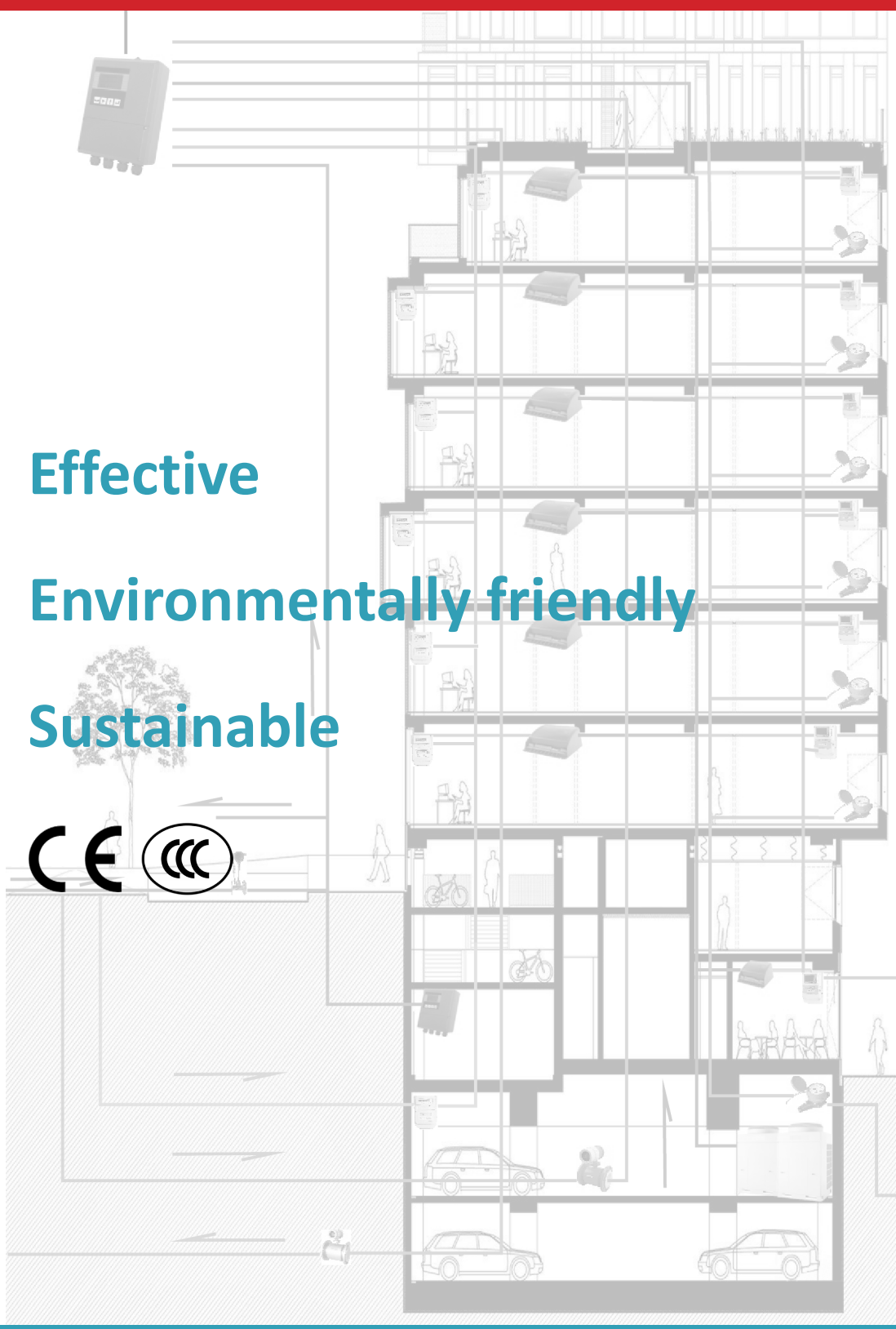
SMAAT TECHNIQUES

Measurement & Control Instruments



- Effective
- Environmentally friendly
- Sustainable

CE CCC

Energy Measurement & Management System

WHAT IS IT?

Overview

During last ten years, we've developed an effective and intelligent energy measurement and management system. Its performance is based on two factors:

- High quality measurement & control instruments;
- Intelligent custom-made software.

Measurement & control instruments collect energy and resource use data, which are sent to management software which stores and displays the data in a very visual way.

The custom-made software allows to look into and analyze data easily, and then adjust energy and resources use, in order to achieve an optimal utilization.

Applications

This system can serve in many fields:

 Air conditioning

 Water

 Electrcity

 Oxygen

 Gas

 Steam

Avec une gestion centrale et intelligente, il est très approprié pour les réseaux complexes tels que :

 Hotels

 Hospitals

 Factories

 Business centers

 Museums

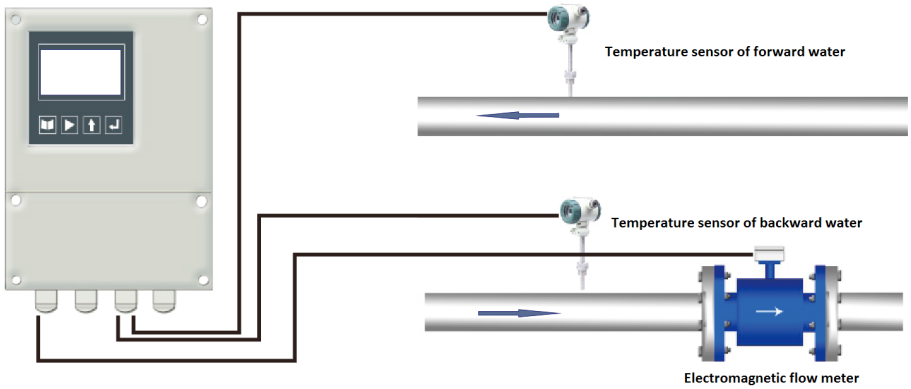
...

Performance

In our partnership with hotels, hospitals, business centers and thermal heating factories…, this system has been proven to be effective, ecological and sustainable in energy measuring and managing.

PRODUCTS

Measurement / Air conditioning



Electromagnetic flow meters

- Thermal energy measurement
- High accuracy: ≤ ± 0.5%
- No pressure loss in measurement
- Small exciting current, low level heat
- Excellent stability, long service time
- Low consumption: < 5 W

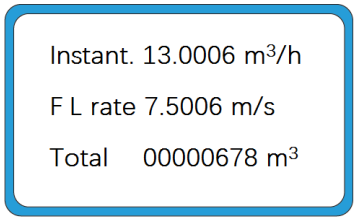
Temperature sensors

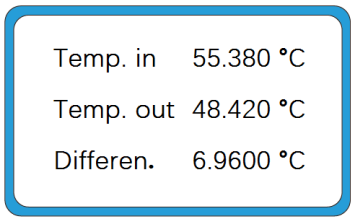
- Sensible elements: PT1000
- The two temperature sensors have the same temperature measurement curve
- Large temperature range: -50 °C to 500 °C

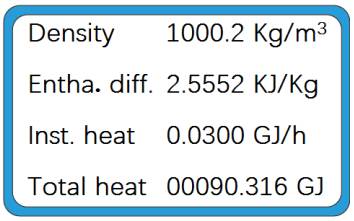
Energy Measurement & Management System

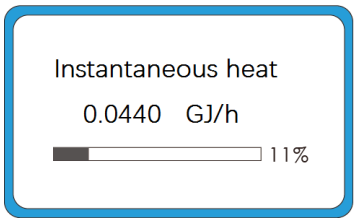
Data collection instruments

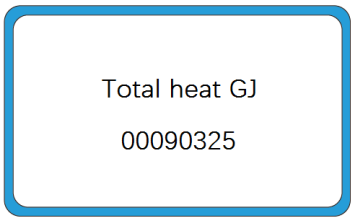
- Big LCD screen to display various values: instantaneous flow, flow rate, totalized flow, instantaneous thermal energy, totalized thermal energy, in-temperature, out-temperature, enthalpy value, time, power-off record
- Instantaneous thermal energy curve
- Daily reports since 365 days, monthly reports since 48 months, and annual reports since 10 years

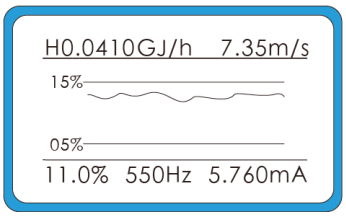


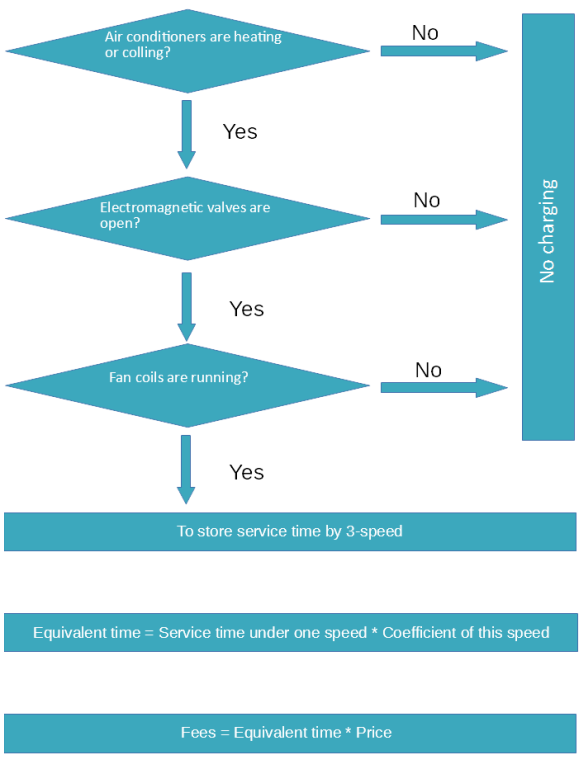












Intelligent fan coils

- Time-oriented billing device
- Modbus RS485
- 3-speed switch
- To calculate and store cooling / heating time in 3 speeds
- To monitor magnetic valves

Energy Measurement & Management System

Measurement / Water, electricity, oxygen

Water meters

- Modbus RS485
- Remote direct reading
- To measure cold or hot water
- Power supply: 4.5 VDC ~ 12 VDC
- 8-digit address code
- CE and 3C (China Compulsory Certificate) markings

Electricity meters

- Modbus RS485
- Monophase or triphase
- 8-digit address code set by factory or by customers
- CE and 3C (China Compulsory Certificate) markings

Oxygen meters

- Composed of a flow sensor and a flow totolizer
- Modbus RS485
- 8-digit address code set by factory or by customers
- CE and 3C (China Compulsory Certificate) markings

Intranet connection instruments

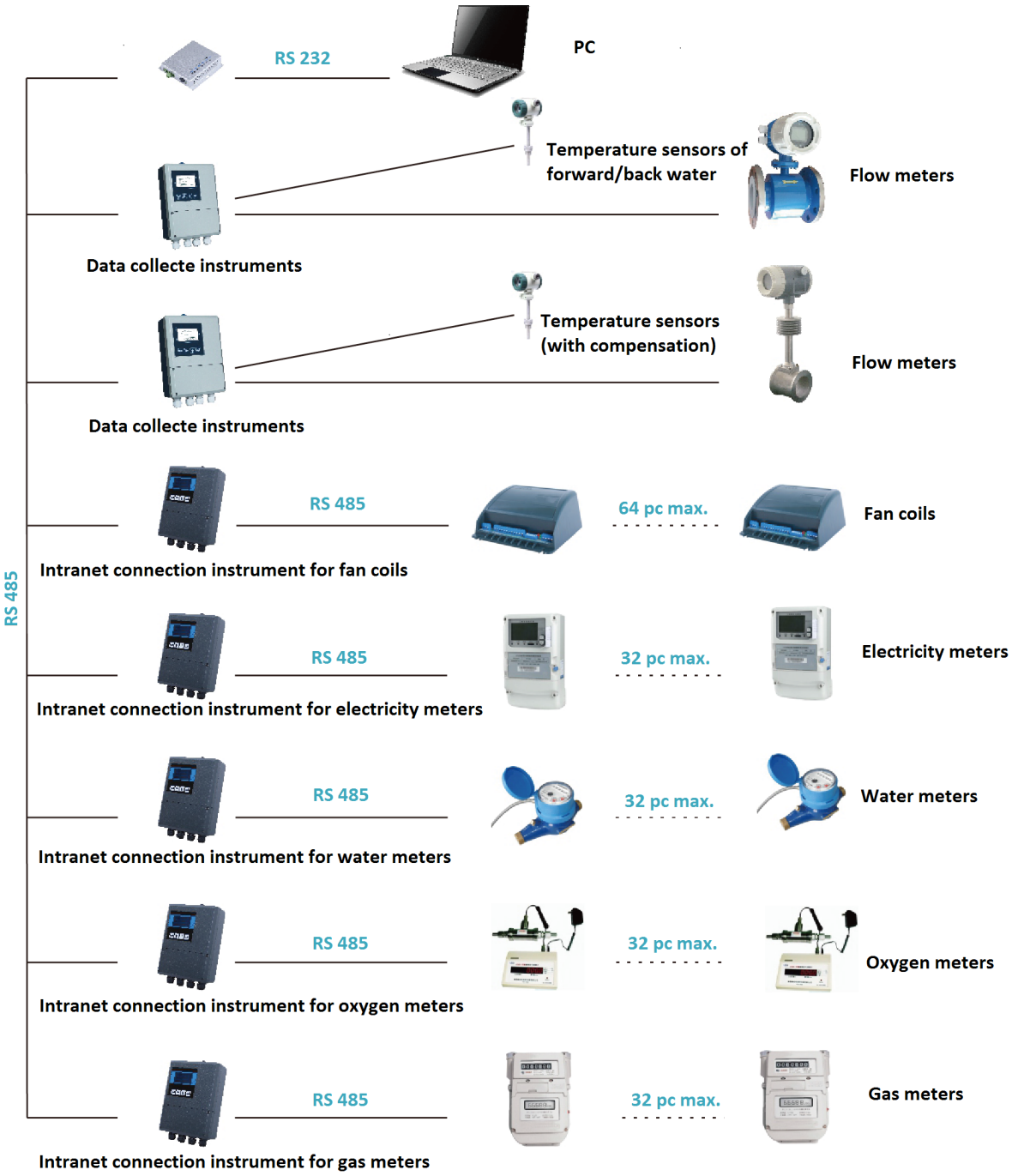
- For electricity meters
- For water meters
- For oxygen meters
- For gas meters
- Remote direct reading of data collected by measurement instruments
- CE and 3C (China Compulsory Certificate) markings

Measurement / Steam

Vortex flow meters

- Particularly designed for steam measurement
- Wide range of applications and excellent reliability
- Low pressure loss
- Simple structure and easy installation
- Remote data transmission
- CE and 3C (China Compulsory Certificate) markings

PHYSICAL ARCHITECTURE



Network **Measurement Instruments**

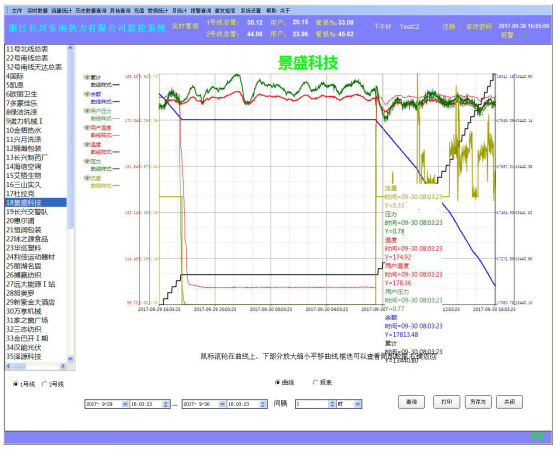
TCP/IP ARCHITECTURE

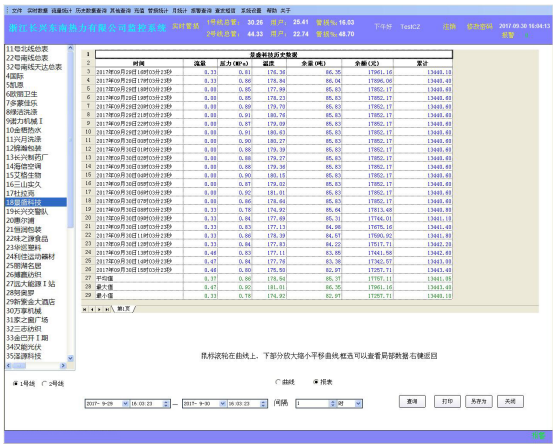
Network **Measurement instruments**

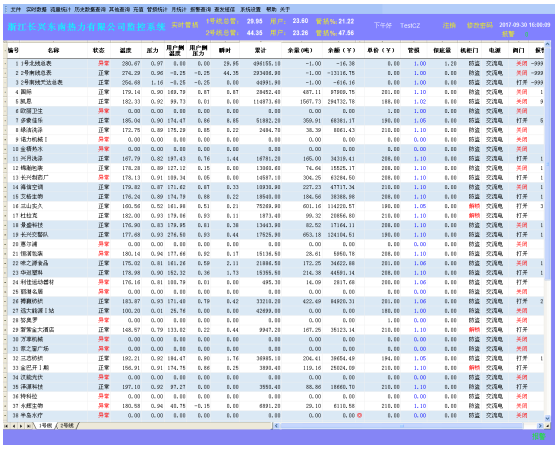
Energy Measurement & Management System

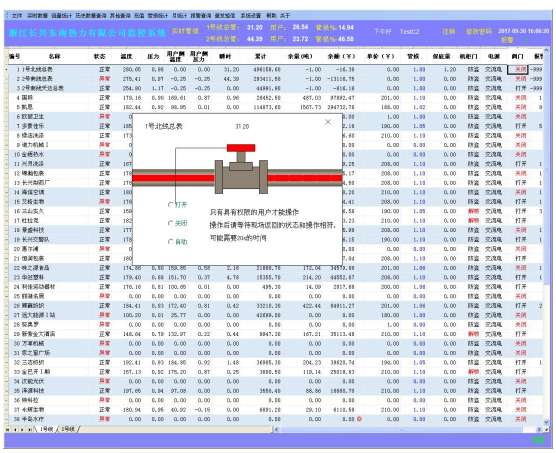
SOFTWARE

For an effective and sustainable energy management system, we offer custom-made software to complete our high-quality measurement instruments. The software can carry out intelligently various tasks like data collection, data analysis (statistics), data showing in a visual way, and data printing, etc.









THEY TRUST US...

Hotels

Westin Sanya Haitang Bay Resort
Water, electricity, air conditioning and steam management

Fairmont Yangcheng Lake Resort
Air conditioning management

Hospitals

Qingtian People's Hospital
Water, electricity, air conditioning and oxygen management

Suzhou Traditional Medecin Hospital
Electricity management

THEY TRUST US...

Commercial centers

Beicheng World in Hangzhou
Water and electricity management

International Plaza in Huzhou
Air conditioning management

And them too ...

XI'an Western Suburb Thermal Power Plant	Central heating measurement
Changxing Waste Water Treatment Plant	Remote transmission of waste water flow
Employees' appartements of Heilan Home	Air conditioning measurement
Lvcheng Qiandao Lake Holiday Apartment	Air conditioning measurement
Zhuji Green Town Square	Water, electricity and air conditioning measurement
Zhuji Xiangsheng Hotel	Central heating measurement
Sheraton Hotels and Resorts in Qingdao	Water, electricity and air conditioning measurement
Sheraton Hotels and Resorts in Jiaozhou	Water, electricity and air conditioning measurement
Xuzhou Thermal Heating Plant	Thermal energy measurement
Meigaomei Hotel in Pékin	Air conditioning measurement

Smaat Techniques

Measurement & Control Instruments

... present in more than 50 countries.

We are at your service, contact-us through + 33 9 52 93 88 90.

SMAAT
TECHNIQUES

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