中控·SUPCON

SupX600 series

Touch Screen Smart Calibrator & Universal HART Communicator

SupX600 series
Interactive Smart Calibrator

Company Profile

1999

SUPCON Technology was established in 1999

20000+

Serving more than 20,000 global companies

100+

More than 100 5S stores covering major Petrochemical parks across the country

Company Profile

Zhejiang Supcon Technology Co., Ltd. (hereinafter referred to as "Supcon Technology" or "the Company") ", 688777.SH) was established in 1999 Years, is a leading provider of integrated solutions for process industry intelligent manufacturing in China。 The company is committed to meeting the industrial digitalization needs of the process industry Deep plowing distributed control system (DCS)、 Safety Instrumented Systems (SIS), Automated control systems such as networked hybrid control systems, and based on this Vigorously deploy and develop industrial software Industry solutions, instrumentation and other products and online and offline service models Formed a relatively complete "industrial 3.0+4.0" Product and Solution Architecture， It has been selected as an intelligent manufacturing system solution provider and demonstration enterprise by the Ministry of Industry and Information Technology for many years.

Main Business

More than 20 years of continuous innovation, Central Control Technology has formed a product system ranging from field instruments to control room instruments. Include Sup Field ® Series Field Instruments、MultiF® series of multi-function smart meters, etc. The main products include pressure instruments, Flow meter, level meter Intelligent secondary instrument, Safety barrier instrument Gas detection instruments and tool instruments, etc. At present, domestic advanced pressure transmitters, Flow meter, level meter production base and calibration production line.

Many of the company's products have been awarded the SIL certification, classification

society certification, CE certification and ATEX certification Central Control Technology Pressure Transmitter Safety barrier products were successfully shortlisted for PetroChina Sinopec, CNOOC procurement framework.

Sales Network

The company has a complete marketing network and service system, through the establishment of six major regions and major petrochemical More than 100 chemical parks 5S store, and in Singapore, Saudi Arabia、Malaysia、Indonesia and other countries completed the registration and operation of many localization companies And gradually to Southeast Asia, Middle East Regional expansion in Africa and Eastern Europe, With a more flexible and efficient resource allocation and collaboration mechanism, Provide customers with more timely and sustainable services.

ISO9000
萬泰認證
认证证书

ISO14000
萬泰認證
认证证书

ISO45001
萬泰認證
认证证书

SGS
EU - TYPE EXAMINATION CERTIFICATE

ATTESTATION
of conformity with European Directives
CE

HD5000 series isolated barriers

IECEx Quality
Assessment Report Summary

CERTIFICATE OF TYPE APPROVAL

国家认定
企业技术中心
国家发展改革委 财 政 部
海 关 总 署 国家税务总局

高新技术企业
证书

软件企业证书

浙江省知名商号
浙江中控自动化仪表有限公司：
经认定，你单位 中控（仪表） 企业商号为浙江省知名商号。
（有效期六年）
浙江省市场监督管理局
二〇一九年一月十七日

“守合同重信用”企业
公示证书
为浙江省AAA级“守合同重信用”企业，公示期两年，公示期间实行动态管理，接受社会监督。

荣誉证书
浙江中控自动化仪表有限公司：
经考核审定，贵单位被新认定为“浙江省信用管理示范企业”，有效期三年。

Production Ability

73000

SUPCON Technology Industrial Park covers an area of 73000m²

200000

The Annual Production capacity than 200,000+ units barriers

700000

of Pressure Transmitters is more the annual production capacity of safety is more than 700,000 units

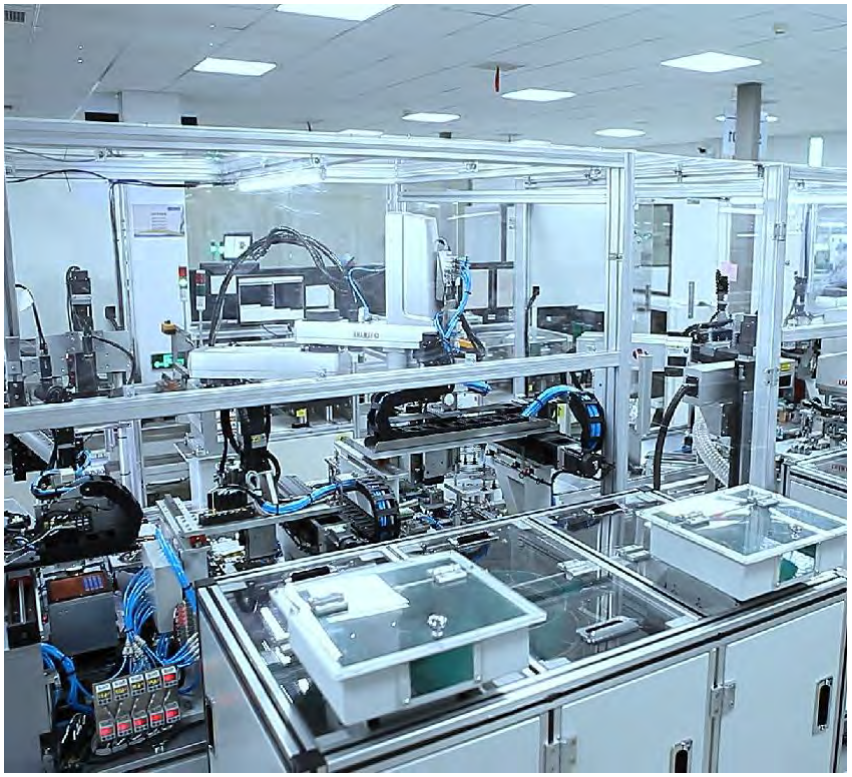
SUPCON Technology Intelligent Manufacturing Factory in 2018 Relocated to Fu yang Industrial Park in October Phase I factory production site Total area 7.3 10,000 square meters, with an annual output of modules 250 Thousand, cabinets 30000, has advanced PCBA production line, automatic coating production line, Self-developed functional test (FCT) production line and other advanced automation equipment Key quality control links have SPI、X-Ray、AOI and other professional testing equipment Warehousing and logistics AGV、Advanced equipment such as automatic silos and intelligent drying cabinets。

In, the production site of SUPCON Technology's intelligent pressure transmitter exceeds 4000 square meter Domestic advanced single crystal silicon sensor has been built device packaging production line, pressure transmitter product automation production line Annual comprehensive production capacity of more than 200,000 units。

Central control technology flow instrument production line adopts high-precision platform scale and standard flow meter Can be used for various flowmeters Verification and Calibration The automation level of the production line is at a high level in China.

The intelligent manufacturing factory of SUPCON Technology adopts the lean production method, All key equipment passed MES It realizes digital networking and automatic data collection, and realizes the intelligence and digitization of manufacturing.

SMT-E
Pb



SupX600 Series

Interactive Smart Calibrator & Hand Communicator

SupX600 Series Interactive Smart Calibrator & The handheld communicator product is as capacitive full Touch screen、1080p High-definition display, integrated intelligent process calibrator and HART Handheld tool instrument product with a handheld communicator。

The product adopts a unique separable operation design，Support the separation of the operation terminal from the product to achieve split use to provide convenience for on-site operation. The product supports dual independent output and measurement，Provides a convenient and easy-to-use process calibrator、

Recorder, etc. Calibration can be done Electronic archiving of operations such as records。

This product has HART Communication function Supports the use of electronic device description languages from major manufacturers （EDDL）with equipment HART communication, complete various HART Configuration of the instrument 、Adjustments and diagnostics, etc.

Product Advantages

High precision process calibrators and HART Communicator in One

Support the measurement and output of various thermal standard signals, Maximum accuracy class 0.01 compliant HART protocol, compatible HART5\6\7 Protocol version device

Fully HART Compatible, Support for HART DD files

Support for thousands of HART device configuration, Adjustment and other operations are fully supported Networked online update equipment DD file.

Field equipment

IDM equipment management system

Provide and control IDM Device management software data integration auto-recording

record the scene HART Upload of any changes to device parameter configuration and tuning IDM software server Realize unified management of operation records

Operation module and signal measurement module can be used separately

When used separately, It can be easily realized in many complex working conditions When used together for efficient work, All operations are identical to other hand tool products

Function Introduction

1. Calibrator

Measure/source basic functions

Support current, voltage (V), Voltage （mV）、frequency, pulse, two/three/ Four-wire resistance or thermal resistance Measurement of thermocouple and on-off signals support current, frequency, pulse Measurement , Voltage of signals such as resistance and analog output of RTD or thermocouple signals the highest accuracy is 0.01%。

- Analog two-wire transmitter output mA Signal
- Provides 24VDC power distribution to the transmitter
- Measure transmitter current, with or without power distribution
- Supports small signal clearing during mV/resistance signal measurement
- The two signals are independent, and can be measured and output at the same time, or two channels can be measured at the same time
- Built-in ITS-90 international temperature scale two-way look-up table
- Celsius and Fahrenheit temperature scale switching
- Manual or tomatic old junction compensation
- Built-in high-precision cold junction temperature sensor

Various and convenient signal output methods

- 5 types of waveform output methods, Graphical parameter configuration
- Custom presets available / step size / fine-tuning / Set the signal value by reset and other methods to quickly output

Data logger

Real-time recording of single- or dual-channel signal measurements or output values in the form of trend graphs Recording interval can be set Support local saving and browsing Export is also supported Maximum recording time up to 12 Hour.

Documented Process Calibrator

The Process Calibrator module is designed for calibrating a variety of process instruments. Industrial sites often need to check and calibrate certain Process instrument or transmitter usually requires two instruments or devices to complete Book modules are designed specifically for this type of application optimized design, the output channel of the product outputs the signal to the process instrument at the same time, the output signal transmitted or processed by the process instrument is input into the input channel of the product for measurement Implement device calibration. Calibration tasks can be guaranteed live operations such as copying Calibration data can be viewed locally Calibration results can also be exported for archiving.

HART Communicator

HART Fully compatible with the device

- support HART DD document（which is HART device description file）： Support thousands of HART equipment (such as transmitters、Locator、Flowmeter、level gauge etc.To configure、tuning、diagnosis, etc. Fully functional HART communication compatible HART5，6，7 Protocol version device.

Customize the favorites menu

- Support adding common menus to the [Favorites] list, which is convenient to quickly update the device configuration status
- Favorites by device type are supported. Favorites of the same device type have memory function, no need to repeat favorites
- During HART adjustment, use the [Favorite] button to reach the target menu directly, eliminating the need to view the menu layer by layer and simplifying the operation

Online update

- Support network online update and download HART DD file。
- Support networked online update application

HART Equipment distribution

- Provides a DC voltage source to power the transmitter
- Provides a DC current source to power the positioner

Simultaneously turn on the calibrator

- In the communicator mode, the calibrator module can be called up through shortcut keys
- Quickly complete the measurement or output of various signals through shortcut keys

Synchronize data with upper-layer systems

- Provide and control IDM Data Integration for Device Management Software Automatically record the scene HART Assume Backup parameter configuration and adjustment
- Automatic recording of field HART device parameter configuration and tuning records, which can be synchronized to the IDM software server via a USB cable.

Other features

Product Features

- 5.5-inch-high-definition full-color display, Icon-based touch operation
- Dynamic and intuitive prompts for wiring information
- Use 24K gold-plated material to effectively ensure signal accuracy,
- High or low alarm can be activated in signal measurement mode
- Removable 18650 lithium battery for easy field .replacement .
- Electronic operation manual and quick guide Built-in safety barrier Bluetooth configuration tool
- Support RS-485 communication, convenient for secondary development
- Support DCS control system loop wiring information query
- Support automatic dark screen or automatic shutdown settings

Product Information

Unless otherwise specified, all specifications apply to the temperature range from +18°C to +28°C.

All specifications assume a 5-minute warm-up time, with a temperature coefficient of ±0.005%/°C from -10°C to +18°C and +28°C to +50°C.

The following indicators are all indicators in the state of not being cleared (excluding resistance and thermal resistance measurement and output).

The calibrator provides a zero function to counteract the resistance of test leads or leads. School.

The maximum allowable input voltage of the calibrator is 30VDC and the input current is 24mA.

1. Output

Signal type		Re Solution	Measuring range	Accuracy 1 Note *	Accuracy 2 Note*	Remark
DC Voltage	100mV	1uV	(-10.000~110.000) mV	± (0.01%RD+10μV)	±(0.015%RD+10μV)	Note 1
	20V	1mV	(0.000~22.000) V	± (0.01%RD+1mV)	± (0.015%RD+1mV)	
DC current	20mA Active	1uA	(0.000~24.000) mA	± (0.01%RD+2μA)	± (0.015%RD+2μA)	
	20mA Passive	1uA	(0.000~24.000) mA	± (0.01%RD+2μA)	± (0.015%RD+2μA)	Note 2
Resistance	400Ω	10mΩ	(1.00~400.00) Ω	±(0.01%RD+0.04Ω)	±(0.015%RD+0.04Ω)	Note 3
	1800Ω	10mΩ	(400.00~1800.00) Ω	±(0.01%RD+0.18Ω)	± (0.015%RD+0.18Ω)	Note 4
	4800Ω	10mΩ	(1800.00~4800.00) Ω	±(0.01%RD+0.48Ω)	±(0.015%RD+0.48Ω)	Note 5
frequency / pulse	1000Hz	0.01Hz	(1.00~1000.00) Hz	±(0.01%RD+0.1Hz)	±(0.015%RD+0.1Hz)	Note 6
	5000Hz	0.01Hz	(1000.00~5000.00) Hz	± (0.01%RD+1Hz)	± (0.015%RD+1Hz)	
	10000Hz	0.01Hz	(5000.00~10000.00) Hz	± (0.01%RD+3Hz)	± (0.015%RD+3Hz)	
	pulse	1	1~999999	±1	±1	

Note *: Accuracy 1 applies to SupX600 Pro model;
Accuracy 2 apply
ToSupX600/SupX600H/SupX600HR type No。
same below

Note 1: Maximum load: 3mA
Note 2: Load capacity: 750Ω/20mA
Note 3: Excitation current (0.15~0.5)mA
Note 4: Excitation current (0.05~0.8)mA
Note 5: Excitation current (0.05~0.4)mA
Note 6: Waveform: (0~22)V±0.5V square wave (peak-to-peak); load driving capacity: 3mA

Two Measurement

Signal type	Channel	Resolution	Measuring range	Accuracy 1	Accuracy 2	Remark
DC Voltage	100mV (measuring end)	1uV	(-100.000~1100.000) mV	± (0.01%RD+10μV)	± (0.015%RD+10μV)	
	100mV (output / Measurementend)	1uV	(-10.000~100.000) mV	± (0.01%RD+10μV)	± (0.015%RD+10μV)	
	30V (measuring end)	1mV	(-30.000~30.000) V	±(0.01%RD+3mV)	± (0.015%RD+3mV)	
	20V (output / measuring end)	1mV	(0.000~22.000) V	±(0.01%RD+2mV)	± (0.015%RD+2mV)	
DC current	20m A (measuringend)	1uA	(-24.000~24.000)mADC	± (0.01%RD+2μA)	± (0.015%RD+2μA)	
	20mA loop measuring end)	1uA	(0.000~24.000)mADC	± (0.01%RD+2μA)	± (0.015%RD+2μA)	
Resistance (2,3,4 wire)	400Ω (output / measuring end)	10mΩ	(0.00~400.00) Ω	±(0.01%RD+0.04Ω)	±(0.015%RD+0.04Ω)	Note 7 Note 8
	1800Ω (output / measuring end)	10mΩ	(400.00~1500.00) Ω	±(0.01%RD+0.18Ω)	±(0.015%RD+0.18Ω)	
	4200Ω (Measurement / output)	10mΩ	(1500.00~4200.00) Ω	±(0.01%RD+0.42Ω)	±(0.015%RD+0.42Ω)	
Frequency / Pulse	1000Hz(output / Measurement Quantitative end)	0.01Hz	(1.00~1000.00)Hz	±(0.01%RD+0.1Hz)	±(0.015%RD+0.1Hz)	Note 9
	5000Hz(output / Measurement end)	0.01Hz	(1000.00~5000.00) Hz	± (0.01%RD+1Hz)	± (0.015%RD+1Hz)	
	30000Hz(output / Measurement Quantitative end)	0.01Hz	(5000.00~30000.00Hz	± (0.01%RD+1Hz)	± (0.015%RD+1Hz)	
	Pulsecount (output / Measurement Quantitative ends)	1	0~9999999	±1	±1	

Note 7: Excitation current: 0.5mA

Note 8: The resistance measurement and output are only calibrated to the calibrator jack at the factory Therefore, please short-circuit the test leads to clear them before use. To offset the resistance of test leads or wires Note 9: Sensitivity: At least 1V (peak-to-peak); Waveform: Square wave

Three Measurement and Simulation of Thermal Resistance

Type	Temperature range (℃)		Accuracy 1	Accuracy 2	Standard or regulation
Cu50	-50.0~150.0	-50.0~150.0	±0.2℃	±0.6℃	IEC751
Pt100(385)	-200.0~800.0	-200.0~800.0	±0.1℃	±0.3℃	IEC751
Pt100(3916)	-200.0~510.0	-200.0~510.0	±0.1℃	±0.3℃	JIS C 1604 1989 (JPt100)
Pt200(385)	-200.0~630.0	-200.0~250.0	±0.1℃	±0.2℃	IEC751
		250.0~630.0	±0.2℃	±0.8℃	
Pt500(385)	-200.0~630.0	-200.0~500.0	±0.1℃	±0.3℃	IEC751
		500.0~630.0	±0.2℃	±0.4℃	
Pt1000(385)	-200.0~630.0	-200.0~100.0	±0.1℃	±0.2℃	IEC751
		100.0~630.0	±0.2℃	±0.2℃	

Four Measurement and Simulation of Thermocouples

Type	Temperature range (℃)		Accuracy 1 (Does notinclude cold junctionerror)	Accuracy 2 (Does not include cold junction error)	standard or regulation
J	-210.0~1200.0	-210.0~0.0	±0.3	±0.6℃	IEC 584-1
		0.0~1200.0	±0.2	±0.4℃	
K	-200.0~1300.0	-200.0~0.0	±0.4	±0.8℃	IEC 584-1
		0.0~1300.0	±0.3	±0.5℃	
T	-200.0~400.0	-200.0~0.0	±0.7	±0.8℃	IEC 584-1
		0.0~400.0	±0.3	±0.5℃	
E	-100.0~1000.0	-100.0~0.0	±0.4	±0.5℃	IEC 584-1
		0.0~1000.0	±0.3	±0.4℃	
R	-20.0~1768.0	-20.0~0.0	±1.0	±1.6℃	IEC 584-1
		0.0~500.0	±0.7	±1.1℃	
		500.0~1768.0	±0.6	±0.9℃	
S	-20.0~1750.0	-20.0~0.0	±1.0	±1.6℃	IEC 584-1
		0.0~500.0	±0.7	±1.1℃	
		500.0~1750.0	±0.6	±0.9℃	
B	250.0~1820.0	250.0~600.0	±1.6	±1.8℃	IEC 584-1
		600.0~1000.0	±1.0	±1.2℃	
		1000.0~1820.0	±0.9	±1.0℃	
N	-200.0~1300.0	-200.0~0.0	±0.6	±0.9℃	IEC 584-1
		0.0~1300.0	±0.3	±0.5℃	

Comprehensive index

Project	Illustrate
Display	5.5” FHD IPS Full HD screen
Operating temperature	-10℃ ~50℃
storage temperature	-20℃ ~70℃
Relative humidity（No condensation）	90%（10℃ ~30℃）
	75%（30℃ ~40℃）
	45%（40℃ ~50℃）
	35%（50℃ ~55℃）
	<10℃，No Control
Electromagnetic Compatibility	EN55022，EN55024
vibration	Randomness，2g ,(5~500)Hz
Impact	30g，11ms，Half-sine shock
Dimensions	About 215.0mm×100.0mm×49.0mm
Power Adapter Power Requirements	(100~240) VAC
Smart Calibrator Power Requirements	5V，3A
Weight	About 870g（Including smart terminals）
Protection class	IP54
communication method	Serial RS-485 communication
External interface	TYPE-C Cable
	External high-precision cold junction temperature sensor interface
Battery	>15000mAh Typical working time of lithium battery: 15 hours

Selection Instructions

Selection

Model	Main function description
SupX600	Accuracy 0.02 Level process verification can Recorder function
SupX600H	Accuracy 0.02 level support HART communication process Check function
SupX600HR	Accuracy 0.02 class support HART Communication process check function capable of data logging
SupX600Pro	Accuracy 0.01 class support HART Pass Information Professional Process School Test function data recording function

Standard accessories

- Test lead (A pair, one red and one black)
- Dual Banana Test Leads *
- Test hook (A pair, one red and one black) *
- Alligator clip (A pair, one red and one black)
- u-clip (A pair, one red and one black)
- Power Adapter +Type-C Charging Cable
- probe (A pair, one red and one black)
- short circuit block
- portable backpack
- High precision cold junction temperature sensor
- Product Use Quick Guide
- Lead (A pair, one red and one black Red wire with built-in 250Ω resistor)

*Note mark * The attachment is with HART Accessories included with functional products, Other models do not include this accessory

Application Scenario

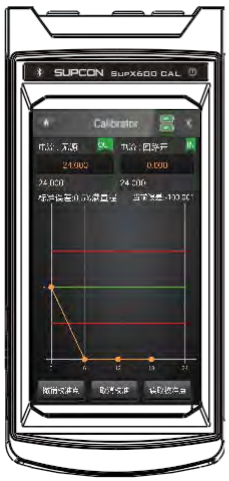
DCS Calibration

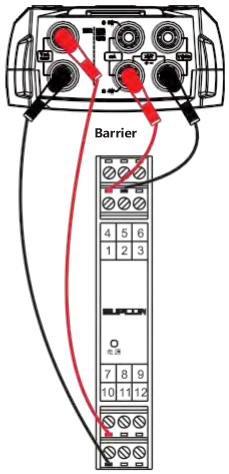
Flow meter

Valve Positioner

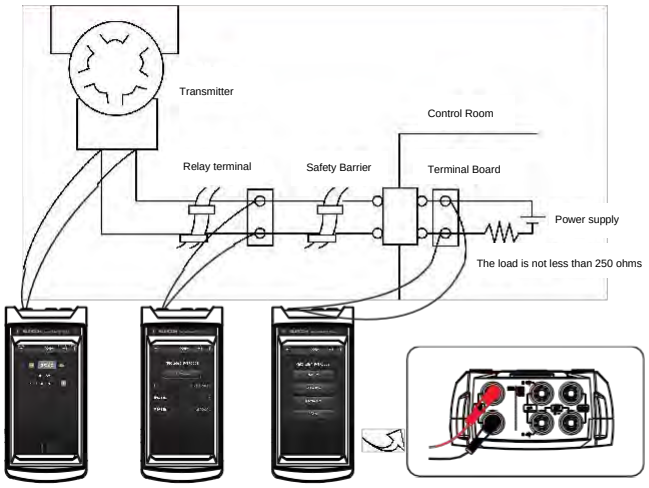
2ndry Insrument

Debugging SI





Transmitter for HART communication: The connection of the handheld 3 devices



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SIX60-PTCH-00A

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