



SPMK
斯贝克 INSTRUMENT

**Professional Manufacturer of Pressure/
Temperature Calibration Instruments**

Beijing Spake Technology Co.,Ltd.

Beijing Spake Technology Co., Ltd is one of the most professional manufacturers of calibration instruments in China with 28 years' experience. We have been successfully manufactured Pressure/Temperature calibration instruments such as high accuracy Digital Pressure Gauge, Pressure Calibrator, Pressure Calibration Comparator Pumps as well as Process Calibrator and Temperature Calibrator Dry Blocks. So far "SPMK" brand calibration instruments have been used in over 100 countries worldwide and enjoy good reputation.

With the corporate philosophy of "Accurate Calibration, Perfect Service" going forward, we will continue developing high quality calibration instruments with the best service to more and more customers worldwide.



Headquarter

6F Jinyanlong Plaza, Haidian District,
Beijing, 100096, China.
Tel: +86-10-62719945
www.bestcalibrator.com
www.spmkcalibrator.com

Production Base

B26, Economic and Technology
Development Zone, Henan Province, 453000,
China
Tel: +86-373-7883360/61
Fax: +86-373-7883368

Sales Director

Ms. Marilyn
Email: sales@bestcalibrator.com
M: +8615210919985
(What's App / We Chat)



What's App



We Chat



YouTube

CONTENTS

SPMK700 Digital Pressure Gauge-Reference	01
SPMK223 Digital Pressure Calibrator	03
Pressure Range Select Table of kPa/MPa/bar.	05
Pressure Range Select Table of psi.	06
SPMK221G Automatic Pressure Calibrator	07
SPMK221S Portable Automatic Pressure Calibrator	11
Pressure Test Pumps Selection Form	14
SPMK212C Low Pressure Test Pump	15
SPMK213C Low Pressure Test Pump	16
SPMK213B Low Pressure Test Pump	17
SPMK213H Pneumatic Pressure Test Pump	18
SPMK213E Pneumatic Pressure Test Pump	19
SPMK214E High Pressure Test Pump	20
SPMK214L Hydraulic Pressure Test Pump	21
SPMK2000E Pneumatic Pressure Calibration Pump	22
SPMK990 Hydraulic High Pressure Calibration Pump	23
SPMK213K Hydraulic Ultrahigh Pressure Pump	24
SPMK214K Hydraulic Ultrahigh Pressure Pump	25
Pressure Calibrators Accessories	26
SPMK361 Precision Digital Thermometer	28
SPMK150/650 Portable Temperature Calibrator	29
SPMK313A / 313B Temperature Calibrator / Dry Block	31
SPMK51X Series Multi-function Process Calibrator	33
SPMK51XT Series Multifunction Process Calibrator	39
SDP Pressure Module	45
SPMK251 Intelligent Pressure Controller	46
SPMK211 Series Automatic Pressure Generator	50
SPMK281 Rapid Pressure Gauge Calibrator	52
SPMK213G-D Pressure Regulator Calibrator with Electronic Pressure Generator	55
SPMK991T Automatic Pressure Calibration Bench	57

SPMK700

Digital Pressure Gauge-Reference



Gauge Pressure



Differential Pressure

Product Description

SPMK700 precision digital pressure gauge is a single range, micro power consumption pressure indicator, which has large LCD screen and with high accuracy and stability. The standard RS232 interface can be used for data transfer into computer by our data logger software.

It can be working as a reference gauge, connect with SPMK pressure comparator pump for pressure calibration of different pressure range.

Product Characteristics





- Large LCD screen with backlight and temperature display;
- Six digits resolution display switch;
- 11 pressure units available: kg/cm², inHg, inH₂O, Pa, kPa, MPa, bar, mbar, psi, mmHg, mmH₂O;
- Connection thread of M20x1.5, NPT, BSP optional;
- Pressure types: gauge pressure, absolute pressure, differential pressure, compound pressure;
- Percentage display of the pressure value;
- Zero function, peak function;
- Storage 40 files, 40 data per file;
- Rechargeable lithium battery power supply.

Technical Parameters

Project	Parameters
Pressure range①	(-0.1~250)MPa
Accuracy②	±0.02/0.05%FS
Pressure type	Gauge pressure, Absolute pressure, Differential pressure
Connector	Connection thread of M20×1.5, NPT, BSP optional
	Differential Pressure Gauge: 4.00 mm diameter PVC plastic hose
Use environment	Temperature: (0~50)°C; Relative Humidity: <90% non-condensing; Atmospheric Pressure: (86~106)kPa.a
Communication	RS232 interface
Power supply	AC and DC power supply
Dimensions	Head:Ø120mm×45mm;Total length:190mm
Weight	0.7 kg

Note: ① ② Specific ranges and accuracy levels are shown in the Pressure Range Selection Table on P5.

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adapter	1 pc	
3	Rechargeable lithium battery	1 pc	
4	Differential pressure gauge connection cable (only for differential pressure gauge)	1 pc	
5	User's manual	1 pc	
6	Test report	1 pc	

SPMK223

Digital Pressure Calibrator



Gauge Pressure

Differential Pressure

Product Description

SPMK223 intelligent digital pressure calibrator is a powerful pressure calibrator with high accuracy, which is mainly used to calibrate pressure (differential pressure) transmitter, pressure gauge, pressure switch and other pressure instruments. The standard RS232 interface can be used for data transfer into computer by our data logger software.

Product Characteristics

- HART communication to calibrate HART pressure transmitter with 24V supply;
- Large LCD screen with backlight and temperature display;
- Six digits resolution display switch;
- 11 pressure units available: kg/cm², inHg, inH₂O, Pa, kPa MPa, bar, mbar, psi, mmHg, mmH₂O;
- Connection thread of M20x1.5, NPT, BSP optional;
- Pressure types: gauge pressure, absolute pressure, differential pressure, compound pressure;
- Percentage display of the pressure value;
- Zero function, peak function;
- Storage 40 files, 40 data per file;
- Rechargeable lithium battery power supply;
- Automatic trigger function for pressure switch measure with a trigger time of less than 15 ms.

Accessories(included)






Signal	Range	Resolution	Accuracy
Voltage measurement	(-30~30)V	0.1mV	$\pm(0.01\%RD+0.005\%FS)$
Current measurement	(-30~30)mA	0.1 μ A	$\pm(0.01\%RD+0.005\%FS)$
Switch detection	If the switch is energized, voltage range (3 to 24) V		
Temperature measurement	(0~50) °C	/	± 1.0 °C
24VDC output	(24 \pm 0.5)V, max. loaded 50mA		

Technical Parameters

Project	Parameters
Pressure range①	(-0.1~250)MPa
Accuracy②	$\pm 0.02/0.05\%$ F.S
Pressure type	Gauge pressure, Absolute pressure, Differential pressure
Connector	Connection thread of M20×1.5, NPT, BSP optional
	Differential Pressure Gauge: 4.00 mm diameter PVC plastic hose
	Electrical connector: Ø4 banana plug
Use environment	Ambient temperature: (0~50)°C; Storage temperature: (-20~60)°C; Relative humidity: <90% non-condensing; Atmospheric pressure: (86~106)kPa.a
Communication	RS232
Power supply	AC and DC power supply
Dimensions	Head:Ø120mm×45mm;Total length:190mm
Weight	0.7 kg
Additional features	Pressure leak detection, pressure switch trigger, pressure peak recording, file storage and export, etc

Note: ① ②Specific ranges and accuracy levels are shown in the Pressure Range Selection Table on P5.

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adapter	1 pc	
3	Rechargeable lithium battery	1 pc	
4	Test lead	1 set	
5	Differential pressure gauge connection cable (only for differential pressure calibrator)	1 pc	
6	User's manual	1 pc	
7	Test report	1 pc	

Pressure Range Select Table of kPa/MPa/bar.

Pressure(kPa/MPa)	Pressure(bar)	Accuracy($\pm\%$ F.S)	Pressure Type
(-100~0)kPa	(-1~0)bar	0.05/0.1	Gauge Pressure
(0~100)kPa	(0~1)bar	0.05/0.1	Gauge Pressure
(0~160)kPa	(0~1.6)bar	0.02/0.05	Gauge Pressure
(0~250)kPa	(0~2.5)bar	0.02/0.05	Gauge Pressure
(0~400)kPa	(0~4)bar	0.02/0.05	Gauge Pressure
(0~600)kPa	(0~6)bar	0.02/0.05	Gauge Pressure
(0~1)MPa	(0~10)bar	0.02/0.05	Gauge Pressure
(0~1.6)MPa	(0~16)bar	0.02/0.05	Gauge Pressure
(0~2.5)MPa	(0~25)bar	0.02/0.05	Gauge Pressure
(0~4)MPa	(0~40)bar	0.02/0.05	Gauge Pressure
(0~6)MPa	(0~60)bar	0.02/0.05	Gauge Pressure
(0~10)MPa	(0~100)bar	0.02/0.05	Gauge Pressure
(0~16)MPa	(0~160)bar	0.02/0.05	Gauge Pressure
(0~25)MPa	(0~250)bar	0.02/0.05	Gauge Pressure
(0~40)MPa	(0~400)bar	0.02/0.05	Gauge Pressure
(0~60)MPa	(0~600)bar	0.02/0.05	Gauge Pressure
(0~70)MPa	(0~700)bar	0.02/0.05	Gauge Pressure
(0~100)MPa	(0~1000)bar	0.05/0.1	Gauge Pressure
(0~160)MPa	(0~1600)bar	0.1/0.2	Gauge Pressure
(0~250)MPa	(0~2500)bar	0.1/0.2	Gauge Pressure
(-100~100)kPa	(-1~1)bar	0.02/0.05	Gauge Pressure
(-100~160)kPa	(-1~1.6)bar	0.02/0.05	Gauge Pressure
(-100~250)kPa	(-1~2.5)bar	0.02/0.05	Gauge Pressure
(-100~600)kPa	(-1~6)bar	0.02/0.05	Gauge Pressure
(-0.1~1.0)MPa	(-1~10)bar	0.02/0.05	Gauge Pressure
(-0.1~2.5)MPa	(-1~25)bar	0.02/0.05	Gauge Pressure
(-0.1~4)MPa	(-1~40)bar	0.02/0.05	Gauge Pressure
(-0.1~6)MPa	(-1~60)bar	0.02/0.05	Gauge Pressure
(0~100)kPa.a	(0~1)bar.a	0.05	Absolute Pressure
(0~160)kPa.a	(0~1.6)bar.a	0.05	Absolute Pressure
(0~250)kPa.a	(0~2.5)bar.a	0.05	Absolute Pressure
(0~400)kPa.a	(0~4)bar.a	0.05	Absolute Pressure
(0~600)kPa.a	(0~6)bar.a	0.05	Absolute Pressure
(0~1)MPa.a	(0~10)bar.a	0.05	Absolute Pressure
(0~1.6)MPa.a	(0~16)bar.a	0.05	Absolute Pressure
(0~2.5)MPa.a	(0~25)bar.a	0.05	Absolute Pressure
(0~4)MPa.a	(0~40)bar.a	0.05	Absolute Pressure
(0~6)MPa.a	(0~60)bar.a	0.05	Absolute Pressure
(0~10)MPa.a	(0~100)bar.a	0.05	Absolute Pressure

Pressure(kPa/MPa)	Pressure(bar)	Accuracy($\pm\%$ F.S)	Pressure Type
(0~16)MPa.a	(0~160)bar.a	0.05	Absolute Pressure
(0~25)MPa.a	(0~250)bar.a	0.05	Absolute Pressure
(0~40)MPa.a	(0~400)bar.a	0.05	Absolute Pressure
(0~60)MPa.a	(0~600)bar.a	0.05	Absolute Pressure
(0~5)kPa	/	0.2	Differential Pressure
(-5~5)kPa	/	0.1	Differential Pressure
(0~10)kPa	/	0.1	Differential Pressure
(-10~10)kPa	/	0.05	Differential Pressure
(0~16)kPa	/	0.05	Differential Pressure
(-16~16)kPa	/	0.05	Differential Pressure
(0~25)kPa	/	0.05	Differential Pressure
(0~40)kPa	/	0.05	Differential Pressure
(-40~40)kPa	/	0.05	Differential Pressure
(0~60)kPa	/	0.05	Differential Pressure
(-60~60)kPa	/	0.05	Differential Pressure

Pressure Range Select Table of psi.

Pressure (psi)	Pressure(bar)	Accuracy($\pm\%$ F.S)	Pressure Type
-15	-1	0.05	Gauge Pressure
2	0.16	0.05	Differential Pressure
5	0.35	0.05	Differential Pressure
10	0.7	0.05	Gauge Pressure
15	1	0.05	Gauge Pressure
30	2	0.05	Gauge Pressure
50	3.5	0.05	Gauge Pressure
100	7	0.05	Gauge Pressure
300	20	0.05	Gauge Pressure
500	35	0.05	Gauge Pressure
600	40	0.05	Gauge Pressure
1000	70	0.05	Gauge Pressure
2000	140	0.05	Gauge Pressure
3000	200	0.05	Gauge Pressure
5000	350	0.05	Gauge Pressure
10000	700	0.05	Gauge Pressure
15000	1000	0.05	Gauge Pressure
25000	1600	0.1	Gauge Pressure
36000	2500	0.1	Gauge Pressure

Note: For $\pm 0.02\%$ FS accuracy, please contact with us.

Temperature compensation included. Accuracy for one-year stability.

SPMK221G

Automatic Pressure Calibrator



Product Description

SPMK221G automatic pressure calibrator has built-in electronic pressure pump. With functions of pressure measurement, electrical signal measurement/output, and HART communication, it is suitable for pressure calibration in the field. SPMK221G can help to complete the calibration of pointer pressure gauge, pressure transmitters, pressure switches and HART pressure instruments.

Product Characteristics

- Accuracy $\pm 0.02\%$ and $\pm 0.05\% \text{F.S}$ optional;
- 8-inch color touch screen;
- Built-in automatic pressure generator;
- Chinese and English language available;
- Supports the step output method;
- Supports calibration of HART instruments;
- Supports measurement of voltage, current, pressure switch;
- Outputs mA and 24V;
- Use of external SDP pressure module (optional);
- RS232 interface with open communication protocols;
- Data storage function;
- Chargeable Li-ion Battery;
- 1 year warranty.

Technical Parameters

Signal	SPMK221G -0.1	SPMK221G -2.5	SPMK221G -4	SPMK221G -7	SPMK221G -60
Pressure auto-generation range	(-90~100) kPa	(-0.09~2.5) MPa	(-0.095~4) MPa	(-0.095~7) MPa	(0~60) MPa
Built-in pressure module I	(-90~100) kPa	(0~2.5) MPa	(-0.095~4) MPa	(-0.095~6) MPa	(0~60) MPa
Built-in pressure module II	(-16~16) kPa	(-90~250) kPa			
Control stability	≤0.003% FS	≤0.003% FS	≤0.003% FS	≤0.003% FS	≤0.005% FS
Pressure medium	Air	Air	Air	Air	Mineral Oil Distilled water
Task functions	★	★	★	★	★
HART communication	★	★	★	★	★
Data storage	★	★	★	★	★
Pressure switch detection	★	★	★	★	★
mA/V measurement	★	★	★	★	★
(0~22)mA output	★	★	★	★	★
24VDC output	★	★	★	★	★
Pressure type	differential/ gauge pressure	gauge pressure	gauge pressure/ absolute pressure	gauge pressure/ absolute pressure	gauge pressure
Automatic temperature compensation①	★	★	★	★	★
External pressure module②	★	★	★	★	★

Note: ① Temperature automatic compensation range is (-10~50)°C, 1 year accuracy.

② Modules can be customized, refer to Module Selection Table for specifications.

Tip: SPMK221G-0.1 and SPMK221G-2.5 can only be connected to the SDP pressure module for measurement but not pressure control.

Module Selection Chart

Pressure range	Accuracy	SPMK221G -0.1	SPMK221G -2.5	SPMK221G -4	SPMK221G -7	SPMK221G -60
(-5 ~ 5) kPa	0.02/0.05	★				
(-10 ~ 10) kPa	0.02/0.05	★				
(-16 ~ 16) kPa	0.02/0.05	★				
(-25 ~ 25) kPa	0.02/0.05	★				
(-40 ~ 40) kPa	0.02/0.05	★				
(-60 ~ 60) kPa	0.02/0.05	★				
(-100 ~ 100) kPa	0.02/0.05	★				
(-100 ~ 160) kPa	0.02/0.05		★	★	★	
(-100 ~ 250) kPa	0.02/0.05		★	★	★	
(-100 ~ 400) kPa	0.02/0.05		★	★	★	
(-100 ~ 600) kPa	0.02/0.05		★	★	★	
(0 ~ 1) MPa	0.02/0.05		★	★	★	
(0 ~ 1.6) MPa	0.02/0.05		★	★	★	
(0 ~ 2.5) MPa	0.02/0.05		★	★	★	★
(0 ~ 4) MPa	0.02/0.05			★	★	★
(0 ~ 6) MPa	0.02/0.05				★	★
(0 ~ 10) MPa	0.02/0.05					★
(0 ~ 25) MPa	0.02/0.05					★
(0 ~ 40) MPa	0.02/0.05					★
(0 ~ 60) MPa	0.02/0.05					★








Electrometric Indicators

Signal	Range	Resolution	Accuracy
Voltage measurement	(-30~30)V	0.1mV	$\pm(0.01\%RD+0.005\%FS)$
Current measurement	(-30~30)mA	0.1 μ A	$\pm(0.01\%RD+0.005\%FS)$
Switch detection	If the switch is energized, voltage range (3 to 24) V		
Current output	(0~22)mA	1 μ A	$\pm(0.02\%RD+0.005\%FS)$
24VDC output	(24 \pm 0.5)V, max. loaded 50mA		





General Technical Indicators

Project	Parameters
Display	4/5/6-digit display optional
Usage environment	Ambient temperature: (0~50)°C; Relative humidity: <90% non-condensing; Atmospheric pressure: (86~106)kPa.a
Storage environment	M20 × 1.5 standard female thread, or BSP/NPT optional
Power supply mode	8 hours (pneumatic version), 12 hours (hydraulic version)
Dimensions	360mm(L) × 295mm(W) × 210mm(H)
Weight	13kg (pneumatic version), 17kg (hydraulic version)
Warranty	1 year

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adapter	1 pc	
3	Test leads	2 sets	
4	Pressure module connection cable	1 pc	
5	Filters (except SPMK221G-60)	2 pcs	
6	Seals	20 pcs	
7	Pressure output plugs	2 pcs	
8	User's manual	1 pc	
9	Test report	1 pc	

Optional Accessories

Serial number	Description	Picture
1	SDP Pressure Module	
2	SDP Module Connection Cable (Low Pressure Hose)	
3	SDP Module Connection Cable (High Pressure Hose)	
4	RS232 Communication Cable	

SPMK221S

Portable Automatic Pressure Calibrator



Product Description

SPMK221S portable automatic pressure calibrator integrated with fully intelligent control technology, including automatic pressure generation, pressure measurement, electrical signal measure and output, HART calibration, task management, data storage and other functions, which is the ideal tool for on-site pressure calibration, maintenance and testing.

Product Characteristics

- Accuracy $\pm 0.02\%$ and $\pm 0.05\%$ F.S optional;
- 7-inch color touch screen;
- Chinese and English language available;
- Built-in automatic pressure generator;
- Built-in atmospheric pressure module, gauge and absolute pressure switch;
- Support the step output method;
- Support calibration of HART instruments;
- Support measurement of voltage, current, and pressure switch;
- External SDP pressure module (optional);
- Data storage function;
- Chargeable Li-ion Battery;
- 1 year warranty.

Technical Parameters

Model	SPMK221S	
Pressure auto-generation range	(-85~250) kPa	(-0.085~2.0) MPa
Built-in pressure module	(-100~250) kPa	(-0.1~2.0) MPa
Control stability	≤0.005% FS	≤0.005% FS
Pressure medium	Air	Air
Task functions	★	★
HART communication	★	★
Data storage	★	★
Pressure switch detection	★	★
mA/V measurement	★	★
(0~22)mA output	★	★
24VDC output	★	★
Automatic temperature compensation①	★	★
External pressure module②	★	★

Note: ①Temperature auto-compensation range of (-10~50)°C, 1 year accuracy.

②Modules can be customized specifications can be found in the Module Selection Table.

In addition, it is prohibited to test the oil gauge.

Module Selection Chart

Pressure range	Accuracy	SPMK221S(250kPa)	SPMK221S(2.0MPa)
(-16 ~ 16) kPa	0.05	★	
(-25 ~ 25) kPa	0.05	★	
(-40 ~ 40) kPa	0.02/0.05	★	
(-60 ~ 60) kPa	0.02/0.05	★	
(-100 ~ 100) kPa	0.02/0.05	★	
(-100 ~ 160) kPa	0.02/0.05	★	★
(-100 ~ 250) kPa	0.02/0.05	★	★
(-100 ~ 400) kPa	0.02/0.05		★
(-100 ~ 600) kPa	0.02/0.05		★
(-0.085 ~ 1) MPa	0.02/0.05		★
(-0.085 ~ 1.6) MPa	0.02/0.05		★
(-0.085 ~ 2.0) MPa	0.02/0.05		★







Electrometric Indicators

Signal	Range	Resolution	Accuracy
Voltage measurement	(-30~30)V	0.1mV	$\pm(0.01\%RD+0.005\%FS)$
Current measurement	(-30~30)mA	0.1 μ A	$\pm(0.01\%RD+0.005\%FS)$
Switch detection	If the switch is energized, voltage range (3 to 24) V		
Current output	(0~22)mA	1 μ A	$\pm(0.02\%RD+0.005\%FS)$
24VDC output	(24 \pm 0.5)V, max. loaded 50mA		

General Technical Indicators

Project	Parameters
Display	4/5/6-digit display optional
Usage environment	Ambient temperature :(-10~50) $^{\circ}$ C; Relative humidity <90% noncondensing; Atmospheric pressure (86~106)kPa.a
Pressure connection	1 x G 1/8 standard thread
Battery life	8 hours
Dimensions	241mm(L)x168mm(W)x73mm(H)
Weight	2.6kg
Warranty	1 year

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adapter	1 pc	
3	Test leads	2 sets	
4	Pressure module connection cable	1 pc	
5	Gas connection hose	1 pc	
6	External pressure manifold with two outputs	1 pc	
7	Seals	20 pcs	
8	Pressure output plugs	2 pcs	
9	User's manual	1 pc	

Optional Accessories

Serial number	Description	Picture
1	SDP Pressure Module	
2	SDP Pressure Module Test Report	

Pressure Test Pumps Selection Form

Model	Photo	Type	Range	Media	Weight	Page
SPMK212C		Pneumatic	(-0.5-0.5)bar,(-7-7)psi	Air	1.5kg	P15
SPMK213C		Pneumatic	(-0.7-1)bar,(-10-15)psi	Air	3.0kg	P16
SPMK213B		Pneumatic	(-0.95-6)bar,(-14-90)psi	Air	2.6kg	P17
SPMK213H		Pneumatic	(-0.95-25)bar,(-14-375)psi; (-0.95-40)bar,(-14-600)psi	Air	2.6kg	P18
SPMK213E		Pneumatic	(-0.95-70)bar,(-14-1000)psi; (-0.95-100)bar,(-14-1500)psi	Air	5.5kg	P19
SPMK214E		Pneumatic	(-0.95-160)bar,(-14-2320)psi; (-0.95-200)bar,(-14-3000)psi	Air	6.5kg	P20
SPMK214L		Hydraulic	(0-700)bar,(0-10,000)psi	Water / Oil	4.7kg	P21
SPMK2000E		Pneumatic	(-0.95-60)bar,(-14-900)psi	Air	14.0kg	P22
SPMK990S		Hydraulic	(0-600)bar,(0-9,000)psi; (0-1,000)bar,(0-15,000)psi	Water	15.0kg	P23
SPMK990Y		Hydraulic	(0-600)bar,(0-9,000)psi; (0-1,000)bar,(0-15,000)psi	Oil	15.0kg	P23
SPMK213K		Hydraulic	(0-2,500)bar,(0-36,500)psi	Water / Oil	17.0kg	P24
SPMK214K		Hydraulic	(0-4,200)bar,(0-60,000)psi	Oil	22.8kg	P25

SPMK212C

Low Pressure Test Pump



Product Description

SPMK212C low pressure test pump is a high precision pneumatic handheld pressure generator. It provides stable micro pressure from -0.5 to 0.5bar (-7-7)psi. Its hard oxidation treatment makes it wear-resistant, and scratch-resistant. The simple structure and easy operation make it a perfect equipment for calibrating differential pressure gauges, pressure transmitters, pressure sensors, and other low pressure (vacuum) instruments.

Product Characteristics

- Pressure Range: -0.5-0.5bar, -7-7psi;
- Perfect pressure stability;
- Quick connector makes it easy and fast to connect the under tested device;
- Light weight, easy for filed and lab usage;
- Fine adjustment screw of 0.01Pa;
- Hard oxidation treatment, wear-resistant, scratch-resistant.

Product Specifications

Model	SPMK212C
Pressure range	(-50-50)kPa, (-0.5-0.5)bar, (-7-7)psi
Fine adjustment	0.01Pa
Medium	Air
Dimensions	(240×130×130) mm
Weight	1.5 kg
Outport thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm 1 or 2 thread type from above.
Accessories	Outport O rings and repair kits
Warranty	1 year

SPMK213C

Low Pressure Test Pump



Product Description

SPMK213C pressure calibration pump is pneumatic handheld pressure generator. It provides stable pressure from -0.7 to 1bar (-10-15)psi. The simple structure and easy operation make it a perfect equipment for calibrating low pressure gauges, pressure transmitters, pressure sensors, and other low pressure (vacuum) instruments.

Product Characteristics

- Pressure range -0.7-1bar, -10-15psi;
- Perfect pressure stability;
- Quick connector makes it easy and fast to connect the under tested device;
- Light weight, good for both on-site and lab usage;
- Fine adjustment screw of 0.01Pa.

Product Specifications

Model	SPMK213C
Pressure range	(-70-100)kPa, (-0.7-1)bar, (-10-15)psi
Fine adjustment	0.01Pa
Medium	Air
Dimensions	(305×205×140) mm
Weight	3.0 kg
Outport thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm 1 or 2 thread type from above.
Accessories	Outport O rings and repair kits
Warranty	1 year

SPMK213B Low Pressure Test Pump



Product Description

SPMK213B pressure calibration pump is pneumatic handheld pressure generator. It provides stable low pressure from -0.95 to 6bar (-14-90)psi. Its hard oxidation treatment makes it wear-resistant and scratch-resistant. The simple structure and easy operation make it a perfect equipment for calibrating low pressure gauges, pressure transmitters, pressure sensors, and other low pressure (vacuum) instruments.

Product Characteristics

- Pressure range -0.95-6bar, -14-90psi;
- Quick connector makes it easy and fast to connect the under tested device;
- Light weight, good for both on-site and lab usage;
- Fine adjustment screw of 1Pa;
- Hard oxidation treatment, wear-resistant, scratch-resistant.

Product Specifications

Model	SPMK213B
Pressure range	(-95-600)kPa, (-0.95-6)bar , (-14-90)psi
Fine adjustment	1Pa
Medium	Air
Dimensions	(298×179×154)mm
Weight	2.6 kg
Outport thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm 1 or 2 thread type from above.
Accessories	Outport O rings and repair kits
Warranty	1 year

SPMK213H

Pneumatic Pressure Test Pump



Product Description

SPMK213H pressure calibration pump is pneumatic handheld pressure generator. It provides stable low pressure from -0.95 to 25bar (-14-375)psi or -0.95 to 40bar (-14-600)psi two types. Its hard oxidation treatment makes it wear-resistant and scratch-resistant. The simple structure and easy operation make it a perfect equipment for calibrating low pressure gauges, pressure transmitters, pressure sensors, and other low pressure (vacuum) instruments.

Product Characteristics

- Pressure range -0.95-25bar, -14-375psi; -0.95-40bar, -14-600psi;
- Perfect pressure stability;
- Quick connector makes it easy and fast to connect the under tested device;
- Light weight, easy for field and lab usage;
- Fine adjustment screw of 1Pa;
- Hard oxidation treatment, wear-resistant, scratch-resistant.

Product Specifications

Model	SPMK213H
Pressure range	(-0.95-25)bar, (-14-375)psi ; (-0.95-40)bar, (-14-600)psi
Fine adjustment	1Pa
Medium	Air
Dimensions	(298×179×154)mm
Weight	2.6 kg
Outport thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm 1 or 2 thread type from above.
Accessories	Outport O rings and repair kits
Warranty	1 year

SPMK213E Pneumatic Pressure Test Pump



Product Description

SPMK213E pressure calibration pump is high pressure pneumatic type. It provides stable high pressure from -0.95 to 70bar (-14-1000)psi or -0.95 to 100bar (-14-1500)psi two types. The hard oxidation treatment makes it wear-resistant and scratch-resistant. The special structure makes it easier to generate high pressure. It is a perfect equipment for calibrating pressure gauges, pressure transmitters, pressure sensors, and other pressure (vacuum) instruments.

Product Characteristics

- Pressure range -0.95-70bar, -14-1000psi; -0.95-100bar, -14-1500psi;
- Perfect pressure stability;
- Hand tight quick connector, easy to connect the under tested device;
- Light weight, easy for filed and lab usage;
- Fine adjustment screw of 1Pa;
- Hard oxidation treatment, wear-resistant, scratch-resistant.

Product Specifications

Model	SPMK213E
Pressure range	(-0.95-70)bar, (-14-1000)psi; (-0.95-100)bar, (-14-1500)psi
Fine adjustment	1Pa
Medium	Air
Dimensions	(400×262×170)mm
Weight	5.5 kg
Outport thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm 1 or 2 thread type from above.
Accessories	Outport O rings and repair kits
Warranty	1 year

SPMK214E High Pressure Test Pump



Product Description

SPMK214E pressure calibration pump is high pressure pneumatic type. It provides stable high pressure from -0.95 to 160bar (-14-2320)psi and -0.95 to 200bar (-14-3000)psi two types. The hard oxidation treatment makes it wear-resistant and scratch-resistant. The special structure makes it easier to generate high pressure up to 2320psi and 3000psi. It is a perfect equipment for calibrating pressure gauges, pressure transmitters, pressure sensors, and other pressure (vacuum) instruments.

Product Characteristics

- Pressure range -0.95-160bar, -14-2320psi; -0.95-200bar, -14-3000psi;
- Perfect pressure stability;
- Hand tight quick connector, easy to connect the under tested device;
- Special structure makes easy to reach high pressure;
- Fine adjustment screw of 1Pa;
- Hard oxidation treatment, wear-resistant, scratch-resistant.

Product Specifications

Model	SPMK214E
Pressure range	(-0.95-160)bar, (-14-2320)psi; (-0.95-200)bar, (-14-3000)psi
Fine adjustment	1Pa
Medium	Air
Dimensions	(470×262×170) mm
Weight	6 kg
Outport thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm 1 or 2 thread type from above.
Accessories	Outport O rings and repair kits
Warranty	1 year

SPMK214L Hydraulic Pressure Test Pump



Product Description

SPMK214L pressure test pump is hydraulic pressure generator with hydraulic oil or distilled water media. It can generate pressure of 0 to 700bar (0-10,000)psi. It is portable design which is suitable for both field and lab usage. The special design structure makes it a perfect equipment for calibrating pressure gauges, pressure transmitters, pressure sensors, and other pressure instruments.

Product Characteristics

- Pressure range 0-700bar, 0-10,000psi;
- Perfect pressure stability;
- Hand tight quick connector, easy to connect the under tested device;
- Special structure makes easy to reach high pressure;
- Fine adjustment screw of 0.1kPa;
- Hard oxidation treatment, wear-resistant, scratch-resistant.

Product Specifications

Model	SPMK214L
Pressure range	(0-700)bar, (0-10,000)psi
Fine adjustment	0.1kPa
Medium	Mineral oil (Distilled water) two types
Dimensions	(384×198×180)mm
Weight	4.7kg
Outport thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm 1 or 2 thread type from above.
Accessories	Outport O rings and repair kits
Warranty	1 year

SPMK2000E

Pneumatic Pressure Calibration Pump



Product Description

SPMK2000E pressure calibration pump is a pneumatic desk-top pressure generator with 3 outputs. The pressure range is -0.95 to 60bar (-14-900)psi. It is a hand operated pressure pump which can generate pressure smoothly up to 60bar. It is a perfect pressure calibration comparator for lab usage.

Product Characteristics

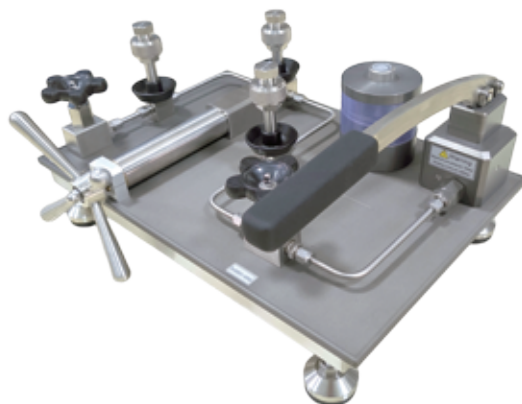
- Pressure range -0.95-60bar, -14-900psi;
- Pneumatic type, perfect pressure stability;
- Hand tight quick connector, easy to connect the under tested device;
- Special structure design makes easy to reach high pressure;
- Fine adjustment screw of 1Pa.

Product Specifications

Model	SPMK2000E
Pressure range	(-0.95- 60)bar, (-14-900)psi
Fine adjustment	1Pa
Medium	Air
Dimensions	(465×360×246) mm
Weight	14 kg
Outlet thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm 1 or 2 thread type from above.
Accessories	Outlet O rings and repair kits
Warranty	1 year

SPMK990

Hydraulic High Pressure Calibration Pump



Product Description

SPMK990S and SPMK990Y hydraulic high pressure calibration pump is hydraulic pressure generator with distilled water media or hydraulic oil two types. The pressure range is 0-600bar (0-9,000)psi and 0-1000bar (0-15,000)psi two types. With special structure design, it can generate pressure smoothly and easily to 600bar and 1000bar. It is a perfect pressure calibration comparator for lab usage.

Product Characteristics

- 0-600bar, 0-9,000psi; 0-1000bar, 0-15,000psi two types;
- SPMK990S water media type, SPMK990Y oil media type;
- Perfect pressure stability;
- Hand tight quick connector, easy to connect the under tested device;
- Special structure design makes easy to reach high pressure;
- Fine adjustment of 0.1kPa.

Product Specifications

Model	SPMK990S	SPMK990Y
Pressure range	(0-600)bar, (0-9,000)psi; (0-1,000)bar, (0-15,000)psi	(0-600)bar, (0-9,000)psi; (0-1,000)bar, (0-15,000)psi
Fine adjustment	0.1kPa	0.1kPa
Medium	Distilled water	Hydraulic oil
Dimensions	(465×370×240) mm	
Weight	15 kg	
Medium volume	0.38L	
Outport thread	M20*1.5, 1/4NPT, 1/4BSP, 1/2NPT, 1/2BSP Female. Please confirm thread type from above.	
Accessories	Outport O rings and repair kits	
Warranty	1 year	

SPMK213K

Hydraulic Ultrahigh Pressure Pump



Product Description

SPMK213K pressure test pump is hydraulic pressure generator, which can generate pressure up to 2500bar (0-36,500)psi. There are water media and oil media two types available. With Pre-pressure design, it can generate very high pressure smoothly and easily up to 2500bar. It is a perfect pressure calibration comparator for lab usage.

Product Characteristics

- Generate 0-2500bar, 0-36,500psi;
- Oil and water two types available, perfect pressure stability;
- Hand tight quick connector, easy to connect the under tested device;
- Pre-pressure design makes easy to reach high pressure;
- Fine adjustment of 1kPa.

Product Specifications

Model	SPMK213K
Pressure range	(0-2500)bar, (0-36,500)psi
Fine adjustment	1kPa
Medium	Mineral oil or Distilled water two types
Dimensions	(450×380×250)mm
Weight	17 kg
Medium volume	0.38L
Outport thread	M20*1.5, 1/2NPT, 1/2BSP Female, UNF 9/16 Male and Female
Accessories	Outport O rings and repair kits
Warranty	1 year

SPMK214K Hydraulic Ultrahigh Pressure Pump



Product Description

SPMK214K pressure test pump is oil media hydraulic pressure generator, which can generate pressure up to 4200bar (0-60,000)psi. With Pre-pressure design, it can generate very high pressure smoothly and easily up to 4200bar. It is a perfect pressure calibration comparator for high pressure device in lab usage.

Product Characteristics

- Generate pressure 0-4200bar, 0-60,000psi;
- Oil media type, perfect pressure stability;
- Hand tight quick connector of 2 outports;
- Pre-pressure design makes easy to reach high pressure;
- Fine adjustment of 10kPa.

Product Specifications

Model	SPMK214K
Pressure range	(0-4200)bar, (0-60,000)psi
Fine adjustment	10kPa
Medium	Mineral oil
Dimensions	(480×430×380)mm
Weight	22.8 kg
Medium volume	0.38L
Outlet thread	M20*1.5, UNF 9/16 Male and Female
Accessories	Outlet O rings and repair kits
Warranty	1 year

SPMK Pressure Calibrators Accessories

Model No.	Item	Picture	Application	Range
SPMK2000-1	Adaptors sets		Based on the standard M20×1.5M to 38 different thread following: M20×1.5 m/f G1/2 m/f NPT1/2 m/f M16×1.5 m/f G3/8m/f NPT3/8 m/f M14×1.5 m/f G1/4 m/f NPT1/4 m/f M12×1.5 m/f G1/8 m/f NPT1/8 m/f M10×1.0 m/f ZG1/2 m/f ZG3/8 m/f ZG1/4 m/f ZG1/8 m/f Ø6 Ø8 Ø10 M20×1.5 right angle	(-1~2500) bar
SPMK2000-1N4	Adaptors sets		Based on 1/4NPTM to 38 different threads as mentioned above	(-1~700) bar
SPMK2000-1N2	Adaptors sets		Based on 1/2NPTM to 38 different threads as mentioned above	(-1~2500) bar
SPMK2000-1B4	Adaptors sets		Based on 1/4BSPM to 38 different threads as mentioned above	(-1~700) bar
SPMK2000-1B2	Adaptors sets		Based on 1/2BSPM to 38 different threads as mentioned above	(-1~2500) bar
SPMK2000-2	Pressure Hose		For Pneumatic Gauge Calibration	(-1~8) bar
SPMK2000-3	Pressure Hose		For Pneumatic Gauge Calibration	(-1~40) bar
SPMK2000-4	Pressure Hose		For Hydraulic Gauge Calibration	(0~700) bar

Model No.	Item	Picture	Application	Range
SPMK2000-5	Pneumatic-Hydraulic Separation Filter		Filter impurities and remove oil during pneumatic pressure comparator calibration.	(-1~250) bar
SPMK2000-6	Hydraulic Filter		Filter impurities in the gauge, protect the pump from pollution.	(0~700) bar
SPMK2000-8	Thread Clean Tool		Remove tape from instrument threads	/
SPMK2000-9	Pressure Manifolds		5-in-1 Pressure Manifolds Pneumatic and Hydraulic two types	(-1~250) bar
				(0~700) bar
SPMK2000-10	Pressure Manifolds		4-in-1 Pressure Manifolds Pneumatic and Hydraulic two types	(-1~250) bar
				(0~700) bar
SPMK2000-17	Pressure Manifolds		8-in-1 Pressure Manifolds Pneumatic and Hydraulic two types	(-1~250) bar
				(0~700) bar
SPMK2000-15	Carrying Case		White, Aluminum Material. For portable pressure comparators	/
SPMK2000-16	Carrying Case		Black, PP Alloy Material, Outer Dimensions:560mm x 455mm x 365mm For SPMK213K&990S comparator only	/
SPMK2000-18	Rubber Protector		SPMK223 pressure calibrator and SPMK700 pressure gauge only.	/

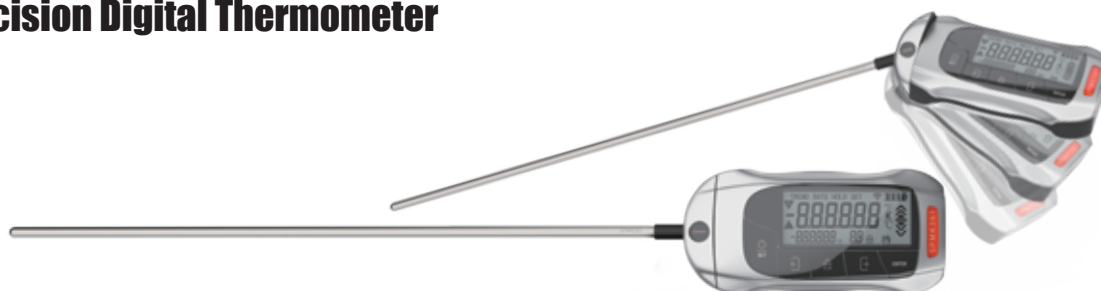
**NPT/BSP/M20×1.5 threads are available for all accessories.

**ZG and PT refer to the same screw thread.

For more information: www.spmkcalibrator.com

SPMK361

Precision Digital Thermometer



Product Description

SPMK361 handheld precision digital thermometer is with high accuracy and good stability, which is a precision temperature measuring instrument for industrial temperature measurement and calibration. The temperature measurement range is (-80 ~ 300) °C. It can directly display the temperature on the LCD screen, which is very suitable for laboratory and field use.

Product Characteristics

- Accuracy of 0.05 °C annually;
- Temperature display: °C, K, °F unit switch, resolution 1/0.1/0.01/0.001 °C switch;
- 7 levels of back lighting, LCD display, the screen can be flipped;
- Over-temperature alarm display (alarm range can be set);
- Documentation: The time files accompanying the data can be stored in groups of 248 (22 files per group);
- Acquisition time 1~3 seconds optional;
- Low power consumption, can work for 1000 hours when wireless communication is closed;
- Warranty: 1 year.

Product Specifications

Model	Temperature range	Accuracy	Calibration cycle
SPMK361-160	(-40 ~ 160) °C	±0.05 °C / ±0.1 °C	1 year
SPMK361-300	(-80 ~ 300) °C	±0.05 °C / ±0.1 °C	1 year

Technical Parameters

Project	Parameters
Power supply mode	Chargeable lithium battery
Annual stability	0.05 °C
Usage environment	Ambient temperature: (-10~50) °C, should be lower than 40 °C when charging; Relative humidity: 90%RH; Air pressure: (86~101)kPa
Storage environment	Ambient temperature: (-10~60) °C; Relative humidity: 90%RH; Air pressure: (86~101)kPa
Dimensions	(123 x 160 x 30) mm
Sensor length	300/500 mm
Weight	0.4 kg
Warranty	1 year

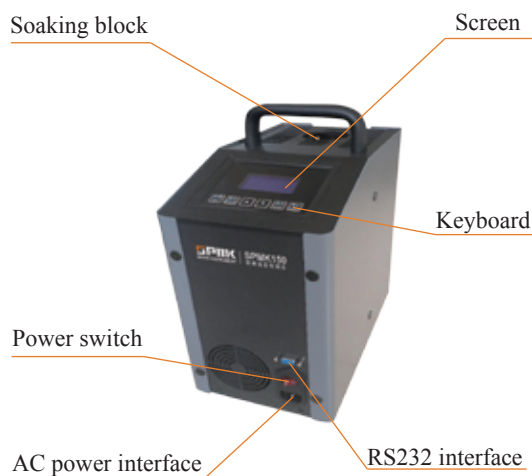
SPMK150/650 Portable Temperature Calibrator



Features

- Temperature range: SPMK150 (-30 ~ 155) °C ; SPMK650 (33 ~ 660) °C ;
- With 6 digits display;
- The soaking block is replaceable and customized;
- Digital temperature control, fast cooling and heating with good stability;
- Dry block has a series of protection functions such as built-in load short circuit, load disconnection, and sensor protection;
- Portable and easy to carry without any pollution.

Basic structure





Diameter of soaking block

Standard 3 holes	Other customized holes
Ø6mm Ø8mm Ø10mm	1. Ø6mm Ø6mm Ø6mm
	2. Ø6mm Ø8mm Ø8mm
	3. Ø6mm Ø6mm Ø10mm
	4. Ø6mm Ø6mm Ø12mm
	5. Ø8mm Ø8mm Ø8mm
	6. Ø6mm Ø8mm
	7. Ø6mm Ø10mm
	8. Ø6mm Ø12mm
	Consult us for other diameters

Basic structure

MODEL	SPMK150		SPMK650
Temperature range (Ambient temperature 25℃)	(-30~155)℃	(-40~155)℃ customized	(33~660)℃
Temperature deviation	±0.15℃		±0.5℃
Temperature stabilization time	5 minutes		10 minutes
Display resolution	0.001℃		
Insert depth	170 mm		
Outside diameter of soaking block	Ø25 mm		
Standard block insertion aperture	Ø6, Ø8, Ø10mm or customized		
Temperature unit	℃、℉、K		
Temperature difference between holes	≤±0.05℃ (Using special soaking block for temperature field test)		
Axial temperature field	Temperature change within 20mm from the bottom of the block insertion≤0.5℃		
Temperature fluctuation	±0.03℃/15min		
Power supply	220VAC 50Hz 0.45kW		220VAC 50Hz 1.2kW
Communication	RS232		
Language	Chinese and English		
Dimensions (including carrying handle)	(320 x 240 x 415) mm	(420 x 240 x 415) mm	(315 x 215 x 390) mm
Weight	15.5 kg	24.5 kg	14 kg
Power	0.45 kW		1.2 kW
Warranty	1 year		

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adaptor	1 pc	
3	Test leads	4 sets	
4	Soaking block picking tool	1 pc	
5	User's manual	1 pc	
6	Test report	1 pc	

SPMK313A/313B

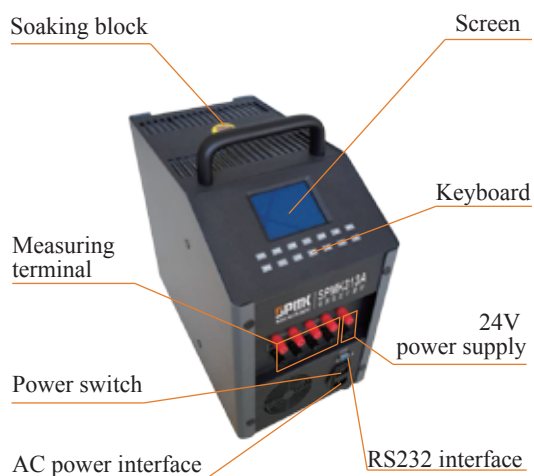
Temperature Calibrator / Dry Block



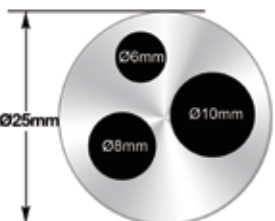
Features

- Measure DC voltage, millivolt voltage, DC current, resistance, switch on and off and other signals;
- It can measure 8 kinds of thermocouples (S, B, R, K, E, J, T, N) and 4 kinds of thermal resistances (Pt100, Pt10, Cu100, Cu50), and provide cold end compensation function, which provides more convenience for users;
- It is convenient and quick to provide 24V power supply when measuring transmitter signal;
- It has dual-channel measurement function, which does not interfere with each other and can be used at the same time;
- The large screen display;
- Six-digit display with resolution of 0.001 °C (adjustable);
- The temperature control resolution and measurement resolution can be set independently.

Basic structure



Diameter of soaking block

Standard 3 holes	Other customized holes
Ø6mm Ø8mm Ø10mm	1. Ø6mm Ø6mm Ø6mm
	2. Ø6mm Ø8mm Ø8mm
	3. Ø6mm Ø6mm Ø10mm
	4. Ø6mm Ø6mm Ø12mm
	5. Ø8mm Ø8mm Ø8mm
	6. Ø6mm Ø8mm
	7. Ø6mm Ø10mm
	8. Ø6mm Ø12mm
	Consult us for other diameters




Electrometric Indicators

Signal	Range	Resolution	Accuracy
Voltage measurement	(-75~75)mV	0.1μV	±(0.01%RD+0.005%FS)
	(-30~30)V	0.1mV	±(0.01%RD+0.005%FS)
Current measurement	(-30~30)mA	0.1μA	±(0.01%RD+0.005%FS)
Resistance 4-wire	(0~400)Ω	1mΩ	±(0.01%RD+0.005%FS)
Switch measurement	Short circuit resistance <100Ω	0.01 °C	Reaction time: < 10ms

Basic structure

MODEL	SPMK313A		SPMK313B
Temperature range (Ambient temperature 25 °C)	(-30~155)°C	(-40~155)°C customized	(33~660)°C
Temperature deviation	±0.15 °C		±0.5 °C
Temperature stabilization time	5 minutes		10 minutes
Display resolution	0.001 °C		
Insert depth	170 mm		
Outside diameter of soaking block	Ø25 mm		
Standard block insertion aperture	Ø6, Ø8, Ø10mm / customized		
Temperature unit	°C、°F、K		
Temperature difference between holes	≤±0.05 °C (Using special soaking block for temperature field test)		
Axial temperature field	Temperature change within 20mm from the bottom of the block insertion≤0.5 °C		
Temperature fluctuation	±0.03 °C/15min		
Power supply	220VAC 50Hz 0.45kW		220VAC 50Hz 1.2kW
Communication	RS232		
Language	Chinese and English		
Dimensions (including carrying handle)	(320×240×415) mm	(420×240×415) mm	(315×215×390) mm
Weight	15.5 kg	24.5 kg	14 kg
Power	0.45 kW		1.2 kW
Warranty	1 year		

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adaptor	1 pc	
3	Test leads	4 sets	
4	Soaking block picking tool	1 pc	
5	User's manual	1 pc	
6	Test report	1 pc	

SPMK51X

Series Multi-function Process Calibrator



Product Description

Whether for troubleshooting or normal maintenance or calibration, SPMK51X series of multifunction process calibrators will help you accomplish your tasks quickly and accurately.

Product Characteristics

- **Variety of functions**
Calibrate pressure, temperature, voltage, current, frequency, pulse, resistance. Both measurement and source functions.
- **Measurement and source functions**
Measures 13 types of thermocouples and 11 types of RTDs and provides analog output with cold end compensation.
- **Data storage function**
No need to worry about data loss. Supports output methods such as step or program.
- **Built-in HART function**
It can calibrate and maintain HART-type instruments, and realize functions such as management of instrument basic information, range migration, zero point and full scale calibration (only for SPMK516 and SPMK518).
- **Support external pressure modules**
SDP pressure module (only for SPMK517 and SPMK518) (optional).
- **Task management function**
- **Analog transmitters**
Generate precise electrical, temperature or pressure signals.
- **Provides commonly used tools**
Thermal engineering treasure trove, user-built RTD library, temperature and pressure unit conversion.
- **Automatic cold-end compensation technology**
Built-in cold end insulation module for fast tracking of temperature changes.
- **3.5-inch high-resolution TFT display**
- **Chinese and English languages available**
- **RS232 interface and open communication protocol**
- **Provide a 24VDC loop power supply with measurement and output isolated from each other**
- **Warranty: 1 year**

Product Functions

Function		SPMK510	SPMK516	SPMK517	SPMK518
Measurement	Millivolt	★	★	★	★
	Voltage	★	★	★	★
	Current	★	★	★	★
	Frequency		★	★	★
	Pulse		★	★	★
	Resistance		★	★	★
	On-off	★	★	★	★
	11 RTDs		★	★	★
	13 thermocouples		★	★	★
Source	Millivolt	★	★	★	★
	Voltage	★	★	★	★
	Current	★	★	★	★
	Frequency		★	★	★
	Resistance		★	★	★
	Simulate 11 RTDs		★	★	★
	Simulate 13 thermocouples		★	★	★
Other Functions	HART communication		★		★
	External pressure module ^①			★	★
	Thermal book		★	★	★
	Step programming output	★	★	★	★
	24V loop current	★	★	★	★
	Simulating transmitter		★	★	★
	RS232 communication	★	★	★	★
	Storage	★	★	★	★

Note: SPMK510 millivolt measurement and output range is wider. Measurement range (-200~200)mV, output range (-10~200)mV, loop integrity test range (0~2000)Ω.

① External pressure module means SDP module produced by our company.

Technical Parameters

Electrical Signal Measurement Specifications (Ambient Temperature (20±5) °C, 1 year Accuracy)

Signal		Range	Accuracy	Resolution
Current		(-30-30)mA	± (0.01%RD+0.005%FS)	0.1 μA
Voltage		(-30-30)V	± (0.01%RD+0.005%FS)	0.1 mV
Millivolt		(-75-75)mV	± (0.01%RD+0.005%FS)	0.1 μV
Resistance	R-3W	(0-400)Ω	± (0.02%RD+0.005%FS)	1mΩ
		(0-4000)Ω		10mΩ
	R-4W	(0-400)Ω	± (0.01%RD+0.005%FS)	1mΩ
		(0-4000)Ω		10mΩ
Frequency		(1-50000)Hz	± (0.005%RD+0.002%FS)	1Hz
Pulse		0-999999	±1	1
Switch (on/off)		If the switch is equipped with an inspection voltage, the voltage range is (3~24)V		
Thermocouples		k、E、J、T、N、R、S、B、C、D、G、L、U		
RTDs		Pt1000(385)、Pt500(385)、Pt100(385)、Pt100(3916)、Pt100(3926)、Pt10(385)、Cu10(427)、Cu50(428)、Cu100(428)、Ni120(672)、Ni100(618)		
Pressure range		Refer to the Pressure Range Selection Chart (SPMK518, SPMK517 only).		

Electrical Source Specifications (Ambient Temperature (20±5) °C , 1 year accuracy)

Signal	Range	Accuracy	Resolution
Current	(0-22)mA	± (0.02%RD+0.005%FS)	0.1μA
Voltage	(0-12)V	± (0.02%RD+0.005%FS)	0.1mV
Millivolt	(-10-100)mV	± (0.02%RD+0.005%FS)	1μV
Resistance	(0-400)Ω	± (0.02%RD+0.005%FS)	1mΩ
	(400-4000)Ω	± (0.03%RD+0.01%FS)	10mΩ
Frequency	(0-50000)Hz	± (0.005%RD+0.002%FS)	0.1Hz
Pulse	0-999999	±1	1
24VDC	(24±0.5)V maximum load 50mA		
Simulating thermocouple	k, E, J, T, N, R, S, B, C, D, G, L, U		
Simulating RTDs	Pt1000(385)、Pt500(385)、Pt100(385)、Pt100(3916)、Pt100(3926)、Pt10(385)、Cu10(427)、Cu50(428)、Cu100(428)、Ni120(672)、Ni100(618)		

Electrical Source Specifications (Ambient Temperature (20±5) °C , 1 year accuracy)

Thermocouple type	Reference	Temperature range (°C)	Tolerance temperature range (°C)	Maximum permissible error (°C)	
				Measurement	Output
Type K	IEC584	-270~1372	-200~-100	±0.4	±0.6
			-100~600	±0.3	±0.3
			600~1372	±0.4	±0.5
Type E	IEC584	-270~1000	-200~-100	±0.3	±0.4
			-100~600	±0.2	±0.2
			600~1000	±0.2	±0.4
Type J	IEC584	-210~1200	-210~-100	±0.3	±0.4
			-100~1200	±0.3	±0.3
Type T	IEC584	-270~400	-200~0	±0.4	±0.5
			0~300	±0.2	±0.3
			300~400	±0.2	±0.2
Type N	IEC584	-270~1300	-200~-100	±0.5	±0.6
			-100~1300	±0.4	±0.5
Type R	IEC584	-50~1768	-50~100	±1.4	±1.5
			100~500	±0.6	±0.7
			500~1768	±0.7	±0.7
Type S	IEC584	-50~1768	-50~100	±1.1	±1.2
			100~400	±1.0	±1.1
			400~1768	±0.7	±0.8
Type B	IEC584	0~1820	0~450	±3.8	±3.8
			450~800	±0.9	±1.0
			800~1200	±0.6	±0.7
			1200~1820	±0.6	±0.8
Type C	ASTM E988	0~2315	0~1000	±0.6	±0.7
			1000~1800	±0.8	±1.0
			1800~2315	±1.2	±1.5
Type D	ASTM E988	0~2315	0~100	±0.6	±0.6
			100~1100	±0.5	±0.6
			1100~2000	±0.8	±1.0
			2000~2315	±1.0	±1.4

Thermocouple type	Reference	Temperature range (°C)	Tolerance temperature range (°C)	Maximum permissible error (°C)	
				Measurement	Output
Type G	ASTM E1751	0~2315	0~200	±2.4	±2.5
			200~400	±0.5	±0.6
			400~1400	±0.4	±0.6
			1400~2315	±0.8	±1.0
Type L	DIN43710	-200~900	-200~-100	±0.3	±0.5
			-100~400	±0.2	±0.3
			400~900	±0.5	±0.6
Type U	DIN43710	-200~600	-200~0	±0.5	±0.4
			0~600	±0.3	±0.5

Measuring and Simulating RTD source temperature specifications using RTDs (ambient temperature (20±5)°C)








Thermocouple type	Reference	Temperature range (°C)	Tolerance applicable temperature range (°C)	Maximum permissible error (°C)		
				3W	4W	Output
Pt1000 (385)	IEC751	-200~850	-100~200	±0.13	±0.08	±0.29
			200~600	±0.24	±0.13	±0.45
			600~840	±0.32	±0.19	±0.56
Pt500 (385)	IEC751	-200~850	-100~200	±0.22	±0.16	±0.35
			200~600	±0.35	±0.22	±0.56
			600~850	±0.39	±0.28	±0.69
Pt100 (385)	IEC751	-200~850	-100~200	±0.18	±0.14	±0.18
			200~600	±0.27	±0.18	±0.27
			600~850	±0.36	±0.29	±0.36
Pt100 (3926)	Minco Application Aid #18	-200~850	-100~200	±0.18	±0.14	±0.18
			200~600	±0.27	±0.18	±0.27
			600~850	±0.36	±0.29	±0.33
Pt100 (3916)	JIS1604	-200~850	-100~200	±0.18	±0.14	±0.18
			200~600	±0.27	±0.18	±0.27
			600~850	±0.35	±0.29	±0.35
Pt10 (385)	IEC751	-200~850	-100~200	±0.68	±0.64	±0.68
			200~600	±0.85	±0.82	±0.85
			600~850	±0.98	±0.89	±0.98
Cu100 (428)	JB/T8623—1997	-50~150	-50~150	±0.15	±0.10	±0.16
Cu50 (428)	JB/T8623—1997	-50~150	-50~150	±0.19	±0.17	±0.20

Thermocouple type	Reference	Temperature range (°C)	Tolerance applicable temperature range (°C)	Maximum permissible error (°C)		
				Measurement		Output
				3W	4W	
Cu10 (427)	Minco Application Aid #18	-100~260	-100~260	±0.65	±0.58	±0.65
Ni120 (672)	Edison curve #7	-70~270	-70~270	±0.08	±0.06	±0.08
Ni100 (618)	DIN43760	-70~190	-70~190	±0.10	±0.07	±0.10


General Technical Indicators

Project	Parameters
Display	6-digit display
Usage environment	Ambient temperature :(-10~50)°C ; Relative humidity <90% noncondensing; Atmospheric pressure (86~106)kPa.a
Storage environment	Ambient temperature(-20~60)°C ; Relative humidity <90% non-condensing
Power supply mode	AC and DC power supply (battery power is recommended for good measurement and output)
Dimensions	208mm(L)x101mm(W)x55mm(H)
Weight	0.7kg
Warranty	1 year

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adapter	1 pc	
3	Chargeable lithium batteries	2 sets	
4	Test lead	1 set	
5	Pressure module connection cable (only for SPMK517, SPMK518)	1 pc	
6	Type compensation conductor (only for SPMK516, SPMK517, SPMK518)	1 pc	
7	Dedicated short routes	20 pcs	
8	User's manual	2 pcs	
9	Calibration test report	1 pc	

Optional Accessories

Serial number	Description	Picture
1	SDP pressure module (only for SPMK517, SPMK518)	
2	SDP pressure module test report	
3	CJC assembly (optional K, E, J, T, N, R, S, B, C, D, G, L, U)	

SPMK51XT

Series Multi-function Process Calibrator



Product Characteristics

■ Variety of functions

Calibrate pressure, temperature, voltage, current, frequency, pulse, resistance. Both measurement and source functions.

■ Measurement and source functions

Measures 13 types of thermocouples and 11 types of RTDs and provides analog output with cold end compensation.

■ Data storage function

No need to worry about data loss. Supports output methods such as step or program.

■ Built-in HART function

It can calibrate and maintain HART-type instruments, and realize functions such as management of instrument basic information, range migration, zero point and full scale calibration (SPMK518T only).

■ Support external pressure modules

SDP pressure module (only for SPMK517T and SPMK518T) (optional).

■ Task management function

■ Analog transmitters

Generate precise electrical, temperature or pressure signals.

■ Provides commonly used tools

Thermal engineering treasure trove, user-built RTD library, temperature and pressure unit conversion.

■ Automatic cold-end compensation technology

Built-in cold end insulation module for fast tracking of temperature changes.

■ 5.6" high resolution TFT display

■ Chinese and English languages available

■ RS232 interface and open communication protocol

■ Provides a 24VDC loop power supply with measurement and output isolated from each other

■ Warranty: 1 year

Product Functions

Function		SPMK516T	SPMK517T	SPMK518T
Measurement	Millivolt	★	★	★
	Voltage	★	★	★
	Current	★	★	★
	Frequency	★	★	★
	Pulse	★	★	★
	Resistance	★	★	★
	On-off	★	★	★
	11 RTDs	★	★	★
	13 thermocouples	★	★	★
Source	Millivolt	★	★	★
	Voltage	★	★	★
	Current	★	★	★
	Frequency	★	★	★
	Resistance	★	★	★
	Simulate 11 RTDs	★	★	★
	Simulate 13 thermocouples	★	★	★
Other Functions	HART communication	★		★
	External pressure module①		★	★
	Thermal book	★	★	★
	Step programming output	★	★	★
	24V loop current	★	★	★
	Simulating transmitter	★	★	★
	RS232 communication	★	★	★
	Storage	★	★	★

Note: ① External pressure module means SDP module produced by our company.

Technical Parameters

Electrical Signal Measurement Specifications (Ambient Temperature (20±5) °C, 1 year Accuracy)

Signal		Range	Accuracy	Resolution
Current		(-30-30)mA	± (0.01%RD+0.005%FS)	0.1 μA
Voltage		(-30-30)V	± (0.01%RD+0.005%FS)	0.1 mV
Millivolt		(-75-75)mV	± (0.01%RD+0.005%FS)	0.1 μV
Resistance	R-3W	(0-400)Ω	± (0.02%RD+0.005%FS)	1mΩ
		(0-4000)Ω		10mΩ
	R-4W	(0-400)Ω	± (0.01%RD+0.005%FS)	1mΩ
		(0-4000)Ω		10mΩ
Frequency		(1-50000)Hz	± (0.005%RD+0.002%FS)	1Hz
Pulse		0-999999	±1	1
Switch (on/off)		If the switch is equipped with an inspection voltage, the voltage range is (3~24)V		
Thermocouples		k、E、J、T、N、R、S、B、C、D、G、L、U		
RTDs		Pt1000(385)、Pt500(385)、Pt100(385)、Pt100(3916)、Pt100(3926)、Pt10(385)、Cu10(427)、Cu50(428)、Cu100(428)、Ni120(672)、Ni100(618)		
Pressure range		Refer to the Pressure Range Selection Chart (SPMK518T, SPMK517T only).		

Electrical Source Specifications (Ambient Temperature (20±5) °C , 1 year accuracy)

Signal	Range	Accuracy	Resolution
Current	(0-22)mA	± (0.02%RD+0.005%FS)	0.1μA
Voltage	(0-12)V	± (0.02%RD+0.005%FS)	0.1mV
Millivolt	(-10-100)mV	± (0.02%RD+0.005%FS)	1μV
Resistance	(0-400)Ω	± (0.02%RD+0.005%FS)	1mΩ
	(400-4000)Ω	± (0.03%RD+0.01%FS)	10mΩ
Frequency	(0-50000)Hz	± (0.005%RD+0.002%FS)	0.1Hz
Pulse	0-999999	±1	1
24VDC	(24±0.5)V maximum load 50mA		
Simulating Thermocouple	k, E, J, T, N, R, S, B, C, D, G, L, U		
Simulating RTDs	Pt1000(385)、Pt500(385)、Pt100(385)、Pt100(3916)、Pt100(3926)、Pt10(385)、Cu10(427)、Cu50(428)、Cu100(428)、Ni120(672)、Ni100(618)		

Electrical Source Specifications (Ambient Temperature (20±5) °C , 1 year accuracy)

Thermocouple type	Reference	Temperature range (°C)	Tolerance temperature range (°C)	Maximum permissible error (°C)	
				Measurement	Output
Type K	IEC584	-270~1372	-200~-100	±0.4	±0.6
			-100~600	±0.3	±0.3
			600~1372	±0.4	±0.5
Type E	IEC584	-270~1000	-200~-100	±0.3	±0.4
			-100~600	±0.2	±0.2
			600~1000	±0.2	±0.4
Type J	IEC584	-210~1200	-210~-100	±0.3	±0.4
			-100~1200	±0.3	±0.3
Type T	IEC584	-270~400	-200~0	±0.4	±0.5
			0~300	±0.2	±0.3
			300~400	±0.2	±0.2
Type N	IEC584	-270~1300	-200~-100	±0.5	±0.6
			-100~1300	±0.4	±0.5
Type R	IEC584	-50~1768	-50~100	±1.4	±1.5
			100~500	±0.6	±0.7
			500~1768	±0.7	±0.7
Type S	IEC584	-50~1768	-50~100	±1.1	±1.2
			100~400	±1.0	±1.1
			400~1768	±0.7	±0.8
Type B	IEC584	0~1820	0~450	±3.8	±3.8
			450~800	±0.9	±1.0
			800~1200	±0.6	±0.7
			1200~1820	±0.6	±0.8
Type C	ASTM E988	0~2315	0~1000	±0.6	±0.7
			1000~1800	±0.8	±1.0
			1800~2315	±1.2	±1.5
Type D	ASTM E988	0~2315	0~100	±0.6	±0.6
			100~1100	±0.5	±0.6
			1100~2000	±0.8	±1.0
			2000~2315	±1.0	±1.4

Thermocouple type	Reference	Temperature range (°C)	Tolerance temperature range (°C)	Maximum permissible error (°C)	
				Measurement	Output
Type G	ASTM E1751	0~2315	0~200	±2.4	±2.5
			200~400	±0.5	±0.6
			400~1400	±0.4	±0.6
			1400~2315	±0.8	±1.0
Type L	DIN43710	-200~900	-200~-100	±0.3	±0.5
			-100~400	±0.2	±0.3
			400~900	±0.5	±0.6
Type U	DIN43710	-200~600	-200~0	±0.5	±0.4
			0~600	±0.3	±0.5

Measuring and Simulating RTD source temperature specifications using RTDs (ambient temperature (20±5)°C)






Thermocouple type	Reference	Temperature range (°C)	Tolerance applicable temperature range (°C)	Maximum permissible error (°C)		
				3W	4W	Output
Pt1000 (385)	IEC751	-200~850	-100~200	±0.13	±0.08	±0.29
			200~600	±0.24	±0.13	±0.45
			600~840	±0.32	±0.19	±0.56
Pt500 (385)	IEC751	-200~850	-100~200	±0.22	±0.16	±0.35
			200~600	±0.35	±0.22	±0.56
			600~850	±0.39	±0.28	±0.69
Pt100 (385)	IEC751	-200~850	-100~200	±0.18	±0.14	±0.18
			200~600	±0.27	±0.18	±0.27
			600~850	±0.36	±0.29	±0.36
Pt100 (3926)	Minco Application Aid #18	-200~850	-100~200	±0.18	±0.14	±0.18
			200~600	±0.27	±0.18	±0.27
			600~850	±0.36	±0.29	±0.33
Pt100 (3916)	JIS1604	-200~850	-100~200	±0.18	±0.14	±0.18
			200~600	±0.27	±0.18	±0.27
			600~850	±0.35	±0.29	±0.35
Pt10 (385)	IEC751	-200~850	-100~200	±0.68	±0.64	±0.68
			200~600	±0.85	±0.82	±0.85
			600~850	±0.98	±0.89	±0.98
Cu100 (428)	JB/T8623—1997	-50~150	-50~150	±0.15	±0.10	±0.16
Cu50 (428)	JB/T8623—1997	-50~150	-50~150	±0.19	±0.17	±0.20

Thermocouple type	Reference	Temperature range (°C)	Tolerance applicable temperature range (°C)	Maximum permissible error (°C)		
				Measurement		Output
				3W	4W	
Cu10 (427)	Minco Application Aid #18	-100~260	-100~260	±0.65	±0.58	±0.65
Ni120 (672)	Edison curve #7	-70~270	-70~270	±0.08	±0.06	±0.08
Ni100 (618)	DIN43760	-70~190	-70~190	±0.10	±0.07	±0.10

General Technical Indicators

Project	Parameters
Display	6-digit display
Usage environment	Ambient temperature: (-10~50)°C ; Relative humidity: <90% non-condensing; Atmospheric pressure: (86~106)kPa.a
Storage environment	Ambient temperature: (-20~60)°C ; Relative humidity: <90% non-condensing
Power supply mode	220VAC 50Hz
Dimensions	415mm(L) x 375mm(W) x 240mm(H)
Weight	7.6kg
Warranty	1 year

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adapter	1 pc	
3	Test leads	3 sets	
4	Pressure module connection cable (SPMK517T, SPMK518T only)	1 pc	
5	Dedicated short route	1 pc	
6	User's manual	1 pc	
7	Test report	1 pc	

Optional Accessories

Serial number	Description	Picture
1	SDP pressure module (only for SPMK517T, SPMK518T)	
2	RS232 communication cable	
3	SDP pressure module test report	

SDP Pressure Module

(External device of SPMK518/7 Process Calibrator)



Product Description

SDP pressure module is easy to carry and with wide pressure range.

It is external device working with SPMK517 / SPMK518 process calibrator for pressure testing and calibration of pressure transmitter, pressure switch, precision pressure gauge, general pressure gauge, pressure sensor and other pressure instruments.

Main Feature

- Easy to carry;
- Tread of M20x1.5M, NPT, BSP optional;
- One process calibrator could with different range of SDP pressure module;
- Stainless steel shell can be shielding electromagnetic interference.

Technical Data

- Pressure ranges up to 36,000 psi (2,500 bar), pressure range and accuracy refer to page 5;
- Accuracy: $\pm 0.02\%FS$ / $\pm 0.05\%FS$ / $\pm 0.1\%FS$;
- Connection: M20×1.5, 1/4NPT / BSP, 1/2NPT / BSP optional;
- Signal output: RS232, 9600 baud rate, data length 8 digits, no stop bit;
- Communication distance: Wire diameter no less than 0.6mm, max distance 3-5m;
- Operation temperature: 0-50 °C ;
- Environmental relative humidity: $\leq 95\%R.H$;
- Atmospheric pressure: (86~106) kPa.a;
- Dimensions: $\varnothing 35 \times 133.5(mm)$;
- Net weight: 0.28kg;
- Calibration period: 1 year.

SPMK251

Intelligent Pressure Controller



Product Description

SPMK251 Intelligent pressure controller uses digital control technology to quickly output high precision and high stability pressure.

It needs to connect with external pressure source (It can be Nitrogen cylinder, or SPMK211D Electric pressure generator, or other brand electrical pressure source with the suitable pressure range).

It can calibrate or test pressure gauge, Intelligent HART pressure transmitter, pressure switch and so on.

Product characteristics

- Accuracy $\pm 0.02\%$ and $\pm 0.05\%$ F.S optional;
- 8-inch color touch screen;
- Chinese and English language available;
- Supports the step output method;
- Supports calibration of HART instruments;
- Supports measurement of voltage, current, pressure switch;
- Outputs mA and 24V;
- Built-in standard barometer for switching between gauge pressure and absolute pressure;
- Use of external SDP pressure module (optional);
- Warranty: 1 year.

Technical parameters

Model	SPMK251-07	SPMK251-6	SPMK251-25	SPMK251-60
Pressure control range	(-95~700) kPa	(-0.09~6) MPa	(-0.09~25) MPa	(1~60) MPa
Built-in pressure module	(-100~700)kPa ±0.02/0.05%FS	(-0.1~6)MPa ±0.02/0.05%FS	(-0.1~25)MPa ±0.02/0.05%FS	(0~60)MPa ±0.02/0.05%FS
External pressure module	According to the inspection pressure instrument selection, the measurement range is not greater than the built-in pressure standard module external module selection, please refer to the Pressure Range Selection Table on P5.			
Pressure type	Gauge pressure/ Absolute pressure	Gauge pressure/ Absolute pressure	Gauge pressure/ Absolute pressure	Gauge pressure
Media	Air/Nitrogen	Air/Nitrogen	Air	Mineral oil (Distilled water)
External pressure source	(-95 to 800) kPa	(-0.095 to 7) MPa	(-0.095 to 26) MPa	(0 to 800) kPa
Control stability (30s)	≤ 0.003%FS	≤ 0.003% FS	≤ 0.003% FS	≤ 0.003% FS
Pressure control over (back) adjustment	Not more than 0.1% of the absolute value of the target pressure			
Target pressure stability duration	Greater than 5 minutes			
Control response time (without external load)	30s			
Function	V, mV, mA, switching, calibration HART instrument with 24VDC output			
Displaying the number of digits	4/5/6 digit display optional			
Pressure connections	M20 x 1.5 female or NPT/BSP thread optional			
Power supply	220VAC			
Power	0.05 kW			
Storage temperature	(0~50)℃			
Relative humidity	<90% non-condensing			
Dimensions	(375 x 460 x 180) mm			(520 x 460 x 210) mm
Weight	14 kg	14 kg	14 kg	40 kg
Recommended purchase	SPMK211D-8	SPMK211D-7	SPMK211D-25	SPMK211D-08

Note:① Temperature automatic compensation range is (-10~50)℃, 1 year accuracy.

② Modules can be customized, refer to the Pressure Range Selection Table on P48.

③ SPMK251-60 pressure controller needs to work with SPMK211D pressure generator only.

Electrometric Indicators

Signal	Range	Resolution	Accuracy
Voltage measurement	(-30 ~ 30)V	0.1mV	$\pm(0.01\%RD+0.005\%FS)$
Current measurement	(-30 ~ 30)mA	0.1 μ A	$\pm(0.01\%RD+0.005\%FS)$
Switch detection	If the switch is energized, voltage range (3 to 24) V		
Current output	(0 ~ 22)mA	1 μ A	$\pm(0.02\%RD+0.005\%FS)$
24VDC output	(24 \pm 0.5)V, maximum load 50mA		







Note: Ambient temperature is (25 \pm 5) $^{\circ}$ C, 1 year accuracy.

Optional Calibration Solution




Program options		Option I (-100~700) kPa	Option II (-0.1~6) MPa	Option III (-0.1~25) MPa	Option IV (1~60) MPa	QTY
Intelligent pressure controller	Built-in pressure control module	SPMK251/07 (-100~700)kPa $\pm 0.02/0.05\%FS$	SPMK251/6 (-0.1~6)MPa $\pm 0.02/0.05\%FS$	SPMK251/25 (-0.1~25)MPa $\pm 0.02/0.05\%FS$	SPMK251/60 (0~60)MPa $\pm 0.02/0.05\%FS$	1 pc
	Dimensions	(375 x 460 x 180) mm			(520 x 460 x 210) mm	
	Weight	14 kg			40kg	
	Power	0.05 kW				
Pressure source	Pressure output	SPMK211D/08 (-95~800) kPa	SPMK211D/6 (-0.095~7) MPa	SPMK211D/25 (-0.095~26) MPa	SPMK211D/08 (0~800) kPa	1 pc
	Dimensions	(560 x 490 x 580) mm				
	Weight	50 kg	70 kg	100 kg	50 kg	
	Power	1 kW		2 kW	0.5 kW	
Combination cabinets	Dimensions	(615x600x1240) mm				1 pc
	Total weight	75 kg	120 kg	150 kg	110 kg	
	Total power	1.05 kW	1 kW	2 kW	0.55 kW	
Pressure control module		(-2~2)kPa 0.05 (-5~5)kPa 0.02/0.05 (-10~10)kPa 0.05 (-100~100)kPa 0.02/0.05 (0~250)kPa 0.02/0.05 (0~400)kPa 0.02/0.05	(-100~160)kPa 0.02/0.05 (0~250)kPa 0.02/0.05 (0~600)kPa 0.02/0.05 (0~1)MPa 0.02/0.05 (0~2.5)MPa 0.02/0.05 (0~4.0)MPa 0.02/0.05	(0~1)MPa 0.02/0.05 (0~2.5)MPa 0.02/0.05 (0~6)MPa 0.02/0.05 (0~10)MPa 0.02/0.05	(0~10)MPa 0.02/0.05 (0~25)MPa 0.02/0.05 (0~40)MPa 0.02/0.05	1 pc
Pressure manifold with 4 outputs		SPMK2000-10 Air pressure (-0.1~30)MPa			SPMK2000-10 Hydraulic (0~80)MPa	1 pc
Pressure adapter		SPMK2000-1 set of adaptors, with 38 different threads				Optional

Note: SPMK251-60 pressure controller needs to work with SPMK211D pressure generator only.

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adapter	1 pc	
3	Test leads	2 sets	
4	Pressure module connection cable	1 pc	
5	SPMK2000-10 pressure manifold with 4 outports	1 pc	
6	RS232 communication cable	1 pc	
7	User's manual	1 pc	
8	Test report	1 pc	

Optional Accessories

Serial number	Description	Picture
1	SPMK2000-9 five outports pressure manifold	
2	SPMK2000-3 high-pressure gas connection hose	
3	SPMK2000-4 high-pressure liquid connection hose	

SPMK211

Series Automatic Pressure Generator

SPMK211 series electric pressure generator can quickly generate pressure to the setting range, and can easily complete the calibration of pressure instruments with the SPMK251 intelligent pressure controller and SPMK213G pressure reducer calibrator. It has the function of automatic pressure replenishment and over-pressure protection.

SPMK211BD (-0.95~70)bar



Main features

- Easy pressurization and fast output of highly stable pressure.
- With pressure storage, automatic replenishment function.
- Dual outputs, vacuum / pressure isolated outputs.
- Overvoltage protection.
- LED screen, easy to carry.

SPMK211D (0.8MPa / 7MPa / 26MPa)







Main features

- The pressure range can be set within the rated pressure range.
- With pressure storage, automatic replenishment function.
- Dual outputs, vacuum/pressure isolated (SPMK211D-7 and SPMK211D-25 only).
- Overvoltage protection.
- LED screen, easy to move.
- SPMK211D-08 can generate pressure up to 600bar.

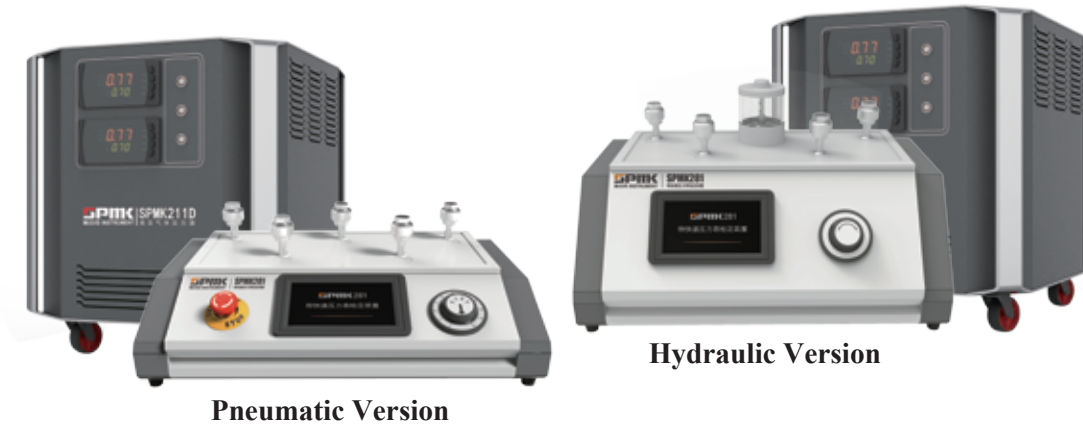
Technical Parameters

Model	SPMK211BD	SPMK211D-08	SPMK211D-7	SPMK211D-25
Pressure range	(-0.095～7)MPa	0.8MPa	(-0.095～7)MPa	(-0.095～26)MPa
Pressurization time	1 minute and 30 seconds			3 minutes
Display	LED display			
Connection	M20 x 1.5 standard female thread			
Dimensions	(300 x 245 x 390) mm	(560x 490x 580)mm		
Weight	20 kg	50 kg	70 kg	100 kg
Power supply	220VAC			
Power	0.15 kW	1 kW		2 kW
Storage environment	(-20～70)℃ <90% non-condensing			
Use environment	(-10～50)℃ <90% non-condensing			

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1pc	
2	Power adaptor	1pc	
3	Seals (only for SPMK211BD)	20pcs	
4	6mm connecting hose (only for SPMK211D-08)	1pc	
5	SPMK2000-4 high pressure hose (only for SPMK211D-7 and SPMK211D-25)	1pc	
6	User's manual	1pc	

SPMK281 Rapid Pressure Gauge Calibrator



Pneumatic Version

Hydraulic Version

Product Description

SPMK281 rapid pressure gauge calibrator adopts the newly developed adjustment system, which can quickly output high precision and high stability pressure. It can realize automatic pressure control and manual pressure control, which can complete the rapid calibration of pressure gauges, pressure transmitters and other instruments.

Product characteristics

- It can calibrate 4-5 units of pressure device at the same time;
- High-resolution 7-inch touch screen, Chinese and English language available;
- Precise proportional adjustment system (pneumatic version), air-driven hydraulic servo pressure regulation technology (hydraulic version), hand-adjustable knob is easy and smooth;
- Customizable pressure values within the pressure range;
- Gas-liquid separation filtration system (pneumatic version) and built-in liquid filtration system (hydraulic version);
- Recommend SPMK223 pressure calibrator, which can calibrate pressure transmitter and pressure switch (optional);
- Recommend SPMK211D electrical pressure generator with the correct pressure range.

Technical Indicators



Model	SPMK281-6	SPMK281-60
Measurement range	Measurement pressure:(0~6)MPa	Measurement pressure:(0~60)MPa
	Measurement accuracy:±0.02%FS	Measurement accuracy:±0.02%FS
Output range	Output pressure:(0~6)MPa	Output pressure:(1~60)MPa
	Measurement accuracy: ±0.02%FS, ±0.05%FS	Measurement accuracy: ±0.02%FS, ±0.05%FS
Working medium	Air or Nitrogen	Mineral oil
External standard device	Range is not greater than the built-in pressure standard module, the external standard device range (0 ~ 2.5MPa, 0 ~ 1 MPa, 0 ~ 600kPa, 0 ~ 250kPa), ±0.02%FS	Range is not greater than the built-in pressure standard module, the external standard device range (0 ~ 6MPa, 0 ~ 25MPa), ±0.02%FS
External pressure source	7MPa (optional)	0.7MPa<Pressure source range <1MPa
	Dimensions:(500x490x580)mm	Dimensions:(500x490x580)mm
	Weight:70kg	Weight:50kg
Automatic (manual) pressure control stabilization and acquisition time	≤20S (according to the accuracy and pressure data acquisition of the under tested device)	
Control stability	≤0.003% full scale	
Pressure-controlled over (back) adjustment volume	Not more than 0.1% of the absolute value of the target pressure value	
Pressure output stabilization time	Continuous output of more than 5 mins	
Minimum controllable fineness adjustment	0.1kPa	0.01MPa

Model	SPMK281-6	SPMK281-60
Screen size	7-inch touchscreen display	7-inch touchscreen display
Pressure input connector	M20 x 1.5 or NPT/BSP Male optional	6mm standard test hose
Pressure output connector	Five M20x1.5 or NPT/BSP Female optional	Four M20x1.5 or NPT/BSP Female optional
Working environment	Ambient temperature: (0~50) °C ; Relative humidity: not more than 90%	
Power supply	220VAC	220VAC
Dimensions	(600x350x210) mm	(610x360x370) mm
Weight	17 kg	34 kg

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1pc	
2	Power adaptor	1pc	
3	2 meters high pressure hose	1pc	
4	Seals (14 x 3.1)	20pcs	
5	Pressure outport plugs	5pcs	
6	User's manual	1pc	
7	Test report	1pc	

Optional Accessories

Serial number	Description	QTY	Picture
1	SPMK211D electric pressure generator	1pc	
2	SPMK223 pressure calibrator (optional according to the range)	1pc	

SPMK213G-D

Pressure Regulator Calibrator with Electronic Pressure Generator



Product Description

The pressure source of the SPMK213G-D electric pressure reducer calibrator uses digital control technology to generate high-stability pressure quickly. The required pressure is controlled by the precision valve on the console to meet the requirements of field and laboratory calibration works, which also can test gas pressure reducers, ordinary pressure gauges, pressure transmitters, and pressure switches.

Note: SPMK213G reducer calibrator can also work with Nitrogen cylinder as pressure source instead of SPMK211D electronic pressure generator.

SPMK213G pressure regulator calibrator and SPMK211D pressure generator can be ordered separately.




Product Characteristics

- Automatically output pneumatic pressure continuously;
- Pressure reducer can be calibrated as a whole set without disassemble the pressure gauge;
- It can check and detect the tightness of the gas pressure reducer;
- It can detect the low pressure and high pressure of the gas pressure reducer to determine whether the high and low pressure chambers are connected;
- The safety valve of the gas pressure reducer can be tested;
- The high and low pressure control systems are independent of each other to avoid damage to the low pressure gauge caused by improper operation;
- It is suitable for the calibration of pressure instruments within (0-25) MPa.

Technical Indicators

Project	Parameters
Range	High pressure (0~25)MPa; Low pressure (0~6)MPa
Fine adjustment	10kPa
Medium	Air
Pressure connection	M20 x 1.5 standard female thread or optional
Usage environment	Operating Temperature:(20±5)℃; Relative Humidity:≤85%
Dimensions	SPMK213G: (740×420×570) mm (includes handle and intake joint and protective cover)
Weight	38.20 kg

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Seals	20 pcs	
3	Oxygen low-pressure connection hose	1 pc	
4	Acetylene low pressure connection hose	1 pc	
5	SPMK2000-4 high pressure connecting hoses	2 pcs	
6	Oxygen adapter	1 pc	
7	Acetylene adapter	1 pc	
8	Propane adapter	1 pc	
9	Transition adapters	2 pcs	
10	User's manual	1 pc	
11	Test report	1 pc	

SPMK991T

Automatic Pressure Calibration Bench



Product Description

SPMK991T series intelligent pressure calibration bench can generate stable pressure automatically during the pressure calibration process. It is widely used in calibration of pressure (differential pressure) transmitters, precision (ordinary) pressure gauges, vacuum gauges, electrical contact pressure gauges and other pressure instruments.

SPMK991T pressure calibration bench is an ideal instrument for pressure measurement and calibration industry.




Product Characteristics

- Auto pressure generator, dynamic balance tech, instant pressure stabilization without leakage;
- High-precision pressure regulating valve;
- Pneumatic type can test 2 gauges, hydraulic type can test 3 gauges at the same time;
- Small noise and easy to operate;
- Warranty: 1 year.

Technical Indicators

Model	SPMK991T-Vacuum	SPMK991T-4	SPMK991T-60
Pressure range	(-0.095～0)MPa at standard atmospheric pressure	(0～4)MPa	(0～60)MPa
Minimum controllable adjustment	0.01kPa	0.1kPa	0.01MPa
Media	Air		Mineral oil
Stability	<0.05%F.S/3S		
Pressure connection	M20 x 1.5F or BSP /NPT * 3 outputs		M20 x 1.5F or BSP /NPT * 4 outputs
Pressure control mode	Imported high-precision servo regulator control		
Dimensions	(700 x 620 x 1050) mm		
Weight	45 kg	65 kg	
Power	0.75 kW		
Usage environment	Temperature (0~35)℃ ; Relative humidity≤85%RH		
Power supply mode	(220V±10%) AC		

Accessories(included)

Serial number	Description	QTY	Picture
1	Main product	1 pc	
2	Power adapter	1 pc	
3	Seals	20 pcs	
4	User's manual	1 pc	
5	Test report	1 pc	

Headquarter

6F Jinyanlong Plaza, Haidian District, Beijing,
100096, China.

Tel: +86-10-62719945

www.bestcalibrator.com

www.spmkcalibrator.com

Sales Director

Ms. Marilyn

Email: sales@bestcalibrator.com

M: +8615210919985 (same as Whats App / We Chat ID)


Production Base

B26, Economic and Technology Development
Zone, Henan Province, 453000, China


Phone: +86-373-7883360/61

Fax: +86-373-7883368




 What's App



 We Chat



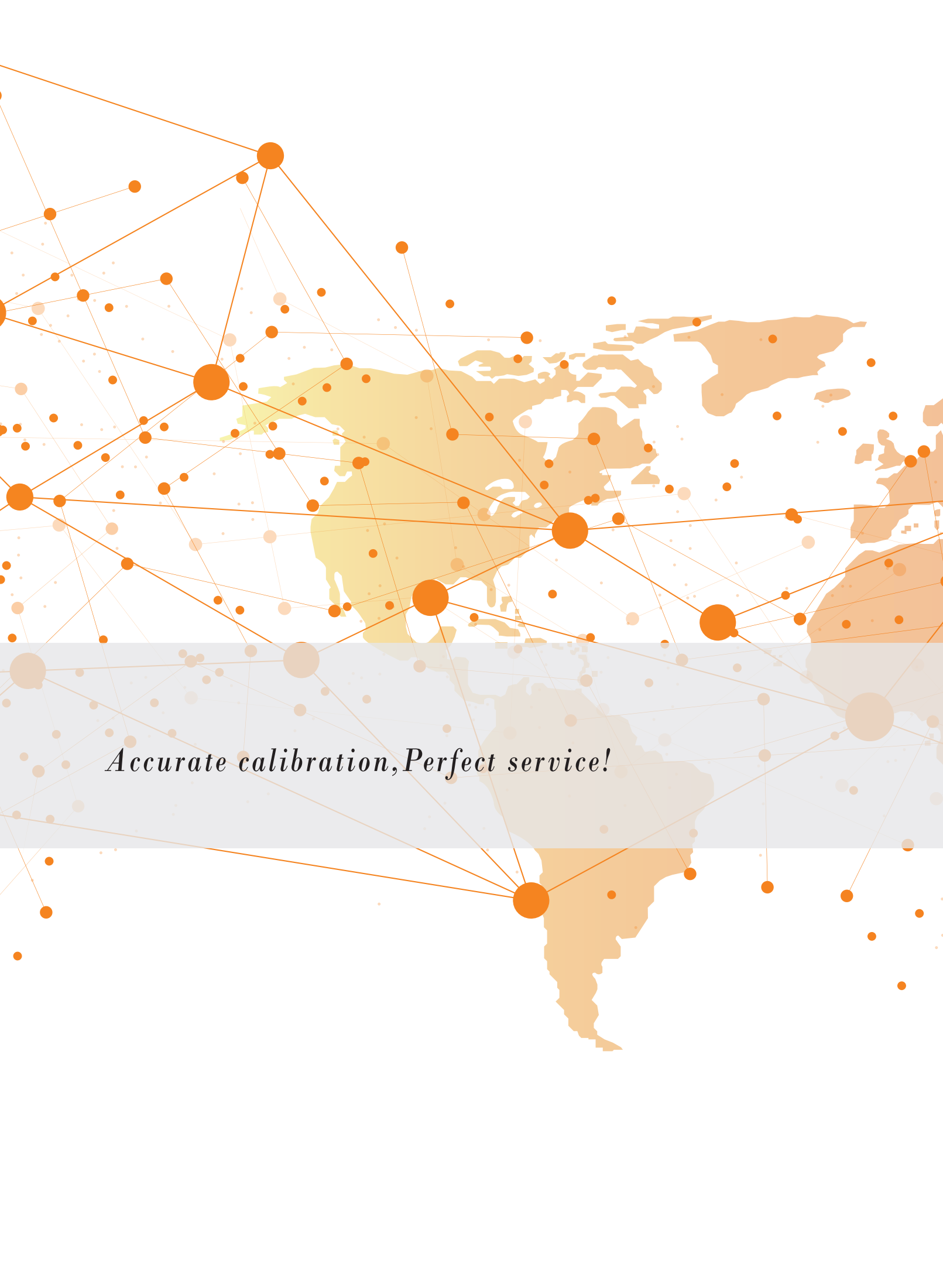
 YouTube

SPMK Certificates



SPMK Pictures





Accurate calibration, Perfect service!