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DATASHEET

SPMK221G Automatic pressure calibrator

BCLog-Control

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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 ±0.02% and ±0.05%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	±(0.01%RD+0.005%FS)
Current measurement	(-30~30)mA	0.1μA	±(0.01%RD+0.005%FS)
Switch detection	If the switch is energized, voltage range (3 to 24) V		
Current output	(0~22)mA	1μA	±(0.02%RD+0.005%FS)
24VDC output	(24±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 outport 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	