Nanjing Wotian Technology Co., Ltd

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- Company Layout
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Company History

START | 2005 | 2008 | 2009 | 2010

Three founders from China national institute establish Nanjing Wotian Technology Co., Ltd.
It is one of the earliest professional sensor company at that time.
The company's initial technical support comes from the transfer of technology from Kulite

Gain ISO9001:2000 quality system certification

Production capacity improves greatly and sales volume increases by 50%

Gain CE certification

Company History

2012	2013	2014	2015	2017
Earn good reputation in China, USA, UK, Germany and Russia	The research and development zone is founded in Nanjing downtown. There are 26 engineers, all with bachelor degree or above. The proportion of R & D people is 12%.	Establish Anshan Wotian Sensor Corp. in China	Establish Wotian Sensor Corporation in USA	Establish KWT Co., Ltd. in Korea and Wotian Sensor GmbH in Germany

Company Layout

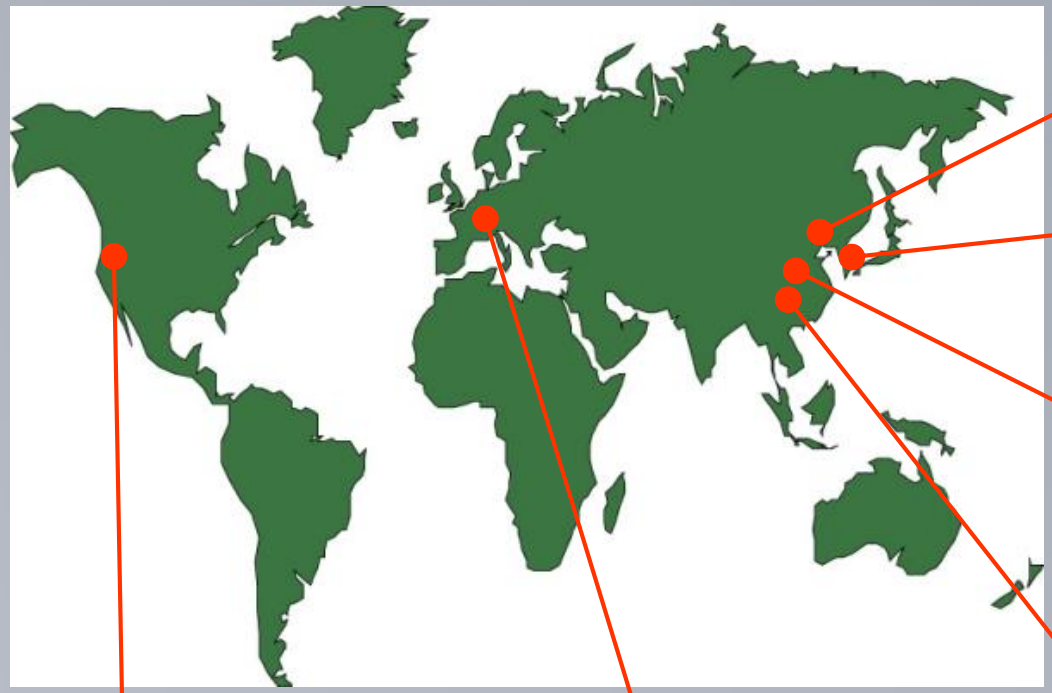
The largest manufacturer of diffused silicon pressure sensors in China

Headquarter
Nanjing Wotian Technology Co.,Ltd.
Founded time:2005
Location: Nanjing China
Plant area: 150,000 m^2
Building area: 20,000 m^2
Employees: 260

Company Layout

Two modern production bases

One North、one South of China production base has formed complementary advantages to ensure rapid supply of domestic products and large-scale international supply.



Anshan Factory
Since 2014

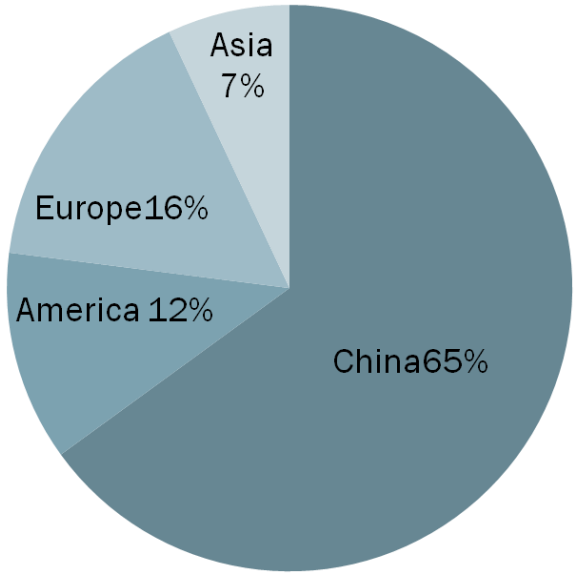
Korean Company
Since 2017

Nanjing Factory
Since 2005

Independent
R&D
department in
Nanjing

American Corporation
Since 2014

German Company
Since 2017



Capacity

Each year we produce more than 1.5 million pressure sensors of every variety and they have been exported worldwide to more than 70 countries.

Company Management

QMS	Enterprises Informatization	Process automation	Production System
ISO9001 TS16949	CRM+PLM+ ERP+MES .	The key processes in the production process are fully automated.	Lean production system

01

Certificate

NANJING WOTIAN TECHNOLOGY CO., LTD

Address: Wenying Road, Binjiang Development Zone, Jiangning District, Nanjing City, Jiangsu Province. P.C.:211161

According to your organization's application, our center carried out audit and certification in accordance with the requirements for *Quality Management System* (GB/T19001-2008 / ISO9001:2008), through the assessment, it is in accordance with the requirements which set up the quality management system.

The scope of the certified QMS is:

The production of PCT temperature sensor, PCM [(0-35)Kpa-(0-60)Mpa precision level 0.5] pressure transmitter.

Registration No. of Certificate:	05313Q20638R1M
Date of the Awarded Certificate:	27-12-2013
Term of the Certificate's Validity:	27-12-2013~26-12-2016
Date of the First Authentication:	19-02-2008

If not stick the laser surveillance mark after the date of surveillance expires, this certificate is invalid.

The first surveillance	Mark stick here	The second surveillance	Mark stick here

Beijing NGV Certification Centre

Director: Wangmei

ISO9001

02

N. ΜΠΡΟΥΣΤΑΣ Ε.Π.Ε.
N.BROUSTAS EPE
EU Notified Body No. 2077

Certificate of Conformity

Certificate Number:	2010/08/17/0/CE
Date of issue:	Aug. 17th, 2010
Certificate holder:	Nanjing Wotian Technology Co.,Ltd.
Address:	Wenying Road, Binjiang Development Zone, Nanjing P.R.China
Manufacturer:	Same as above
Address:	/
Product name:	Pressure Sensor
Type(s) or model(s):	WT
EU directive(s):	Electro Magnetic CompatibilityDirective 2004/108/EC
	EN 61326-1:2006 EN 61000-4-2:2009
	EN 61000-4-3:2006 EN 61000-4-4:2004+A1:2010
	EN 61000-4-6:2009 EN 55022:2006+A1:2007
Technical data & Category:	-0.1~~0~0.02~~100Mpa
Technical file/report(s):	SH2010080-EMC

Declaration:

This certification declares that the certificate holder or his manufacturer has draw up and submit the technical file/report(s) referred to directive(s) 2004/108/EC for the mentioned above product type(s) or model(s). The Notified Body received the technical file/report(s), found comply to the mentioned directive(s), and keeps the technical file/report(s) for specified period (5 years after the date of issue this certificate).

Remarks:

CE The CE marking as show left can be used under the responsibility of the holder, after completion of an EC Declaration of Conformity and compliance with all relevant EC directives.

This certificate is only valid for the product described. The holder must inform the Notified Body of any plan for substantial changes in the design, construction of the products in order to examine whether this Certificate remain valid or not.

N. ΜΠΡΟΥΣΤΑΣ Ε.Π.Ε.
N.BROUSTAS EPE

Procedure Tzanetou 8 Ag. Dimitrios TK 173 42 ATHENS
www.broustas.com info@broustas.com

CE

03

CNEX 国家防爆

Electrical Apparatus for Explosive Atmospheres

CERTIFICATE OF CONFORMITY

No.: CNEx13.1512

Manufacturer	Nanjing Wotian Technology Co., Ltd Intersection of Dixiu Road and Wenying Road, Binjiang development zone, Jiangning District, Nanjing
Name of Product	Pressure transmitter
Type of Product	PCM301 9~36VDC
Marking	ExdIICT6 Gb
Standard	Q/3201 WTK001-2012
Drawing No.	PCM301-101

The drawings, technical documents and the samples are verified and certified according to standard(s) for safety as below:

GB3836.1-2010 Explosive atmospheres Part 1: Equipment-General requirements

GB3836.2-2010 Explosive atmospheres Part 2: Equipment protection by flameproof enclosures "d"

Note: IP Code: IP65

Valid Date: From May 6, 2013 to May 5, 2018

Issue Date: May 6, 2013

Director:

Ex CQST NANYANG

CHINA NATIONAL QUALITY SUPERVISION AND TEST CENTRE FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS

Address: No.20 North Zhongjing Rd, Nanyang, Henan(473006), P.R.China
Tel: 0377-63258564 Fax: 0377-63208175 Http://www.china-ex.com

Note:This certificate is only valid for the products which identify with the sample(s) tested and verified. Holder(s) of this certificate have the responsibility to ensure the products complying with relevant standard(s).

查证网址 输入验码 查询真伪 5210 0334 9247 3465 查询方式 www.china-ex.com

CNEX

04

CTI 华测检测

Verification Report

Report No. ECL01J30137001R1 Page 1 of 20

CENTRE TESTING INTERNATIONAL

CTI RoHS VERIFICATION REPORT

Applicant	NANJING WOTIAN TECHNOLOGY CO., LTD.
Address	5 WENYING ROAD , BINJIANG DEVELOPMENT ZONE, NANJING, 211161, CHINA
Product Name	Silicon pressure sensor
Product Part No.	PC

Conclusion

Tested Sample	According to directive	Result
Submitted Sample	2011/65/EU	Pass

Pass means that the results shown in the report comply with the limits set by RoHS Directive 2011/65/EU.

Tested by: Reviewed by:

Approved by: Senior Laboratory Manager

Date: Jul. 19. 2012

No. R295822114

Centre Testing International Product (Shanghai) Co., Ltd. No.1966,Qinjiajiao Road, Pudong New District,Shanghai,China

RoHS

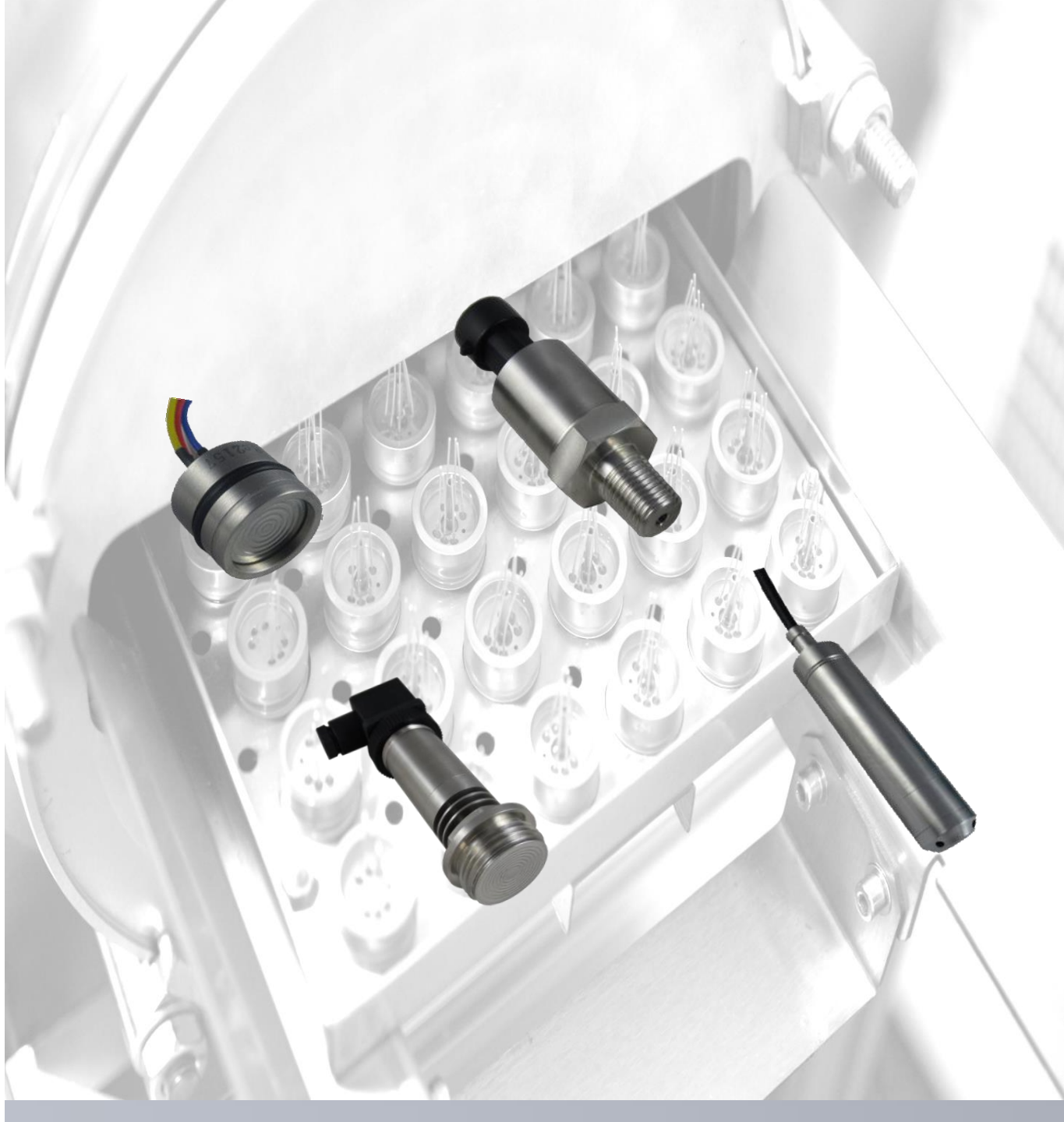
Introduction of sensor production

Principle

The principle of piezoresistive of diffused silicon

$$U = IR$$

The resistance of a diffused silicon material changes proportionally when the pressure changes, and this characteristic of silicon is used to measure the pressure



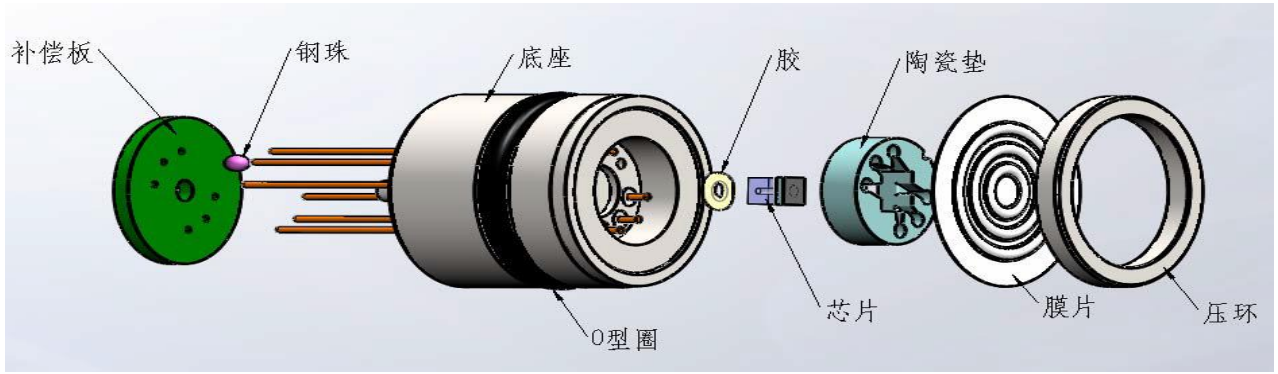
Step 01
Header processing

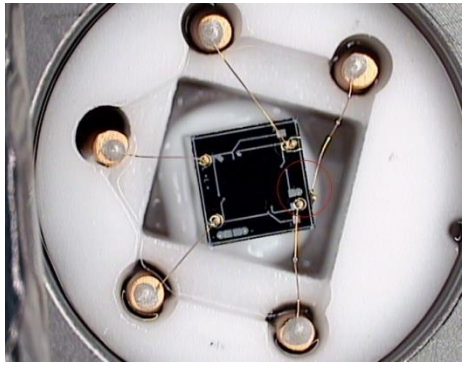
Step 02
Die attach

Step 03
Ceramic pads attach

Step 04
Golden wire bonding

Step 05
Diaphragm welding





Step 06
Oil filling

Step 07
Stainless ball sealing

Step 08
Aging

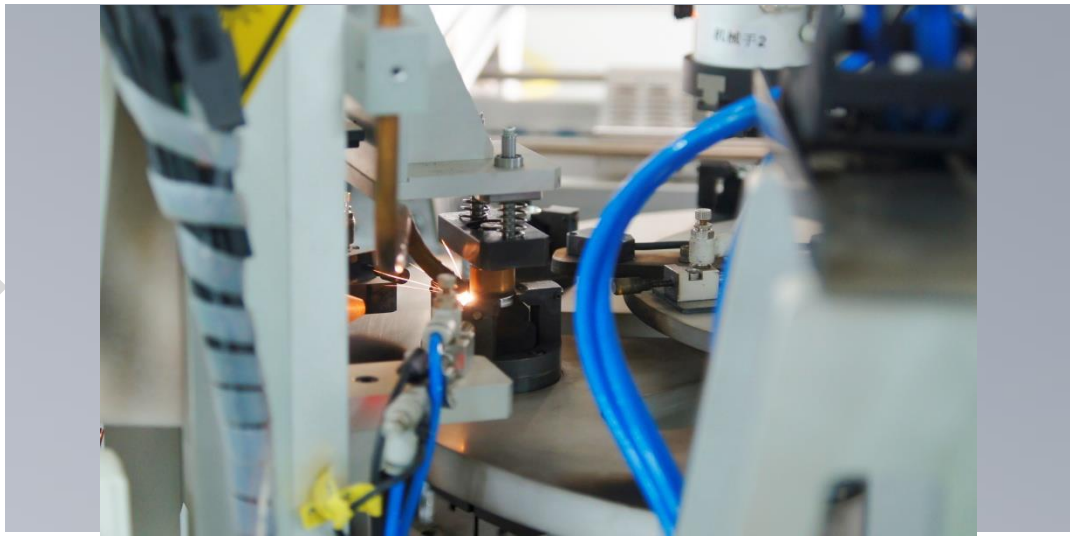
Step 09
Temperature compensation

Golden Wire Bonding

We process products using 5 welding machines which accomplish a high-precision gold ball wire bonding procedure.

Step 4

Step 5



Fully Automated Laser Welding

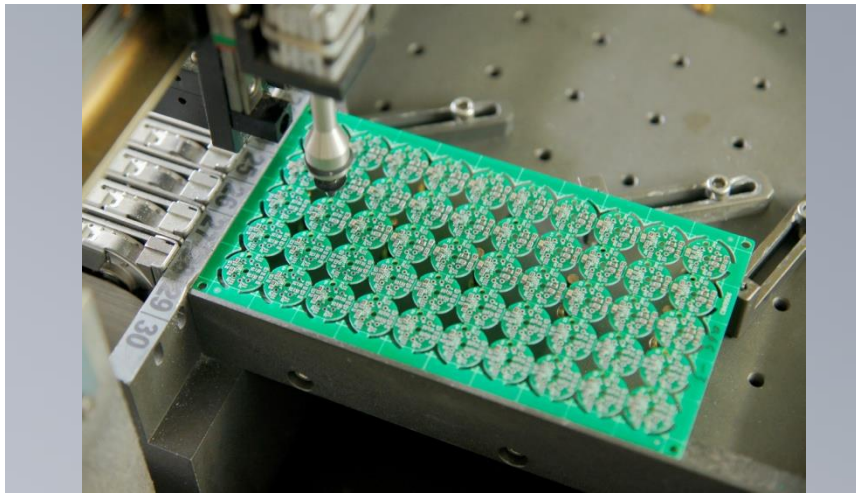
We spent 3 years developing our fully automated laser welding equipment. It allows us to perform an exceptionally reliable and high-performance welding process.

Step 6

Automatic Oil Filling

It has been a 3 year long process for our company to successfully develop the automatic oil filling machine. This equipment ensures a high level of vacuum in the oil filling process.

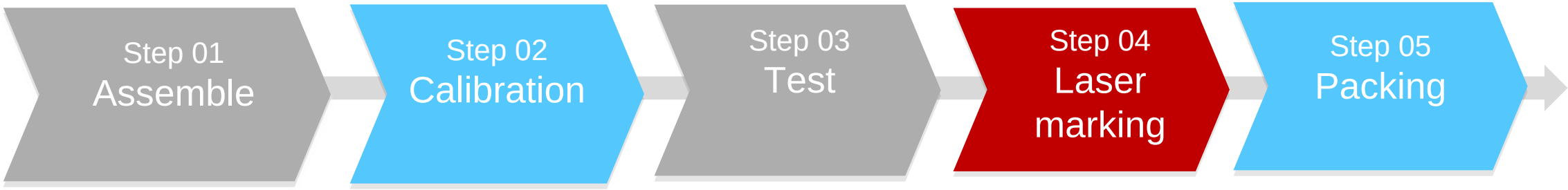
Step 9



Temperature Compensation

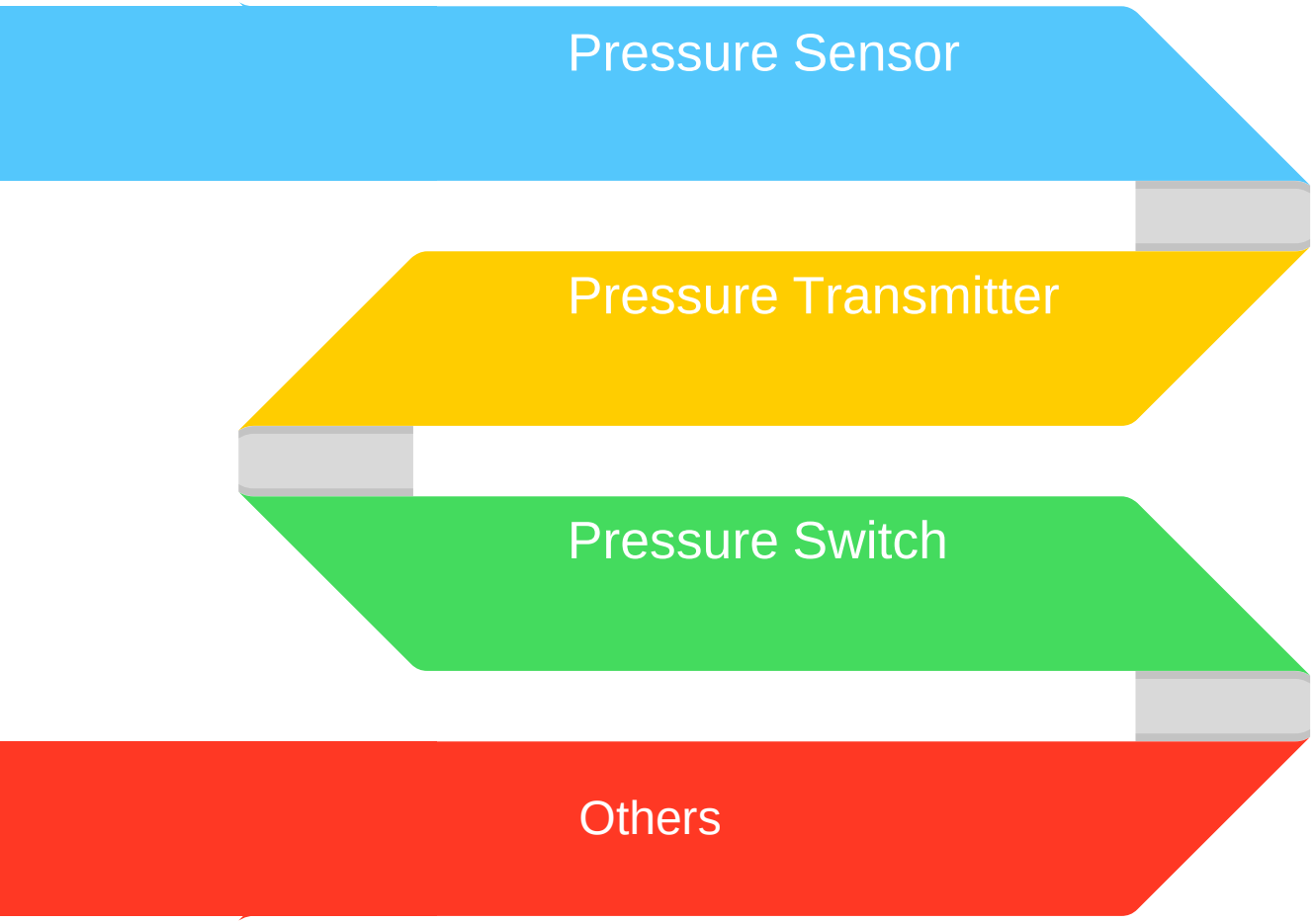
SMT placement equipment is fully-automated surface mount machine. It attaches each and every pressure sensor to the printed circuit board. This is the solution for any potential incorrect temperature reading.

Introduction of transmitter production process


Step 01
Assemble
Step 02
Calibration
Step 03
Test
Step 04
Laser marking
Step 05
Packing

Calibration

We run the pressure transmitters through zero-position, middle-position and full-range calibration procedures.



Pressure sensor overview

Pressure Sensor

The most standard and popular sensor applied in air and liquid pressure measuring

PC10 （ Diameter 19mm)

- **A high stability-sensitivity imported chip**
- **Long term stability and easy to amplify the signal**
- **Large temperature compensation**
- **All welded with 316L**

Ranges: -100kPa~0~10kPa…100MPa
Input impedance: 2kΩ~5kΩ(constant current);3kΩ~18kΩ(constant voltage)
Zero output: ±2mV
Span output: 1.5mA excitation: ≥ 40 mV(≤ 35kPa), ≥ 60mV(other ranges);
10V excitation: ≥ 60mV(≤ 35kPa), 80~120mV(other ranges)
Excitation: 1.5mA; 10V
Operating temp.: -40℃ ~125℃
Compensated temp.: constant current:0℃ ~60℃ (≤ 35kPa), -10℃ ~70℃ (other ranges);
constant voltage: -20℃ ~85℃

Pressure Sensor

PCM10

Pressure ref: gauge/absolute/sealed gauge
Range:0~35kPa…25MPa
Output and Supply: 4-20mA(24VDC),0.5-4.5V ratio metric(5VDC),I2C(3.3VDC)
Accuracy:0.25%F.S.
Operating temp.: -40℃ ~125℃
Compensated temp.: 0 ℃ ~60 ℃ (≤ 35kPa);-10℃ ~70℃ (other ranges)

PCM10 smart pressure sensor is implanted with the high-precision signal processing circuit. The digital signal output of this smart pressure sensor supports I2C interface protocol.
The product features small, low power consumption, easy installation, high stability and available for the wide range of applications especially for the small-volume occasions.

Pressure Sensor

Piezoresistive Silicon Differential Pressure Sensor(Φ19×27.6mm)

PC10D

Ranges: 0~10kPa…2.5MPa
Input impedance: 2kΩ~5kΩ
Zero output: ±2mV
Span output: ≥ 40mV(≤ 35kPa); ≥ 60mV(other ranges)
Excitation: 1.5mA
Accuracy: 0.25%FS(typ.)
Operating temp.: -40℃ ~125℃
Compensated temp.: 0 ℃ ~60 ℃ (≤ 35kPa);-10℃ ~70℃ (other ranges)

Pressure Sensor

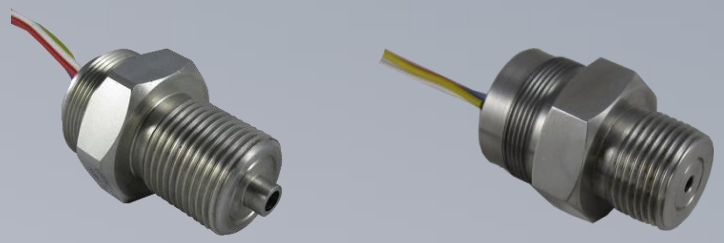
Monocrystalline Silicon Differential Pressure Sensor

PC90D

Ranges: 6kPa, 10kPa, 35kPa, 70kPa, 100kPa,1MPa
Input impedance: 2kΩ~5kΩ
Excitation: 1.5mA
Span output: ≥ 80mV
Operating temp.: -20℃ ~100℃
Compensated temp.: -20℃ ~85℃

- High accuracy 0.075%-1%
- Excellent stability
- Good static pressure performance :40Mpa
- No mechanical moving parts
- Low power consumption
- Full 316L stainless steel integrated design
- Constant current excitation
- Imported high reliable pressure die

Pressure Sensor



PC11

Ranges: -100kPa…0~10kPa…100MPa
Input impedance: 2kΩ~5kΩ
Zero output: ±2mV
Span output: 1.5mA excitation: ≥ 40mV(≤ 35kPa),≥ 60mV(other ranges);
10V excitation: ≥ 60mV(≤ 35kPa), 80~120mV (other ranges)
Excitation: 1.5mA, 10VDC
Accuracy: 0.25%FS(typ.)
Operating temp.: -40℃ ~125℃
Compensated temp.: 0 ℃ ~60 ℃ (≤ 35kPa);
-10℃ ~70℃ (other ranges)

Pressure Transmitter

PCM390

All welded structure and digital circuit compensation
Strong anti-interference and long-term stability.
Small diameter, easy to install and use.
A variety of pressure modes and various electrical connections
all 316L for pressure port
Suitable for batch production

Sanitary Pressure Transmitter

PCM350

Pressure ref.: gauge , absolute, sealed gauge
Ranges: -100kPa~35kPa…10MPa
Output signal: 4~20mA, 0.5~4.5V, 1~5V, 0~5V
Supply: 24VDC, 12VDC, 5VDC
Accuracy: 0.5%FS
Operating temp.: -40℃ ~85℃
Temp. drift: 1.5%FS(-20℃ ~85℃)
Housing: 304
Wetted part: 316L
Filling oil: M20
Electrical connection: DIN43650
Protection: IP65

Explosion-Proof Pressure Transmitter

PCM302

Pressure ref.: gauge , absolute, sealed gauge
Ranges: -100kPa…0~35kPa…100MPa
Output signal: 4~20mA, 1~5V, 0~5V
Supply: 24VDC, 12VDC
Accuracy: 0.5%FS
Operating temp.: -40℃ ~125℃
Temp. drift: 1.5%FS(-20℃ ~85℃)
Housing: 304
Sensor: 316L
Protection: IP65

Differential Pressure Transmitter

PCM610

Ranges: 0~10kPa…2.5MPa
Output signal: 4~20mA, 0.5~4.5V, 1~5V, 0~5V
Supply: 24VDC, 12VDC, 5VDC
Accuracy: 0.5%FS
Operating temp.: -20℃ ~85℃
Temp. drift: 1.5%FS(-20℃ ~85℃)
Housing: 304
Sensor: 316L
Filling oil: Silicon oil
Protection: IP65

Intelligent Pressure Transmitter

PCM460

Pressure ref.: gauge pressure, absolute pressure, sealed gauge pressure
Ranges: -100kPa…0~35kPa…100MPa
Output signal: 4~20mA+Hart, 4~20mA+RS485
Supply: 24VDC
Accuracy: 0.5%FS
Housing: copper aluminum alloy
Sensor: 316L
Protection: IP65

Intelligent Differential Pressure Transmitter

PCM3051C-DP

Ranges(kPa): ±7.5, ±37.4, ±186.8, ±690, ±2068, ±6890kPa
Output signal: 4~20mA, 4~20mA+HART
Supply: 24VDC
Accuracy: 0.1%FS, 0.2%FS, 0.3%F, 0.5%FS
Housing: low copper aluminum alloy
Diaphragm: 316L
Filling oil: silicon oil
Protection: IP65
Ex-proof: Exd IIB T6 Gb

Pressure/Level Transmitter

PCM260

Ranges: 0~0.5m…20m
Output signal: 4~20mA, 1~5V, 0~5V
Supply: 24VDC, 12VDC
Accuracy: 0.5%FS
Operating temp.: -20℃ ~85℃
Temp. drift: 2.5%FS(0℃ ~60℃，≤ 3.5m H2O);
1.5%FS(0℃ ~60℃, other ranges)
Medium temp.: -20℃ ~100℃
Housing: 304
Sensor: 316L
Electrical connection: 2088 housing, 2088 housing with display, cable outlet
Protection: IP68

Digital Pressure Switch

PCM710

- Ranges: 0~10kPa…100MPa
- Pressure ref.: gauge, absolute,sealed gauge
- Overpressure: 150%FS
- Supply: 12~30V
- Display mode: OLED display of 4 digits
- Output mode: PNP, NPN
- Operating temp.: -25℃ ~80℃
- Storage temp.: -40℃ ~100℃
- Load capacity: 24V 1.2A
- Accuracy: 0.1%FS, 0.5%FS
- Protection: IP65

Integrated Electromagnetic Flowmeter

PCL-Y

Basic error: ±0.2%, ±0.5%
Pressure level: DN15-DN600 1.0, 1.6, 2.5, 4.0MPa; DN700-DN2400 0.6, 1.0, 1.6MPa
Lining material: PTFE, PU, CR, PFA, F46, IR
Conductivity: ≥5uS/cm(standard)
Protection: IP65, IP67
Medium temp.: -25℃~80℃
Repetition: 0.1%FS, 0.25%FS
Analog output error: ±0.02mA
Output: 4~20mA, pulse, RS485, HART, Profibus-PA

Thank you

Our mission: Keep quality increasing and keep cost decreasing