

SINCE :2006

Trust the start of a
**CONTINUOUS
PRODUCTION**

ANSI Code	ANSI MC 96.1 Colour Coding		Alloy Combination		Maximum T/C Grade Temp. Range	EMF (mV) Over Max. Temp. Range	IEC 584-3 Colour Coding		IEC Code
	Thermocouple Grade	Extension Grade	+ Lead	- Lead			Thermocouple Grade	Intrinsically Safe	
J			IRON Fe (magnetic)	CONSTANTAN COPPER- NICKEL Cu-Ni	-210 to 1200°C -340 to 2190°F	-8.095 to 89.523			J
K			CHROME NICKEL- CHROMIUM Ni-Cr	NICKEL- ALUMINUM Ni-Al (magnetic)	-270 to 1372°C -454 to 2501°F	-6.458 to 54.886			K
T			COPPER Cu	CONSTANTAN COPPER- NICKEL Cu-Ni	-270 to 400°C -454 to 752°F	-6.258 to 20.872			T
E			CHROME NICKEL- CHROMIUM Ni-Cr	CONSTANTAN COPPER- NICKEL Cu-Ni	-270 to 1000°C -454 to 1832°F	-9.835 to 76.373			E
N			MICROSIL Ni-Cr-Si	NISIL Ni-Si-Mg	-270 to 1300°C -450 to 2372°F	-4.345 to 47.513			N
R	NONE ESTABLISHED		PLATINUM- 13% RHODIUM Pt-13% Rh	PLATINUM Pt	-50 to 1768°C -58 to 3214°F	-0.226 to 21.101			R
S	NONE ESTABLISHED		PLATINUM- 10% RHODIUM Pt-10% Rh	PLATINUM Pt	-50 to 1768°C -58 to 3214°F	-0.236 to 18.683			S



Visit Website /Catalogue /Instagram



Address: No 4 / the second sideway / third Wested / first phase / east industrial Town / Isfahan / IRAN

Postal Code: 81391-73783

Mobile: +98-913 1001406 +98-919 0831876/46/47

Tel: +98 31 464 12940-42 / Fax: +98 31 464 12944

WWW.SIPNACO.COM

INFO@SIPNACO.IR

AMIR.RASHEDIAN

@SIPNA

کارخانه و دفتر فروش: اصفهان / شهرک صنعتی سجزی / فاز اول
خیابان سوم غربی / فرعی دوم جنوبی / پلاک ۴

کد پستی: ۸۱۳۹۱۷۳۷۸۳

همراه: ۰۹۱۳ ۱۰۰ ۱۴۰۶ / ۰۹۱۹ ۰۸۳۱ ۸۷۶ / ۴۶ / ۴۷

تلفن: ۰۳۱ ۴۶ ۴۱۲۹ ۴۰-۰۲ / فکس: ۰۳۱ ۴۶ ۴۱۲۹ ۴۴

Add Management Contact No. in phone



SIPNA Company
Instrumentation Equipment Manufacturer

شرکت سینا پرداز آپادانا (سینا)
تولید کننده تجهیزات ابزار دقیق

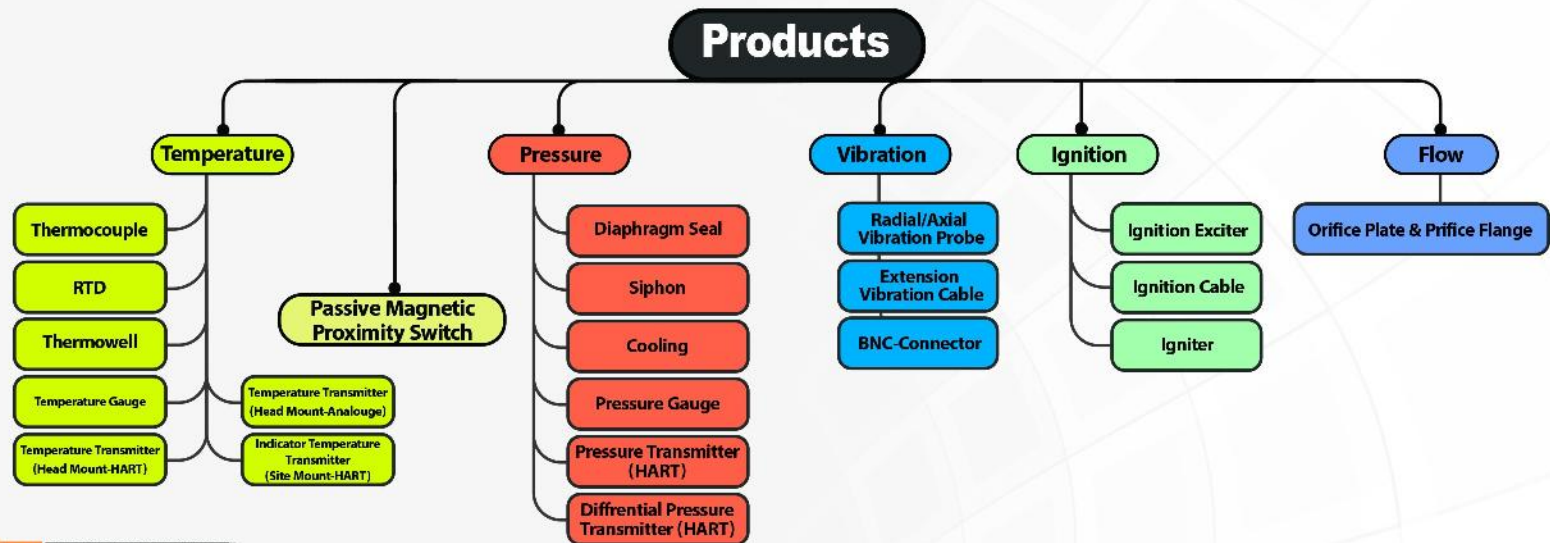


● INTRODUCTION OF SINA PARDAZ APADANA COMPANY:

Sina Pardaz Apadana Industrial Manufacturing Company (under the brand name Sipna) is one of the pioneers in the field of manufacturing instrumentation, electrical and electronic equipment in Iran, which was established in 2006 by Mr. Amir Hossein Rashedian and Mr. Mehdi Jafarzadeh. The company, by gradually developing its production capacity and scientific and technical infrastructure, while creating employment in the country, has taken an effective step towards self-sufficiency and breaking the country's dependence on the construction and supply of this equipment. At present, this company is producing various instrumentation products in an area of 1500 square meters with an up-to-date production line, and now it has been approved by the Ministry of Oil, Energy, Electricity and its subsidiaries in all vendor lists. Sipna currently has close and sincere cooperation with some countries such as China, Syria, Turkey, Iraqi Kurdistan Region, Azerbaijan, Iraq and Afghanistan in this field and intends to expand its activities to one of the largest producers of this Convert equipment to the Middle East level.

Company goals :

- 1) Support and after-sales service in the best way for customer satisfaction and solving industry problems
- 2) Production of products in accordance with international standards, observance of safety principles and respect for the environment
- 3) Continuous improvement of products, services and day-to-day development in technology and equipment.



● شرکت تولیدی صنعتی سینا پرداز آپادانا (با نام تجاری سینا)

از پیشگامان صنعت ساخت تجهیزات ابزار دقیق، برق و الکترونیک در ایران است که در سال ۱۳۸۵ توسط آقایان مهندس امیرحسین راشدیان و مهندس مهدی جعفرزاده تاسیس گردید. این شرکت با توسعه تدریجی ظرفیت تولید و زیرساخت های علمی و فنی خود، ضمن ایجاد اشتغال در داخل کشور، گام موثری در جهت خودکفایی و قطع وابستگی کشور در زمینه ساخت و تأمین این تجهیزات برداشته است. در حال حاضر این شرکت در مساحتی بالغ بر ۱۵۰ مترمربع با دارا بودن خط تولید به روز در حال تولید محصولات مختلف بازار دقیقی بوده و در حال حاضر در کلیه وندور لیست های مورد تایید وزارت نفت، نیرو و شرکت های تابعه قرار گرفته است. سینا هم اکنون با برخی از کشورهای نظیر: چین - سوریه - ترکیه - اقلیم کردستان عراق - آذربایجان - عراق و افغانستان همکاری نزدیک و مستمری دارد. در این زمینه داشته و درمداست با گسترش هرچه بیشتر فعالیت های خود به یکی از بزرگ ترین تولیدکنندگان این تجهیزات در سطح خاورمیانه تبدیل شود.

- ۱) پشتیبانی و خدمات پس از فروش به بهترین شکل برای رضایت مشتری و برطرف کردن مشکلات صنایع
- ۲) تولید محصولات مطابق با استانداردهای بین المللی، رعایت اصول ایمنی و احترام به محیط زیست
- ۳) بهبود مداوم محصولات، خدمات و توسعه روز به روز در فناوری و تجهیزات

محصولات



FACILITIES**● MACHINING**

- CNC TURNING CENTER
- DEEP HOLE DRILLING MACHINES UP TO 1500MM
- MILLING CENTERS
- MANUAL LATHE MACHINES
- CUTTING MACHINES
- LASER MARKING MACHINES
- ENGRAVING MACHINE
- COIL MAKING MACHINE
- HIGH FREQUENCY ANNEALING MACHINE
- MGO FILLING MACHINE
- ROLLING MACHINE & SKINNING MACHINE

● WELDING AND BRANZING

- LASER WELDING MACHINES
- TIG WELDING MACHINES WITH PULSE MODULATION AND ROTARY
- INDUCTION BRAZING
- RESISTANCE WELDING
- BRAZING SETS

**● TESTING AND CALIBRATION**

- STANDARD ACCREDITED CALIBRATION LAB FOR PRESSURE, TEMPERATURE, VIBRATION AND LEVEL
- CONTINUES SIGNAL OF TEMPERATURE SENSORS BY HMI TEST
- PRESSURE TEST SETUP BENCH
- DYE PENETRATION TEST SETUP FOR WELD JOINTS
- MICROSCOPIC JUNCTION CHECK
- GIGA OHM INSULATION RESISTANCE TESTERS
- MECHANICAL CHECKS - LENGTHS, GAUGES, CONCENTRICITY CHECKS
- CONDUCTOR RESISTANCE TEST
- PHYSICAL TEST FOR INSULATION AND OUTER SHEATH
- ON LINE HIGH VOLTAGE TEST

امکانات کارخانه

● ماشین کاری

- ماشین تراش CNC
- ماشین تراش
- ماشین سوراخ کاری عمیق تا طول ۱۵۰۰ میلیمتر
- ماشین فرزنسنتر
- ماشین فرز CNC
- ماشین برش
- ماشین حکاکی لیزر
- ماشین کلاف کن MI و کابل
- ماشین متر و برش MI
- ماشین تخلیه پودر MGO درون MI
- ماشین حکاکی ضربه ای

● جوشکاری ولحیم کاری

- ماشین جوش لیزر CNC
- ماشین جوش تیگ چرخشی
- لحیم کاری القایی و انواع ست لحیم کاری
- جوش مقاومتی
- ماشین جوش تیگ و تیگ نقطه زن



● شاپ گالیبراسیون دما ، لرزش ، فشار و سطح

- تست مایعات نافذ برای اتمالات جوشی
- تستر مقاومت عایقی گیگا اهم
- میکروسکوپ الکترونیکی جهت چک جانکشن
- تستر ضخامت سنج آلتراسونیک
- تجهیزات اندازه گیری دقیق مکانیکی (گیج - میکرو متر- کولیس و ..)
- تستر مانیتورینگ پیوستگی سیگنال سنسور
- تستر های ولتاژ
- تست بنج فشار



THERMOCOUPLE**● MINIATURE THERMOCOUPLE**

- Type : K, J, T, N, E, R, S
- Element Size (Ml) : 0.25, 0.5, 1, 1.5, 3, 4.5, 6, 8 (mm)
- Protection Sheath : SS321, SS316, SS310, INCONEL 600 etc
- Configuration : Simplex, Duplex, Multi

**● THERMOCOUPLES WITH THERMOWELLS/PROTECTION TUBES**

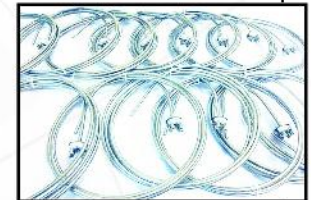
- Type : K, J, T, N, E, R, S
- Element Size (Ml) : 0.25, 0.5, 1, 1.5, 3, 4.5, 6, 8 (mm)
(Non-Ml) : 1.2, 1.6, 2, 2.5, 3.2 (mm)
- Protection Sheath : SS304, SS321, SS316, SS310 HRS 446, INCONEL 600/601/800, Nickel, Hastalloy, Titanium, Tantalum, Ceramic 610 & C-799, Monel, etc.
- Configuration : Simplex, Duplex, Multi

**● BEARING THERMOCOUPLE SENSOR**

- Type : J, K, T, E, N
- Element Size (Ml) : 1, 1.5, 2, 2.5, 3 (mm)
- Cable Length : On request
- Configuration : Simplex, Duplex

**● MI THERMOCOUPLE**

- Type : J, K, T, E, N
- Element Size (Ml) : 3, 4, 5, 6, 8, 10 (mm)
- Protection Sheath : SS321, SS316, SS310, INCONEL 600 etc.
- Configuration : Simplex, Duplex, Multi

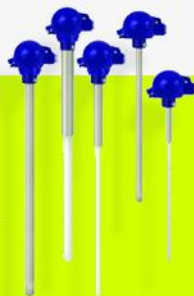


THERMOCOUPLE**● REDUCER THERMOCOUPLE**

- Type : K, J, T, N, E
- Element Size (Ml) : 1, 1.5, 3, 4.5, 6 (mm)
- Protection Sheath : SS321, SS316, SS310, INCONEL 600 etc
- Configuration : Simplex, Duplex

**● NOBLE METAL THERMOCOUPLES**

- Type : R, S, B
- Element Size : 0.30, 0.35, 0.4, 0.45, 0.5 (mm)
- Protection Sheath : Ceramic (C-799), 610, Inconel
- Configuration : Simplex, Duplex, Multipoint

**● WELD PAD (TUBE SKIN) THERMOCOUPLE**

Sheaths are formable to enable easy installation and are self-supporting within the application

-Made to your size requirements including:

Long lengths / Large diameters sheaths / Heavy walled sheaths / Long lead extensions
-Available in many high temperature alloys including Inconel 600 and 310 (316) stainless steel

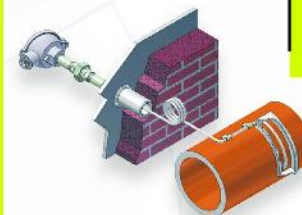
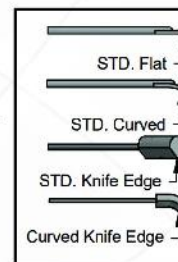
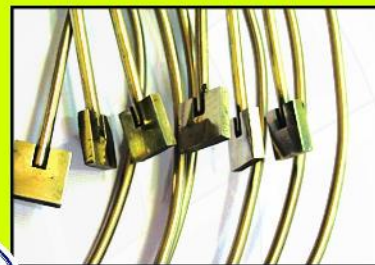
-Made to your orientation requirements including:

Expansion Loops / Bends and Radii / Variety of Weld Pad Styles

-Made to your configuration requirements

Connection head Assemblies / Gas seals / Connector Combinations / Lead Wire Protection / Heat Shields / Weld Clips

- Type : J, K, T, E, N
- Element Size (Ml) : 3, 4.5, 6, 8, 10, 12 (mm)
- Configuration : Simplex, Duplex
- Tip Type : Flat, Curved, Knife Edge, Curved Knife Edge



THERMOCOUPLE**MULTIPOINT THERMOCOUPLE**

- Type : J, K, T, E, N
- Element Size (Ml) : 1, 1.5, 2, 2.5, 3, 4.5, 6, 8 (mm)
- Protection Sheath : SS321, SS316, SS310, INCONEL 600 etc
- Configuration : Simplex, Duplex, Multi

**THERMOCOUPLE INSERT WITH CERAMIC TERMINAL BLOCK**

- Type : J, K, T, E, N
- Element Size (Ml) : 1, 1.5, 2, 2.5, 3, 4.5, 6, 8 (mm)
- Protection Sheath : SS321, SS316, SS310
INCONEL 600 etc.
- Configuration : Simplex, Duplex, Multi

**BAYONET THERMOCOUPLE**

Bayonet Thermocouples, temperature sensors are commonly used in extruder and plastic processing industries. These sensors provide accurate temperature control for the best plasticizing combination of plastic material, mold and design

- Type : J, K, T, E, N
- Configuration : Simplex, Duplex, Multi
- Adjustable Immersion : Bayonet on Flex Armor, Bayonet on Flex Armor with transition, Bayonet on spring
- Fixed Immersion : Bayonet Straight, Bayonet 45° Degree Bend, Bayonet 90° Degree Bend



THERMOCOUPLE**GE**

- **Gas Turbine Sword(Short) Thermocouples**

- OEM. P/N : 297A581P009
- SIPNAP/N : SP-297A581P009

**GE**

- **Gas Turbine Sword(Long) Thermocouples**

- OEM. P/N : 297A581P005
- SIPNAP/N : SP-297A581P009

GE

- **Gas Turbine Wheel Space Thermocouples**

- OEM. P/N : 255A1309P011
- SIPNAP/N : SP-255A1309P011

**GE**

- **Gas Turbine Thermocouples**

- OEM. P/N : 248A4123P091
- SIPNAP/N : SP-248A4123P091

**GE**

- **Gas Turbine Thermocouples**

- OEM. P/N : RTO-65874
- SIPNAP/N : SP-RTO-65874

**GE**

- **Gas Turbine Exhaust Thermocouples**

- OEM. P/N : 297A559P003
- SIPNAP/N : SP-297A559P003

**GE**

- **Gas Turbine Thermocouples**

- OEM. P/N : 297A585P001
- SIPNAP/N : SP-2297A585P001



RTD

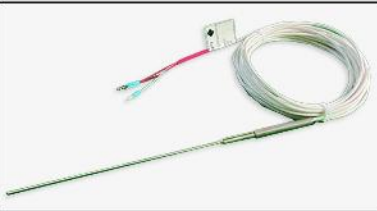
● RTDs WITH THERMOWELLS / PROTECTION TUBES

- Type : Pt 100, 200, 500, 1000 etc
- Element Size (MI) : 2, 2.5, 3, 4.5, 6, 8 (mm)
- Connection : 2, 3, 4, wire
- Protection Sheath : SS304, SS321, SS316, SS316, INCONEL 600/800, HRS 446, Hastalloy, Monel etc
- Configuration : Simplex, Duplex, Multipoint



● MINERAL INSULATED RTDs

- Type : Pt 100, 200, 500, 1000 etc
- Element Size (MI) : 2, 2.5, 3, 4.5, 6, 8 (mm)
- Connection : 2, 3, 4, wire
- Configuration : Simplex, Duplex, Multipoint



● BEARING (THRUST & JURNAL) RTD SENSOR

- Type : Pt 100, 200, 500, 1000 etc
- Element Size (MI) : 2, 2.5, 3, 4.5, 6, 8 (mm)
- Connection : 2, 3, 4, wire
- Cable Length: : On request
- Configuration : Simplex, Duplex



● RTD INSERT WITH CERAMIC TERMINAL BLOCK

- Type : Pt 100, 200, 500, 1000 etc
- Element Size (MI) : 2, 2.5, 3, 4.5, 6, 8 (mm)
- Configuration : Simplex, Duplex, Multi



RTD & THERMOWELL**MULTIPOINT RTD**

- Type : Pt 100, 200, 500, 1000 etc
- Insertion Length : 0.25, 0.5, 1, 1.5, 3, 4.5, 6, 8 (mm)
- Process Connection : On request
- Connection : Simplex, Duplex, Multi
- Box : IP/Explosion Proof

**SPECIAL RTD WITH CONNECTOR OR HEAD****THERMOWELL**

Thermowell is a tube, closed at one end, which protects the probe and allows its removal without breaking the liquid seal. Many materials and styles are available to match application requirements. Thermowells drilled from solid bar stock provide the highest pressure ratings, and welded models are also available. The selection of materials and the manufacturing of the Thermowells or protection tubes in accordance with global standards or to customer specifications ensure optimal protection for the sensor.

Standards:

- Standard Thermowell designs comply with ASME PTC 19.3 and wake frequency calculations are available upon request
- Our flanged thermowells are manufactured from ASME B16.5 flanges
- Non-Destructive Testing (NDT) and accompanying documentation is available upon request for any thermowell order

- Type : Drilled Bar stock, Fabricated
- Construction : Tapered, Straight, Stepped, Helical
- Thermowell Material : SS304, SS316, SS316L, SS321, SS310, HRS446
INCONEL 600/800/601, Hastalloy, Monel, Titanium etc.
- Process Connection : Screwed, Flanged, Welded

**FLANGED THERMOWELL**

THERMOWELL● **SCREWED THERMOWELL**● **VAN STONE THERMOWELL**● **WELDED THERMOWELL****DIGITAL TEMPERATURE GAUGE**● **MODEL: ZEO-300**

Features:

- Large screen LCD display, High resolution, ignoring the value of error.
- Peak hold function, max value recording during the measurement
- Dynamic display temperature percentage, (the progress bar shows)
- Five engineering units' selection °C, °F, K, Ra, Re
- 1~15min Automatic shutdown function
- 6 Micro power consumption
- Parameter correction function
- The upper and lower limit range

**TEMPERATURE GAUGE**

Gas Filled Thermometer

Dial Diameter	100 , 160 mm
Scale Ranges	-20 ... 0 ... 600 °C
Case/cover	Stainless steel 304/316
IP	65,67
Connection	Stainless Steel 304/316
Connection Direction	Back /Bottom/Any angle
Thread	G1/4B/M12x1,5/ G1/2B/M20x1,5/NPT
Movement	Stainless Steel 304/316
Accuracy	1.6%

HEAD MOUNT TEMPERATURE TRANSMITTER-HART

● MODEL: ZEO-130

Features:

- 2wires 4-20 Ma Output/HART
- Input: thermocouples, RTD , resistance or voltage
- Build-in cold junction compensation
- Available with Form B temperature probe
- High accuracy 0.1% for RTD,0.2% for TC



TEMPERATURE GAUGES



Bimetal Thermometer

Dial Diameter	100 , 160 mm
Scale Ranges	-20 ... 0 ... 500 °C
Case/cover	Stainless steel 304/316
IP	65,67
Connection	Stainless Steel 304/316
Connection Direction	Back /Bottom/Any angle
Thread	G1/4B/M12x1,5/ G1/2B/M20x1,5/NPT 1/2
Movement	Stainless Steel 304/316
Accuracy	1.6%

INTELLIGENT TEMPERATURE TRANSMITTER (HART)

● MODEL: ZEO-131

This series of temperature transmitter is a kind of intelligent type, used for field installation, with electrical isolation, support HART protocol. It Receive signal then convert 4-20mA and stack HART signal output, like Thermal resistance, thermocouple, resistance, millivolt.

The transmitter can field configuration through instrument panel button Or HART hand operated device, also can through one USB interface HART modem to connect to PC configuration



Performance Specifications:

Standard	Sensor	Measuring range	Measurement accuracy		Ambient temperature effect by each	
			Fixed	Range	Fixed	Range
Thermal resistance/resistance						
IEC60751	Pt100	-200...850°C	±0.1°C	±0.1%	±0.006°C	±0.004%
	Pt1000	-200...850°C	±0.1°C	±0.1%	±0.006°C	±0.004%
	Resistance Measurement	0...400 Ω	0.035 Ω	±0.1%	0.028Ω	±0.004%
	Resistance Measurement	0...4000Ω	0.35Ω	±0.1%	0.028Ω	±0.004%
Thermocouple/voltage						
IEC60584	N	-270...1300°C	±0.8°C	±0.1%	±0.02°C	±0.004%
	K	-270...1372°C	±0.8°C	±0.1%	±0.02°C	±0.004%
	E	-270...1000°C	±0.8°C	±0.1%	±0.02°C	±0.004%
	J	-210...1200°C	±0.8°C	±0.1%	±0.02°C	±0.004%
	T	-270...400°C	±0.8°C	±0.1%	±0.02°C	±0.004%
	B	0...1820°C	±1°C	±0.1%	±0.06°C	±0.004%
	R	-50...1768°C	±1°C	±0.1%	±0.06°C	±0.004%
	S	-50...1768°C	±1°C	±0.1%	±0.06°C	±0.004%
	Voltage Measurement	-125...125 mV	0.02mV	±0.1%	0.001mV	±0.004%

Specifications:

Input	
Input signal	Thermal resistance (RTD), thermocouple (TC)
Cold junction compensation range	-20 ~ 60°C
Compensation accuracy	±1°C
Output	
Output signal	4 ~ 20 mA
Load Resistance	$RL \leq (Ue-12)/0.21$
Upper and Lower limit overflow alarm output current	I _H =21Ma I _L =3.8Ma
Power supply	
Supply voltage	DC 12 ~ 40 V
Other parameters	
Temperature drift	0.02%/FS/°C
Response time	1.5 reaches 90% of final value
Working temperature	-40~60°C
Stored temperature	-40~100°C
Shock resistance	4g/2~150Hz
Installation angle	Unlimited
Installation area	b-type top box mounting
Electromagnetic	Meet the requirement of gb/118268

HEAD MOUNT TEMPERATURE TRANSMITTER (4-20mA)

● MODEL: ZEO-240

Features:

- 2 wires 4-20 mA output
- Input: thermocouples, RTD, resistance or voltage
- USB Cable for Configuration directly via PC
- Built-in cold junction compensation
- Available with Form B temperature probe
- High accuracy 0.1% for RTD, 0.2% for TC.



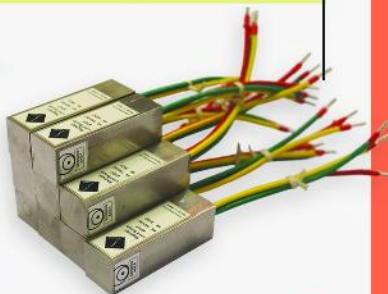
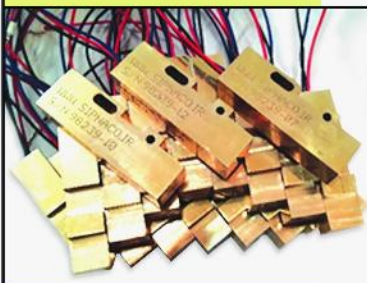
PASSIVE MAGNETIC PROXIMITY SWITCH

- The SIPNA's switch operates without any supply voltage, requires only a magnetic field and offers two types of contact (NO / NC).

Our products are equivalent to two brands, GOSWITCH and TOPWORX, which have been used extensively in GE (nuovo pignone) gas turbines for feedback on valves and turbine doors. Max Switching Distance is 20 mm and has a current tolerance of 0.5 A and a voltage of 220 volts. This switch is fully adjustable at the installation location and the appropriate magnet (361-7011) can be purchased separately.



**GO
SWITCH**



TOPWORX

DIGITAL PRESSURE GAUGE

● MODEL: PRO-300

- Size 100mm, stainless steel case,
- Large-screen LCD display, high resolution, back light, easy to read
- Automatically record the maximum pressure values during the measurement
- Pressure on the percentage of dynamic display, (the progress bar display)
- 10 engineering units: psi, bar, kpa, Mpa, Kg(kgf / cm2) , MMH (mmH2O),MH2(mH2O),
- 0~ 15min auto-shut off feature.
- Micro-power consumption, over 2 years in power-saving mode, continuous work 2,000 hours
- Parameter correction, correct zero and error in field application.
- Pressure range already setted before use
- Sampling rate: 4 times / sec
- Applicable to gases and liquids compatible with stainless steel



Specifications:

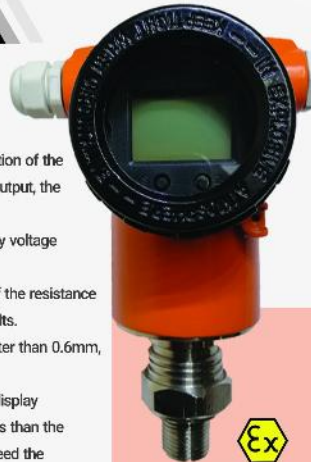
Pressure range	thread 0-100MPa OR More 100MPa	Accuracy	0.2% 0.50%
Overload capacity	200%	Pressure type	Gauge pressure
Display	<0.1%/year	Battery voltage	3.6 DC
Ambient temperature	LCD	Display range	-19999~99999
temperature	-20C~70C	Relative humidity	≤80%
Mounting	1/2 NPT	Interface	Stainless
thread		Material	Steel

PRESSURE TRANSMITTER (HART)

● MODEL: PRO-131

Function parameters

- Use scope: liquid, gas and steam
- Signal output: Two line 4-20mA isolated DC signal superposition of the HART digital signal output, can choose linear or square root output, the maximum output current not exceeding 22MA
- Power supply: DC12-45V, HART communication, power supply voltage range: 15.5~45VDC, general working voltage: 24DC
- Load range: HART communication, the power supply loop of the resistance 250 euro, the supply voltage is greater than or equal to 15.5 volts.
- The communication distance: connecting wire diameter greater than 0.6mm, the communication distance is about 1500 meters.
- Display: intelligent LCD LCD backlight for 5 and a half digital display
- The zero and span migration: measuring range limit is not less than the maximum measuring range lower limit, upper limit not to exceed the maximum measuring range limit value, namely the work range does not exceed the limit value of sensor, zero and range can be set in 4~ 20mA any corresponding points.



HART
COMMUNICATION PROTOCOL



- The damping value: electronic damping adjustable range from 0 to 32 seconds
- Fault alarm: from diagnostic procedures for the detection of a failure, the analog output of more than 20.8mA or less than 3.9mA
- Data recovery data: when data from being damaged when, through three key scene restore corrupted data
- Temperature compensation: computer collecting temperature data sent to the transmitter with temperature compensation
- Working temperature: Electronic circuit: -40~+85°C With LCD liquid crystal display: -30~+80°C
- Sensitive element (silicon oil): -40~+104°C;
- Storage temperature: -45~+90°C.

HART
COMMUNICATION PROTOCOL

DIFFERENTIAL PRESSURE TRANSMITTER (HART)



● MODEL: PRO-141

Technical parameters

- Basic error: $\pm 0.075\%$, Repeatability error: $< 0.05\%$, Return
- difference: $< 0.075\%$
- Stability: in the range, within one year of no more than basic error.
- Constant flow performance: Change in volume $< 0.075\%$.
- Insulating properties: Power resistance to ground $> 400M\Omega$.
- Response time: Electric start, response time less than 2 seconds.
- Sensitivity: Lower limit value and the range of variation $< 0.01\%$.
- Supply voltage variation: Lower limit value and the range of variation $< 0.02\%$.
- Steady state variation: Power interruption, Change in volume $< 0.02\%$.
- Over range: Lower limit value and the range of variation $< 0.05\%$.
- Installation position effect: When the sensor measuring diaphragm is not vertical, may have no more than 0.24kPa zero system error, but the error can be achieved by adjusting the zero pressure tuning to eliminate, had no effect on the range.
- Electrical connection: The transmitter housing two M20x1.5 Screw hole, Used to connect the cable duct. The shell has a terminal and a test pad, such as communicator connected, which can be fixed on the testing pad.
- Anti explosion: Flameproof Exd II BT 4; Intrinsic safety type Exia II CT6.



PRESSURE

● PRESSURE GAUGES

SIPNA offers high quality Bourdon tube pressure gauges manufactured under strict ISO 9001 quality standards.

A wide variety of sizes, ranges, and configurations meet the demands of any industrial application.

From the most rugged process gauges to the cost effective general purpose gauge, you can count on SIPNA for long and reliable service. For the most demanding applications.



Bourdon Tube Pressure Gauge

Dial Diameter	40, 50, 63, 100, 150, 250 mm
Scale Ranges	-1 ... 0 ... 2500 bar
Case/cover	Stainless steel 304/316
IP	65,67
Connection	Stainless Steel 304/316/Brass
Connection Direction	Back /Bottom
Thread	G1/4B/M12x1,5/ G1/2B/M20x1,5/NPT 1/2
Bourdon tube	Stainless Steel 316L
Movement	Stainless Steel 304/316
Liquid Filling	Glycerin or Silicon
Accuracy	1.0%,1.6%, 2.5%

Capsule Pressure Gauge

Dial Diameter	63, 100, 160 mm
Scale Ranges	0 ... 600 mbar
Case/cover	Stainless steel 304/316
Window	Polycarbonate lens/Tempered glass
Connection	Stainless Steel 304/316/Brass
Connection Direction	Back /Bottom
Thread	G1/4B/M12x1,5/ G1/2B/M20x1,5/NPT 1/2
Bourdon tube	Stainless Steel 316L
Movement	Stainless Steel 304/316
Liquid Filling	Glycerin or Silicon
Accuracy	1.0%,1.6%, 2.5%



Diaphragm Pressure Gauge

Dial Diameter	100, 160, 250 mm
Scale Ranges	-1 ... 0 ... 2500 bar
Case/cover	Stainless steel 304/316
Window	Polycarbonate lens/Tempered glass
Connection	Stainless Steel 304/316/Brass
Connection Direction	Back /Bottom
Thread	G1/4B/M12x1,5/ G1/2B/M20x1,5/NPT 1/2
Bourdon tube	Stainless Steel 316L
Movement	Stainless Steel 304/316
Liquid Filling	Glycerin or Silicon
Accuracy	1.0%,1.6%, 2.5%





Electric Contact Pressure Gauge

Dial Diameter	100 , 160 mm
Scale Ranges	0 ... 1000 bar
Case/cover	Stainless steel 304/316
Window	Polycarbonate lens
Connection	Stainless Steel 304/316/Brass
Connection Direction	Back /Bottom
Thread	G1/4B/M12x1,5/ G1/2B/M20x1,5/NPT 1/2
Bourdon tube	Stainless Steel 316L/Brass
Movement	Stainless Steel 304/316
Liquid Filling	Glycerin or Silicon
Accuracy	1.0%,1.6%



Differential Pressure Gauge

Dial Diameter	100 , 160 mm
Scale Ranges	0 ... 40 bar
Case/cover	Stainless steel 304/316
Static Pressure	400 Bar
Connection	Stainless Steel 304/316/Brass
Connection Direction	Bottom
Thread	G1/4B/M12x1,5/ G1/2B/M20x1,5/NPT 1/2
Bourdon tube	Stainless Steel 316L/Brass
Movement	Stainless Steel 304/316
Liquid Filling	Glycerin or Silicon
Accuracy	1.6%

PRESSURE

● BACK SIDE DIAPHRAGM SEAL WITH THREADED CONNECTION FOR HIGH PRESSURE

- Material : Stainless steel and special materials
- Accessories : Diaphragm seals
- Process connection : Threaded
- Range : 0...60 / 0...600bar
- Sensing element : Welded diaphragm



● WELDED DIAPHRAGM SEAL WITH FLANGED CONNECTION

- Material : Stainless steel and special materials
- Accessories : Diaphragm seals
- Process connection : Flanged
- Range : 0...1 / 0...400bar
- Sensing element : Welded diaphragm



● WAFER DIAPHRAGM SEAL WITH FLANGED CONNECTION

- Material : Stainless steel and special materials
- Accessories : Diaphragm seals
- Process connection : Flanged
- Range : 0...0.1 / 0...160bar
- Sensing element : Welded diaphragm



● IN LINE DIAPHRAGM SEAL WITH FLANGED CONNECTION

- Material : Stainless steel and special materials
- Accessories : Diaphragm seals
- Process connection : Flanged
- Range : 0...0.1 / 0...40bar
- Sensing element : Welded diaphragm



● DIAPHRAGM SEAL AND CAPILARY REPAIR SERVICE IN SIPNA'S WORKSHOP

SIPNA Company is able to repair and produce all diaphragm seal with capillaries. Sipna pressure calibration department after production or repair of diaphragm seals can perform all oil filling (fluid), ventilation and calibration operations on the :

- Any Brand Transmitter
 - Gauge Pressure Transmitters
 - Pressure Gauge
 - Level Transmitters
 - Differential Pressure Transmitter
- With **1-Year Warranty**



BEFORE REPAIRING



AFTER REPAIRING



VIBRATION

• The SIPNA probe series consist of 5mm and 8mm tip diameter probes. The models are available with all standard thread sizes and body configurations required in API 670 Standard. Both probes offer a full 80 mil (2mm) range, and are designed to offer full API670-compliant performance characteristics when used with a matching extension cable and driver. SIPNA probes are fully interchangeable with :

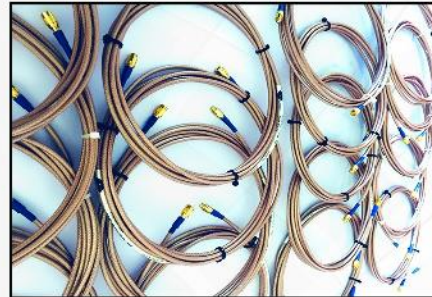
• **Bently Nevada (BN):**
3300 XL, 3500, 3000, 7200
MEGGIT , SHINKAWA , METRIX
B&K(Brüel & Kjær Vibro)



• **RADIAL/AXIAL VIBRATION PROBE**



• **EXTENSION CABLE**



• **BNC MALE/FEMALE VIBRATION CONNECTOR**



IGNITION

- The SIPNA is in IRAN a leading manufacturer of ignition systems for gas turbine. SIPNA's ignition systems products are fully interchangeable with specified as original equipment on engines from General Electric, General Electric Power & Water, Honeywell, Microturbo, Pratt & Whitney, Pratt & Whitney Canada, Rolls-Royce, Solar, Sundstrand, Siemens, Turbomeca, Volvo, Wesinghouse, and Ruston.

UNISON



● IGNITION EXCITER

- UNISON Ignition Exciter made by SIPNA
Gas Turbine Brand: SIEMENS /Model :SGT-400
Channel Quantity : 6 No.
OEMP /N : 9060316-2
SIPNA P/N : SP-98083



SULZER

- SULZER Ignition Exciter made by SIPNA
Gas Turbine Brand :SULZER
Channel Quantity : 2 No.
OEMP /N : 00000-4582122/AGC 093032-10
SIPNA P/N : SP-00000-4582122



UNISON

- UNISON Ignition Exciter made by SIPNA
Gas Turbine Brand:
SIEMENS /Model (TORNADO) /Model :SGT-200
Channel Quantity : 1 No.
OEMP /N : 9060040-1, 64/07001393-1
SIPNA P/N : SP-64/07001393-1



- CHAMPION Ignition Exciter made by SIPNA
Gas Turbine Brand: ROLLS ROYCE /Model : AVON
Channel Quantity : 2 No.
OEMP /N : 305136
SIPNA P/N : SP-95070



- CHAMPION Ignition Exciter made by SIPNA
Gas Turbine Brand: SIEMENS /Model :SGT-600/GT-10B
Channel Quantity : 1 No.
OEMP /N : 305076
SIPNA P/N : SP-96167



MEGGITT

Vibro-Meter®

- VIBRO-METER Ignition Exciter made by SIPNA
Gas Turbine Brand: SIEMENS /Model :SGT-600
Channel Quantity : 1 No.
OEMP /N : S26416
SIPNA P/N : SP- S26416



IGNITION



- SAUNDERS ELECTRONIC Ignition Exciter made by SIPNA
Gas Turbine Brand: ROLLS ROYCE / Model : AVON
Channel Quantity : 1 No.
OEMP / N : PL-284
SIPNA P / N : SP-99063



- FOXBORO INSTRUMENT USA Ignition Exciter made by SIPNA
Gas Turbine Brand : NEVSKY RUSSIA
Channel Quantity : 2 No.
SIPNA P / N : SP-97197



- ALTA INDUSTRIES SRL Ignition Exciter made by SIPNA
Gas Turbine Brand:
NUOVO PIGNON (GE) / Model : F5
Channel Quantity : 1 No.
OEMP / N : RTO-44314
SIPNA P / N : SP-97197



- CHAMPION Ignition Exciter made by SIPNA
Gas Turbine Brand: SOLAR CENTAUR / Model : GSC 4000
Channel Quantity : 1 No.
OEMP / N : 917560C2
SIPNA P / N : SP-917560C2



- UNISON Ignition Exciter made by SIPNA
Gas Turbine Brand:
SIEMENS / Model (TORNADO) / Model : TA-1750, TB-5000
Channel Quantity : 1 No.
OEMP / N : 10-392775-4
SIPNA P / N : SP-10-392775-4



- UNISON Ignition Exciter made by SIPNA
Gas Turbine Brand:
SIEMENS (TYPHOON) / Model : SGT-100
Channel Quantity : 1 No.
OEMP / N : 9060038-88,64/07001417-4
SIPNA P / N : SP-64/07001417-4



IGNITION

● IGNITER

- The SIPNA Co. has produced igniter designs for customers, including marine power plants, oil and gas stations. Our internal Ceramic Manufacturing capability permits design and manufacture of industry leading Alumina Oxide insulators and Silicon Carbide semiconductors which sets it apart from the competition in product performance, quality and response time. Have both high energy igniters and high voltage igniters.

Solar Turbines

A Caterpillar Company

- SOLAR Centaure MDG-4000 Igniter made by SIPNA
OEMP/N : 903316C1
SIPNA P/N : SP-903316C1



- ROLLS ROYCE Igniter made by SIPNA
OEMP/N : 2-02H99-201
SIPNA P/N : SP-2-02H99-201



- RUSTON Igniter made by SIPNA
OEMP/N : TA23119
SIPNA P/N : SP-TA23119



SIEMENS

- SIEMENS SGT-100 Typhoon Igniter made by SIPNA
OEMP/N : 9058685-2
SIPNA P/N : SP-9058685-2



- SIEMENS SGT-200 Torando Igniter made by SIPNA
OEMP/N : 9058685-64/51009003-3
SIPNA P/N : SP-9058685



SIEMENS

- SIEMENS SGT-600 Igniter made by SIPNA
OEMP/N : CV21156
SIPNA P/N : SP-CV21156



SIEMENS



● IGNITION CABLE



FLOW

● ORIFICE PLATE & ORIFICE FLANGE

- The SIPNA's Orifice plates and restriction orifices are part of our portfolio of primary flow elements. Our production are Orifice flange assembly, Integral orifice assembly, Orifice plate with carrier ring, Orifice plate assembly with RTJ holder, Orifice plate, Restriction orifice plate according to standards ISO 5167, BS1042, ASME MFC-3M, ANSI 2530, AGA 3, API-ch.14, R.W. MILLER and L.K. Spink etc.



● Some of our customers and the strong presence of Sipna in their approved Vendor list (AVL) of Producers

● برخی از مشتریان ما و حضور پررنگ سینا در لیست تولیدکنندگان مورد تایید (AVL):



South Pars Gas Complex (SPGC)



National Iranian Gas Transmission Company (NIGTC)



Pars Oil and Gas Company (POGC)



National Iranian Oil Company (NIOC)



شرکت ملی نفت ایران



شرکت نفت و گاز پارس



شرکت ملی انتقال گاز ایران



مجتمع گاز پارس جنوبی



National Iranian Southern Oilfields Company (NISOC)



Iranian Offshore Oil Company (IOOC)



National Iranian Petrochemical Company (NIPCC)



National Iranian Gas Engineering and Development Company (NIGCENG)



شرکت مهندسی و توسعه گاز ایران



شرکت ملی صنایع پتروشیمی ایران



شرکت نفت فلات قاره ایران



شرکت ملی مناطق نفت خیز جنوب



Karoon Oil and Gas Exploitation Co. (KOGPC)



Gachsaran Oil and Gas Exploitation Co. (MOGPC)



Aghajari Oil and Gas Exploitation Co. (AGOGPC)



Maroon Oil and Gas Exploitation Company (MOGPC)



شرکت بهره برداری نفت و گاز مارون



شرکت بهره برداری نفت و گاز آغاچری



شرکت بهره برداری نفت و گاز گچساران



شرکت بهره برداری نفت و گاز کارون



National Iranian Oil Refining and Distribution Company (NIORDC)



Iran Oil Pipelines and Telecommunications Company (IOPTC)



Social Security Investment Company



Ministry of Energy



وزارت نیرو



شرکت سرمایه گذاری تامین اجتماعی (شستا)



شرکت خطوط لوله و مخابرات نفت ایران



شرکت ملی پالایش و پخش فراورده های نفتی ایران



Mobarakah Steel Company



Ta'min Petroleum and Petrochemical Investment Co (TAPPICO)



Parsian Oil and Gas Development Group



Parsian Gulf Petrochemical Company



شرکت صنایع پتروشیمی خلیج فارس



گروه گسترش نفت و گاز پارسپان



شرکت سرمایه گذاری نفت و گاز پتروشیمی تامین تایپکو



شرکت فولاد مبارکه

