



temperature sensor accessories

Thermowells

Flanges

Protection Tubes

Precision Pipe Fittings

Compression Fittings

Baynot Parts

Seal Pots & Accessories

Connectors

Compensating Cables

Connection Heads

Terminal Block



www.tempsens.com

Thermowells



Threaded



Flanged



Stepped



Van Stone



Socket-Weld



Weld-in

Tempens thermowells come in variety of material and sizes.

Material : AISI -SS304, SS304L, SS 316, SS 316L, SS 321, SS 310, 321 Ti, 304 Ti
HRS 446, INCONEL 600/800, Hastalloy, Monel Titanium etc.

Type : Drilled barstock, Fabricated, Flanged, Screwed

Flanges



Plate Flange



Lap Joint Flange



Socket Weld Flange



Weld Neck Flange



Thread Flange

Material : AISI- SS304,SS304L, SS316, SS316L, Carbon Steel, Cast Iron etc.

Size : 1/2" to 4" & others

Rating : 150# to 2500# etc.

Ceramic Tubes



Open Ended



Close Ended



Insulators



Beads

Material : Ceramic -Alumina Tubes, Type DIN C-799, Type 610, K 80 etc.
Type : One End Closed / Open Both End
Standard Length : 350, 530, 600, 650, 740, 900, 1030, 1200, 1430, 2000, 2300mm

Ceramic Tubes

| OD X ID (mm) | Length (mm) |
|--------------|-------------|
| 6 X 4 | 350 to 2300 |
| 8 X 5 | 350 to 2300 |
| 10 X 6 | 350 to 2300 |
| 12 X 8 | 350 to 2300 |
| 15 X 6 | 350 to 2300 |
| 15 X 10 | 350 to 2300 |
| 20 X 10 | 350 to 2300 |
| 20 X 15 | 350 to 2300 |
| 24 X 12 | 350 to 2300 |
| 24 X 18 | 350 to 2300 |

Insulating Tubes

| OD | Configuration | Length(mm) |
|-----|---------------|-------------|
| 2.8 | 2/4/6 Holes | 350 to 2300 |
| 3.5 | 2/4/6 Holes | 350 to 2300 |
| 4.5 | 2/4/6 Holes | 350 to 2300 |
| 5.5 | 2/4/6 Holes | 350 to 2300 |
| 8.5 | 2/4/6 Holes | 350 to 2300 |

Ceramic Beads

| OD(mm) | Configuration | Length(mm) |
|--------|---------------|------------|
| 3.6 | 2/4 holes | 25 |
| 8.5 | 2/4 holes | 25 |
| 11 | 2/4 holes | 25 |
| 12 | 2/4 holes | 25 |
| 13.5 | 2/4 holes | 25 |

Material Properties:

| Properties | Units | Rubalit (DIN C-799) | Dimulit |
|--|-------------------|---------------------|-------------------|
| Al ₂ O ₃ - content | % | 99 | 59.0 |
| Color | - | yellow | white |
| Water absorption | % | 0 | 0 |
| Flexural Strength | N/mm ² | 360 | 200 |
| Max. Temp. use* | °C | 1700 | 1500 |
| Thermal Conductivity | W/m °K | 28 | 4 |
| Temperature Stability | | Good/satisfactory | Good/satisfactory |
| Chemical resistivity | | Very good | good |

Stainless Steel Tubes

Material : SS304, SS304L, SS310, SS446, Inconel-800/600, Hastalloy, Titanium etc.
Type : Open Ended, Close Ended ,Round Ended
Length : As per Customer requirement



Open Ended



Close Ended



Round Ended

| OD X ID (mm) |
|---------------------------|
| 3x2.2 |
| 4x3.7 |
| 4.5x3.7 |
| 5x4 |
| 6x5 |
| 8x6.5 |
| 9.5x7.1 |
| 10x7 |
| 12x8 |
| 21.3x2.77 ½"NB SCH 40 |
| 21.3x3.77 ½"NB SCH 80 |
| 21.3x4.77 ½"NB SCH 160 |
| 26.7x5.35 |
| 33x8.5 |
| 33.4x21 |
| ¾" NB SCH 40, 60, 80, 160 |
| 1" NB SCH 80, 160 |

We welcome your enquiries for items not listed.

Precision Pipe Fittings



Hex Nipple



Long Nipple



Reducing Adapter



Pipe Cap



Reducing Bushing



Pipe Plug



Hex Reducing Nipple



Three Piece Union

Material : AISI- SS316, SS304, SS303, SS321 etc.
Thread : NPT, BSP, Others
Size : 1/8" to 1"

Compression Fittings



Hex Nipple



Male Pipe Weld Connector



Elbow Union



Male Adapter



Back Ferrule



Front Ferrule



Male Elbow



Reducing Union

Material : AISI -SS316, SS304, SS303, Carbon Steel, Brass etc.
Thread : NPT, BSP, Others
Size : 1/8" to 1"

Bayonet Caps



Bayonet Caps



Bayonet Adapters



Springs



Adjustable Bayonet Caps

Material : AISI- SS316, SS304, SS303, Carbon Steel, Brass etc.

Thread : NPT, BSP , Others

Seal Pots and Accessories



Plain Seal Pots



Threaded Seal Pots



Connector Seal Pots



Seal Pots for Armour

Material : AISI- SS316, SS304, SS303, Carbon Steel ,Brass etc.

Thread : Plain, Threaded

Size : As per customer requirement

Connectors

Plug and jack compensated connectors for thermocouples.

Types : J, K, R, S, B, T, E
Standard, Miniature

Material : Fibre Glass

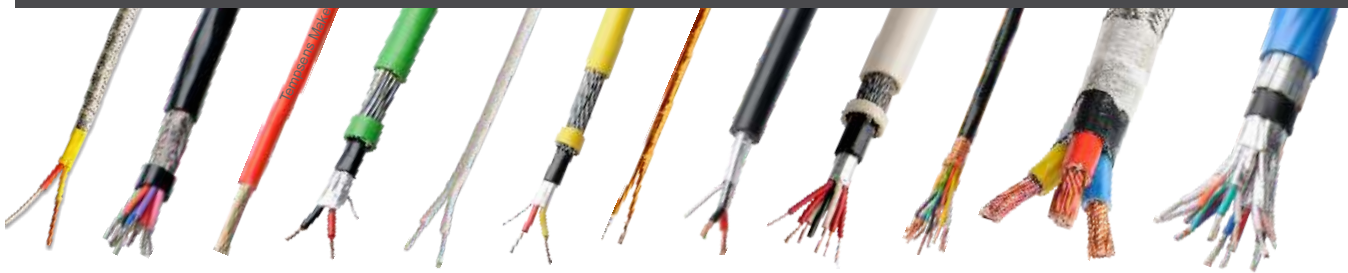
Features

High Quality impact resistant material
Polarized pins prevent misconduction
Easy to wire.



We welcome your enquiries for items not listed.

Compensating Cable



Wire :14 to 36 gauge (AWG/SWG)

Gauge :Solid / Multistrand

Conductor :Single and Double Fibre Glass, PTFE, Ceramic Fibre, Silica Fibre, SS Braided, PVC etc.

Insulation :Armored / Unarmored

COLOR CODE OF THERMOCOUPLE EXTENSION AND COMPENSATING

| CONDUCTOR COMBINATION TYPE | CONDUCTOR | | INTERNATIONAL COLOUR CODE TO IEC 5843:1989 | AMERICAN TO ASTM/ANSI 1 | JAPANESE TO JIS C 5420:1982 | TOLERANCE CLASS | | CABLE TEMPERATURE RANGE °C |
|----------------------------|-----------------|--------------------|--|-------------------------|-----------------------------|-----------------|-----------------|----------------------------|
| | EXTENSION CABLE | COMPENSATING CABLE | | | | 1 | 2 | |
| K | KX | | | | | ±80 μV (±1.5°C) | ±100μV (±2.5°C) | -25°C TO +200°C |
| | KCA | | | | | | ±100μV (±2.5°C) | -2°C TO +150°C |
| | KCB | | | | | | ±100μV (±2.5°C) | -2°C TO +100°C |
| T | TX | | | | | ±30μV (±0.5°C) | ±60μV (±1.0°C) | -25°C TO +100°C |
| J | JX | | | | | ±85μV (±1.5°C) | ±140μV (±2.5°C) | -25°C TO +200°C |
| N | NX | | | | | ±60μV (±1.5°C) | ±100μV (±2.5°C) | -25°C TO +200°C |
| | NC | | | | | | ±100μV (±2.5°C) | -2°C TO +150°C |
| E | EX | | | | | ±120μV (±1.5°C) | ±200μV (±2.5°C) | -25°C TO +200°C |
| R | RCA | | | | | | ±30μV (±0.5°C) | 0°C TO +100°C |
| | RCB | | | | | | ±60μV (±1.0°C) | 0°C TO +200°C |
| S | SCA | | | | | | ±30μV (±0.5°C) | 0°C TO +100°C |
| | SCB | | | | | | ±60μV (±1.0°C) | 0°C TO +200°C |
| B | BC | | | | | | | |

Wire Insulation Identification and Application guide

| INSULATION CODE | INSULATION | APPEARANCE OF CABLE | TEMP. RANGE INSULATION | ABRASION RESISTANCE | FLEXIBILITY | WATER SUBMERSION | RESISTANCE TO: | |
|-----------------|-------------------------------------|---------------------|------------------------|---------------------|-------------|------------------|----------------|-----------|
| | | | | | | | FLAME | HUMIDITY |
| P | Polyvinyl Chloride (PVC) | | -40 to 105°C | GOOD | EXCELLENT | GOOD | GOOD | GOOD |
| EF | FEP | | -200 to 200°C | EXCELLENT | GOOD | EXCELLENT | EXCELLENT | EXCELLENT |
| S | Silicon | | -40 to 200°C | GOOD | GOOD | EXCELLENT | GOOD | EXCELLENT |
| T | PTFE | | -267 to 260°C | EXCELLENT | GOOD | EXCELLENT | EXCELLENT | EXCELLENT |
| PF | PFA | | -260 to 260°C | EXCELLENT | GOOD | EXCELLENT | EXCELLENT | EXCELLENT |
| K | Kapton | | -267 to 310°C | EXCELLENT | GOOD | GOOD | EXCELLENT | EXCELLENT |
| F | Fiber Glass | | -73 to 600°C | GOOD | GOOD | EXCELLENT | EXCELLENT | EXCELLENT |
| CF/SF | Ceramic Fiber/ Silica | | -72 to 800°C | POOR | GOOD | POOR | EXCELLENT | EXCELLENT |
| RF/NF/AL | Refrasil/Nextel Silica yarn/Alumina | | -73 to 1200°C | POOR | GOOD | POOR | EXCELLENT | FAIR |

MI CABLES



Type : K, J, D, E, N

Dia : 0.25, 0.5, 1, 1.5, 2, 3, 4.5, 6 & 8 mm

Sheath Material : SS316, SS310, Inconel 600 etc. others available on request

Configuration : Simplex/Duplex

Connection Heads



Type A



Type B



Type C



Type DAN



Type D



Type DAN-W



Type MA

- Material** : Die cast aluminum, Stainless steel, Plastic etc.
- Types** : A, B, C, DAN, DAN-W, KNE etc
Single entry, Double entry, miniature
- Cable Entry** : M24x1.5, M20x1.5, 3/4" ET, 1/2" NPT/BSP
- Bottom Entry** : 1/2" BSP, M20x1.5, 1/2" NPT
- Protection Class** : IP 65, IP 67, Ex-proof II A/II B, II C

Terminal Block

Tempsens offers various types of terminal blocks for connection heads.

- Material** : Ceramic
- Terminal** : Two, Three, Four, Six, Eight.



Six Pin
Terminal Block

Four Pin
Terminal Block

Three Pin
Terminal Block

Two Pin
Terminal Block

We welcome your enquiries for items not listed.

Always One Step ahead.... Committed to success

TEMPESENS Instruments (I) Pvt. Ltd is a part of Pyrotech group which was established by four technocrats in 1976 at Udaipur, with our first product as Thermocouples and RTDs. To enhance our customer's success we provide high quality products and services for "Thermal Engineering Solution", tailored to their needs, and delivered to meet their schedule.

We have tied up with world leaders in Temperature measuring technology for critical components, Non contact Temperature measurement and Thermal imaging solutions. We add value to these products and deliver complete engineered solutions, backed by efficient service and application support.

- 35 years of experience.
- Large Customer base.
- Strong sales and service network
- Executed Major Projects in India and Abroad.
- Production Expertise-Specialised Team & Facility.
- NABL Accredited Calibration Laboratory -196°C to 1700°C.
- Fixed Point Temperature Calibration-TPW, Ga, Sn, Zn & Al.
- Export to more than 40 countries.

Quality Assurance

- ❖ Inspection and testing
- ❖ Raw Material Surface Finish
- ❖ Material Analysis
- ❖ Ultrasonic Test for integrity
- ❖ Hardness Test
- ❖ Intergranular Corrossion Test
- ❖ Dimensional Inspection
- ❖ GO/NO GO Gauge for threads
- ❖ Hydro Test
- ❖ Pneumatic/Gas Test
- ❖ Helium Leak Test
- ❖ Pressure Cycle Test
- ❖ Temperature Cycle Test
- ❖ Radiography
- ❖ Ultrasonic Bore Concentricity Test
- ❖ Positive Material Identification (PMI)

Other Products

- ❖ Thermocouples
- ❖ RTDs
- ❖ Glass Thermocouples
- ❖ Master Sensors
- ❖ Calibration Equipments
- ❖ Calibration Services – NABL Accredited Lab and on-site
- ❖ Infrared Pyrometer.
- ❖ Furnace Cameras.
- ❖ Kiln Shell Scanner

THERMAL ENGINEERING SOLUTIONS



INDIA

Tempsens Instruments (I) Pvt. Ltd. U# I
B-188A, Road No.5, M.I.A.,
Udaipur-313003 (Rajasthan) INDIA
Ph.:+91-294-3057700 to 800
Fax.:+91-294-3057750
Email: info@tempsens.com

Tempsens Instruments (I) Pvt. Ltd. U# II
A-190, Road No.5, M.I.A.,
Udaipur-313003 (Rajasthan) INDIA
Ph.:+91-294-3052900
Fax.:+91-294-3052950
Email: info@compensatingcables.net
info@tempsens.com

GERMANY

Tempsens Instruments Gmbh
Loehestrasse 37,
53773 Hennef, GERMANY
Ph.:+49-2242-8703-22
Fax.:+49-2242-8703-20
Email: hmueller@tempsens.de

CHINA

WUXI Tempsens Instruments Co. Ltd.
Rm 911, ShiDaijieDou, No.655, Hubin Rd.,
Binhu District, Wuxi, Jiangsu, CHINA
Ph.:+86-510-385116563
Fax.:+86-510-385116563
Email: sophia@tempsens.com