

# 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](http://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 <sub>2</sub> O <sub>3</sub> – content	%	99	59.0
Color	-	yellow	white
Water absorption	%	0	0
Flexural Strength	N/mm <sup>2</sup>	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 Adpater



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

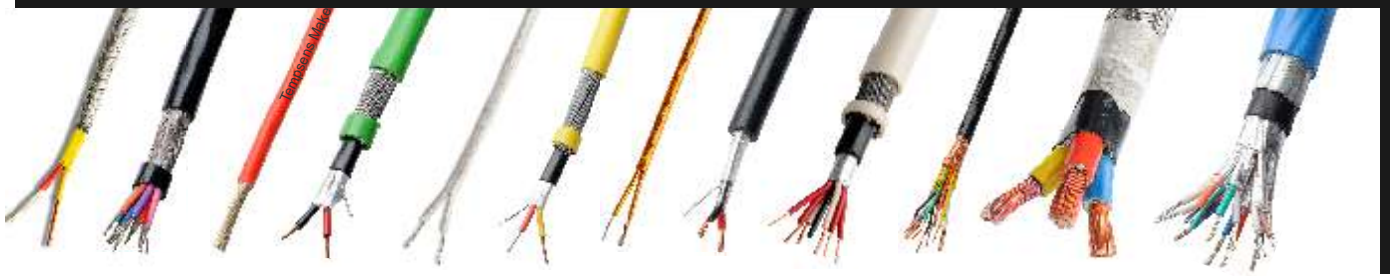
Features

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 ANSI/ISA-1	JAPANESE TO JIS C 1430:1981	TOLERANCE CLASS		CABLE TEMPERATURE RANGE °C
	EXTENSION CABLE	COMPENSATING CABLE				1	2	
K	KX					±80 µV (±1.5°C)	±100µV (±2.5°C)	-20°C TO +200°C
	KCA						±100µV (±2.5°C)	-0°C TO +150°C
	KCB						±100µV (±2.5°C)	-0°C TO +100°C
T	TX					±30µV (±1.0°C)	±60µV (±2.0°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)	-0°C TO +150°C
E	EX					±120µV (±1.5°C)	±200µV (±2.5°C)	-25°C TO +200°C
R	RCA					±30µV (±1.0°C)	±60µV (±2.0°C)	-0°C TO +100°C
	RCB					±60µV (±2.0°C)	±120µV (±2.5°C)	-0°C TO +200°C
S	SCA					±30µV (±1.0°C)	±60µV (±2.0°C)	-0°C TO +100°C
	SCB					±60µV (±2.0°C)	±120µV (±2.5°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

TEMPSENS 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



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