

Ceramic protection sheaths are available in lengths to suit customer requirements & in range of diameters. Standard material : Impervious aluminous porcelain, impervious recrystallised alumina, impervious mullite and silicon carbide.

For attachment purposes a range of adjustable or welded flanges and bushes are available. These are secured to the support tube.

Metal tube supporting the main ceramic sheath. This support tube is normally in stainless steel and is typically 25mm OD with 150mm length. Support tubes in alternative materials and dimensions are available on request.

Heavy duty, weatherproof, screw top terminal heads are supplied fitted to Type 14 assemblies. It is supplied completed with terminal block.



# TC Series *RTD & Thermocouples*

**FAST DELIVERY** Fast Delivery TC Series

Huge stock and spare parts in coverage for our clients' order

## Sensor Head

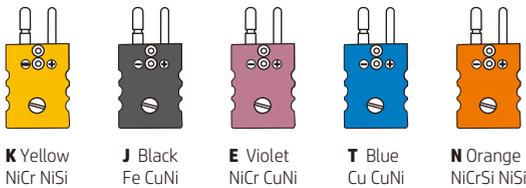


## Terminal Blocks



## Connector

### ANSI colour code



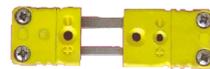
### Standard thermoplastic connector



### Standard ceramic connector



### Mini thermoplastic connector

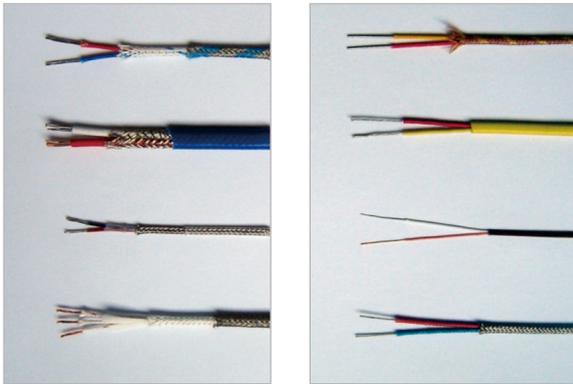


### Mini ceramic connector





## Thermocouple Cable



### Comparison AWG standard & metric Standard

AWG Code	Ø in mm	AWG Code	Ø in mm
0	8.25	23	0.574
1	7.35	24	0.511
2	6.54	25	0.455
3	5.83	26	0.404
4	5.19	27	0.361
5	4.62	28	0.320
6	4.11	29	0.287
7	3.67	30	0.254
8	3.26	31	0.226
9	2.91	32	0.203
10	2.59	33	0.180
11	2.30	34	0.160
12	2.05	35	0.142
13	1.83	36	0.127
14	1.63	37	0.114
15	1.45	38	0.102
16	1.29	39	0.089
17	1.15	40	0.079
18	1.02	41	0.071
19	0.912	42	0.064
20	0.813	43	0.056
21	0.724	44	0.051
22	0.643		

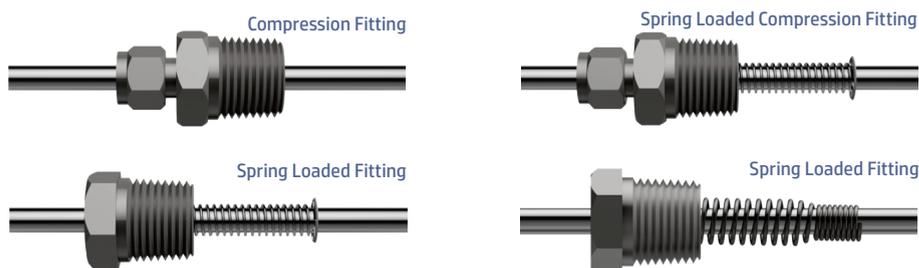
### Features introduction

- Cable construction
  - Conductor : original thermocouple alloy material, is made up of solid wires or strand wires.
  - Insulation layers :
    - Fiberglass [Ambient temperature range 0..300°C]
    - PVC [Ambient temperature range 0..105°C]
    - Teflon [Ambient temperature range 0..350°C]
    - Silicone rubber [Ambient temperature range 0..180°C]
  - Jacket layer material : fiberglass, PVC, Teflon, Silicone rubber
- Conforms to IEC584 standard
- Cables with special material or special dimensions or special artworks, welcome to contact our sales for further discussion.

### Thermocouple cable colour code standard

Thermocouple type	Colour code standard					
	ANSI	DIN	BS	NFC	JIS	IEC
<b>K</b> +NICRO -NIAL	+ Yellow - Red	+ Green - Red	+ Red - Blue	+ Purple - Yellow	+ Blue - Red	+ Green - White
<b>J</b> +IRON -CONSTANTAN	+ Black - Red	+ Blue - Red	+ Black - Blue	+ Black - Yellow	+ Yellow - Red	+ Black - White
<b>E</b> +NICRO -CONSTANTAN	+ Blue - Red	+ Black - Red	+ Brown - Blue	+ Orange - Yellow	+ Blue - Red	+ Blue - White
<b>T</b> +COPPER -CONSTANTAN	+ Blue - Red	+ Brown - Red	+ Blue - Blue	+ Blue - Yellow	+ Brown - Red	+ Brown - White
<b>N</b> +NICROSIL -NISIL	+ Orange - Red	--	+ Orange - Blue	--	--	+ Pink - White
<b>S</b> +COPPER -CUPRONIC	+ Green - Red	+ White - Red	+ Green - Blue	+ Green - Yellow	+ Black - Red	+ Orange - White

## Process Connection





# TC Series *Thermocouples and RTDs*



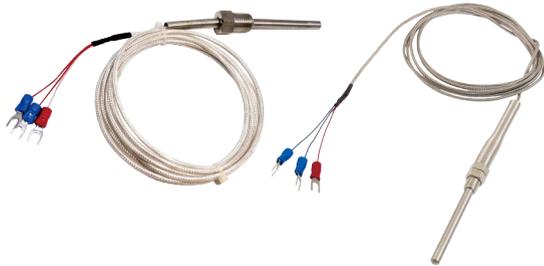
### TC10 Series

- Thermocouples & RTDs with Weatherproof Terminal Head
- Aluminium terminal head, other materials available on request
  - Integral terminal block wiring or with transmitter available
  - Sensors with fixed lengths, spring loaded or flexible armor
  - Single or dual J, K, E, T, N, R, S and B thermocouples or RTDs



### TC20 Series

- Thermocouples & RTDs with Hazardous Location Terminal Head
- Aluminium terminal head, epoxy-coated or SS316 heads
  - Class 1, Division 1, Groups B, C and D
  - Integral terminal block wiring or transmitters available
  - Single or dual J, K, E, T and N thermocouples or variety of RTDs



### TC30 Series

- Thermocouples & RTDs with Sheath and stripped or terminated end
- Variety of wires and cables available
  - 316 Stainless steel standard and other sheath material on request
  - Stainless steel armor, with/without waterproof PVC or Teflon coating
  - Terminated stripped ends or connectors, plugs and crimped terminals
  - Compression fitting or Weld-pads process connection
  - Single or dual J, K, E, T and N thermocouples or variety of RTDs



### TC40 Series

- Integrated dual Thermometer with Transmitter output
- One reading for both analog and temperature transmitter
  - IP65 Weather proof construction for universal application
  - Accuracy class 1.0 - 1.6 of Full Scale
  - Standard 316 stainless steel material sensor
  - Design dial size 3", 4", 5" and 6"
  - Standard 1/4" or 1/2" NPT or BSP, fixed or sliding connection
  - Output signal 4-20 mA, Power 10-33 VDC
  - Temperature range -20° ..+300°C



### TC50 Series

- High Temperature Ceramic Type R or S Thermocouples
- Accuracy Class 1.0
  - Recrystallised alumina (Altsin) sheath with Duplex option
  - Interchangeable insert
  - Temperature range 0 to 1650°C
  - Sheath length from 300, 500 up to 1000 mm
  - Weather proof terminal head or Explosion proof housing



### Recrystallised alumina (Altsin)

- **Material: Aluminium Oxide (Al2O3)**
- **Temperature range exceeding 1800°C**
- **Resistance to corrosive stresses**
- **High degree of thermal conductivity**