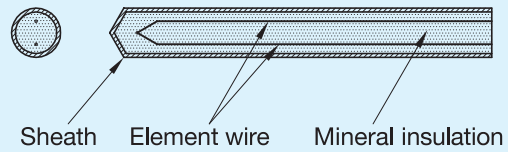


Sheathed Type Thermocouple

OUTLINE

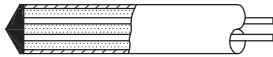
Sheathed thermocouple is one sheathed thermocouple that is composed of a fine gauged metal sheath in which high purity MgO powder is tightly compacted around thermoelement wires.

Sheathed thermocouple has high insulation and pressure resistance. It has also high reliability because of its electromotive force tolerance falling within the limits stipulated by JIS, ANSI, BS, DIN etc.



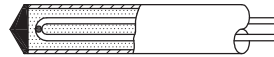
Tip Shape

Grounded type



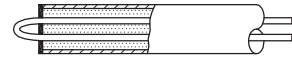
Thermoelement wires are welded together directly at hot end of the sheath to form a hot junction. Quick response and suitable at high temperature and pressure but not recommendable for use in critical and noise generating field.

Ungrounded type



Thermoelement wires are welded together to form a hot junction which is completely insulated from the sheath. Slower response than grounded but less aging deterioration of EMF and good for long service in critical and noise generating field.

Exposed type



Both ends of thermoelement wires are welded together to form a hot junction protruding from sheath. Quick response and can detect even slight temperature change but not usable for long time in corrosive, high temperature and high pressure atmospheres.

FEATURES

- Quick response :**
 By virtue of its integrated structure composed of thermoelement wires insulating material and a protection tube, one has very quick response to temperature change.
- High flexibility and mechanical strength :**
 With its tightly compacted from, sheathed thermocouple has mechanical strength and pliability up to bending radius equal to 2 time of the sheath O.D.
- Excellent resistance to heat Corrosion and Pressure :**
 As high purity MgO powder is tightly compacted in a heat resistance metal tube, Sheath thermocouple is highly gas-tight, no corrosion from surrounding atmosphere and withstand high pressure up to 50 MPa.
- Wide selection of cable specifications :**
 From very fine gauge of 0.25mm to 12.7mm in O.D. and up to 300meters in length are available. Thermoelement wires of 2-pair and 3-pair are also available.

GENERAL SPECIFICATION

1. Type of Elements :

Ref : JIS C 1602-1981

| Type | Old JIS Type | Combination of Element Wires | |
|------|--------------|----------------------------------|------------------------------|
| | | Positive (+) Leg | Negative (-) Leg |
| B | | 70% Platinum/30% Rhodium | 94% Platinum/6% Rhodium |
| R | PR* | 87% Platinum/13% Rhodium | 100% Platinum |
| S | --- | 90% Platinum/10% Rhodium | 100% Platinum |
| K | CA | Chromel** (90%Ni/10% Cr) | Alumel** (95%Ni/2%Mn/2%Al) |
| E | CRC | Chromel** (90%Ni/10% Cr) | Constantan (55%Cu/45%Ni) |
| J | IC | 99.5% Iron | Constantan (55%Cu/45%Ni) |
| T | CC | 100% Copper | Constantan (55%Cu/45%Ni) |
| N | --- | Nicrosil (84%Ni/14.2%Cr/1.45%Si) | Nisil (95%Ni/4.4%Si/0.15%Mg) |

Note : * Old type PR does not correspond to the present type R because of different content of Rhodium in positive (+) leg.

** Chromel and Alumel are the registered trade market by Hoskins Mfg. Co., U.S.A.

Sheath type thermocouple specifications

2. Grade for temperature reading

| Type | Old JIS type | Temperature range | Class | Tolerance Ref:JIS C 1602-1981 |
|--------|--------------|-------------------|-------|----------------------------------|
| B | | 600°C ~ 1,700°C | 0.5 | ±4°C or ±0.5°C of Reading |
| R S | PR13 | 0°C ~ 1,600°C | 0.25 | ±1.5°C or ±0.25°C of Reading |
| K | CA | 0°C ~ 1,000°C | 0.4 | ±1.5°C or ±0.4°C of Reading |
| | | 0°C ~ 1,200°C | 0.75 | ±2.5°C or ±0.75°C of Reading |
| | | -200°C ~ 0°C | 1.5 | ±2.5°C or ±1.5°C of Reading |
| E | CRC | 0°C ~ 800°C | 0.4 | ±1.5°C or ±0.4°C of Reading |
| | | 0°C ~ 800°C | 0.75 | ±2.5°C or ±0.75°C of Reading |
| | | -200°C ~ 0°C | 1.5 | ±2.5°C or ±1.5°C of Reading |
| J | IC | 0°C ~ 750°C | 0.4 | ±1.5°C or ±0.4°C of Reading |
| | | 0°C ~ 750°C | 0.75 | ±2.5°C or ±0.75°C of Reading |
| T | CC | 0°C ~ 350°C | 0.4 | ±0.5°C or ±0.4°C of Reading |
| | | 0°C ~ 350°C | 0.75 | ±1°C or ±0.75°C of Reading |
| | | -200°C ~ 0°C | 1.5 | ±1°C or ±1.5°C of Reading |
| N | --- | 0°C ~ 1250°C | 0.75 | ±2.5°C or ±0.75°C of Reading |

Note : * Tolerance means maximum allowable limit calculated by deducting the temperature at hot junction from the deducting the temperature at hot junction from the temperature value converted from EMF Table.

The tolerance shall be expressed in either °C or % whichever larger.

3. Insulating tubes and protection tubes

| Metallic tubes | | |
|----------------|---------------------|-------------------|
| Material | Operating Temp.(°C) | Maximum Temp.(°C) |
| 304SS | 900 | 1,000 |
| 316SS | 900 | 1,000 |
| 321SS | 900 | 1,000 |
| 310SS | 950 | 1,000 |
| 347SS | 900 | 1,000 |
| 446SS | 1,050 | 1,000 |
| Inconel-600 | 1,080 | 1,000 |
| Inconel-800 | 870 | 1,000 |
| Hastelloy-C | 1,000 | 1,000 |
| Hastelloy-B | 800 | 1,000 |
| Titanium | Oxi.250 red.1,000 | |
| Monel | 500 | 1,000 |
| Tantalum | Oxi.300 red.2,200 | |

4. Operating temperature and typical resistance of sheathed thermocouple

| Shaeth Outdia. | Sheath Thickness (mm) | Wire Dia. (mm) | K | | | T | | J | | E | | |
|----------------|-----------------------|----------------|-----------------|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|------------------|-------------------|
| | | | Operating Temp. | | Resistance Ω/m | Operating Temp. | Resistance Ω/m | Operating Temp. | Resistance Ω/m | Operating Temp. | | Resistance Ω/m |
| | | | 316SS 347SS | 310SS Inconel | | | | | | 316SS 347SS | 310SS Inconel | |
| 1.0mm | 0.15 | 0.2 | 450°C | . | 31.8 | 200°C | 16.2 | 250°C | 19.4 | 450°C | . | 38.0 |
| 1.6mm | 0.2 | 0.32 | 600°C | 700°C | 12.4 | 250°C | 6.3 | 350°C | 7.6 | 600°C | 700°C | 14.9 |
| 3.2mm | 0.4 | 0.53 | 700°C | 900°C | 4.5 | 250°C | 2.3 | 450°C | 2.8 | 700°C | 900°C | 5.4 |
| 4.8mm | 0.5 | 0.77 | 800°C | 1,000°C | 2.2 | 300°C | 1.1 | 500°C | 1.3 | 800°C | 1,000°C | 262 |
| 6.4mm | 0.6 | 1.14 | 850°C | 1,050°C | 1.0 | 300°C | 0.5 | 550°C | 0.6 | 850°C | 1,050°C | 1.2 |
| 8.0mm | 0.7 | 1.3 | 900°C | 1,050°C | 0.8 | 300°C | 0.4 | 600°C | 0.5 | 900°C | 1,050°C | 0.9 |

5. Application specifications

- Head : Material - Aluminium alloy with metallic silver plating.
Type - General type & Ex-Proof type
Construction - Weather & Ex-Proof

- Terminal block :
Type : Single (2-wire System)
Double (4-wire System)
Material : Ceramic (General head)
Phenol resin (Ex-Proof head)

- Cable gland : PF1/2" (JIS15b)
PF3/4" (JIS20b)

- Sheath element :
Type - K, J, T, E, etc. (Request)
Dia. - ø3.2, ø4.8, ø6.4, ø8 (Request)
Material - 316SS, 310SS, 347SS (Request)

- Grade :
0.4 or 0.75 Class (Request)

- Tip of Shape :
Grounded, Ungrounded, Exposed

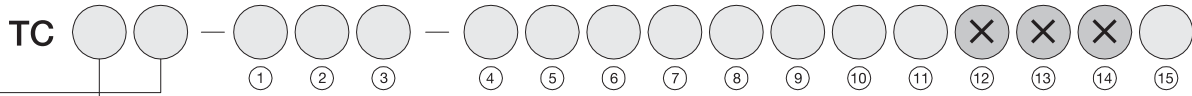
- Connection :
Type - Nipple 1/2", 3/4", Other (Request)
Union Nipple 1/2", 3/4", Other (Request)
Compression fitting type (Request)
Length - 100mm(L), 150mm(L), Other (Request)
Size - 1/2"PT, 1/2"NPT, 3/4"PT, 3/4"NPT
Other (Request)

- Sensing type : Fixed type
Spring load type

- Insert Length(L) : by Request
* Thermowell is option (Request)

Model number configuration (Sheath type thermocouple)

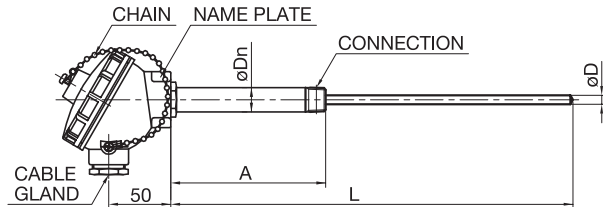
* For ordering, Please specify the model number and each spec.



| Model | | Selective spec. | | | | Option | | | | | |
|----------------------|---|--|--|--|---|---------|-------------------------------------|--|---|--------|--|
| Head & nipple | 1 | General head with Nipple | | | | 5 | General head with Non nipple | | | | |
| | 2 | General head with Union nipple | | | | 6 | Ex-proof head with Non union nipple | | | | |
| | 3 | Ex-proof head with Nipple | | | | 7 | Non head type | | | | |
| | 4 | Ex-proof head with Union nipple | | | | | | | | | |
| Sensing type | 0 | Nipple & Non welded sheath type (Use for well) | | | | | | | | | |
| | 1 | Spring load type | | | | | | | | | |
| | 2 | Nipple welded sheath type (Use for without well) | | | | | | | | | |
| | 3 | Direct compression fitting type | | | | | | | | | |
| | 4 | Remote with Compression fitting type | | | | | | | | | |
| ① Terminal block | 1 | Single type (2-Wire system) | | | | | | | | | |
| | 2 | Double type (4-Wire system) | | | | | | | | | |
| ② Element type | K | K-Type | | | E | E-Type | | | R | R-Type | |
| | J | J-Type | | | T | T-Type | | | X | Other | |
| ③ Type of connection | 3 | PF3/8 | | | 4 | PF1/2 | | | E | PF3/4 | |
| | 8 | PT3/8 | | | 9 | PT1/2 | | | F | PT3/4 | |
| | C | NPT3/8 | | | D | NPT1/2 | | | G | NPT3/4 | |
| | X | Other (Request) | | | | | | | | | |
| ④ Sheath dia. | 1 | 1.6mm | | | | 6 | 6.4mm | | | | |
| | 3 | 3.2mm | | | | 8 | 8mm | | | | |
| | 4 | 4.8mm | | | | X | Other (Request) | | | | |
| | | | | | | | | | | | |
| ⑤ Grade | A | 0.4 Class | | | | | | | | | |
| | B | 0.75 Class | | | | | | | | | |
| ⑥ Sheath material | 6 | 316SS | | | 7 | 347SS | | | X | Other | |
| | 0 | 310SS | | | I | Inconel | | | | | |
| ⑦ Nipple length | 1 | 100mm | | | | 2 | 200mm | | | | |
| | 5 | 150mm | | | | X | Other (Request) | | | | |
| ⑧ Cable gland | 1 | JIS 15b (PF1/2") | | | | | | | | | |
| | 2 | JIS 20b (PF3/4") | | | | | | | | | |
| | 3 | Other | | | | | | | | | |
| ⑨ Tip of shape | G | Unground | | | | E | Exposed | | | | |
| | U | Ground | | | | | | | | | |
| ⑩ Length "L" | L | By Request | | | | | | | | | |
| ⑪ Option | 0 | Nil | | | | | | | | | |
| | 1 | Please specify your requirement (Thermowell) | | | | | | | | | |
| ⑮ Document | 0 | Nil | | | | | | | | | |
| | 1 | Required | | | | | | | | | |

Outline dimension & Specifications (Sheath type thermocouple)

Model : TC10 - □□□



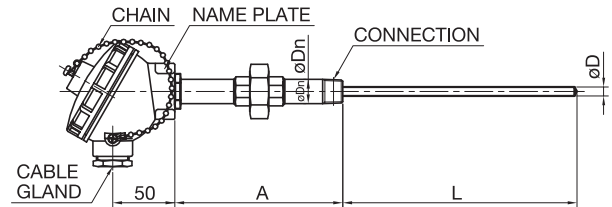
GENERAL SPECIFICATION

1. MODEL : TC10 - □□□
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (GENERAL)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : CERAMIC
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : WEATHER PROOF
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
10. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. NIPPLE SIZE (Dn), MAT'L _____
 1/2B (21.7mm) 3/4B (27.2mm)
13. NIPPLE LENGTH (A mm)
 50 100 150 OTHER
14. CONNECTION
 1/2PT 1/2NPT 3/4PT 3/4NPT
15. LENGTH "L" _____ (mm)

Title

General head with Nipple type
sheathed thermocouple

Model : TC20 - □□□



GENERAL SPECIFICATION

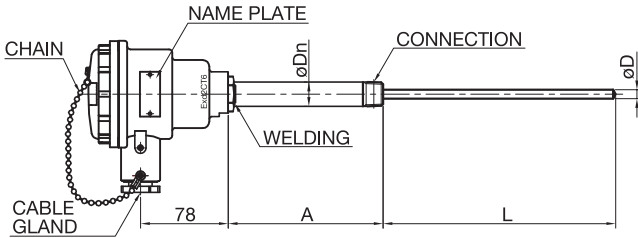
1. MODEL : TC20 - □□□
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (GENERAL)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : CERAMIC
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : WEATHER PROOF
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
10. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. UNION & NIPPLE SIZE (Dn), MAT'L _____
 1/2B (21.7mm) 3/4B (27.2mm)
13. UNION & NIPPLE LENGTH (A mm)
 100 150 OTHER
14. CONNECTION
 1/2PT 1/2NPT 3/4PT 3/4NPT
15. LENGTH "L" _____ (mm)

Title

General head with Union nipple type
sheathed thermocouple

Outline dimension & Specifications (Sheath type thermocouple)

Model : TC30 - □□□



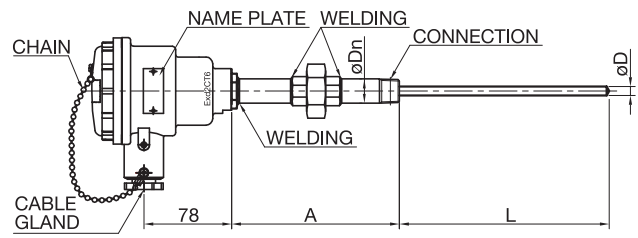
GENERAL SPECIFICATION

1. MODEL : TC30 - □□□
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (EX-PROOF ExdIICT6)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : PHENOL RESIGN
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : ExdIICT6
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
10. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. NIPPLE SIZE (Dn), MAT'L _____
 1/2B (21.7mm) 3/4B (27.2mm)
13. NIPPLE LENGTH (A mm)
 50 100 150 OTHER
14. CONNECTION
 1/2PT 1/2NPT 3/4PT 3/4NPT
15. LENGTH "L" _____ (mm)

Title

Ex-Proof head with Nipple type
sheathed thermocouple

Model : TC40 - □□□



GENERAL SPECIFICATION

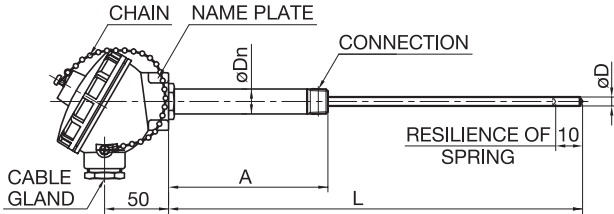
1. MODEL : TC40 - □□□
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (EX-PROOF ExdIICT6)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : PHENOL RESIGN
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : ExdIICT6
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
10. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. UNION & NIPPLE SIZE (Dn), MAT'L _____
 1/2B (21.7mm) 3/4B (27.2mm)
13. UNION & NIPPLE LENGTH (A mm)
 100 150 OTHER
14. CONNECTION
 1/2PT 1/2NPT 3/4PT 3/4NPT
15. LENGTH "L" _____ (mm)

Title

Ex-Proof head with Union nipple type
sheathed thermocouple

Outline dimension & Specifications (Sheath type thermocouple)

Model : TC11 - □□□



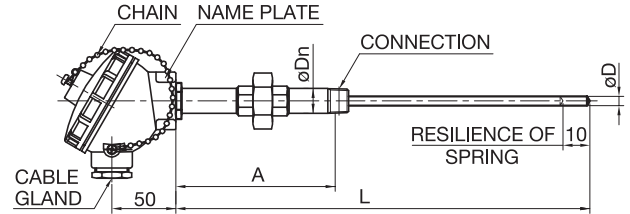
GENERAL SPECIFICATION

1. MODEL : TC11 - □□□
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (GENERAL)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : CERAMIC
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : WEATHER PROOF
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
10. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. NIPPLE SIZE (Dn), MAT'L _____
 1/2B (21.7mm) 3/4B (27.2mm)
13. NIPPLE LENGTH (A mm)
 50 100 150 OTHER
14. CONNECTION
 1/2PT 1/2NPT 3/4PT 3/4NPT
15. SPRING LOAD TYPE
16. LENGTH "L" _____ (mm)

Title

General head with Nipple type
spring load sheathed thermocouple

Model : TC21 - □□□



GENERAL SPECIFICATION

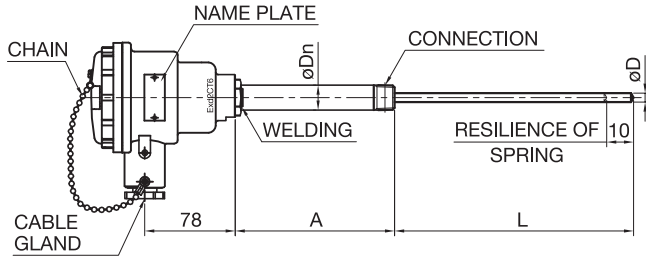
1. MODEL : TC21 - □□□
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (GENERAL)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : CERAMIC
4. PROTECTION TUBE : PIPE
5. CONSTRUCTION : WEATHER PROOF
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
10. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. UNION & NIPPLE SIZE (Dn), MAT'L _____
 1/2B (21.7mm) 3/4B (27.2mm)
13. UNION & NIPPLE LENGTH (A mm)
 100 150 OTHER
14. CONNECTION
 1/2PT 1/2NPT 3/4PT 3/4NPT
15. SPRING LOAD TYPE
16. LENGTH "L" _____ (mm)

Title

General head with Union nipple type
spring load sheathed thermocouple

Outline dimension & Specifications (Sheath type thermocouple)

Model : TC31 - □□□



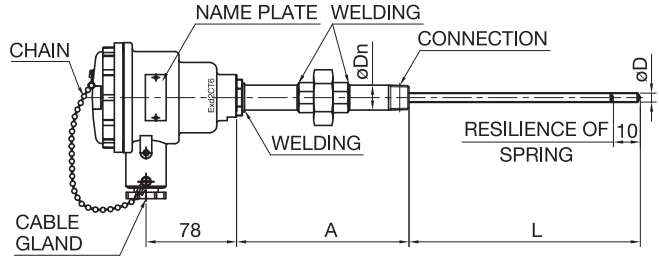
GENERAL SPECIFICATION

1. MODEL : TC31 - □□□
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (EX-PROOF ExdIICT6)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : PHENOL RESIGN
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : ExdIICT6
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
10. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. NIPPLE SIZE (Dn), MAT'L _____
 1/2B (21.7mm) 3/4B (27.2mm)
13. NIPPLE LENGTH (A mm)
 50 100 150 OTHER
14. CONNECTION
 1/2PT 1/2NPT 3/4PT 3/4NPT
15. SPRING LOAD TYPE
16. LENGTH "L" _____ (mm)

Title

Ex-Proof head with Nipple type
spring load sheathed thermocouple

Model : TC41 - □□□



GENERAL SPECIFICATION

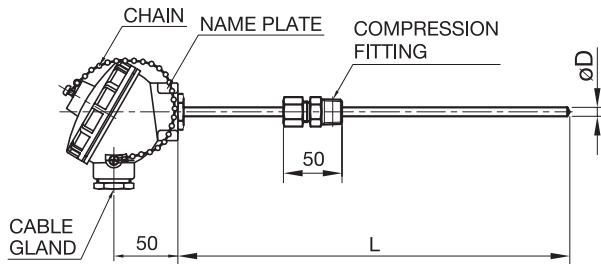
1. MODEL : TC41 - □□□
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (EX-PROOF ExdIICT6)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : PHENOL RESIGN
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : ExdIICT6
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
10. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. UNION & NIPPLE SIZE (Dn), MAT'L _____
 1/2B (21.7mm) 3/4B (27.2mm)
13. UNION & NIPPLE LENGTH (A mm)
 100 150 OTHER
14. CONNECTION
 1/2PT 1/2NPT 3/4PT 3/4NPT
15. SPRING LOAD TYPE
16. LENGTH "L" _____ (mm)

Title

Ex-Proof head with Union nipple type
spring load sheathed thermocouple

Outline dimension & Specifications (Sheath type thermocouple)

Model : TC53 - □□□



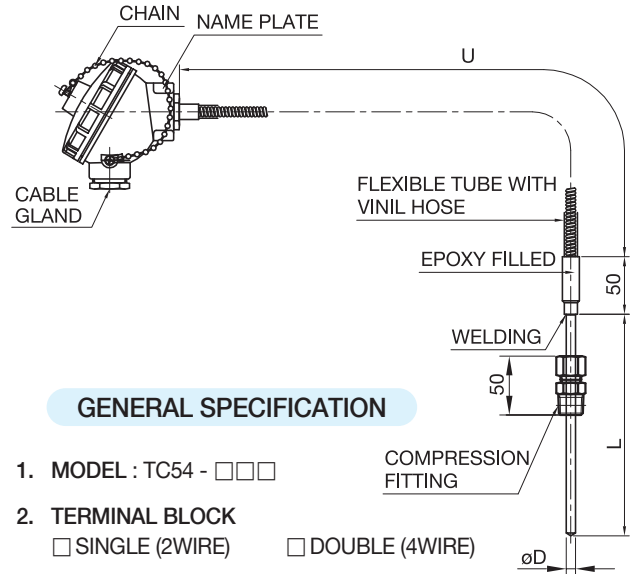
GENERAL SPECIFICATION

1. MODEL : TC53 - □□□
2. TERMINAL BLOCK
 - SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (GENERAL)
 - MATERIAL : ALUMINIUM ALLOY
 - SURFACE COLOR : METALLIC SILVER
 - TERMINAL BLOCK MATERIAL : CERAMIC
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : WEATHER PROOF
6. CABLE GLAND
 - JIS15b JIS20b
7. ELEMENT TYPE
 - K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. PROTECTION TUBE OUTER DIAMETER (D)
 - 3.2 4.8 6.4 8 OTHER
10. CONNECTION (COMPRESSION FITTING)
 - 1/4PT 3/8NPT 1/2PT OTHER
11. PROTECTION TUBE MATERIAL
 - 316SS 310SS 347SS INCONEL OTHER
12. CONNECTION MAT'L
 - 304SS 316SS OTHER
13. TIP SHAPE
 - GROUND TYPE UNGROUND TYPE EXPOSED TYPE
14. LENGTH "L" _____ (mm)

Title

General head with Non nipple
compression fitting type sheathed thermocouple

Model : TC54 - □□□



GENERAL SPECIFICATION

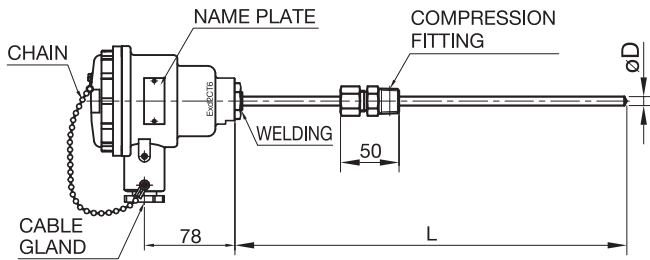
1. MODEL : TC54 - □□□
2. TERMINAL BLOCK
 - SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (GENERAL)
 - MATERIAL : ALUMINIUM ALLOY
 - SURFACE COLOR : METALLIC SILVER
 - TERMINAL BLOCK MATERIAL : CERAMIC
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : WEATHER PROOF
6. CABLE GLAND
 - JIS15b JIS20b
7. ELEMENT TYPE
 - K (CA) J (IC) E (CRC) T (CC) OTHER
8. GRADE : 0.4 0.75
9. PROTECTION TUBE OUTER DIAMETER (D)
 - 3.2 4.8 6.4 8 OTHER
10. CONNECTION (COMPRESSION FITTING)
 - 1/4PT 3/8NPT 1/2PT OTHER
11. PROTECTION TUBE MATERIAL
 - 316SS 310SS 347SS INCONEL OTHER
12. CONNECTION MAT'L
 - 304SS 316SS OTHER
13. TIP SHAPE
 - GROUND TYPE UNGROUND TYPE EXPOSED TYPE
14. FLEXIBLE TUBE LENGTH "U" _____ (mm)
15. LENGTH "L" _____ (mm)
16. MOUNTING BRACKET IS REQUEST (OPTION)

Title

General head with Remote type
compression fitting sheathed thermocouple

Outline dimension & Specifications (Sheath type thermocouple)

Model : TC63 -



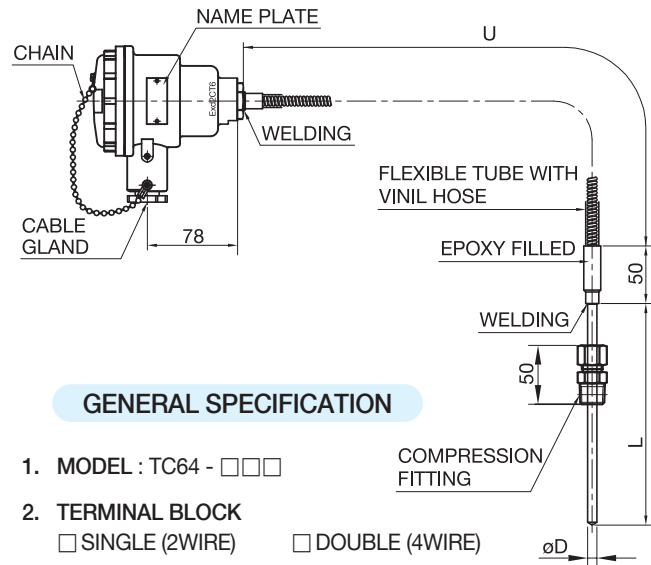
GENERAL SPECIFICATION

1. MODEL : TC63 -
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (ExdIICT6)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : PHENOL RESIGN
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : ExdIICT6
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC)
8. GRADE : 0.4 0.75
9. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
10. CONNECTION (COMPRESSION FITTING)
 1/4PT 3/8NPT 1/2PT OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. CONNECTION MAT'L
 304SS 316SS OTHER
13. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
14. LENGTH "L" _____ (mm)

Title

Ex-Proof head with Non nipple type
compression fitting sheathed thermocouple

Model : TC64 -



GENERAL SPECIFICATION

1. MODEL : TC64 -
2. TERMINAL BLOCK
 SINGLE (2WIRE) DOUBLE (4WIRE)
3. HEAD (ExdIICT6)
 MATERIAL : ALUMINIUM ALLOY
 SURFACE COLOR : METALLIC SILVER
 TERMINAL BLOCK MATERIAL : PHENOL RESIGN
4. PROTECTION TUBE : SHEATHED
5. CONSTRUCTION : ExdIICT6
6. CABLE GLAND
 JIS15b JIS20b
7. ELEMENT TYPE
 K (CA) J (IC) E (CRC) T (CC)
8. GRADE : 0.4 0.75
9. PROTECTION TUBE OUTER DIAMETER (D)
 3.2 4.8 6.4 8 OTHER
10. CONNECTION (COMPRESSION FITTING)
 1/4PT 3/8NPT 1/2PT OTHER
11. PROTECTION TUBE MATERIAL
 316SS 310SS 347SS INCONEL
12. CONNECTION MAT'L
 304SS 316SS OTHER
13. TIP SHAPE
 GROUND TYPE UNGROUND TYPE EXPOSED TYPE
14. FLEXIBLE TUBE LENGTH "U" _____ (mm)
15. LENGTH "L" _____ (mm)
16. MOUNTING BRACKET IS REQUEST (OPTION)

Title

Ex-Proof head with Remote type
compression fitting sheathed thermocouple