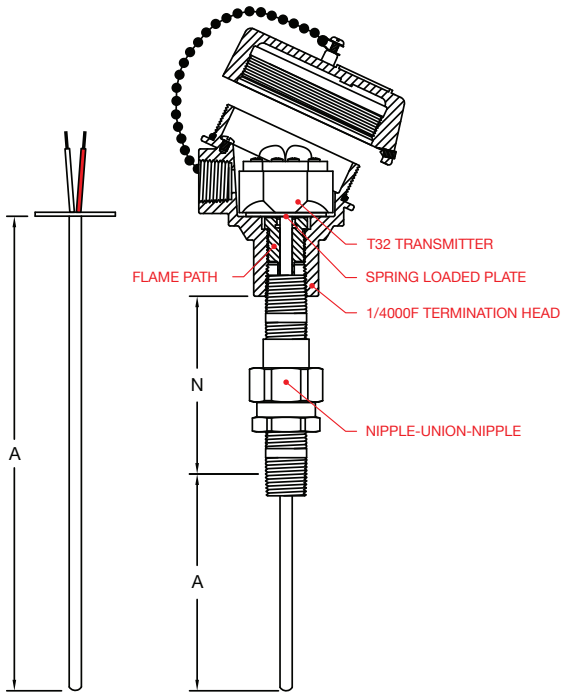
TC10-2 Industrial Thermocouple Assembly

Spring Loaded (Head Internal)

TC10-2 thermocouples are industrial assemblies supplied with or without a temperature transmitter. An extensive range of thermocouple calibrations, connection heads, insertion lengths and neck lengths can be individually selected for the appropriate application.

Thermocouples in this series can be inserted directly into a variety of thermowell configurations. Spring loading is acheived within the termination head utilizing a self-gripping spring or spring loaded DIN plate.

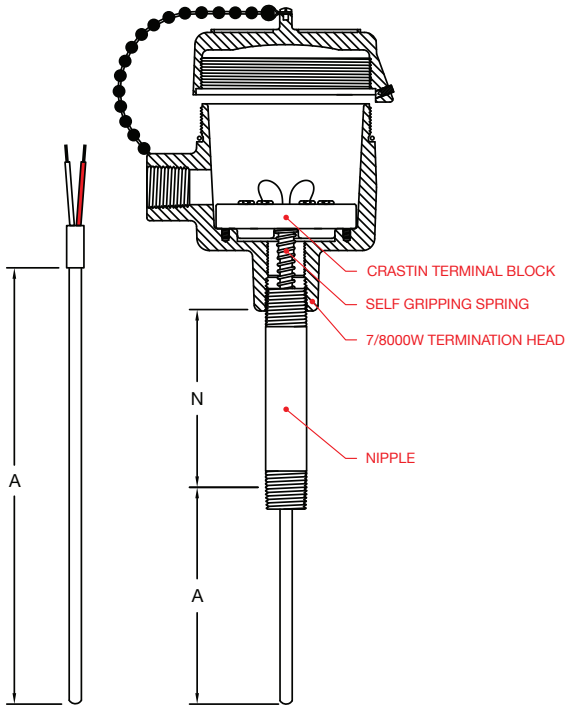
Replacement sensors can also be configured for this model.



THERMOCOUPLE ASSEMBLY SAMPLE
TC10-2-0-I-D-C-1AF13-6-FG-060-A-1-1-P-00600-Z

Features:

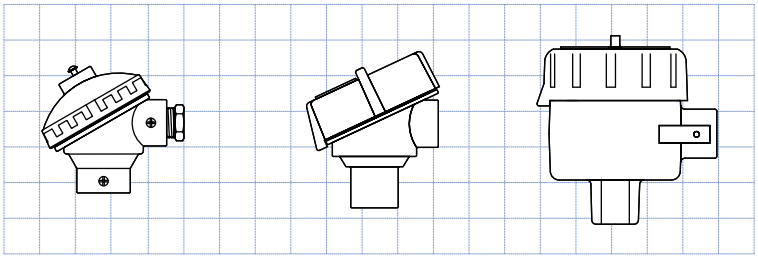
- The sensor is designed to be mounted into a thermowell.
- The assembly has electrical approvals for explosion proof hazardous locations, ingress protection and general purpose areas.
- Electrical authorities that have registered these approvals include CSA, FM and ATEX. The approvals can be with or without an attached thermowell. Our patented integral flame path is required when supplied without a thermowell.
- The thermocouple sensor is spring-loaded ensuring a positive contact to the base of a thermowell bore.



THERMOCOUPLE ASSEMBLY SAMPLE
TC10-2-0-I-S-C-7AW13-1-EG-030-B-1-1-P-00600-Z

Connection Heads

Imperial Grid 1" x 1"



KN4-A
KN4-P

1/4000F
1/4000S

7/8000W

Edmonton Tel: (780) 463.7035 | Chilliwack Tel: (604) 816.2646 | Calgary Tel: (403) 237.5960 | Fort McMurray Tel: (780) 791.9995 | Grande Prairie Tel: (780) 831.5257 | Saskatoon Tel: (306) 664.1105 | Oakville Tel: (905) 337.1611 | Sarnia Tel: (519) 344.1339 | Montréal Tel: (514) 332.0330 | Quebec City Tel: (418) 952.7779

TC10-2-...

Create your product part number by selecting the appropriate assembly items from each of the categories below.
Enter the item code into the applicable box to generate the part number.
Note: Some configurations are unavailable. Your WIKA sales representative will notify you if you have made an incorrect selection.

Part Number	TC10-2-X-X-X-X-XXXXX-X-XX-XXX-X-X-X-X-XXXXX-X

1 Assembly description

Code	
0	Industrial assembly configured
1	Industrial sensor configured (no termination head)

2 Unit of measure

I	Imperial (inch)
M	Metric (mm)

3 Spring design

S	Self gripping spring
D	Spring loaded plate (required for transmitter)

4 Electrical approval

C	CSA Ex-proof Class I Division 1
F	FM Ex-proof Class I Division 1
J	ATEX ZONE 1 gas Ex d IIB+H2 T6 acc. to directive 94/9/EC
Z	Without

5 Connection head

1AF	1/4000 F (Aluminum) with Flame Path[1]
1SF	1/4000 S (Stainless steel) with Flame Path[1]
7AF	7/8000 W (Aluminum) with Flame Path[1]
1AW	1/4000 F (Aluminum) without Flame Path
1SW	1/4000 S (Stainless steel) without Flame Path
7AW	7/8000 W (Aluminum) without Flame Path
KAW	KN4-A (Aluminum)
KPW	KN4-P (Polypropylene)
ZZZ	Without

6 Instrument x Conduit entry

11	1/2 NPT x 1/2 NPT
13	1/2 NPT x 3/4 NPT
12	1/2 NPT x M20x1.5
31	3/4 NPT x 1/2 NPT (reducer)
33	3/4 NPT x 3/4 NPT
32	3/4 NPT x M20x1.5
ZZ	Without

7 Terminal block / Transmitter

1	Crastin terminal block
2	Ceramic terminal block
7	T16, Digital transmitter, 4...20mA, universally progammable
6	T32, Digital transmitter, HART®, universally programmable
9	T53, Fieldbus transmitter, FOUNDATION Fieldbus, PROFIBUS® PA
B	T91.10, Analogue transmitter, fixed measuring range
Y	Without

8 Neck extension

FG	Nipple-Union-Nipple - *Galvanized steel*
EG	Nipple - *Galvanized steel*
UG	Nipple-Union (protection tube only) - *Galvanized steel*
FS	Nipple-Union-Nipple - *Stainless steel*
ES	Nipple - *Stainless steel*
US	Nipple-Union (protection tube only) - *Stainless steel*
BS	Nipple-Union-O-ring Seal Bushing - *Stainless steel*[4]
ZZ	Without

9 N-Dimension (N) - Neck Extension Length

***	N-Dimension in units (e.g. 6.0" = 060, 150 mm = 150) Up to 12.0" (300 mm) Use Increments of 1.0" (25 mm)
ZZZ	Without

10 Thermocouple sensor

A	Type K (NiCr-NiAl) / 0...+1260 °C
B	Type K (NiCr-NiAl) / 0...+1260 °C Special Limits of Error[2]
C	Type J (Fe-CuNi) / 0...+760 °C
D	Type J (Fe-CuNi) / 0...+760 °C Special Limits of Error[2]
E	Type N (NiCrSi-NiSi) / 0...+1260 °C
F	Type N (NiCrSi-NiSi) / 0...+1260 °C Special Limits of Error[2]
G	Type E (NiCr-CuNi) / 0...+870 °C
H	Type E (NiCr-CuNi) / 0...+870 °C Special Limits of Error[2]
J	Type T (Cu-CuNi) / -200...+370 °C
K	Type T (Cu-CuNi) / -200...+370 °C Special Limits of Error[2]

11 Thermocouple junction

1	Single Ungrounded
2	Single Grounded
3	Dual Ungrounded
4	Dual Grounded

12 Sensor diameter

1	1/4 inch / 0.250 inch (6.35 mm)
8	3/8 inch / 0.375 inch (9.53 mm)
D	6.0 mm (0.235 Inch)

13 Sheath material

P	Stainless steel 316 / 316 L (1.4401 / 1.4435)
O	Stainless steel 310 (1.4841)
J	Inconel® 600 (2.4816)
I	Hastelloy® X (2.4665)
T	Stainless steel 446 (1.4762)
H	Hastelloy® C276 (2.4819)

14 A-Dimension (A) - Sensor Insertion Length

*****	Please specify (e.g. 84 mm = 00084) (e.g. 9.5 inch = 00950)

15 Certificates

1	Yes[3]
Z	Without

Replacement Sensor 'A'-Dimension

Self gripping spring without Flame Path	'A'+'N'+1 7/8"
Self gripping spring with Flame Path	'A'+'N'+2 3/8"
Spring loaded plate without Flame Path	'A'+'N'+1 7/8"
Spring loaded plate with Flame Path	'A'+'N'+1 7/8"

Notes:

[1] Flame path required for Explosion Proof assemblies not assembled to WIKA thermowell.
[2] As per ASTM E230.
[3] See Data Sheet CERT.31 for certificate options and details.
[4] Rated to 100 psi @ 86°C, hydrostatic tested in H_2O