



## TC10-3 Industrial Thermocouple Assembly

### Fixed (Direct Mount Into Process)

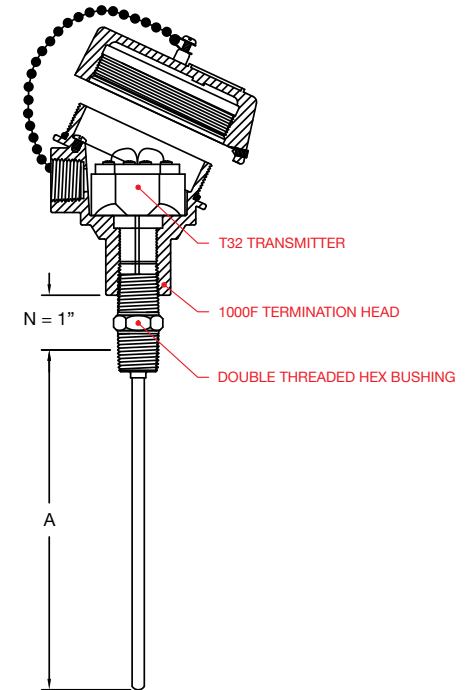
TC10-3 thermocouples are industrial assemblies supplied with or without a temperature transmitter. An extensive range of thermocouple calibrations, connection heads, insertion lengths and neck lengths can be individually selected for the appropriate application.

Thermocouples in this series are designed to be installed directly into the process. The welded fitting or optional compression fitting make this assembly ideal for use without a thermowell.

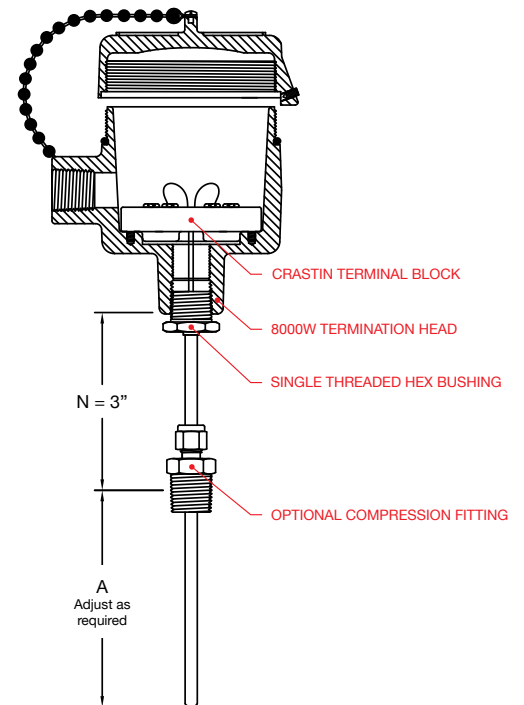
Replacement sensors can also be configured for this model.

#### Features:

- The sensor is designed to be mounted directly into process.
- 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.
- Optional compression fitting allows insertion depth to be adjusted during installation.



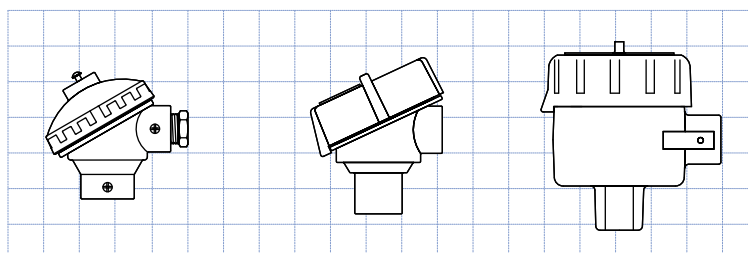
**THERMOCOUPLE ASSEMBLY SAMPLE**  
TC10-3-0-I-C-1AW13-6-DS-010-B-1-1-P-00600-Z



**THERMOCOUPLE ASSEMBLY SAMPLE**  
TC10-3-0-I-C-7AW13-1-SC-030-B-1-1-P-00600-Z

### Connection Heads

Imperial Grid 1" x 1"



KN4-A  
KN4-P

1/4000F  
1/4000S

7/8000W

# TC10-3-...

1 2 3 4 5 6 7 8 9 10 11 12 13 14

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  
 TC10-3-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 Electrical approval	
C	CSA Ex-proof Class I Division 1
F	FM Ex-proof Class I Division 1
J	EEx-d (ATEX) acc. to directive 94/9/EC
Z	Without
4 Connection head	
1AW	1/4000 F (Aluminum)
1SW	1/4000 S (Stainless steel)
7AW	7/8000 W (Aluminum)
KAW	KN4-A (Aluminum)
KPW	KN4-P (Polypropylene)
ZZZ	Without
5 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 (reduce)
33	3/4 NPT x 3/4 NPT
32	3/4 NPT x M20x1.5
ZZ	Without

6 Terminal block / Transmitter	
1	Crastin terminal block
2	Ceramic terminal block
3	T12, Digital transmitter, universally programmable
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
7 Neck extension	
DS	Fixed double threaded hex bushing (316SS)
SS	Fixed single threaded hex bushing (316SS)
SC	Fixed single threaded hex bushing with 1/2 NPT compression fitting (SS body and ferrule)
DU	Nipple-Union-Fixed double threaded hex bushing (316SS)

9 Thermocouple sensor	
A	Type K (NiCr-NiAl) / 0...+1260 °C
B	Type K (NiCr-NiAl) / 0...+1260 °C Special Limits of Error <sup>1</sup>
C	Type J (Fe-CuNi) / 0...+760 °C
D	Type J (Fe-CuNi) / 0...+760 °C Special Limits of Error <sup>1</sup>
E	Type N (NiCrSi-NiSi) / 0...+1260 °C
F	Type N (NiCrSi-NiSi) / 0...+1260 °C Special Limits of Error <sup>1</sup>
G	Type E (NiCr-CuNi) / 0...+870 °C
H	Type E (NiCr-CuNi) / 0...+870 °C Special Limits of Error <sup>1</sup>
J	Type T (Cu-CuNi) / -200...+370 °C
K	Type T (Cu-CuNi) / -200...+370 °C Special Limits of Error <sup>1</sup>
10 Thermocouple Junction	
1	Single Ungrounded
2	Single Grounded
3	Dual Ungrounded
4	Dual Grounded

12 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)
13 A-Dimension (A) - Sensor Insertion Length	
*****	Please specify (e.g. 84 mm = 00084) (e.g. 9.5 inch = 00950)
14 Certificates	
1	Yes <sup>2</sup>
Z	Without

8 N-Dimension (N) - Neck Extension Length	
005	0.5 inch (13 mm) - Single threaded
010	1.0 inch (25 mm) - Double threaded
030	3.0 inch (76 mm) - Single threaded with compression fitting
050	5.0 inch (127 mm) - Nipple-Union-Fixed Double threaded hex bushing

11 Sensor diameter	
1	1/4 inch / 0.250 inch (6.35 mm)
2	1/8 inch / 0.125 inch (3.17 mm)
4	3/16 inch / 0.188 inch (4.75 mm)
5	3/8 inch / 0.375 inch (9.53 mm)
D	6.0 mm (0.235 inch)

Notes:

<sup>1</sup>As per ANSI MC96.1-1982.  
<sup>2</sup>See Data Sheet CERT.31 for certificate options and details.