



## TC10-9 Industrial Thermocouple Assembly

### Ceramic Beaded Sensor

TC10-9 ceramic beaded insulator thermocouple assemblies are used in extremely high temperature industrial applications.

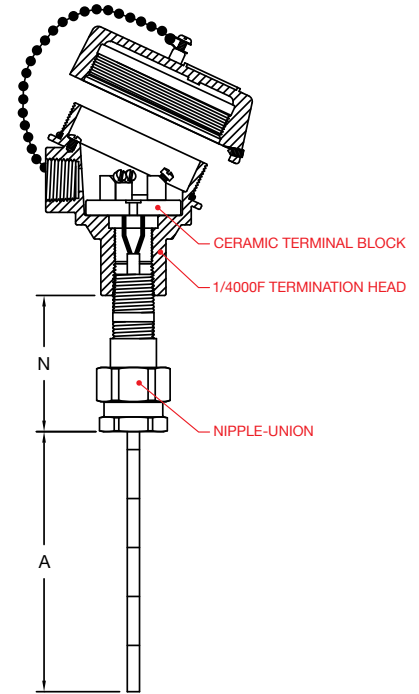
These assemblies are primarily used in conjunction with ceramic closed ended protection tubes. An extensive range of thermocouple calibrations, connection heads, wire gauges, ceramic insulator diameters and insertion lengths can be selected for this model.

The assembly provides a neck extension with a female threaded union for installing directly to a ceramic protection tube fitting.

Replacement thermocouple sensors can be configured for this model.

### Features:

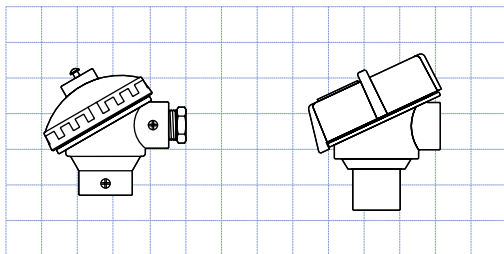
- The assembly has a general purpose approval.
- Wire sizes for single thermocouples range from 20 AWG with insulator diameter of 0.187" to 8 AWG with insulator diameter of 0.465"
- For dual thermocouples the range is 20 AWG with insulator diameter of 0.220" to 14AWG with insulator diameter of 0.312".
- A ceramic terminal block with metal screws is provided inside the head for direct termination of the ceramic beaded thermocouple.



**THERMOCOUPLE ASSEMBLY SAMPLE**  
TC10-9-0-I-1AW-13-UG-030-A-5-04-00600-Z

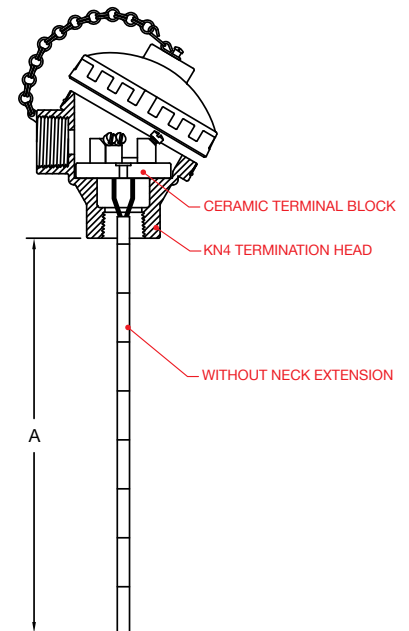
### Connection Heads

Imperial Grid 1" x 1"



KN4-A  
KN4-P

1/4000F  
1/4000S



**THERMOCOUPLE ASSEMBLY SAMPLE**  
TC10-9-0-I-KAW-13-ZZ-ZZZ-A-5-04-00600-Z

# TC10-9-...

1	2	3	4	5	6	7	8	9	10	11
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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  
 TC10-9-X-X-XXXXX-XX-XXX-X-X-  
 XX-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 Connection head	
1AW	1/4000 F (Aluminum)
1SW	1/4000 S (Stainless steel)
KAW	KN4-A (Aluminum)
KPW	KN4-P (Polypropylene)
ZZZ	Without

4 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

5 Neck extension	
UG	Nipple-Union (protection tube only) - Galvanized steel
US	Nipple-Union (protection tube only) - Stainless steel
ZZ	Without

6 N-Dimension (N) - Neck Extension Length	
030	3.0 inch (76 mm)
040	4.0 inch (102 mm) - Nipple-Union Standard
060	6.0 inch (152 mm)
ZZZ	Without

7 Thermocouple sensor	
A	Type K (NiCr-NiAl) / 0...+1260 °C
C	Type J (Fe-CuNi) / 0...+760 °C
E	Type N (NiCrSi-NiSi) / 0...+1260 °C
G	Type E (NiCr-CuNi) / 0...+870 °C

8 Thermocouple junction	
5	Single Recessed
6	Single Exposed
7	Dual Recessed
8	Dual Exposed

9 Insulator Diameter x Wire Gauge	
01	0.465" (8 AWG - single only)
02	0.312" (14 AWG - single or dual)
03	0.250" (14 AWG - single or dual)
04	0.230" (14 AWG - single only)
05	0.220" (20 AWG - dual only) - Recessed not available
06	0.187" (20 AWG - single only)

10 A-Dimension (A) - Sensor Insertion Length	
****	Please specify (e.g. 84 mm = 00084) (e.g. 9.5 inch = 00950)

11 Certificates	
1	Yes <sup>1</sup>
Z	Without

Notes:

<sup>1</sup>See Data Sheet CERT.31 for certificate options and details.