Model 305 spring loaded NPT hex nipple thermocouple

Overview

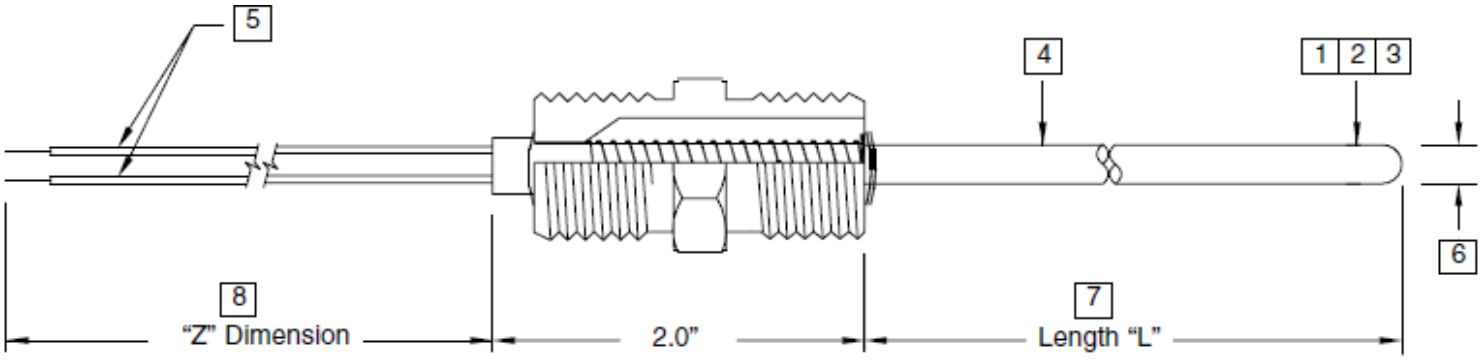
Designed for applications where a spring-loaded threaded male fitting is required for mounting. The spring loading action ensures proper contact with the tip of the thermowell for maximum heat transfer. The sensor is intended to be used with a thermowell, not intended for direct immersion applications.

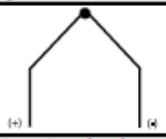
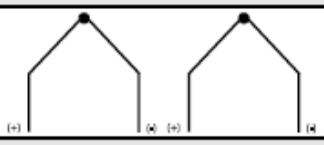
- Refer to 300 Series if threaded fitting is not required
- Refer to Model 201 if welded fitting is required

Technical specification

Feature	Description
Element type	Standard Type K -328 to 2300°F, and other types J, T, E and N
Accuracy	ANSI Special Limits of Error is standard
Junction	Standard ungrounded, with grounded, exposed optional
Construction	Inconel sheathed MgO construction, fiberglass insulated lead wire
Lead wires	Standard single 24” with no head
Sheath diameter	Standard .250” diameter, with options of 1/8", 3/16" and others
Fittings	Standard 1/2” x 1/2" NPT hex spring loaded nipple
Lead wire protection	Optional stainless steel overbraid, stainless steel armor
Accessory	1/2" NPT spring loaded hex fitting kit (310)

Technical specification



1.	Base Model	Base Model/Series Number.
2.	A. Accuracy: B. Type: C. Response Time: D. Tip Sensitivity:	ANSI Special Limits of Error is standard. See Thermocouple General Specifications. Application dependent. See Thermocouple General Specifications. Dependent on sheath diameter and measuring junction. See Thermocouple General Specifications. Thermocouples are inherently tip sensitive.
3.	Grounded: Ungrounded:	At the tip, thermocouple wires are attached to inside of probe wall, resulting in quick response time. At the tip, thermocouple wires are insulated from the inside of probe wall, results are a slower response time but increased isolation.
4.	Construction:	Code A - 316SS tube construction, Teflon insulated lead wire. Code C - 316SS MgO construction, Teflon insulated lead wire. Code B - Inconel MgO construction, Teflon insulated lead wire.
5.	Lead Wires:	Single  Dual 
6.	Sheath Diameter:	.250" (1/4") is industry standard.
7.	Sheath Length:	Bottom of fitting to tip of sensor.
8.	Lead Wire Length:	Length of wires beyond the sheath.

Technical specification

Model	Description
305	**Spring-Loaded, 1/2" X 1/2" NPT Hex Nipple Thermocouple (All Housings)**

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Code	Thermocouple Type	Range	
J	Type J Thermocouple	32 to 1400°F	0 to 760°C
K	Type K Thermocouple	-328 to 2300°F	-200 to 1260°C
T	Type T Thermocouple	-328 to 700°F	-200 to 371°C
E	Type E Thermocouple	-328 to 1600°F	-200 to 871°C
R	Type R Thermocouple	32 to 2700°F	0 to 1482°C
S	Type S Thermocouple	32 to 2700°F	0 to 1482°C
B	Type B Thermocouple	32 to 3100°F	0 to 1704°C
N	Type N Thermocouple	-454 to 2372°F	-270 to 1300°C

Add "MT" for matched to transmitter. See Thermocouple General Specifications.

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Code	Junction Type
G	Grounded
U	Ungrounded

3

Code	Temperature Range
A	500° F Maximum
C	1600° F Maximum
B	2300° F Maximum

4

Code	Number of Lead Wires
2	Single Thermocouple
4	Dual Thermocouple

5

Code	Sheath Diameter
C	.250" Diameter
Other	Consult factory

6

Code	Sheath Length
XXX.X	Specify length to nearest 0.1"

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Code	Lead Wire Length
Z003	3" - Standard with head
Z024	24" - Standard without head
ZXXX	Other - consult factory

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305	-	J	-	G	-	C	-	2	-	C	-	012.0	-	Z003	Sample Model Number
	-		-		-		-		-		-		-		Your Model Number

Technical specification

305	Spring Loaded Sensor with 1/2"NPT Hex Fitting			
Code	**Sensing Element**	**TCR (ohms/C/C)**	**Accuracy**	
01B	100 ohm Platinum	.00385055	DIN-B	**Standard**
01BW	100 ohm Platinum - wire wound	.00385055	DIN-B	
01AW	100 ohm Platinum - wire wound	.003902	DIN-B equivalent	
10AW	1000 ohm Platinum - wire wound	.003902	DIN-B equivalent	
10B	1000 ohm Platinum	.00385055	DIN-B	
10BW	1000 ohm Platinum - wire wound	.00385055	DIN-B	
12N	120 ohm Nickel	.00672	+/-.85deg.C(.60 ohms) at 0deg.C	
09C	10 ohm Copper	.004275	+/-.25deg.C(.05 ohms) at 0deg.C	
	Option: Add 'H' for high accuracy - DIN-A (Platinum elements only)			
	Option: Add 'S' for 1/6 DIN accuacy (Platinum elements only)			
	Option: Add 'MT' for matched calibration to transmitter			

Code	**Temperature Range Limit / Construction**	**Sensing Tip**	**Lead End Max.**	
A	316SS Sheath, Teflon insulated internal & external leads	-58 to 500F	500F	**Standard**
C	316SS Sheath, Fiberglass insulated internal & external leads (Platinum only)	-58 to 900F	900F	
E	316SS Sheath, Fiberglass internal & Teflon external insulated leads (Platinum only)	-58 to 900F	500F	
D	316SS MgO Sheath, Teflon insulated external leads (Platinum only)	-58 to 1200F	500F	
B	Inconel MgO Sheath, Teflon insulated external leads (Platinum only)	-58 to 1700F	500F	
L	316SS Sheath, Teflon insulated internal & external leads (Platinum only)	-328 to 500F	500F	

Code	**Lead Wire Configuration**	
2	2 wire (no lead compensation)	
3	3-wire (lead compensation)	**Standard**
4	4-wire (complete lead compensation)	
6	dual 3-wire (2 sensing elements - .187" diameter sheath or larger)	
8	dual 4-wire (2 sensing elements - .187" diameter sheath or larger)	

Code	**Sheath Diameter**
C	.250" (1/4") Diameter - **Standard**
Other	Consult Factory

Code	**Sheath Length (QuickShip limit: 1.5" to 44")**
xxx.x	Specify length to the nearest 0.1 inch

Code	**Lead Wire Configuration (inches) (QuickShip Limit: 24" max.)**	
Zxxx	Specify flying lead length	**Standard Z024 (Z006 if used w/head)**
Jxxx	Specify jacketed lead length	
Sxxx	Specify jacketed w/shield lead length	

Code	**Options**
SF	Silicone Free

305 - 01B - A - 3 - C - 010.0 - Z006 - - - -

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