

## CONNECTION HEAD WITH BEADED THERMOCOUPLE AND MOUNTING HARDWARE

### How to build a part number:

To order an Applied Sensor Technologies temperature sensor, select the requirements for the categories listed below and fill in the corresponding boxes with your selection. Don't see exactly what you need? Give us a call!

SENSOR TYPE	ASSEMBLY STYLE	CONNECTION	CONNECTION LENGTH	WIRE GAUGE	BEAD SHAPE	CALIBRATION	HOT JUNCTION	INSULATOR MATERIAL	BEAD LENGTH	OPTIONS

#### SENSOR TYPE

**BTC** – Beaded thermocouple

#### ASSEMBLY STYLE

**80 – Sheath with cast aluminum head and beaded base-metal thermocouple;** head conforms to NEMA 4 requirements; 3/4" NPT conduit connection; ceramic terminal block; 1/2" NPT carbon steel process connection; gasketed screw cover with stainless steel chain; maximum head temperature 100°C

#### CONNECTION

**H** – Head only, no mounting hardware; 1/2" NPT (female) instrument connection

**N** – 1/2" NPT carbon steel nipple

**NU** – 1/2" NPT carbon steel nipple and union

**NUN** – 1/2" NPT carbon steel nipple, union and nipple

Add suffix **"1S"** for 304 stainless steel

Add suffix **"2S"** for 316 stainless steel

See chart below for restrictions

#### CONNECTION LENGTH

**###** (e.g., 006 = 6 inch)

(See chart below for standard available lengths)

#### WIRE GAUGE

**14** – 0.255" bead diameter for 0.260" bore well

**08** – 0.460" bead diameter for 0.500" I.D. well or tube

#### BEAD SHAPE

**R** – Round

#### CALIBRATION

– Standard limits

**J** – Single J      **JJ** – Dual J

**K** – Single K      **KK** – Dual K

#### HOT JUNCTION

**U** – Underground junction

**E** – Exposed junction

**TE** – Twisted, exposed junction (single calibration only)

#### INSULATOR MATERIAL

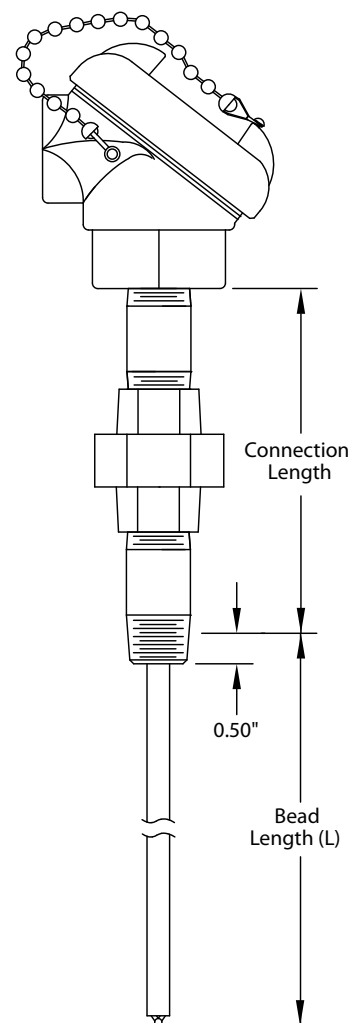
**M** – Mullite

#### BEAD LENGTH (96" maximum)

**L#** – (e.g., L6 = 6 inch sheath, L12.5 = 12.5 inch length)

**OPTIONS** – see back page

STANDARD AVAILABLE CONNECTION LENGTHS		
N	NU	NUN
N/A	2.00	2.50
0.50	2.50	3.00*
1.00	3.00	4.00*
1.50	3.50	5.00
2.00	4.00	6.00*
3.00	5.00	8.00
4.00	6.00	10.00
5.00	7.00	12.00
6.00	8.00	14.00
*NUN 2S OPTION AVAILABLE IN THESE LENGTHS ONLY.		
DIMENSIONS ARE GIVEN IN INCHES		



## STYLE 80

### AVAILABLE OPTIONS and MODIFICATIONS

ASSEMBLY OPTIONS	
Option Code	Description
TAG1	Stainless steel tag and wire
CAL1	NIST traceable calibration [specify point(s)]
CRT1	Certificate of conformance
WC20	Wiring cable gland for 0.187 - 0.312 diameter cables, for terminal heads with 1/2" NPT conduit connections
WC21	Wiring cable gland for 0.125 - 0.187 diameter cables, for terminal heads with 1/2" NPT conduit connections

NEMA 4 OR 4X TERMINAL HEAD OPTIONS			
Head without ground screw	Head with internal ground screw	Process Connection	Conduit Connection
Cast aluminum, screw cover with chain, NEMA 4			
HD10	HD11	1/2"	1/2"
Std.	HD13	1/2"	3/4"
Epoxy-coated aluminum, screw cover with chain, NEMA 4X			
HD50	HD51	1/2"	1/2"
HD52	HD53	1/2"	3/4"
Cast iron, screw cover with chain, NEMA 4			
HD20	HD21	1/2"	1/2"
HD22	HD23	1/2"	3/4"
316 stainless steel, screw cover with chain, NEMA 4X			
HD40	HD41	1/2"	3/4"

Notes:

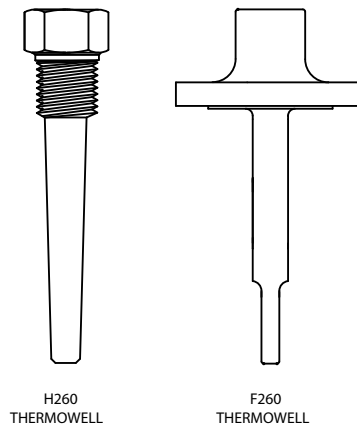
1. See Accessories for additional information

#### EXTENSION WIRE

A selection of extension-grade thermocouple wire is available to connect the sensor to its input device. Consult Accessories section.

#### THERMOWELLS & PROTECTION TUBES

For a complete offering of metal, ceramic and composite material thermowells and protection tubes, please see the Thermowell and Protection Tube sections.



#### REPLACEMENT ELEMENT – see Style 50

**Style 50** – Beaded replacement for base-metal thermocouple

