

# INDUSTRIAL THERMOCOUPLES

A	CODE	HEAD EXTENSION
	2	NIPPLE (NOTE 1)
	4	NIPPLE/UNION/NIPPLE (NOTE 1)

B	CODE	CONNECTION HEAD		
		MATERIAL	TYPE	NEMA
	AN	ALUMINUM	WATER PROOF	4
	SN	STAINLESS STEEL	WATER PROOF, CORROSION RESISTANT	4, 4X
	AE	ALUMINUM	EXPLOSION PROOF (NOTE 2)	4
	SE	STAINLESS STEEL	EXPLOSION PROOF, CORROSION RESISTANT (NOTE 2)	4, 4X
	XD	ALUMINUM	EXPLOSION PROOF, FM, CSA APPROVED (NOTES 2 & 3)	4, 4X
	A	CAST IRON	WEATHER PROOF, RUGGED	
	L	POLYPROPYLENE	WEATHER PROOF, LIGHT WEIGHT	
	AX	ALUMINUM, LARGE DEVICE, EPOXY COATED	EXPLOSION PROOF, ATEX APPROVED (NOTE 3)	4

C	CODE	CONDUIT OPENING	D	CODE	TUBE OPENING	E	CODE	"A" LENGTH
		1/2 or 3/4NPT			1/2			IN INCHES

F	CODE		ELEMENT CONSTRUCTION			
	SINGLE	DUPLEX	DIAMETER	WIRE SIZE (AWG)	INSULATION	SPRING LOADED
	ASL18	ADSL18	1/8"	24	MgO-SHEATH	YES
	A316	AD316	3/16"	20	MgO-SHEATH	NO
	ASL316	ADSL316	3/16"	20	MgO-SHEATH	YES
	A14	AD14	1/4"	18	MgO-SHEATH	NO
	ASL14	ADSL14	1/4"	18	MgO-SHEATH	YES
	B14	BD14	.325"	14	CERAMIC BEAD	NO
	B20	BD20	.183"	20	CERAMIC BEAD	NO

G	CODE		CALIBRATION
	STANDARD	SPECIAL (NOTE 4)	
	J	JJ	IRON (+) vs CONSTANTAN (-)
	K	KK	CHROMEL (+) vs ALUMEL (-)
	T	TT	COPPER (+) vs CONSTANTAN (-)
	E	EE	CHROMEL (+) vs CONSTANTAN (-)
	N	NN	NICROSIL (+) vs NISIL (-)
	-	KKS	CHROMEL (+) vs ALUMEL (-) (NOTE 5)
	-	EES	CHROMEL (+) vs CONSTANTAN (-) (NOTE 5)

H	CODE	MEASURING JUNCTION
	G	SINGLE GROUNDED, GROUNDED TO SHEATH
	U	SINGLE UNGROUNDED, ISOLATED FROM SHEATH
	DG	DUPLEX GROUNDED, GROUNDED TO SHEATH
	DU	DUPLEX UNGROUNDED, ISOLATED FROM SHEATH

J	CODE	ELEMENT SHEATH MATERIAL	STANDARD CALIBRATIONS (NOTE 6)
	P	304 STN. STL.	J, K, T
	R	316 STN. STL.	J, K, T, E, N
	Q	310 STN. STL.	J, K, E
	J	INCONEL 600	K, N, KKS, EES (NOTE 5)

DROP CODE WHEN USING CERAMIC BEADED ELEMENTS

K	WELL TYPE		
	OD-1	OD-2	ID
	432	.500	.875 .260

L	WELL MATERIAL	
	P	304 STAINLESS STEEL
	Q	310 STAINLESS STEEL
	R	316 STAINLESS STEEL
	PLorRL	304or316 S. S. (LOW CARBON)
	N	CARBON STEEL
J	INCONEL 600	
H	HASTELLOY C276	

M	CODE	"F" LENGTH
		IN INCHES (2.25" STD.)

N	CODE	"U" LENGTH
		IN INCHES

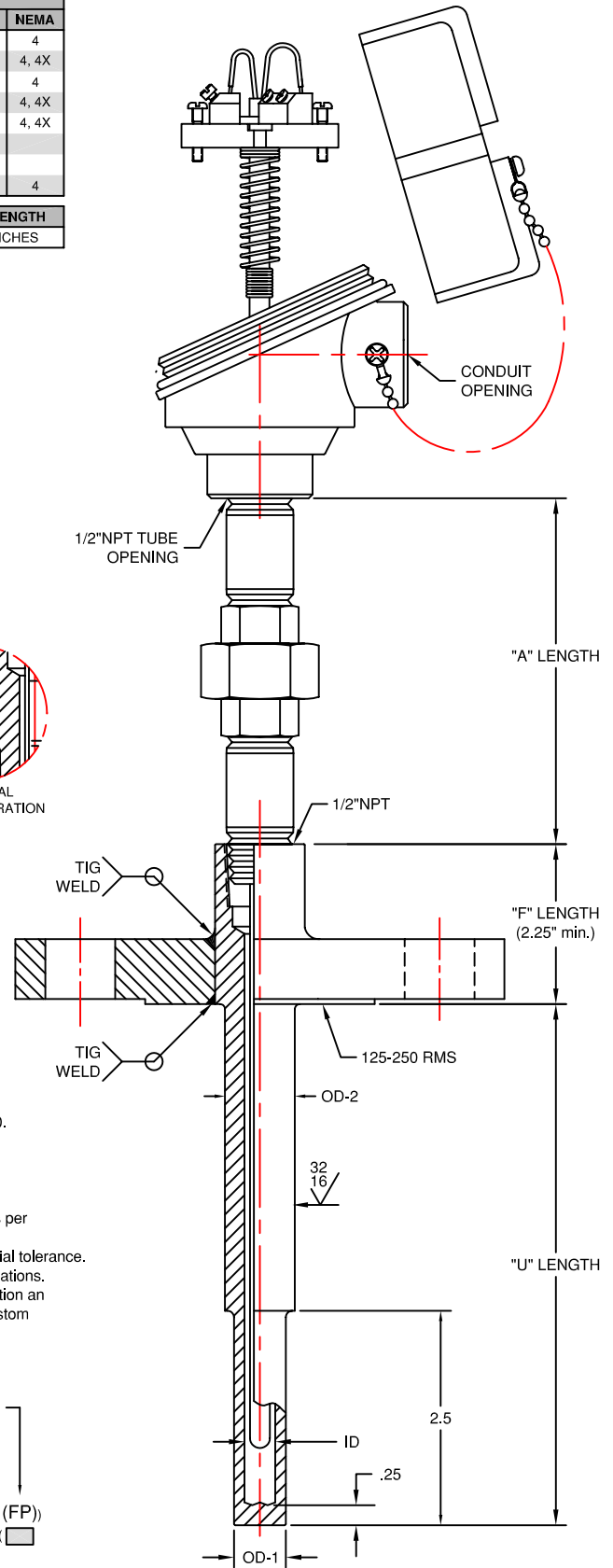
P	CODE	FLANGE SIZE
		SPECIFY

Q	CODE	FLANGE RATING
		SPECIFY

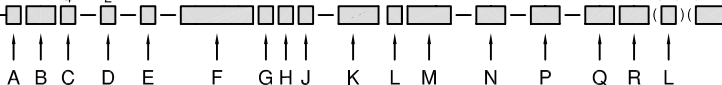
R	FLANGE TYPE	
	FF	FLAT FACE
	RF	RAISED FACE
	RJ	RING TYPE JOINT

**Notes:**

- (1) Standard Nipples - Steel, Schedule 40.  
Standard Unions - Black Malleable Iron, 150#.  
OPTIONAL STAINLESS STEEL  
Nipples - 304 or 316 Stainless Steel, Schedule 40 or 80.  
Unions - 304 or 316 Stainless Steel.  
Example Ordering Code: 4AE 3/4 1/2 6(R or R80).
- (2) Rated NEC class 1, Groups B, C and D.
- (3) ATEX approved EEx d IIC, T6.
- (4) Meets or exceeds Special Initial Calibration Tolerances per ANSI MC96.1-1982 and ASTM E230-1993
- (5) KKS & EES denotes stabilized thermocouple and special tolerance.
- (6) Contact factory for other calibration and sheath combinations.
- (7) For an item that does not fall within the catalog description an (SP) can be added to the ordering code as part of a custom construction.



EXAMPLE: 2 AN  $\frac{3}{4}$  -  $\frac{1}{2}$  - 4 - ASL14 J G R - 432 R 2.25 - 8 - 2 - 300 RF (N) (FP)



OPTIONAL FULL PENETRATION WELD  
USE ONLY IF FLANGE MATERIAL IS NOT THE SAME AS WELL MATERIAL



TEMPERATURE MEASUREMENT DESIGNER'S GUIDE  
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## SECTION INTC

### DRILLED FLANGED WELL ASSEMBLIES STEPPED DOWN SHANK CONSTRUCTION

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