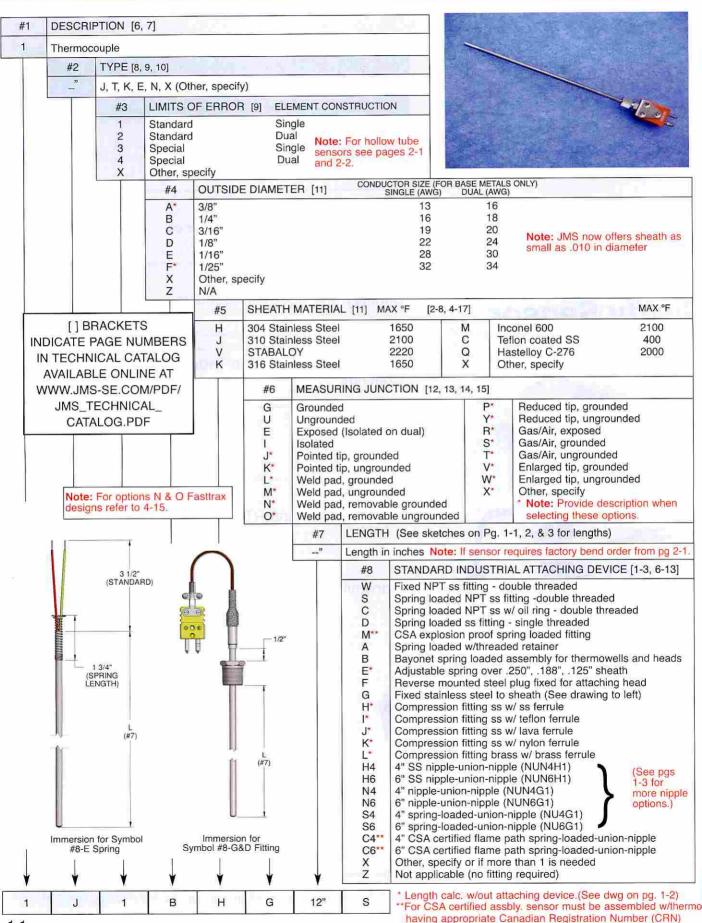
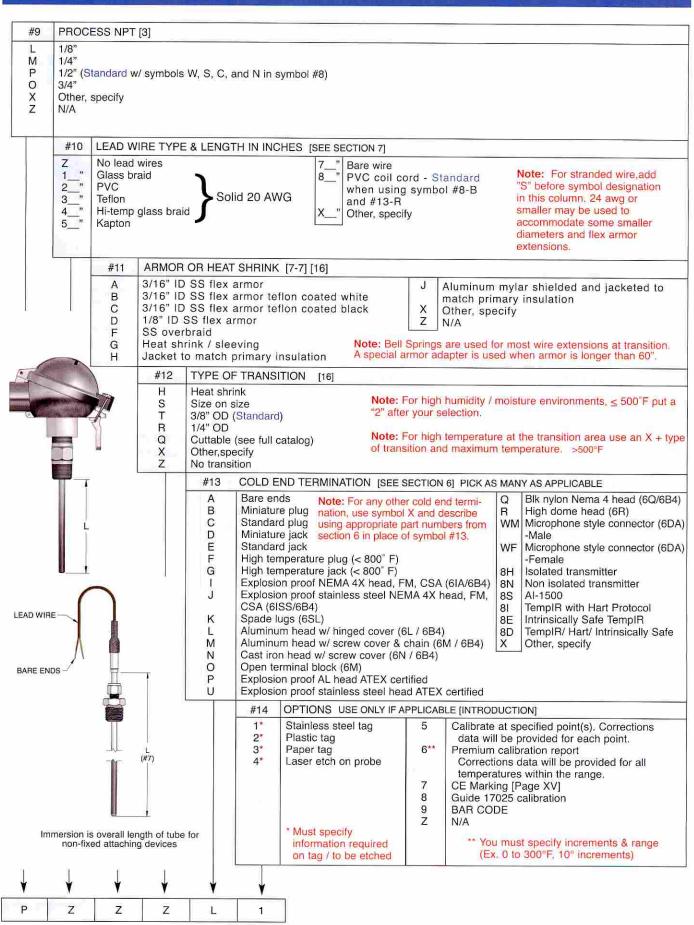
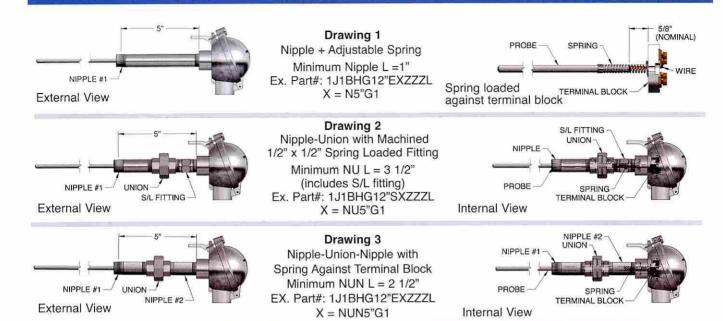
MINIATURE AND INDUSTRIAL THERMOCOUPLES



MINIATURE AND INDUSTRIAL THERMOCOUPLES



NIPPLE-UNION-NIPPLE EXTENSION ASSEMBLIES



An extension assembly may be needed to provide extra length for your sensor in order to extend your sensor head through insulation, or away from the heat of the process. This extension can include a pipe nipple only or a nipple-union-nipple or a nipple-union with a spring-loaded fitting.

Standard nipples and unions are 1/2" NPT and are available in galvanized or stainless steel. The union joins two nipples in an extension assembly and has a standard pressure rating of 150 pounds.

When a nipple-union-nipple or nipple only assembly is used and spring loading of the thermocouple element is required, there are two different methods of spring loading the sensor. The preferred method is to use the machined 1/2" by 1/2" NPT spring-loaded stainless steel fitting as one of the nipples. With this design, the probe is secured within the fitting and is mounted to the head in a rigid manner (see drawing #2 above). The appropriate part number for this assembly would be selected from symbols #8 and #9 from page 1-1 and 1-2, in addition to the symbols on this page. A cheaper method is a spring, mounted over the probe and loaded against the bottom of the terminal block in the head. With this method the probe is not supported within the nipple-union-nipple. It is secured only by the wires into the terminal block. (See drawings 1 & 3 above). We do not recommend that you use this method of spring loading.

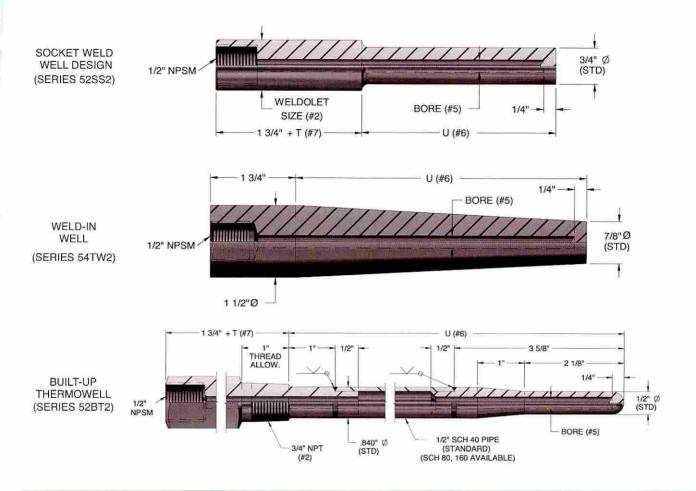
When specifying this sensor extension, the nipple-union-nipple length tolerance is $\pm 1/2$ ".

#1	EXTEN	SION ASS	SEMBLY									
N NU NUN	Nipple Only (Dwg #1) Nipple-Union (Dwg #2) Nipple-Union-Nipple (Dwg #3)											
	#2	LENGT	H									
	21	Specify	length in i	nches								
		#3	MATER	AL.								
		G H C		zed Steel inless Steel teel								
			#4	PRESSURE RATING								
			1 2 3 X	#150 - A351 spec (Standard) #3000 - A182 spec #6000 - A182 spec Other, specify								
NUN	5"	¥ G	¥									

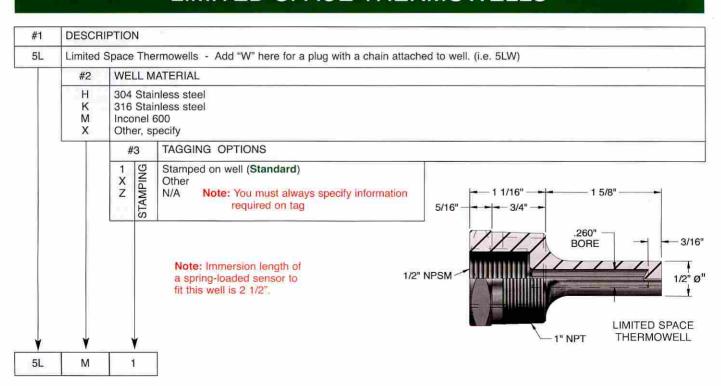
THREADED, WELD-IN, & SOCKET WELD THERMOWELLS

#1	DESCRI	PTION [S	ee pages	20-24 for	complete	information	on dimer	nsions, veloc	ity ratings, and pres	sure ratings)	
5		-			g with a ch						
	#2		DED WELL NAL THRE			ET WELL DLET SIZE					
	1 2 3 4 X	1/2" NP 3/4" NP 1" NP 1 1/2" N Other, s	Γ (Standa Τ ΡΤ	rd)	N/A 3/4" 1" 1 1/2"	1.050°© 1.315°© 1.900°©		rd)			
		#3	SHANK	STYLE [15]			HE			
X Other, spe					AT VICE TO SE	over 22 1/2	2", see dra	awing on 5-2)		
Ţ	Ţ	ı)	#4	2500000 - Semilio	DED OR S	CONTRACTOR AND	ELD WEL	.LS			
	7		T S W X	Socket	ed well des weld well o (Tapered s specify	lesign	dard)				
	/ 🔼		-	#5	BORE S	SIZE	40500	12			110-1
	3			2 3 X		used for .		sensors (Sta sensors (stra	andard) light or tapered only)		
ookina	for San	itary The	rmowells		#6	U (INSE	RTION) D	EPTH [15]	STANDARD "T" DIMENSION		R LENGTH WITH LAG
-A certif	ied sanita	thermo	wells [4-4 eld-in ther]	В	173 SELECT	Note: JN	//S recom-	2	4	6
owells [[4-5] can l		n section		C	4 1/2" 6"	mends the	ne use of	3	6 7 1/2	9 10 1/2
this cat					E	7 1/2"	design if	longer	3	9	12
1/2"	NPSM -				G	10 1/2" 13 1/2"	than 22 page 5-2	1/2" See 2 for draw-	3	12 15	15 18
3/4" + T (#7)					H I* X	16 1/2" 22 1/2" Other, sp	ing.		3 3	18 24	21 27
•						#7	T (LAG)	EXTENSIO	N [15]		
ļ		3/4" NPT (#2)				T Z X	Standar N/A (No Other, s	lag)	ngth see Table in Sy	mbol #6)	
Q	- /	-					#8	1	TERIAL [31-34]		
U (#6)	2"	BORE (#5)	ENGTH)	[]BI	RACKETS		EFGHIJKLMZQSX	310 Stainl 316 Stainl Low Carbo Inconel 60 Monel 400 Hastelloy Titanium Other, spe	ess steel on 304 Stainless ste ess steel ess steel (Standard on 316 Stainless ste 0) C-276 ecify (i.e.: Teflon, PV	d) el /C, Nickel, etc	2.)
	Ĭ	1/4 1/4 - - - - 	IN A	ICATE F TECHN VAILAB WV SE.COI	PAGE NUI ICAL CAT LE ONLIN VW.JMS- M/PDF/JN	MBERS ALOG IE AT IS_		1 SN			
		V	TEC	HNICAL	_CATALO	JG.PDF	¥.				
					T E	I T	THE	1 1			

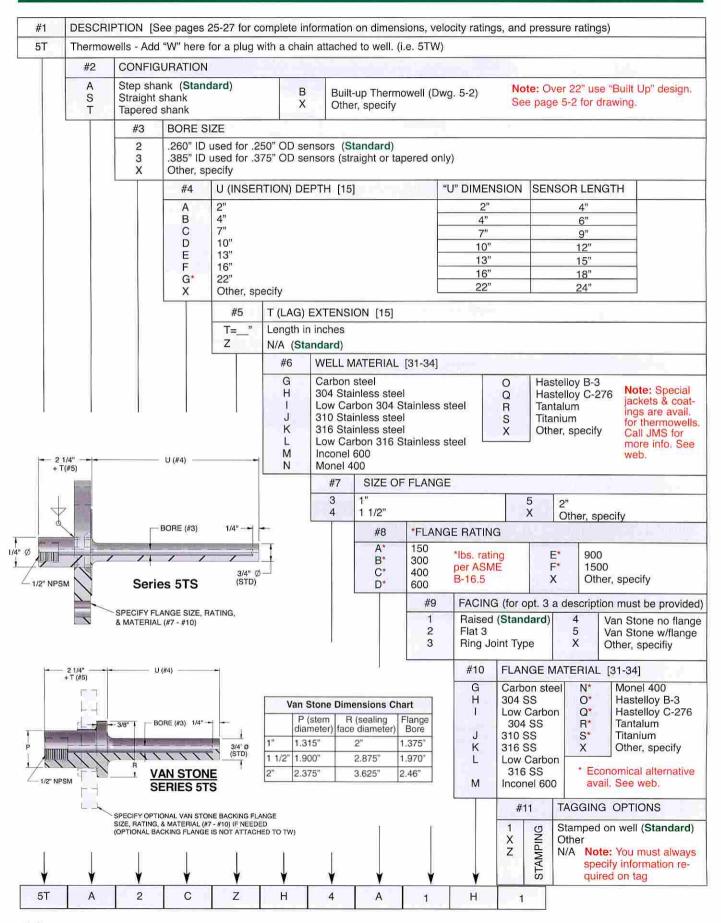
THREADED, SOCKET & WELD-IN THERMOWELLS



LIMITED SPACE THERMOWELLS



FLANGED THERMOWELLS



NON-ISOLATED TRANSMITTERS

#1	DESCRIPTION [8-13]									
8N	Transmitter, Non-Isolated									
	#2	INPUT								
	J* T* K* E* S*	Iron/Constantan thermocouple Copper/Constantan thermocouple Chromel/Alumel thermocouple Chromel/Constantan thermocouple Platinum 10% Rhodium/Pure Platinum thermocouple Platinum 13% Rhodium/Pure Platinum thermocouple	B* N* C* 3 X	Platinum 6% Rhodium/Platinum 30% Rhodium thermocouple Nicrosil/Nisil thermocouple Tungsten 5% Rhenium / Tungsten 26% Rhenium T/0 100Ω, Platinum, a=.00385, RTD Other, specify						

Although non-isolated transmitters are available for thermocouples, JMS always recommends the customer use isolated transmitters for their application. See below for isolation values to 3750 volts

#3	TEMPE	RATURE RANGE	*All no
_ to _°C		ired temperature span ired temperature span specify	thermo transm be use
	#4	OUTPUT	to prev
	4 X	4 to 20 mA Other, specify	loops a interfe

*All non-isolated thermocouple transmitters should be used with ungrounded junctions to prevent ground loops and noise interference.





	#5	MOUNT	ING						
	A B X Z	Dual mounting bracket Dual mounting bracket with 12" cuttable mounting track Other, specify N/A							
11.7		#6	SOFTWARE [8-19]						
		A	Yes - range at factory	Z	No - range at factory				

ISOLATED TRANSMITTERS

#1	DESCRI	PTION [8	-14 through	ı 8-17]			20.0							
8	Transmit	Transmitter (Add "R" for DIN Rail Style for transmitter options H, I, D, and E, see selection #2)												
	#2 TYPE OF TRANSMITTER				1/0	1/O ISOLATION		HART						
	H* C A S B I* E* D X	CAL 940 Al-1000 Al-1500 Al-2000 TempIR Intrinsio	(See pg. 8 (See pg. 8 (See pg. 8 with Hart ally safe	ee pg. 8-5, 8-6) pg. 8-8, 8-9) pg. 8-10, 8-11)			1500 VAC 1000 VAC 500 VAC 500 VAC 850 VAC 1500 VAC 3750 VAC			8H				
	#3 INPUT J Iron/Constantan thermocoup T Copper/Constantan thermoc K Chromel/Alumel thermocoup E Chromel/Constantan thermo S Platinum 10% Rhodium/Pure R Platinum 13% Rhodium/Platin B Platinum 6% Rhodium/Platin			n thermoco ermocoupl an thermoco dium/Pure edium/Pure	ouple e couple Platinum t Platinum t	hermocou	ple ple	N C 3 X Z	Nicrosil/Nisil thermocouple Tungsten 5% Rhenium / Tungsten 26% Rhenium thermocouple 100Ω, Platinum, a=.00385, RTD Other, specify N/A					
			#4 _ to _°C _ to _°F	List desi		ANGE ature span ature span			Other, spe	ecify				
ote: DIN Rail Style available for ansmitter options H. I, D, E			#5 4 X	OUTPUT 4 to 20 m Other, sp	ıA	P		ofibus eldbus						

4 to 20 mA Other, specify		P F	Profibus Fieldbus				
#6	SOFTWARE						
A Z	Yes - ran	nge at fa	actory ctory				