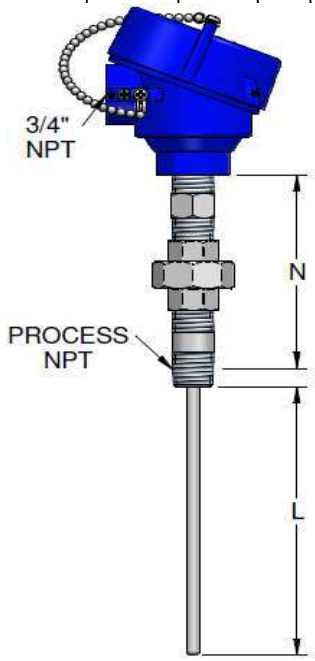


Ex Rated Flame Path Spring Loaded & Welded Assemblies

The 4E Series sets out the CSA and FM approved Ex Rated Flame Path Spring Loaded Assemblies. Selection 10, Option A "Bare ends" permits this Ex rated sensor to be used with any approved transmitter or enclosure that offers at least the same level of protection as that detailed at the bottom of the page. This allows the entire assembly to be CSA and FM approved for Class I, II and III, Divs A*, B,C,D,E,F & G . Both sides of the Nipple-Union extension assembly are 1/2" NPT threaded. Spring-loaded probes should be assembled with a protective tube assembly such as a thermowell for installation. For items requiring CSA certification any thermowell must be approved to Canadian standards and carry a CRN appropriate to the province of installation.

#1	SERIES	
4E	CSA & FM Approved Assembly (See Certification System Details Below)	
	#2	SENSOR TYPE More Options Available -- RTD prefix of 2, 3 or 4 denotes # of wires per element [1-8, 9, 10]
	K	Type K Thermocouple, Special Limits per ASTM E230
	J	Type J Thermocouple, Special Limits per ASTM E230
	E	Type E Thermocouple, Special Limits per ASTM E230
	N	Type N Thermocouple, Special Limits per ASTM E230
	T	Type T Thermocouple, Special Limits per ASTM E230
	3B	100 Ω Platinum RTD 0.00385 alpha (Ω/Ω/°C) per IEC 60751, Class B (Competitors' Standard), 3 Wire, ≥ F 0.30 [p 3-18]
	3E	100 Ω Platinum RTD 0.00385 alpha (Ω/Ω/°C) per IEC 60751, Class A (JMS Standard), 3 Wire ≥ F 0.15 [p 3-18]
	3P	100 Ω Platinum RTD 0.00385 alpha (Ω/Ω/°C) per IEC 60751, Class AA, 3 Wire ≥ 1/2 F 0.10 [p 3-18]
	4S	100 Ω Platinum RTD 0.00385 alpha (Ω/Ω/°C) per IEC 60751, Class 1/4 AA, 4 Wire, ≥ 1/10 F 0.10 [p 3-18]
	X	Other, specify
	#3	NUMBER OF ELEMENTS
	1	Single
	2	Dual
	X	Other, specify
	#4	PROBE OUTSIDE DIAMETER [1-11, 2-8, 4-17]
	B	1/4" (0.250")
	R	6mm (0.236")
	X	Other, specify
	#5	SHEATH MATERIAL [1-11]
	K	316 SS
	L	316L SS
	H	304 SS
	I	304L SS
	M	Inconel 600
	J	310 SS
	Q	Hastelloy C-276
	V	Stabaloy
	P	Pyrosil
	X	Other, specify.
	#6	MEASURING JUNCTION [1-12, 13, 14, 15]
	U	Ungrounded (standard)
	G	Grounded (only available for thermocouples)
	I	Isolated
	X	Other, specify
	#7	LENGTH (L) <i>See sketches for how length is calculated. See 5-1 and 5-3 for thermowell matching.</i>
	"	Length in inches*
	#8	MAXIMUM TEMPERATURE AT WHICH TIP WILL BE EXPOSED
	A	< 0°C (32°F)
	B	< 200°C (392°F)
	C	< 285°C (550°F)
	D	< 350°C (662°F)
	E	≤ 660°C (1220°F)
	F	> 660°C (1220°F)
		Temp Range RTD Wire Insulation* Thermocouple Insulation
		Kapton Swaged *Swaged may be substituted for any of the other insulation types in the discretion of JMS.
		Teflon Swaged
		Kapton Swaged
		Fiberglass Swaged
		Swaged Swaged
		N/A Swaged
	#9	Fitting Spring Loaded or Welded Stainless Steel Nipple Union Ext Assembly Length ("N" Length)
	S	Spring Loaded Fitting Only (no union or nipple)
	S__	State length of 4 or more in inches
	W*	Welded Double Threaded
	W*_	Welded Union Nipple, specify length in inches
		* US Ex Cert Only - No Canada
	#10	ENCLOSURES
	No Display Enclosures [Material, Encl. Cert., weather rating, content]	
	P	Aluminum, FM/CSA/ATEX/IECEX, NEMA 4X (6IAIEC/6G4Z)
	I	Aluminum, FM/CSA, NEMA 4X (6IA/6G4Z)
	J	316 Stainless Steel, FM/CSA, NEMA 4X (6ISS/6G4Z)
	SI*	Cast Iron, NEMA 3, 4, UL / CSA (6I/6PT)
	Windowed Enclosures (Transmitter from #11 will be Display Version)	
	8	Enclosure for JMS Indicating Transmitter FM/CSA/ATEX/IECEX (#11 options PA & PS)
	GA	JMS Alum. Windowed Encl. for Indicating Transmitter (#11 options 300 or 82)
	GS	JMS SS Windowed Encl. for Indicating Transmitter (688S1/ 300 or 82)
	Other Options	
	E	Transmitter OEM Enclosure
	A	Bare Ends
	X	Other Specify

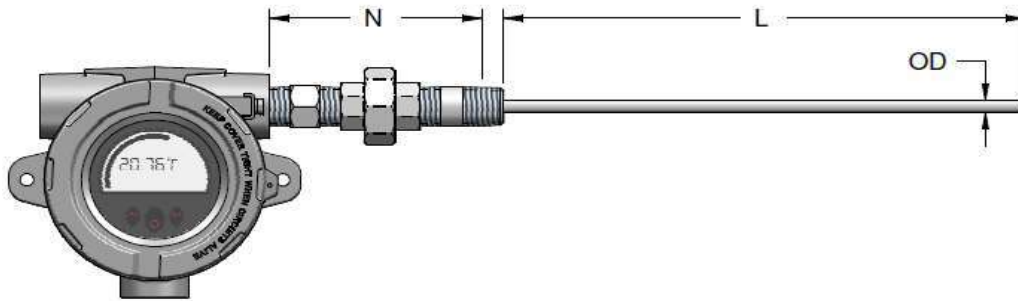


4E K 2 B K U 12 F S6 P

--> Continue to next page to complete Series 4E JMS part # -->

Ex Rated Flame Path Spring Loaded & Welded Assemblies

#11	TRANSMITTER	Add span range after transmitter selection. Example: 8H(0-200C).	
Z	N/A -- No Transmitter		
PA	JMS HART Indicating Transmitter with Aluminum housing (DWG22777A)		* Where OEM Transmitter is selected, full OEM part # must follow JMS Part #. Example: 4EK2BKU12FS6P300(0-200C)1; 300 =TTH300L1HBS
PS	JMS HART Indicating Transmitter with Stainless Steel housing (DWG22777S)		
8D	JMS Intrinsically Safe HART Transmitter - 2 channel (8D)		
8I	JMS Intrinsically Safe Isolated Transmitter - 2 channel (8I)		
8H	JMS Isolated Transmitter - 2 channel (8H)		
8N	JMS Nonisolated Transmitter (8N)		** If #10 Encl = E, then Emerson Enclosure Spec must be one of: J2, J4, J6, J8, R2, R4, D1, D2.
3144P*	Specify Emerson 3144P Transmitter w/ E5, K5, KB, I5, NA_Product Cert.		
644*	Specify Emerson 644 Transmitter**		
248*	Specify Emerson 248 Transmitter***		
82*	Specify Endress + Hauser TMT82 Transmitter		*** If #10 Encl = E, then Emerson Enclosure Spec must be one of: A, G, H, J, K or U.
300*	Specify ABB TTH300 Transmitter	Note: if Fieldbus or Profibus, add F suffix to selection (ex: 644F)	
X	Other, specify.		
#12	OPTIONS	Use only if applicable	[INTRODUCTION]
Marking / Tagging	Calibration Options	Certifications	
1 SS Tag	5 Calibrate at specified point(s).	8***	Guide 17025 calibration certificate
2 Plastic Tag	Corrections data provided for each point	M	MTR (sheath / tubing TC measuring junction)
3 Paper Tag	5L* Standard lot calibration - thermocouple only		
4 Laser Etch	5M Material Calibration - thermocouple only	Other Options	
7 CE Mark	6** Premium calibration report	S	Ship straight (do not coil)
T Calibration Tag	6L** Premium lot calibration report	X	Other, specify.
	Corrections data provided for temperatures within the range. Thermocouple only.		
	6C Callendar-Van Dusen Calibration (RTD only)		
* Lot Calibration AMS 2750 F/G Compliant - Only Available for Thermocouples			
** Must specify increments and range (Example: 0 to 300°F, 10° increments) - Thermocouple Only			
*** Must choose calibration option other than 5M.			



To complete the assembly, just add a flanged, threaded, socket weld, weld-in or sanitary thermowell using JMS catalog pages 5-1, 5-3, 4-3 or 4-5 or configure online!

300 1

--> If OEM transmitter, state full OEM part # -->

; 300 = TTH300L1HBS