RESISTANCE TEMPERATURE DEVICES (RTD'S)

#1	DESCRIPTION
3	RTD

#2 ELEMENT TYPE [4, 9, 10, 11, 15, 18, 22] Platinum 0.00385 alpha (Ω/Ω/°C)

	Resistor Accuracy at 0°C	Thermometer Class [page 3-18]	Resistor Class [page 3-18]
B	± 0.3° C (Competitor's Std)	B	≥ F 0.30
E	± 0.15° C (JMS Standard)	A	≥ F 0.15
P*	± 0.06° C	AA	≥ 1/2 F 0.10
S*	± 0.03° C (Best Accuracy)	1/4 AA	≥ 1/10 F 0.10
X	Other, specify [3-22]		

Note: Wound or film resistors may be used.

* For compliant results, use a 4wire RTD for high accuracy (types P & S).

#3 ELEMENT CONSTRUCTION [4] [3-11]

S	Single	Standard construction
D	Dual	Standard construction
J	Single	Swaged construction
K	Dual	Swaged construction
X	Other, specify	

Note: Use swaged for high temperature, bendability, high vibration and/or longer than 6 ft.

#4 TUBE DIAMETER - MUST CHOOSE 1 FROM EACH COLUMN [5-30, 1-13, 1-14]

A	3/8" (.375")	N	Normal, closed tip (Standard)
B	1/4" (.250")	K*	Pointed tip
C	3/16" (.188")	M*	Weld pad
D	1/8" (.125")	O*	Weld pad, removable (Fasttrax)
X	Other, specify	R*	Gas/Air, exposed
Z	N/A	W*	Enlarged tip
		Y*	Reduced tip

* **Note:** When selecting these options, a description must be provided. See 4-15 for example of removeable weld pad.

#5 TUBE MATERIAL [11, 12]

K	316 Stainless Steel
L	316 LSS
M	I-600 (Use if symbol #7 >500°F)
C	Teflon Coated, SS
X	Other, specify

#6 LENGTH (L) (See sketches on Pg. 3–1 and 3–2 for L")

__"	Immersion length in inches

#7 MAX. TEMPERATURE AT WHICH TIP WILL BE EXPOSED

A	Cryogenic Applications	
B*	<200°C (392°F)	=3 Teflon
C*	<285°C (550°F)	=5 Kapton
D*	<350°C (662°F)	=1 Fiberglass
E*	<660°C (1220°F)	=4 HT Fiberglass

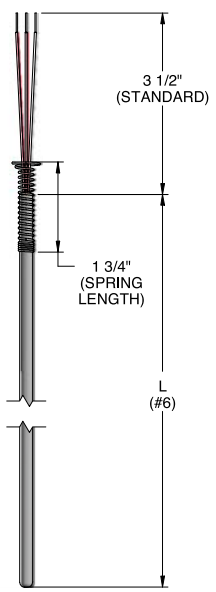
* If no transition (Z) is in symbol 13, we recommend these corresponding selections for primary wire insulation in symbol 10.

#8 STANDARD INDUSTRIAL ATTACHING DEVICE

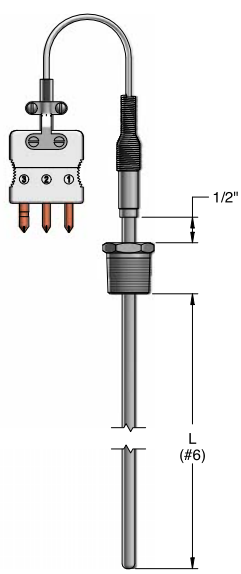
W	Fixed NPT SS fitting - double threaded
S	Spring-loaded NPT SS fitting - double threaded
M**	CSA explosion proof spring loaded fitting
A	Spring loaded w/ threaded retainer
C	Spring-loaded NPT SS fitting w/ oil ring - double threaded
D	Spring-loaded SS fitting - single threaded
B	Bayonet spring loaded assembly for thermowells & heads
E*	Adjustable spring over .250", .188", .125" sheath
F	Reverse mounted steel plug fixed for attaching head
G	Fixed stainless steel to sheath
H*	Compression fitting ss w/ ss ferrule
I*	Compression fitting ss w/ teflon ferrule
J*	Compression fitting ss w/ lava ferrule
K*	Compression fitting ss w/ nylon ferrule
L*	Compression fitting brass w/ brass ferrule
H4	4" SS nipple-union-nipple (NUN4H1)
H6	6" SS nipple-union-nipple (NUN6H1
N4	4" nipple-union-nipple (NUN4G1)
N6	6" nipple-union-nipple (NUN6G1)
S4	4" spring-loaded-union-nipple (NU4G1)
S6	6" spring-loaded-union-nipple (NU6G1)
C4**	4" CSA certified flame path spring-loaded-union-nipple
C6**	6" CSA certified flame path spring-loaded-union-nipple
X	Other, specify or if more than 1 is needed
Z	N/A (No fitting needed)

See page 1-3 FOR MORE NIPPLE OPTIONS.

[ ] BRACKETS INDICATE PAGE NUMBERS IN TECHNICAL CATALOG AVAILABLE ONLINE AT WWW.JMS-SE.COM/PDF/JMS_TECHNICAL_CATALOG.PDF



Immersion for Symbol #8-E



Immersion for Symbol #8-G & D

3	E	S	BN	K	12"	B	W

* Length is calculated without consideration of these attaching device options. (See dwg on pg. 3-2).

**CSA certified sensor must be assembled with thermowell bearing appropriate Canadian Registration Number (CRN).

RESISTANCE TEMPERATURE DEVICES (RTD'S)

#9	PROCESS NPT [1-3]
L	1/8"
M	1/4"
P	1/2" (Standard w/ symbols W, S, & C above)
O	3/4"
X	Other, specify
Z	N/A

#10	LEAD WIRE TYPE & LENGTH IN INCHES [SEE SECTION 7]		
1__"	Fiberglass braid	6__	Bare wire (Standard for swaged leads under 12")
2__"	PVC	X__"	Other, specify
3__"	Teflon (Standard)	Z	N/A
4__"	Hi-temp glass braid		
5__"	Kapton		

Note: All wire in tubes > 1/8" OD will be 24 AWG. Smaller tubes will have a max. of 28 AWG. If no transition or armor is specified, wire may be fragile. JMS standard lead wire for RTDs is stranded plated copper.

#11	ARMOR OR HEAT SHRINK / JACKET [7-7]		
A	3/16" ID SS flex armor (Standard)	G	Heat shrink / sleeving
B	3/16" ID SS flex armor teflon coated white	H	Jacket to match primary insulation
C	3/16" ID SS flex armor teflon coated black	J	Alum mylar shielded and jacketed to match primary insulation
D	1/8" ID SS flex armor	Z	N/A
F	SS overbraid	X	Other, specify

#12	WIRE CONFIGURATION [17, 18]
T	2 Wire
Y	3 Wire
W	4 Wire

Note: Use a double symbol (Ex. TT) for 2 separate lead wires if dual elements.

#13	TYPE OF TRANSITION [14]		
H	Heat shrink	X	Other, specify
S	Size on size	Z	No Transition
T	3/8" OD		
R	1/4" OD		
Q**	Cuttable (See full catalog)		
M	M12 Fixed Mount Transition		

Note: For extra high humidity / moisture environments, ≤ 500°F put a "2" after your selection.

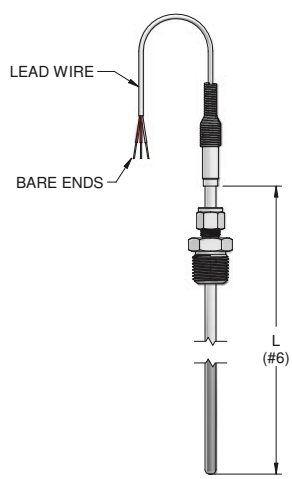
For high temperatures (i.e. > 500°F) at the transition area use an X + type of transition and maximum temperature.

#14	COLD END TERMINATION [SEE SECTION 6] Pick as many as applicable		
A	Bare ends	8H	Isolated transmitter
B*	Miniature plug	8N	Non isolated transmitter
C*	Standard plug	8S	AI-1500
D*	Miniature jack	8I	TempIR with Hart Protocol
E*	Standard jack	8E	Intrinsically Safe TempIR
F*	High temperature plug (< 800° F)	8D	TempIR/Hart/Intrinsically Safe
G*	High temperature jack (< 800° F)	8M	Integral transmitter (see 3-5)
I	Exp. proof NEMA 4X head, CSA & FM	Y	M12 Watertight Male Connector
K	Spade lugs (6SL)	X	Other, specify
L	Aluminum head w/ hinged cover (6L / 6B4)		
M	Aluminum head w/ screw cover & chain (6M / 6B4)		
J	Explosion proof stainless steel NEMA 4X head, FM, CSA (6ISS/6B4		
P	Explosion proof AL head ATEX certified		
U	Explosion proof stainless steel head ATEX certified.		
N	Cast iron head w/ screw cover (6N / 6B4)		
O	Open terminal block (6M)		
Q	Black nylon Nema 4 head (6Q / 6B4)		
R	High dome head (6R)		
V**	Hermetic connector (6DC) - Male		
WM**	Microphone style connector (6DA) - Male		
WF**	Microphone style connector (6DA) - Female		

*We do not advise using these connectors for RTD's

**Use double symbol here for matching female connector. (Ex. B/BB male with matching female)

Note: For other cold end termination, use appropriate part# from section 6 in place of symbol #14.



Immersion is overall length of tube for non-fixed attaching devices

#15	OPTIONS USE ONLY IF APPLICABLE [INTRODUCTION]		
1*	Stainless steel tag	5	Calibrate at specified point(s). Corrections data will be provided for each point.
2*	Plastic tag	6**	Calibrate specified temperature range. Corrections data will be provided for all temperatures within the range.
3*	Paper tag	7	CE Marking [PAGE XV]
4*	Laser etch on probe	8	Bar Code
	*Note: You must always specify information required on tag.		**Note: You must specify increments & range. (Ex. 0 to 300°F, 0.1° increments)

P	3-36"	A	Y	T	A	1