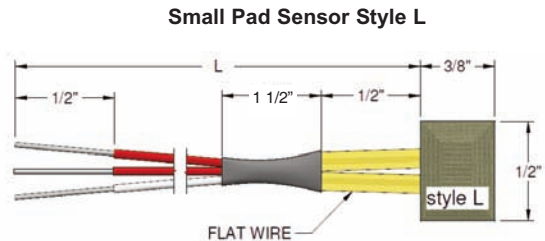
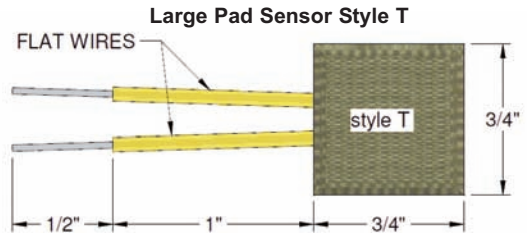
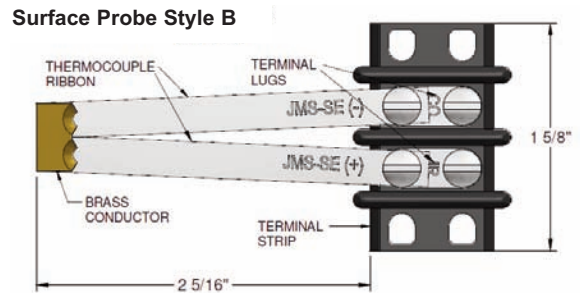
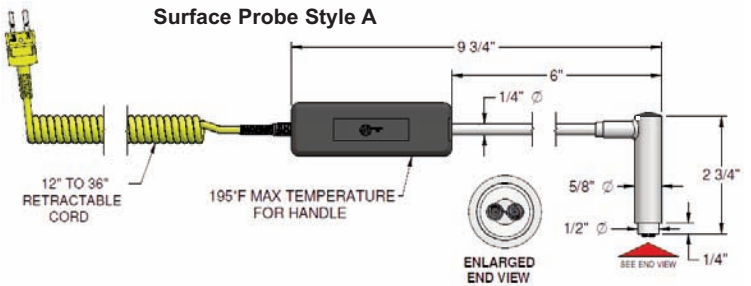
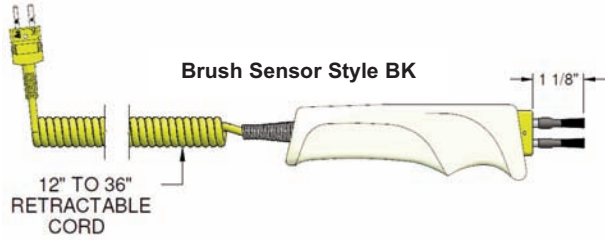


SURFACE SENSORS

The JMS Brush Thermocouple can be used in applications in which a surface temperature of a stationary or moving electrically conducting surface is needed.

True temperature measurement of a surface is very hard to obtain. Previous designs called for the probe to fully contact with as small a junction as possible, spring load with as even pressure as possible, insulate around the surface to be measured, or combinations of all these methods.

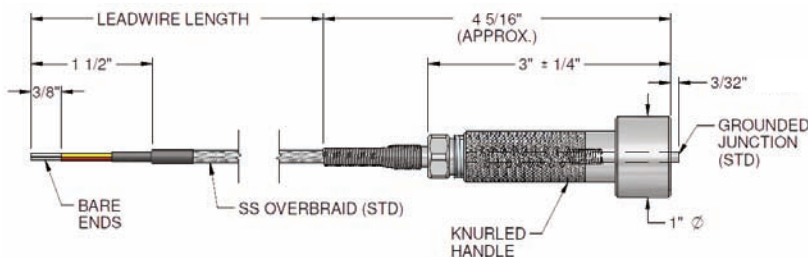
All of the above methods have proven to have their own particular faults. When compared to an infrared sensor, which does accurately measure surface temperature (unit must have correct emissivity adjustment), most of the above mentioned sensors either read much hotter or colder than the infrared. However, even the infrared style exhibits problems when emissivity levels fall beneath .4 or less (most metallic surfaces). JMS has applied for a patent on this brush sensor because of its unique design and widespread application. The JMS brush probe eliminates emissivity, surface contact and heat wicking considerations



TEMPERATURE RATING IS BASED ON T/C TYPE

#1	DESCRIPTION			
4A 4AS 4B 4BK	Hand held (90° design) Hand held (straight design) Permanent mount Specialty brush sensor	4PADL 4PADT 4M	Small pad surface Large pad surface Magnetic surface sensor	
#2	COLD END TERMINATION [Add'l options see Pg 1-6]			
A B C X Z	Bare ends Miniature plug Standard plug Other, specify N/A			
#3	SURFACE SENSOR			
J K 2 3	J thermocouple (not available for brush) K thermocouple 2 wire RTD 3 wire RTD	4 X	4 wire RTD Other, specify	
#4	LEADWIRE LENGTH			
S 3" 5" X	Standard coil cord Teflon Kapton w/ SS overbraid Other, specify	Z	N/A	
#5	# OF REPLACEMENT TIPS			
0 1+	No sets Number of sets	Z	N/A	

Note: Thermocouple wire is 24 AWG solid conductors. RTD wire is 24 AWG stranded conductors.



The JMS pad RTD is a specialty sensor which provides a fast response surface temperature measurement. It is a 100Ω platinum RTD with an alpha of .00385 Ω/Ω/°C. Pad material is fiberglass coated with a silicon rubber. The pad RTD has an effective operating range from -80°C to 200°C and its tolerance is 0.1Ω (± 0.26° C at 0° C). Additional teflon leadwire is configured as a 3 wire RTD. High Temperature configuration can be designed.

*Magnet has a 20 pound pull at ambient and retains 11 pounds of pulling force at 752°F (400°C).