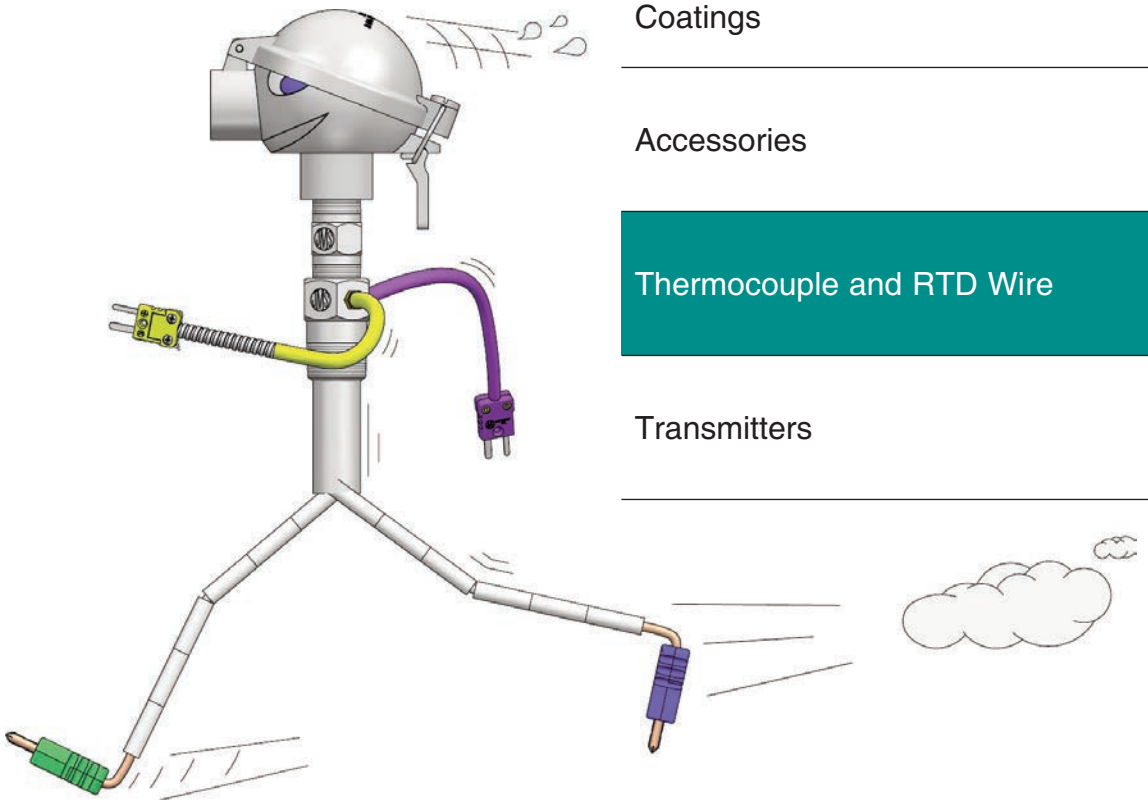
THERMOCOUPLE AND RTD WIRE

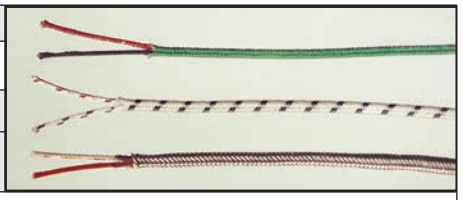
Swifty Sensor



Due to space limitations we have excluded some part number selections from publication. Additional selections are available via JMS catalog cut sheets posted at www.JMS-SE.com. It is the final reference for JMS part numbers. Custom products are also available with drawings to suit your application. Call 1-800-873-1835 or email Sensors@JMS-SE.com for more information.

THERMOCOUPLE WIRE

#1	DESCRIPTION [7-5 through 7-17]
7	Thermocouple wire (measured in feet)



#2	TYPE		
EXTENSION GRADE [10]	THERMOCOUPLE GRADE [9]	TYPE	
JX	J	Iron/Constantan	
KX	K	Chromel/Alumel	
TX	T	Copper/Constantan	
EX	E	Chromel/Constantan	
NX	N	Nicrosil/Nisil	
RX	--	Copper/#11 Alloy	
SX	--	Copper/#11 Alloy	
BX	–	PCLW 630/Copper (special order only)	It is common practice to use plain Copper wire for type "B" extension. Use 2X from this selection or 2 conductor RTD wire. (Ex. 7RTT2242N)
2X	–	Copper/Copper	
CX	–	A405/A426	

Note: For special limits of error thermocouple wire, use a double calibration symbol. (Example: JJ for Type J special limits). Polyvinyl Chloride (PVC) wire and type R,S, B, and C fiberglass wire are ordinarily manufactured in extension grade. Kapton, Nylon, Teflon, fiberglass braid, Refrasil, and Nextel are ordinarily manufactured in thermocouple grade.

Extension Grade Only

#3	INSULATION [7-5] [7-6]	Temperature Range (°C)			Temperature Range (°C)
PP*	Polyvinyl Chloride(PVC)	-29 - 105	GG*	Fiberglass braid	25 - 482
PC	Polyvinyl Chloride(PVC) rip cord	-29 - 105	GS*	Fiberglass braid with SS overbraid	25 - 482
PA*	Polyvinyl Chloride(PVC) w/ twisted conductors Aluminum Mylar shield & drain wire	-29 - 80	HG*	High temperature fiberglass braid	25 - 705
			HS*	High temperature fiberglass braid with SS overbraid	25 - 705
KK*	Kapton	-200 - 285	RR	Refrasil	25 - 871
NN	Nylon	-200 - 177	SI	Siloflex	25 - 982
TF*	Fused Teflon	-200 - 260	NE*	Nextel - Heavy weave (for light weave, use X and specify lower weave #)	25 - 1200
TT*	Extruded Teflon	-200 - 200			
			X	Other, specify	

*Standard stock items in 20 AWG. Other insulation and sizes available.

#4	WIRE SIZE		
16	16 AWG	28	28 AWG
20	20 AWG (Standard)	30	30 AWG
24	24 AWG	X	Other, specify

#5	WIRE CONSTRUCTION
1	Solid (Standard)
2	Stranded

7	J	TT	20	1

[ ] Brackets indicate page numbers where additional helpful information can be found in technical catalog. Now available online at www.JMS-SE.com/TechnicalCatalog

NON-INSULATED SINGLE CONDUCTOR THERMOCOUPLE WIRE

#1	DESCRIPTION [7-11]
7N	Non-Insulated thermocouple wire

#2	TYPE				
JP	Iron	NN	Nisil	BP*	Platinum 30% Rhodium
JN	Constantan	TP	Copper	BN*	Platinum 6% Rhodium
KP	Chromel	TN	Constantan	CP*	Tungsten 5% Rhenium
KN	Alumel	SP*	Platinum 10% Rhodium	CN*	Tungsten 26% Rhenium
EP	Chromel	SN*	Platinum	AP*	Tungsten 5% Rhenium
EN	Constantan	RP*	Platinum 13% Rhodium	AN*	Tungsten 20% Rhenium
NP	Nicrosil	RN*	Platinum		

*Unit of Measure = inches

#3	WIRE SIZE			
8	8 AWG	24	24 AWG	(JMS standard for SP, SN, RP, RN, BP, & BN)
14	14 AWG	28	28 AWG	
16	16 AWG	30	30 AWG	
20	20 AWG	X	Other, specify	

Note: See www.JMS-SE.com for weight per unit of measure

MULTI-CONDUCTOR EXTENSION CABLE

Each conductor is insulated with Polyvinyl Chloride (PVC) or Teflon. An aluminum backed Mylar™ tape serves as an electrostatic shield. A solid 20 gauge tinned-copper drain wire is over the bundle in direct contact with the aluminum/mylar shield, thus minimizing any stray EMFs. Conductors are color coded and numbered for identification. All conductors are insulated with an outer jacket of polyvinyl chloride or Teflon insulation approximately .0245" thick. Multipair extension cable can be manufactured with various quantities of pairs and insulation types. Contact JMS Southeast sales office for any requirements you may have.

#1	DESCRIPTION [7-5 through 7-17]
7M	Multi-conductor extension cable

#2	TYPE	Unit of Measure = Feet
J	Iron/Constantan	
K	Chromel/Alumel	
T	Copper/Constantan	
E	Chromel/Constantan	
R	Copper/#11 Alloy	
S	Copper/#11 Alloy	
B	PCLW 630/Copper	
2	2 wire RTD (commonly used for type B thermocouples)	
3	3 wire RTD	
4	4 wire RTD	
X	Other, specify	

Note: Standard thermocouple conductors are solid 20 AWG, standard RTD conductors are stranded 24 AWG.

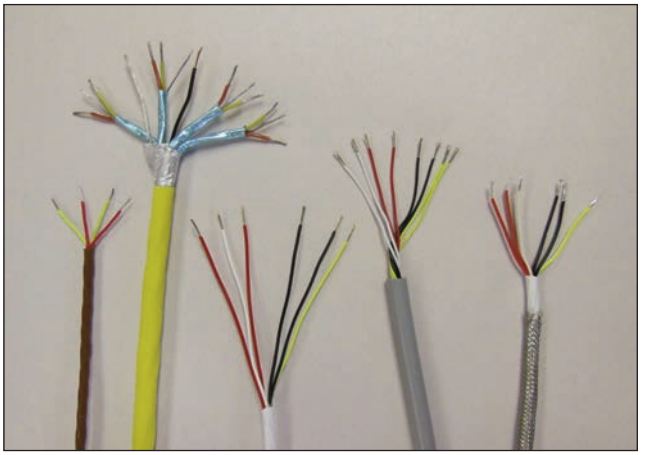
#3	# OF PAIRS	NOMINAL OD	EST. SHIPPING WT. LBS. PER 1000 FEET
2	2	.370	53
4	4	.390	80
8	8	.480	131
12	12	.580	198
16	16	.650	245
20	20	.680	285
24	24	.770	338
X	Other, specify		

Note: Add an "S" suffix for stranded conductors

#4	INSULATION
P	Polyvinyl Chloride(PVC) (Standard)
T	Extruded Teflon
X	Other, specify

#5	ALUMINUM MYLAR SHIELD
I	Individual pair and overall
O	Overall only
Z	No shield/not applicable

7M	J	4	P	I



RTD WIRE

#1	DESCRIPTION
7R	RTD wire

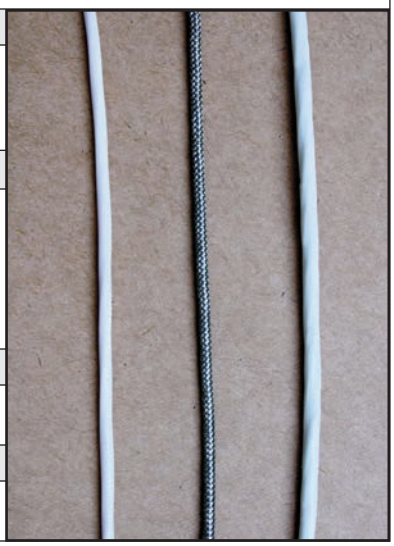
#2	INSULATION *Conductors are color coded per ASTM E1137 & IEC 60751
PP	Polyvinyl Chloride(PVC)
GG	Fiberglass braid (Standard)
GS	Fiberglass braid with stainless steel overbraid (available in 3, 4 or 6 conductor, 24 AWG)
KK	Kapton insulated
TT*	Extruded Teflon singles, Teflon wrap overall (Standard)
TS*	Extruded Teflon singles, Teflon wrap overall, SSOB
X	Other, specify

#3	NUMBER OF CONDUCTORS
2	Two conductors
3	Three conductors
4	Four conductors
X	Other, specify

#4	WIRE SIZE
16	16 AWG
20	20 AWG
24	24 AWG (Standard)
28	28 AWG
30	30 AWG
X	Other, specify

#5	WIRE CONSTRUCTION
1	Solid
2	Stranded (Standard)

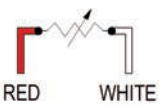
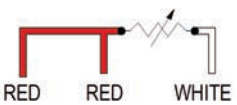
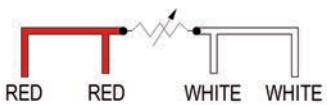
#6	SHIELD
N	No shield/not applicable
A	Aluminum Mylar shield



7R	TT	3	24	2	N

RTD WIRING CONFIGURATION AND COLOR CODE

(Reference ASTM 1137 and IEC 60751)

	2-wire-configuration	3-wire-configuration	4-wire-configuration
One resistor			
Two resistor