



THERMOCOUPLE and EXTENSION WIRE



Calibration	Colour Coding	
	Thermocouple Grade	Extension Grade
J		
K		
T		
E		
N		
R	NONE ESTABLISHED	
S	NONE ESTABLISHED	
B	NONE ESTABLISHED	

Please visit our website for our other Product Literature Guides : Resistance Temperature Detectors, Industrial Thermocouples, Thermowells, Protection Tubes, Calibration Services

toll free 1-800-268-0967 • www.thermo-kinetics.com

Toronto • Montréal • Québec • Calgary • Edmonton • Vancouver

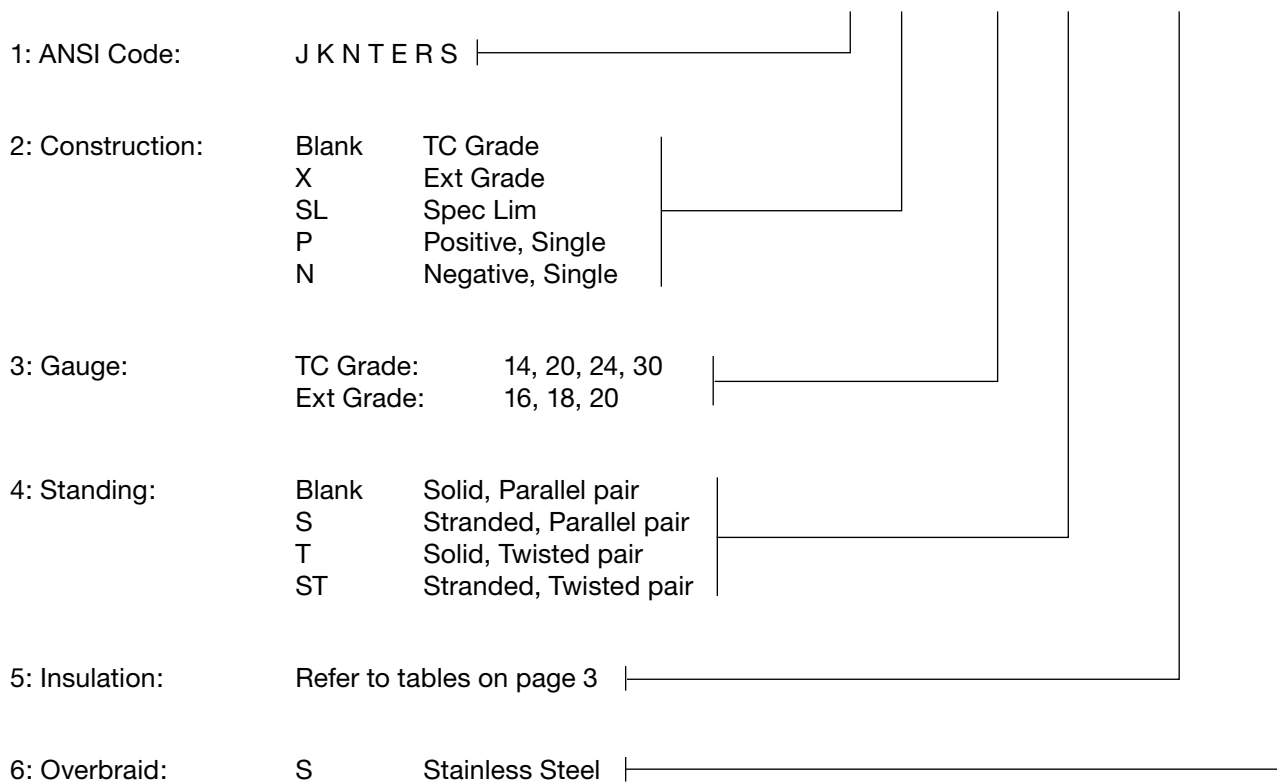
Insulation Material & Properties

Insul Code	Conductor Insulation	Overall Insulation	Max Temp (°C/°F)*		Flexibility	Resistance to				
			Cont	1 Rdg		Moist	Abras	Acid	Flame	Elect
GG	Glass Braid	Glass Braid	480/900	520/970	G	G	P	E	E	G
PP	PVC	PVC	105/220	–	E	G	G	G	E	E
TT	FEP Teflon	FEP Teflon	205/400	260/500	E	E	E	E	E	E
KK	Kapton	Kapton	315/600	425/800	E	E	E	E	E	E
QQ	Refrasil	Refrasil	980/1800	1095/2000	F	P	P	E	E	G
RR	Silicone Rubber	Silicone Rubber	200/390	260/500	E	G	F	F	G	E
TSS	Tef + Synthetic Fibre	Synthetic Fibre	290/550	340/650	G	G	G	E	E	G
GGHT	Hi Temp Glass Braid	Hi Temp Glass Braid	700/1290	870/1600	G	P	F	E	E	E
CGG	Hi Temp Glass Braid	Hi Temp Glass Braid	700/1290	870/1600	G	P	F	E	E	E
CFIR	Ceramic Fiber	Ceramic Fiber	1200/2200	1425/2600	G	P	P	E	E	E
TPU	FEP Teflon	Polyurethane	175/350	–	G	E	E		E	E
CMX	PVC	PVC + Al-Mylar Shield	105/220	–	E	E	G	G	P	E
TALT	FEP Teflon	FEP + Al-Mylar Shield	205/400	260/500	G	E	E	E	E	E

* Nominal values

Catalog Numbering

K X - 20 ST - PP / S



THERMOCOUPLE GRADE and EXTENSION WIRE

Thermocouple Grade & Extension Wire Availability

THERMOCOUPLE GRADE WIRE (Bold indicates normally stocked)																						
Calib		J				K				N				T				E				
Insul	GA	14	20	24	30	14	20	24	30	14	20	24	30	14	20	24	30	14	20	24	30	
PP	Sol	x	x			x	x			x	x				x	x	x		x	x	x	
	Str																					
GG	Sol	x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	x	x	
	Str		x				x															
TT	Sol	x	x	x		x	x	x		x	x	x			x	x	x		x	x	x	
	Str						x															
KK	Sol		x				x				x				x							
	Str																					
QQ	Sol		x				x				x											
	Str																					
CGG	Sol						x															
	Str																					
GGHT	Sol	x	x			x	x			x	x											
	Str																					
CFIR	Sol		x				x				x											
	Str																					

EXTENSION GRADE WIRE (Bold indicates normally stocked)																			
Calib		JX			KX			NX			TX			EX			RSX		
Insul	GA	16	18	20	16	18	20	16	18	20	16	18	20	16	18	20	16	18	20
PP	Sol	x		x	x		x	x		x			x			x			x
	Str																		
GG	Sol	x		x	x	x	x	x		x	x		x			x	x		x
	Str					x													
TT	Sol	x		x	x		x	x		x			x			x	x	x	x
	Str																		
CMX	Sol	x		x	x		x	x		x			x			x	x		
	Str																		
TALT	Sol	x		x	x		x	x		x			x			x	x		
	Str						x												
TSS	Sol	x			x														
	Str																		
RR	Sol																		
	Str																		x
GGHT	Sol																	x	
	Str																		
TPU	Sol						x												
	Str																		

Overbaid (S)
 Stainless steel overbaid provides high resistance to abrasion & mechanical damage, as well as increase tensile strength.

THERMOCOUPLE GRADE and EXTENSION WIRE

Initial Calibration for Thermocouple & Extension Wire

ANSI Code	Temperature Range		Tolerance (whichever is Greater)*5	
	°C	°F	Standard	Special
Thermocouple Grade Wire				
K	0 to 1250	32 to 2300	± 2.2 °C or ± 0.75%	± 1.1 °C or ± 0.4%
J	0 to 760	32 to 1400	± 2.2 °C or ± 0.75%	± 1.1 °C or ± 0.4%
N	0 to 1250	32 to 2300	± 2.2 °C or ± 0.75%	± 1.1 °C or ± 0.4%
T	0 to 370	32 to 700	± 1.0 °C or ± 0.75%	± 0.5 °C or ± 0.4%
E	0 to 870	32 to 1600	± 1.7 °C or ± 0.5%	± 1.0 °C or ± 0.4%
R	0 to 1480	32 to 2700	± 1.5 °C or ± 0.25%	± 0.6 °C or ± 0.1%
S	0 to 1480	32 to 2700	± 1.5 °C or ± 0.25%	± 0.6 °C or ± 0.1%
B	870 to 1700	1600 to 3100	± 0.5%	± 0.25%
Extension Grade Wire				
KX	0 to 200	32 to 400	± 2.2 °C	± 1.1 °C
JX	0 to 200	32 to 400	± 2.2 °C	± 1.1 °C
NX	0 to 200	32 to 400	± 2.2 °C	± 1.1 °C
TX	-60 to 100	-75 to 200	± 1.0 °C	± 0.5 °C
EX	0 to 200	32 to 400	± 1.7 °C	± 1.0 °C
Compensating Extension Wire				
RX	0 to 200	32 to 400	± 5.0 °C	*4
SX	0 to 200	32 to 400	± 5.0 °C	*4
BX	0 to 200	32 to 400	± 4.2 °C	*4
B*1	0 to 100	32 to 200	± 3.7 °C	*4

Tolerances listed above are applicable only to new homogeneous wire and used at temperatures not exceeding the recommended limits. If used at higher temperatures, these tolerances may not apply.

Thermocouple materials are normally supplied to meet the specific tolerances for temperatures above 0°C. The same materials may not fall within these tolerances for below 0°C. Wire required for use below 0°C should be ordered specifically for this application.

The magnitude of errors introduced by extension or compensating leadwire is equal to the algebraic difference of the deviations at its two ends.

Due to possible changes in homogeneity, recalibration of used thermocouple wire will likely yield meaningless results. It is recommended that used thermocouples be compared in-situ with a new or known good one to determine their suitability for further service.

*1 Copper/copper non-compensating leadwire (no significant error over the range 0 to 50°C).
 *2 Special tolerances below 0°C are listed as a guide only.
 *3 Special tolerance for below zero type K are not available.
 *4 Special tolerance compensating extension leadwire is not available.
 *5 The tolerances in °F equals 1.8 times the tolerance in °C. Percentage-based tolerances must first be calculated in °C then converted to °F. (Eg: Tolerance at 752°F: 400 (=°C) X 0.75% X 1.8 = 5.4 °F)



1-800-268-0967
www.thermo-kinetics.com

Mississauga (905) 670-2266 Fax (905) 670-8530	Montréal (514) 856-0370 Fax (514) 856-0373	Québec (418) 655-6505 Fax (514) 856-0373	Calgary (403) 252-2522 Fax (403) 252-2778	Edmonton (780) 448-1580 Fax (780) 463-5164	Vancouver (604) 231-0711 Fax (604) 270-3644
--	---	---	--	---	--