

## Fiberglass insulated thermocouple wire(FB-FB)



### Specification:

Conductors:	Solid or stranded thermocouple wire per、 ASTM E230 & ANSI MC96.1
Insulation:	Braided fiberglass
Construction:	Parallel conductors
Jacket:	Braided fiberglass
Max. Temperature:	400°C
Limits of Error:	Conforms to ASTM E230, IEC 584、 and ANSI MC 96.1
Color Code:	Conforms to ANSI, IEC, JIS

Insulation		Wire Grade	Max. Temp. (°C)	Nominal Size (mm)	Gauge Size (AWG)	Wire Type	Calibration ( <b>Order No.</b> )	
Conductor	Overall						Type J	Type K
Fiber glass	Fiber glass	Thermocouple	400	2.5X3.9	14	Solid	J-FB-FB-14	K-FB-FB-14
				2.2X3.3	16	Solid	J-FB-FB-16	K-FB-FB-16
				1.5X2.4	20	Solid	J-FB-FB-20	K-FB-FB-20
				1.5X2.5	20	Stranded	J-FB-FB-20S	K-FB-FB-20S
				1.3X2.0	24	Solid	J-FB-FB-24	K-FB-FB-24
				1.3X2.2	24	Stranded	J-FB-FB-24S	K-FB-FB-24S
		Extension	400	2.2X3.3	16	Solid	JX-FB-FB-16	KX-FB-FB-16
				1.5X2.4	20	Solid	JX-FB-FB-20	KX-FB-FB-20
				1.5X2.5	20	Stranded	JX-FB-FB-20S	KX-FB-FB-20S

### Overbraids:

All above thermocouple and extension wire also can be finished with a metal **overbraid** to give added protection from abrasion and mechanical damage.

Stranded Overbraids: - **Stainless Steel(SSB)** - **Tinned Copper (TCB)**

Please add "SSB" or "TCB" to the Order No., such as "JX-FB-FB-SSB-20S", it means **Type JX, 20AWG, Stranded, Conductor insulation: Fiber-glass, Overall insulation: Fiber-glass, Overbraid: Stainless steel.**

**Color code & initial calibration tolerances for thermocouple wire:**

Thermocouple Type		ANSI Color Code		Initial Calibration Tolerances		
Wire Alloys	Calibration	+/- Conductor	Overall	Temperature Range	Standard Limits	Special Limits
Iron(+) vs. Constantan(-)	J	White/Red	Brown	0°C to +285°C 285°C to +750°C	±2.2°C ± .75%	±1.1°C ± .4%
CHROMEL(+) vs. ALUMEL(-)	K	Yellow/Red	Brown	-200°C to -110°C -110°C to 0°C 0°C to +285°C 285°C to +1250°C	± 2% ±2.2°C ±2.2°C ± .75%	±1.1°C ± .4%
Copper(+) vs. Constantan(-)	T	Blue/Red	Brown	-200°C to -65°C -65°C to +130°C 130°C to +350°C	± 1.5% ±1°C ± .75%	± .8% ± .5°C ± .4%
CHROMEL(+) vs. Constantan(-)	E	Purple/Red	Brown	-200°C to -170°C -170°C to +250°C 250°C to +340°C 340°C+900°C	± 1% ±1.7°C ±1.7°C ± .5%	±1°C ±1°C ± .4% ± .4%

Thermocouple Type		ANSI Color Code		Initial Calibration Tolerances		
Wire Alloys	Calibration	+/- Conductor	Overall	Temperature Range	Standard Limits	Special Limits
Iron vs. Constantan	JX	White/Red	Black	0°C to +200°C	±2.2°C	±1.1°C
CHROMEL vs. ALUMEL	KX	Yellow/Red	Yellow	0°C to +200°C	±2.2°C	±1.1°C
Copper vs. Constantan	TX	Blue/Red	Blue	-60°C to +100°C	±1.1°C	± .5°C
CHROMEL vs. Constantan	EX	Purple/Red	Purple	0°C to +200°C	±1.7°C	±1.1°C

FB-FB Physical Properties		
Characteristics	Insulation	Overall
Specific Gravity	2.54	2.54
Tensile Strength; psi (min)	250,000 at 1000°F(537°C )	250,000 at 1000°F(537°C )
Elongation; %(min)	4.8	4.8
Minimum Bend Radius	5x O.D.	10x O.D.
Abrasion Resistance	Good	Good
Cut Through Resistance	Very Good	Excellent
Moisture Resistance	Good	Good
Solder Iron Resistance	Excellent	Excellent
Service Temperature	260°C continuous 343°C single exposure	260°C continuous 537°C single exposure
Flame Test	Non-flammable	Non-flammable