CERAMIC FIBER INSULATED
TYPE W-CE/CE

CERAMIC FIBER INSULATION
Individual conductors are insulated with a high temperature ceramic yarn. Conductors are laid parallel and covered with an overall high temperature ceramic yarn. A tracer is braided into the insulation for polarity and calibration identification. Used when an application requires flexibility while pushing thermocouples to their high temperature limit.

PERFORMANCE FEATURES
Designed for continuous use to 2200° F (1204° C), intermittent to 2600° F (1427° C).
Permits on site fabrication of high temperature thermocouples

APPLICATIONS
Heat Treating
Steel Industry
Load Thermocouples

CALIBRATION: ANSI Type J

ORDERING CODE		CONDUCTOR SIZE (AWG)	NOMINAL LOOP RESISTANCE (2)
STANDARD	SPECIAL (1)		
W-CEB/CEB-20F-J	W-CEB/CEB-20F-JJ	20 STRANDED	0.335
W-CEB/CEB-20-J	W-CEB/CEB-20-JJ	20 SOLID	0.367
W-CEB/CEB-18-J	W-CEB/CEB-18-JJ	18 SOLID	0.234
W-CEB/CEB-16-J	W-CEB/CEB-16-JJ	16 SOLID	0.145
W-CEB/CEB-14-J	W-CEB/CEB-14-JJ	14 SOLID	0.091

CALIBRATION: ANSI Type K

ORDERING CODE		CONDUCTOR SIZE (AWG)	NOMINAL LOOP RESISTANCE (2)
STANDARD	SPECIAL (1)		
W-CEB/CEB-20F-K	W-CEB/CEB-20F-KK	20 STRANDED	0.538
W-CEB/CEB-20-K	W-CEB/CEB-20-KK	20 SOLID	0.589
W-CEB/CEB-18-K	W-CEB/CEB-18-KK	18 SOLID	0.376
W-CEB/CEB-16-K	W-CEB/CEB-16-KK	16 SOLID	0.233
W-CEB/CEB-14-K	W-CEB/CEB-14-KK	14 SOLID	0.147

CALIBRATION: ANSI Type E

ORDERING CODE		CONDUCTOR SIZE (AWG)	NOMINAL LOOP RESISTANCE (2)
STANDARD	SPECIAL (1)		
W-CEB/CEB-20F-E	W-CEB/CEB-20F-EE	20 STRANDED	0.648
W-CEB/CEB-20-E	W-CEB/CEB-20-EE	20 SOLID	0.709
W-CEB/CEB-18-E	W-CEB/CEB-18-EE	18 SOLID	0.453
W-CEB/CEB-16-E	W-CEB/CEB-16-EE	16 SOLID	0.281
W-CEB/CEB-14-E	W-CEB/CEB-14-EE	14 SOLID	0.177

CALIBRATION: ANSI Type N

ORDERING CODE		CONDUCTOR SIZE (AWG)	NOMINAL LOOP RESISTANCE (2)
STANDARD	SPECIAL (1)		
W-CEB/CEB-20F-N	W-CEB/CEB-20F-NN	20 STRANDED	0.715
W-CEB/CEB-20-N	W-CEB/CEB-20-NN	20 SOLID	0.783
W-CEB/CEB-18-N	W-CEB/CEB-18-NN	18 SOLID	0.500
W-CEB/CEB-16-N	W-CEB/CEB-16-NN	16 SOLID	0.310
W-CEB/CEB-14-N	W-CEB/CEB-14-NN	14 SOLID	0.195

CALIBRATION	COLOR CODE (ANSI)			COLOR CODE (IEC)*		
	POSITIVE	NEGATIVE	OVERALL	POSITIVE	NEGATIVE	OVERALL
TYPE J	WHITE	RED	WHITE	BLACK	WHITE	WHITE
TYPE K	YELLOW	RED	WHITE	GREEN	WHITE	WHITE
TYPE E	PURPLE	RED	WHITE	PURPLE	WHITE	WHITE
TYPE N	ORANGE	RED	WHITE	PINK	WHITE	PINK

* Add (-IEC) to the end of the ordering code for IEC color coded insulation and jacketed wire.
Example: W-CEB/CEB-20-J-IEC

INITIAL CALIBRATION TOLERANCES Per ANSI MC96.1 and ASTM E230 (°F)				
TEMPERATURE RANGE	STANDARD		SPECIAL	
	CALIBRATION	TOLERANCE	CALIBRATION	TOLERANCE
32 to 1400°F	TYPE J	±4.0°F or ±.75%*	TYPE JJ	±2.0°F or ±.4%*
32 to 2300°F	TYPE K	±4.0°F or ±.75%*	TYPE KK	±2.0°F or ±.4%*
32 to 1600°F	TYPE E	±3.0°F or ±.50%*	TYPE EE	±1.8°F or ±.5%*
32 to 2300°F	TYPE N	±4.0°F or ±.75%*	TYPE NN	±2.0°F or ±.4%*

*Whichever is greater.

CONDUCTOR SIZE (AWG)	INSULATION THICKNESS	JACKET THICKNESS	NOMINAL DIMENSIONS	APPROX. SHIPPING WT. lbs/1000 Ft. (Kg)
20 STRANDED	.018	.018	.110/.184	17 lbs (7.7 Kg)
20 SOLID	.018	.018	.104/.172	16 lbs (7.3 Kg)
18 SOLID	.018	.018	.112/.188	24 lbs (10.9 Kg)
16 SOLID	.018	.018	.123/.210	32 lbs (14.5 Kg)
14 SOLID	.018	.018	.136/.236	44 lbs (20.0 Kg)

Notes:
(1) Meets or exceeds Special Initial Calibration Tolerances per ANSI MC96.1-1982 and ASTM E230-1993.
(2) Nominal resistance in OHMS per double feet at 68°F (20°C).