

**FREP/CPE INSTRUMENT CABLE #16AWG (SPOS & STOS)  
SINGLE SHIELDED PAIR/TRIAD AND MULTIPLE SHIELDED PAIRS &  
TRIADS WITH OVERALL SHIELD TYPE TC 90DEG C 600VOLTS**

**CONSTRUCTION:**

**CONDUCTOR** 7 STRANDED TINNED COPPER.

**INSULATION** THERMOSETTING FLAME RETARDANT EHTYLENE PROPYLENE (FREP).

**CONDUCTOR SINGLE PAIR/TRIAD:** PAIR IS CODED BLACK-WHITE AND TRIAD IS COLOR CODED BLACK-WHITE-RED.

**IDENTIFICATION MULTIPAIRS/TRIADS:** PAIRS ARE CODED BLACK-WHITE AND TRIADS ARE CODED BLACK-WHITE-RED. ONE CONDUCTOR IN EACH PAIR IS ALSO NUMBERED.

**PAIRS/TRIADS** INSULATED CONDUCTORS TWISTED INTO PAIRS OR TRIADS AND SHIELDED WITH ALUMINUM/MYLAR TAPE SHIELD AND STRANDED TINNED COPPER DRAIN WIRE.

**OVERALL SHIELD** MULTIPLE SHIELDED PAIRS/TRIADS CABLED TOGETHER WITH OVERALL ALUMINUM/MYLAR TAPE SHIELD AND STRANDED TINNED DRAIN.

**JACKET** SUNLIGHT RESISTANT, FLAME RETARDANT BLACK CPE.

Charlotte Wire Part# *	Size AWG	Number of Pairs**	Number of Triads**	Insulation Thickness (in.)	Jacket Thickness (in.)	Overall Diameter (in.)	Approx. Net Wt. (Lbs/Mft)
CW05421	16	1		.025"	.045"	.35"	55
CW05422	16	2		.025"	.045"	.56"	109
CW05423	16	3		.025"	.060"	.61"	160
CW05424	16	4		.025"	.060"	.68"	200
CW05425	16	6		.025"	.060"	.78"	274
CW05426	16	7		.025"	.060"	.82"	320
CW05427	16	8		.025"	.060"	.87"	365
CW05428	16	12		.025"	.080"	1.06"	535
CW05429	16	16		.025"	.080"	1.21"	673
CW05430	16	20		.025"	.080"	1.29"	794
CW05431	16	24		.025"	.080"	1.44"	948
CW05432	16	36		.025"	.080"	1.68"	1377
CW05433	16		1	.025"	.045"	.37"	70
CW05438	16		2	.025"	.060"	.62"	160
CW05434	16		4	.025"	.060"	.77"	272
CW05437	16		5	.025"	.060"	.88"	360
CW05435	16		8	.025"	.080"	1.02"	544
CW05436	16		12	.025"	.080"	1.23"	740

\* To specify "ER" rating, add suffix "ER" to Charlotte Wire Part Number.

\*\*To specify Black/Red pairs or Black/Red/Blue triads, add suffix "K2" to Charlotte Wire Part Number.

**APPLICATION:**

Suitable for control or instrumentation circuits rated 600Volts in power plants and heavy industrial locations where flame-resistance, stability in heat, physical durability, and excellent reliability is needed. May be used as sunlight resistant, directly buried, and wet or dry locations. Per NEC Articles 336 and 392, approved for installation in

- 1) raceways and cable tray systems including ladders, troughs, channels, solid bottom trays, and other similar structures,
- 2) lighting, control, and signal circuits,
- 3) aerial locations where supported by a messenger wire,
- 4) hazardous locations per NEC Article 501 Class 1 Division 2, and
- 5) Class 1 circuits as permitted in NEC Article 725.

**STANDARDS:**

UL 1277 for Type TC Cables.  
Passes UL & IEEE383 70,000BTU Flame Test.  
ICEA S-95-658/NEMA WC70 for Nonshielded 0 - 2KV Cables.  
NEC Articles 336 and 392 for Tray Cable Uses and Constructions.  
TC-ER rated cables comply with crush and impact requirements of MC cable.