

**CONNECT AND PROTECT**

# Theft Deterrent Composite Cable

  
**nvent**

**ERICO**



Theft Deterrent Composite Cable



Theft deterrent composite cables are bare or insulated concentric stranded conductors that consist of peripheral galvanized steel stranding, which protects and conceals the internal tinned copper strands.

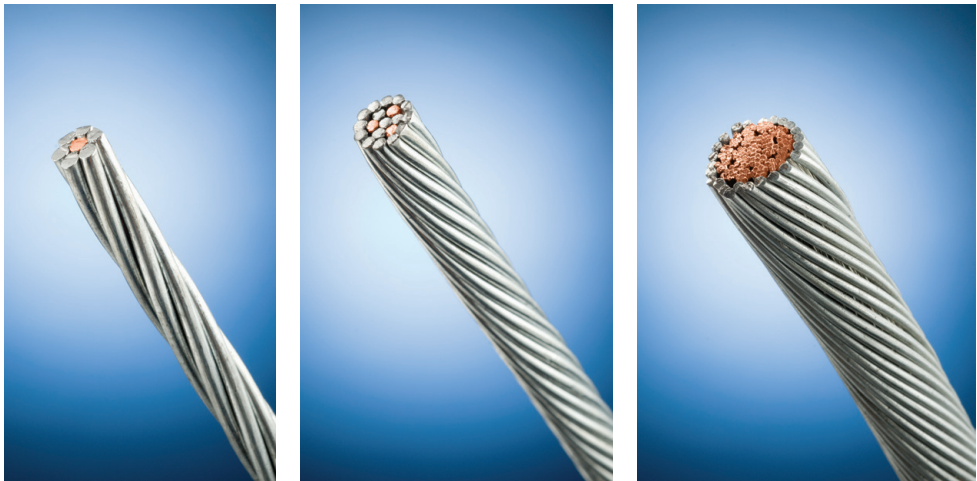
These conductors are ideal for exposed electrical distribution grounding leads where copper theft may occur. These conductors are difficult to cut with hand tools and the outer steel stranding is magnetic, which further deters thieves looking for copper.

The conductors are suited for use in substation risers to connect the grounding grid to substation equipment and structures. The insulated conductors can be used on power and grounding connections to rail tracks. The CC5A04 (7-strand) and CC5A05 (19-strand) are electrical equivalents to a 4 AWG (16 mm²) and are ideal for transmission tower, distribution pole and street-light, bridge-light or platform-light grounding.

The CC5A04 and CC5A05 have the same outside cable diameter and are compatible with connectors and cable lugs designed for use with 1 AWG (35 mm²) copper cable. The CC5A30 and the cable core of CC5A30INS, as well as CC5A30INSK, have the same outside diameter as 250 kcmil (equivalent diameter to 120 mm² copper cable). They offer an equivalent fusing capacity to 70 mm² copper cable and are compatible with connectors and cable lugs designed for use with 250 kcmil / 120 mm² copper cable.

The black jacket of the insulated cable is a thermoplastic elastomer with UV absorber. The insulation meets 600 V usage and UL® 80° C requirements at a minimum.

- FEATURES**
- Copper stranding inside of conductor increases conductivity and conductor flexibility
  - Copper stranding is tinned for superior corrosion resistance
  - Copper strands are hidden by outer galvanized steel strands
  - Outer strands comprised of galvanized steel for corrosion resistance
  - Insulation meets 600V usage and UL 80° C resistance
  - Insulated version is popular for railway applications and is DB approved
  - Available in four configurations



Cable Parts Overview

Global Part Number	Stranding	Cross Section	Resistance	Outside Diameter of Bare Conductor	Fusing Capacity Equivalency	Standard Packaging Quantity	Net Weight	nVent ERICO Cadweld Connection Cable Code
CC5A04	(1) Tinned Copper, (6) Galvanized Steel		0.485 Ω/1,000 ft; 1.499 Ω/km	0.330 in (0.838 cm)	112% of 4 AWG (100% of 16 mm²)	250 ft (76 m)	57 lbs (26 kg)*	S1
CC5A05	(3) Tinned Copper, (16) Galvanized Steel		0.457 Ω/1,000 ft; 1.591 Ω/km	0.334 in (0.848 cm)	113% of 4 AWG (100% of 16 mm²)	250 ft (76 m)	58 lbs (27 kg)*	S1
CC5A20	(133) Tinned Copper, (21) Galvanized Steel		0.098 Ω/1,000 ft; 0.320 Ω/km	0.526 in (1.336 cm)	100% of 2/0 AWG (> 50 mm²)	200 ft (60 m)	109 lbs (50 kg)*	S5
CC5A20INS	(133) Tinned Copper, (21) Galvanized Steel		0.098 Ω/1,000 ft; 0.320 Ω/km	0.526 in (1.336 cm)	100% of 2/0 AWG (> 50 mm²)	200 ft (60 m)	135 lbs (62 kg)*	S5
CC5A30	(133) Tinned Copper, (24) Galvanized Steel		0.076 Ω/1,000 ft; 0.249 Ω/km	0.572 in (1.453 cm)	100% of 3/0 AWG (> 70 mm²)	200 ft (60 m)	135 lbs (62 kg)*	S6
CC5A30INS	(133) Tinned Copper, (24) Galvanized Steel		0.076 Ω/1,000 ft; 0.249 Ω/km	0.572 in (1.453 cm)	100% of 3/0 AWG (> 70 mm²)	200 ft (60 m)	172 lbs (78 kg)*	S6
CC5A30INSK	(133) Tinned Copper, (24) Galvanized Steel		0.076 Ω/1,000 ft; 0.249 Ω/km	0.572 in (1.453 cm)	100% of 3/0 AWG (> 70 mm²)	1000 ft (304 m)	678 lbs (368 kg)*	S6
CC5A40	(133) Tinned Copper, (28) Galvanized Steel		0.057 Ω/1,000 ft; 0.188 Ω/km	0.656 in (1.666 cm)	100% of 4/0 AWG (> 95 mm²)	200 ft (60 m)	172 lbs (79 kg)*	S7
CC5A40INS	(133) Tinned Copper, (28) Galvanized Steel		0.057 Ω/1,000 ft; 0.188 Ω/km	0.656 in (1.666 cm)	100% of 4/0 AWG (> 95 mm²)	200 ft (60 m)	199 lbs (91 kg)*	S7

\*Weight does not include reel.

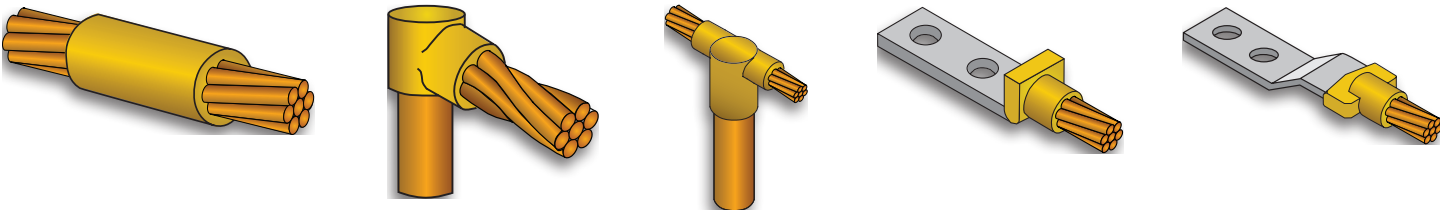
Connections to Theft Deterrent Composite Cable

NVENT ERICO HAMMERLOCK

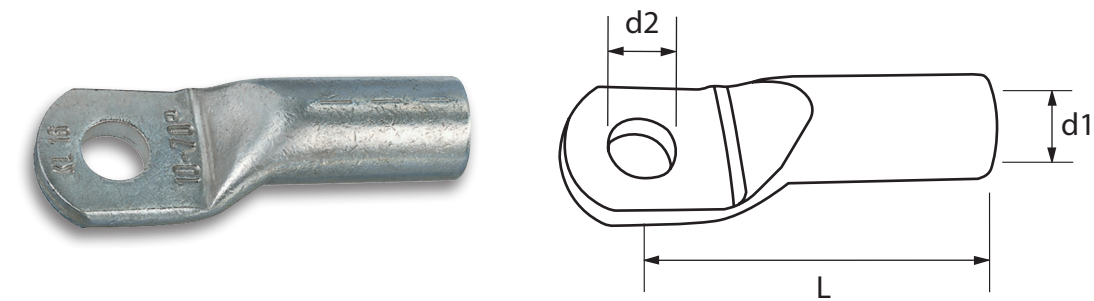
Part Number	Conductor Size	Ground Rod
EHL58C2G	CC5A04 or CC5A05	Nominal 5/8" Copper-bonded
EHL34C2G	CC5A04 or CC5A05	Nominal 3/4" Copper-bonded

CADWELD CONNECTIONS

Conductor Size	Weld	CADWELD Mold	Ground Rod or Lug	Welding Material
CC5A04 or CC5A05	"SS" Style	SSCS1		32
CC5A20		SSCS5		90
CC5A30		SSCS6		115
CC5A40		SSCS7		150
CC5A04 or CC5A05	"GR" Style	GRC16S1	Nominal 5/8" Copper-bonded	65
CC5A20			Nominal 5/8" Copper-bonded	90
CC5A30		GRC16S6	Nominal 5/8" Copper-bonded	90
CC5A40		GRC16S7	Nominal 5/8" Copper-bonded	115
CC5A04 or CC5A05		GRC18S1	Nominal 3/4" Copper-bonded	90
CC5A20		GRC18S5	Nominal 3/4" Copper-bonded	90
CC5A30		GRC18S6	Nominal 3/4" Copper-bonded	90
CC5A40		GRC18S7	Nominal 3/4" Copper-bonded	115
CC5A04 or CC5A05	"GT" Style	GTC16S1	Nominal 5/8" Copper-bonded	90
CC5A20		GTC16S5	Nominal 5/8" Copper-bonded	115
CC5A30		GTC16S6	Nominal 5/8" Copper-bonded	150
CC5A40		GTC16S7	Nominal 5/8" Copper-bonded	200
CC5A04 or CC5A05		GTC18S1	Nominal 3/4" Copper-bonded	90
CC5A20		GTC18S5	Nominal 3/4" Copper-bonded	115
CC5A30		GTC18S6	Nominal 3/4" Copper-bonded	150
CC5A40		GTC18S7	Nominal 3/4" Copper-bonded	200
CC5A04 or CC5A05	"GL" Style	GLCCES1	B121CE or B122CE	32
CC5A20		GLCCES5	B121CE or B122CE	45
CC5A30		GLCCES6	B121CE or B122CE	65
CC5A40		GLCCES7	B121DE or B122DE	65
CC5A04 or CC5A05	"LA" Style	LACS1CE	B101CEOL or B102CEOL	45
CC5A20		LACS5CE	B101CEOL or B102CEOL	65
CC5A30		LACS6CE	B101CEOL or B102CEOL	65
CC5A40		LACS7DE	B101DEOL or B102DEOL	90



Cable Lugs



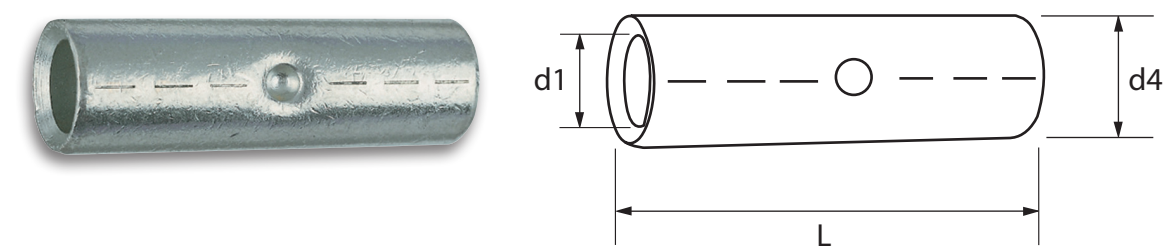
TUBULAR CRIMPING LUGS

Part Number	Description	Inside Dia. "d1"	Hole Dia. "d2"	Length "L"	Composite Cable Code	Std. Pkg. Unit	Approx. Weight 100 pc.
716654	Lug, Cable, Tubular, RKS35/12	8.5 mm 0.335 in	13.0 mm 0.51 in	38 mm 1.30 in	CC5A04	100	2.12 kg 4.67 lbs
716655	Lug, Cable, Tubular, RKS50/12	10.0 mm 0.394 in	13.0 mm 0.51 in	43 mm 1.70 in	CC5A05	50	3.23 kg 7.12 lbs
716557	Lug, Cable, Tubular, RKS95/12	13.5 mm 0.531 in	13.5 mm 0.51 in	49 mm 1.93 in	CC5A20 or CC5A20INS	50	5.56 kg 12.26 lbs
715121	Lug, Cable, Tubular, RKS120/12	15.0 mm 0.591 in	13.0 mm 0.51 in	51 mm 2.00 in	CC5A30 or CC5A30INS	50	6.38 kg 14.06 lbs
716659	Lug, Cable, Tubular, RKS120/16	15.0 mm 0.591 in	17.0 mm 0.66 in	54 mm 2.12 in	CC5A30 or CC5A30INS	50	6.51 kg 14.35 lbs

COMPRESSION CABLE LUGS, HEAVY-DUTY VERSION (DIN46235)

Part Number	Description	Inside Dia. "d1"	Hole Dia. "d2"	Length "L"	Composite Cable Code	Std. Pkg. Unit	Approx. Weight 100 pc.
715135	Lug, Cable, Comp, PKS50/12-H	10.0 mm 0.394 in	13.0 mm 0.51 in	52 mm 2.05 in	CC5A04 & CC5A05	50	4.40 kg 9.70 lbs
715105	Lug, Cable, Comp, PKS50/16-H	10.0 mm 0.394 in	17.0 mm 0.66 in	52 mm 2.05 in	CC5A04 & CC5A05	25	4.57 kg 10.08 lbs
715125	Lug, Cable, Comp, PKS95/12-H	.531	13.0 mm 0.51 in	65 mm 2.56 in	CC5A20 or CC5A20INS	50	8.62 kg 19.00 lbs
715120	Lug, Cable, Comp, PKS95/16-H	.531	17.0 mm 0.66 in	65 mm 2.56 in	CC5A20 or CC5A20INS	50	9.00 kg 19.84 lbs
715115	Lug, Cable, Comp, PKS120/12-H	15.5 mm 0.610 in	13.0 mm 0.51 in	70 mm 2.76 in	CC5A30 or CC5A30INS	50	11.31 kg 24.93 lbs
715110	Lug, Cable, Comp, PKS120/16-H	15.5 mm 0.610 in	17.0 mm 0.66 in	70 mm 2.76 in	CC5A30 or CC5A30INS	50	11.24 kg 24.78 lbs
715106	Lug, Cable, Comp, PKS150/12-H	0.67	13.0 mm 0.51 in	78 mm 3.07 in	CC5A40 or CC5A40INS	25	16.29 kg 35.92 Lbs
715122	Lug, Cable, Comp, PKS150/16-H	.67	17.0 mm 0.66 in	78 mm 3.07 in	CC5A40 or CC5A40INS	10	16.17 kg 35.65 lbs

# Cable Connections



## CABLE CONNECTORS STRAIGHT

Part Number	Description	Inside Dia. "d1"	Hole Dia. "d4"	Length "L"	Composite Cable Code	Std. Pkg. Unit	Approx. Weight 100 pc.
716714	Connector, Cable, RKC35	8.5 mm 0.335 in	12.0 mm 0.470 in	45 mm 1.77 in	CC5A04	50	2.24 kg 4.94 lbs
716715	Connector, Cable, RKC50	10.0 mm 0.394 in	14.0 mm 0.551 in	50 mm 1.97 in	CC5A05	50	3.36 kg 7.41 lbs
716717	Connector, Cable, RKC95	13.5 mm 0.531 in	18.0 mm 0.709 in	60 mm 2.36 in	CC5A20 or CC5A20INS	25	5.91 kg 13.03 lbs
716718	Connector, Cable, RKC120	15.0 mm 0.591 in	19.5 mm 0.767 in	65 mm 2.56 in	CC5A30 or CC5A30INS	25	7.00 kg 15.43 lbs

## CABLE CONNECTORS, HEAVY-DUTY VERSION (DIN46247-1)

Part Number	Description	Inside Dia. "d1"	Hole Dia. "d4"	Length "L"	Composite Cable Code	Std. Pkg. Unit	Approx. Weight 100 pc.
716625	Connector, Heavy, PKC50-H	10.0 mm 0.394 in	14.5 mm 0.570 in	56 mm 2.20 in	CC5A04 & CC5A05	50	4.26 kg 9.39 lbs
716627	Connector, Heavy, PKC95-H	13.5 mm 0.531 in	19.0 mm 0.748 in	70 mm 2.76 in	CC5A20 or CC5A20INS	25	8.62 kg 19.00 lbs
716628	Connector, Heavy, PKC120-H	15.5 mm 0.610 in	21.0 mm 0.826 in	70 mm 2.76 in	CC5A30 or CC5A30INS	25	9.66 kg 21.30 lbs
716629	Connector, Heavy, PKC150-H	17.0 mm 0.669in	23.5 mm 0.925 in	80 mm 3.15 in	CC5A40 or CC5A40INS	10	14.5 kg 31.97 lbs

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Erico-SB-ER1083B-ER1209LT11WWEN-EN-1805