

nVent ERICO Cu-Bond Round Conductor

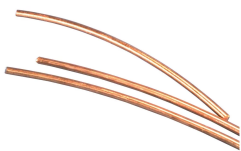
Power Utilities

For decades, nVent ERICO has provided the market with high quality copper-bonded ground rods. nVent ERICO has taken that same concept in ground rods and made this into a revolutionary new grounding conductor. The core of the nVent ERICO Cu-Bond Round Conductor is a low carbon steel grade for improved flexibility in the field. The steel core is plated with nickel then electro-plated with a coating of copper. This electro-plating process helps ensure a long-lasting molecular bond between the copper layer and the steel.

The steel core of the conductor provides theft-deterrent benefits, making the conductor difficult to cut with hand tools. With this steel core, nVent ERICO Cu-Bond Round Conductor is a cost-effective alternative to 100% copper conductor. The copper surface of the conductor provides high conductivity and corrosion resistance properties.

Above grade, the unique properties of nVent ERICO Cu-Bond Round Conductor make it ideal for both horizontal and vertical placement. The conductor is well-suited as a lightning protection conductor when applied in accordance with the IEC 62305-3 Edition 2.0 standard.

In the utility industry, the product can be used as a distribution down-lead conductor or as part of a bonding kit for substation fences or equipment ground risers back to the grid. In telecom applications, the product can be used to connect an equipment ground to the ground grid, as a riser (down-lead) for towers, or as a grounding conductor for datacenter mesh bonding. They are also well suited for rail applications such as trackside bonding conductors and stray current conductors, grounding kits for trackside equipment, electrical traction power, as well as in substation, wayside shelters, and communication antenna equipment.



Below grade, nVent ERICO Cu-Bond Round Conductors are ideal as earthing and bonding conductors where copper theft may occur. They may be used as a buried ground grid conductor or electrode for wireless telecom towers, power distribution and transmission grounding in utility substations, large scale ground mount solar farms, petro-chemical and mining infrastructure in industrial facilities, and railway applications. The conductor also can be used as an interconnecting grounding conductor between wind towers or as a grounding grid at the base of a wind tower.

认证



功能

- Theft-deterrent; steel core is hard to cut with hand tools
- Cost-effective; copper bonded to a steel core minimizes the amount of copper in the cable
- Superior corrosion resistance; application life of typically 30-40 years in most soil conditions
- Copper-bonded coating will not crack or tear when the conductor is bent
- High resistance to corrosion and provides a low-resistance path to ground
- nVent ERICO Cu-Bond Round Conductor is marked every meter (3.28') for easy measurement in the field
- Meets the requirements of IEC® 62305-3 Edition 2 and IEC/EN 62561-2 for lightning protection applications
- nVent ERICO Cu-Bond Round Conductors are UL certified to IEC® 62561-2

技术参数

Table 1/1					
物料号	镀层厚度	熔断容量等效值	nVent ERICO Cadweld 导体代码	单位重量	认证详细信息
CBSC8	254 μm	25 mm²	T1	39 kg	IEC® 62561-2

其他产品详情

Resistance per unit length measurements made in mΩ/m, CBSC compared with respect to AWG/Metric.

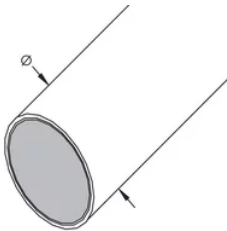
The IEEE® 837 standard (Annex C) provides a method of calculating the fusing current for conductors. This chart is a reference of the calculations for copper-bonded steel conductor according to the IEEE 837 standard. This information is for reference only.

导体实际尺寸比较		
导体尺寸	近似直径	横截面
25 平方毫米	6.76 毫米	-
35 平方毫米	7.65 毫米	-
CBSC8	8.00 毫米	50.27 平方毫米
50 平方毫米	8.89 毫米	-
CBSC10	10.00 毫米	78.52 平方毫米
70 平方毫米	10.69 毫米	-
95 平方毫米	12.47 毫米	-
CBSC13	13.20 毫米	138.07 平方毫米
CBSC14	14.20 毫米	158.90 平方毫米
120 平方毫米	14.22 毫米	-
CBSC16	15.70 毫米	199.84 平方毫米
150 平方毫米	15.75 毫米	-
185 平方毫米	17.65 毫米	-
CBSC18	17.70 毫米	243.27 平方毫米

导电性比较				
部件编号	AWG (欧姆/千米)	CBSC 电阻/ 长度比较	平方毫米 (欧姆/千米)	CBSC 电阻/ 长度比较
CBSC18	1/0 AWG	118.52%	50 平方毫米	110.82%
	2 AWG	74.54%	35 平方毫米	77.57%
CBSC16	2 AWG	102.20%	35 平方毫米	106.36%
	4 AWG	64.27%	25 平方毫米	75.97%
CBSC14	2 AWG	137.78%	25 平方毫米	102.42%
	4 AWG	86.65%	16 平方毫米	65.55%
CBSC13	2 AWG	134.46%	25 平方毫米	99.95%
	4 AWG	84.56%	16 平方毫米	63.97%
CBSC10	4 AWG	132.25%	16 平方毫米	100.05%
	6 AWG	83.17%	10 平方毫米	62.53%
CBSC8	6 AWG	107.85%	16 平方毫米	129.73%
	8 AWG	67.83%	10 平方毫米	81.08%

熔断电流 I _{rms} (千安) - IEEE® 837 附录 C							
导体类型 敷铜铜芯棒a		CBSC8	CBSC10	CBSC13	CBSC14	CBSC16	CBSC18
导体横截面 (平方毫米)	A	50.265	78.52	138.07	158.903	199.84	243.27
初始导体温度 (摄氏度)	Ta	40	40	40	40	40	40
电流时间 (秒)	tc	2	2	2	2	2	2
最高允许温度 (摄氏度)	Tm	1084	1084	1084	1084	1084	1084
电阻率热系数, 参考温度 Tr	ar	0.00378	0.00378	0.00378	0.00378	0.00378	0.00378
接地导体的电阻率, 参考温度 Tr, 单位 m&-cm	rr	8.621	8.621	8.621	8.621	8.621	8.621
1/a0 或 (1/ar) – Tr, 单位摄氏度	K0	245	245	245	245	245	245
热容量因子, 单位焦耳/厘米3/摄氏度	TCAP	3.846	3.846	3.846	3.846	3.846	3.846
材料传导率	%	24.5	20.4	18.8	15.9	16.3	17.7
熔断电流计算	β	84.73	84.73	84.73	84.73	84.73	84.73
	I	4.79	7.48	13.16	15.15	19.05	23.19
	I90%	4.31	6.74	11.84	13.63	17.14	20.87
	I80%	3.83	5.99	10.53	12.12	15.24	18.55

图



警告

应仅根据 nVent 的产品说明书与培训材料安装并使用 nVent 的产品。可访问 www.nvent.com 获取说明书，或者向您的 nVent 客服代表索取。错误安装、使用不当、滥用或未能完全遵守 nVent 的说明与警告，可能会造成产品故障、财产损失、严重的人身伤害及死亡和/或使得保修服务无效。

⚠ WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



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