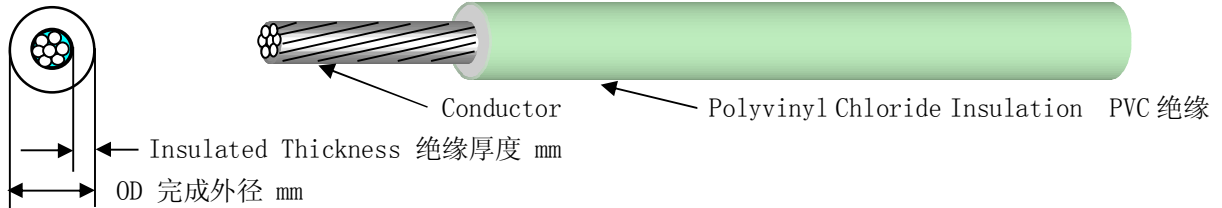


# 美国军用电线 MIL-DTL-16878/3C



## 引用标准:

MIL-DTL-16878/3C 11 August 2000

## 替代

MIL-W-16878/3B(NAVY) 11 September 1992

## 使用材质:

聚氯乙烯 PVC (POLYVINYL CHLORIDE) 材质绝缘, 额定温度: 105°C; 额定电压: 3000V。

## 应用范围:

应用于国防部相关的各个部门, 但不能使用于海军舰艇和航空宇宙飞船。

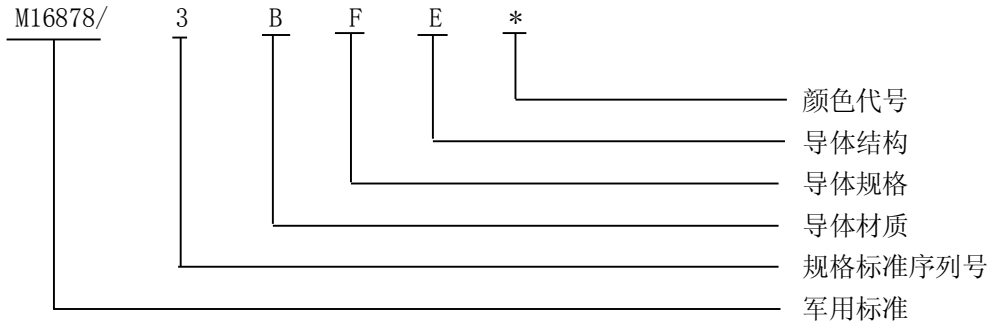
## 标准规格参数:

PIN	Wire size (AWG)	Stranding	Conductor		Conductor Diameter (mm)	Insulated Thickness Nominal (mm)	Finished Wire Diameter (mm)	
			Material	Coating			Min	Max
M16878/3BAA*	32	1/0.203	Copper	Tin	0.203	0.25	0.610	0.762
M16878/3BEA*	24	1/0.511	Copper	Tin	0.511	0.79	1.803	2.184
M16878/3DEA*	24	1/0.511	H.S.C.A	Silver	0.511	0.79	1.803	2.184
M16878/3CEA*	24	1/0.511	C.C.steel	Tin	0.511	0.79	1.803	2.184
M16878/3BEB*	24	7/0.203	Copper	Tin	0.610	0.79	1.905	2.286
M16878/3DEB*	24	7/0.203	H.S.C.A	Silver	0.610	0.79	1.905	2.286
M16878/3BEE*	24	19/0.127	Copper	Tin	0.660	0.79	1.905	2.286
M16878/3DEE*	24	19/0.127	H.S.C.A	Silver	0.660	0.79	1.905	2.286
M16878/3BFA*	22	1/0.643	Copper	Tin	0.645	0.79	1.930	2.311
M16878/3DFA*	22	1/0.643	H.S.C.A	Silver	0.645	0.79	1.930	2.311
M16878/3CFA*	22	1/0.643	C.C.steel	Tin	0.645	0.79	1.930	2.311
M16878/3BFB*	22	7/0.254	Copper	Tin	0.762	0.79	2.057	2.438
M16878/3DFB*	22	7/0.254	H.S.C.A	Silver	0.762	0.79	2.057	2.438
M16878/3BFE*	22	19/0.160	Copper	Tin	0.813	0.79	2.057	2.438
M16878/3DFE*	22	19/0.160	H.S.C.A	Silver	0.813	0.79	2.057	2.438
M16878/3BGA*	20	1/0.813	Copper	Tin	0.813	0.79	2.108	2.489
M16878/3DGA*	20	1/0.813	H.S.C.A	Silver	0.813	0.79	2.108	2.489
M16878/3BGB*	20	7/0.320	Copper	Tin	0.965	0.79	2.261	2.642
M16878/3DGB*	20	7/0.320	H.S.C.A	Silver	0.965	0.79	2.261	2.642
M16878/3BGE*	20	19/0.203	Copper	Tin	1.041	0.79	2.261	2.642
M16878/3DGE*	20	19/0.203	H.S.C.A	Silver	1.041	0.79	2.261	2.642
M16878/3BHA*	18	1/1.020	Copper	Tin	1.024	0.79	2.311	2.692
M16878/3BHB*	18	7/0.404	Copper	Tin	1.245	0.79	2.540	2.921
M16878/3BHE*	18	19/0.254	Copper	Tin	1.295	0.79	2.540	2.921
M16878/3BJA*	16	1/1.290	Copper	Tin	1.290	0.79	2.631	2.972
M16878/3BJE*	16	19/0.287	Copper	Tin	1.499	0.79	2.794	3.175
M16878/3BJF*	16	26/0.254	Copper	Tin	1.575	0.79	2.870	3.251
M16878/3BKA*	14	1/1.630	Copper	Tin	1.628	0.79	2.921	3.302
M16878/3BKE*	14	19/0.361	Copper	Tin	1.829	0.79	3.124	3.505
M16878/3BKH*	14	41/0.254	Copper	Tin	2.032	0.79	3.327	3.708
M16878/3BLA*	12	1/2.050	Copper	Tin	2.052	0.94	3.683	4.039
M16878/3BLE*	12	19/0.455	Copper	Tin	2.337	0.94	3.962	4.343

PIN	Wire size (AWG)	Stranding	Conductor		Conductor Diameter (mm)	Insulated Thickness Nominal (mm)	Finished Wire Diameter (mm)	
			Material	Coating			Min	Max
M16878/3BLG*	12	37/0.320	Copper	Tin	2.261	0.94	3.886	4.267
M16878/3BLJ*	12	65/0.254	Copper	Tin	2.489	0.94	4.115	4.496
M16878/3BMA*	10	1/2.588	Copper	Tin	2.588	0.94	4.216	4.597
M16878/3BMG*	10	37/0.404	Copper	Tin	2.819	0.94	4.445	4.826
M16878/3BMK*	10	105/0.254	Copper	Tin	3.226	0.94	4.851	5.232
M16878/3BNL*	8	133/0.287	Copper	Tin	4.293	1.02	6.121	6.502
M16878/3BPL*	6	133/0.361	Copper	Tin	5.410	1.02	7.264	7.645
M16878/3BRL*	4	133/0.455	Copper	Tin	6.807	1.14	8.839	9.347
M16878/3BSP*	2	665/0.254	Copper	Tin	8.687	1.14	10.719	11.227
M16878/3BTR*	1	817/0.254	Copper	Tin	9.703	1.27	11.989	12.497
M16878/3BUS*	0	1045/0.254	Copper	Tin	10.947	1.32	13.335	13.843

备注:

- 1、PIN (Part or Identifying Number) 型号
- 2、H.S.C.A(High-Strength Copper Alloy) 高强度铜合金材质。
- 3、C.C.(Copper-Clad) 铜包钢双层金属材质。
- 4、电线型号表示方法: 例如: M16878/3BFE\*



**技术要求:**

- 1、火花机测试电压: 8.0kv
- 2、冲击试验电压: 12.0kv 或 3.0kHz、8.5kv 火花机测试
- 3、耐压试验电压: 6.0kv
- 4、绝缘电阻:  $IR_{20^{\circ}C} = K \cdot \log_{10} D/d$  (MΩ/KF)  
 $IR_{20^{\circ}C}$ : 20°C 的最小绝缘电阻  
 K=2000  
 D: 电线最大完成外径  
 d: 导体直径
- 5、冷弯曲试验: 试验温度 X 时间:  $-54 \pm 1^{\circ}C$  X 4h  
 试验用芯轴直径:

电线规格 (AWG)	最大芯轴直径 (mm)
32AWG、24AWG、22AWG	50.8
20AWG~14AWG	76.2
12AWG、10AWG	114.3
8AWG	152.4
6AWG、4AWG	254
2AWG、1AWG、0AWG	457.2

- 6、热冲击试验: 试验温度: 150°C
- 7、抗张强度 (Min): 1800Ibs/Inch<sup>2</sup> 或 12.4MPa

8、断裂伸长率 (Min): 100%

9、热老化试验: 试验温度 X 时间: 135°C X 96h  
变化率 (Max): 25%

10、表面电阻: 不作要求