

航空航天用镀银铜芯聚四氟乙烯绝缘电线电缆 Silver-plated copper core PTFE insulated electrical wire and cable for aerospace

产品用途

本产品适用于交流额定电压600V及以下电器设备和仪器仪表连接用线以及航空航天飞行器布线等。

产品使用温度

-65℃~200℃

产品执行标准

GJB773A/3A-2000

使用特性 Service property

| 项目名称 Item | 技术指标 Technical index |
|---|--|
| 电线绝缘最薄处厚度 Electrical wire insulation minimum thickness | ≥0.20mm |
| 电缆编织屏蔽密度 Cable braided shield density | ≥85% |
| 电线绝缘电阻 Electrical wire insulation resistance | ≥1.0 × 10 ⁴ MΩ·km |
| 绝缘浸水电压 Insulation voltage when immersed in water | 2.5KV/1min不击穿 2.5kV/1 min, no breakdown |
| 电线冒烟 Electrical wire smoke emission | (290 ± 5) °C×15min, 无冒烟现象 (290 ± 5) °C×15min, no smoke |
| 电线绝缘及电缆护套抗张强度: Tensile strength of electrical wire insulation and sheath | 拉伸速度为50 ± 5mm/min Tensile speed should be 50 ± 5mm/min |
| A) 电线绝缘 Electrical wire insulation | 截面0.080~6mm ² 时, ≥31.0N/mm ² 截面0.75~3mm ² 时, ≥27.6N/mm ² 截面4~6mm ² 时 ≥24.2N/mm ² |
| B) 电缆护套 Cable sheath | ≥20.7N/mm ² (H3型) |
| 电线绝缘及电缆护套断裂伸长率: Elongation at break of cable insulation and sheath | 拉伸速度为50 ± 5mm/min Tensile speed should be 50 ± 5mm/min |
| A) 电线绝缘 Electrical wire insulation | 截面0.08~2mm ² 时, ≥250% 截面2.5~6mm ² 时, ≥200% |
| B) 电缆护套 Cable sheath | ≥200% (H3型) |

产品型号及名称 Type and description

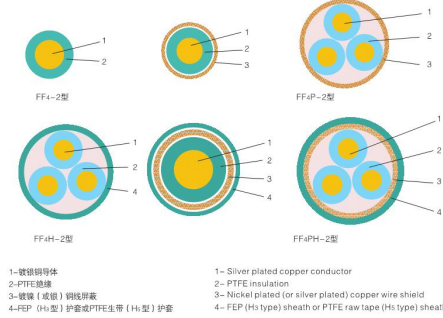
| 型号 Type | 名称 Description |
|---------|--|
| FF4-2 | 镀银铜芯PTFE绝缘电线 Silver-plated copper core PTFE insulated electrical wire |
| FF4H3-2 | 镀银铜芯PTFE绝缘FEP护套电线电缆 Silver-plated copper core PTFE insulated FEP sheathed electrical wire and cable |



续上表 Continued

| 型号 Type | 名称 Description |
|------------|---|
| FF4H5-2 | 镀银铜芯PTFE绝缘PTFE护套电线电缆 Silver-plated copper core PTFE insulated and sheathed electrical wire and cable |
| FF4P21-2 | 镀银铜芯PTFE绝缘镍钎焊屏蔽层电线电缆 Silver-plated copper core PTFE insulated nickel plated round copper wire braided shielded electrical wire and cable |
| FF4P31-2 | 镀银铜芯PTFE绝缘镍钎焊屏蔽层屏蔽层电线电缆 Silver-plated copper core PTFE insulated nickel plated round copper wire braided shielded FEP sheath electrical wire and cable |
| FF4P21H3-2 | 镀银铜芯PTFE绝缘镍钎焊屏蔽层PTFE护套电线电缆 Silver-plated copper core PTFE insulated silver plated round copper wire braided shielded FEP sheath electrical wire and cable |
| FF4P31H3-2 | 镀银铜芯PTFE绝缘镍钎焊屏蔽层PTFE护套电线电缆 Silver-plated copper core PTFE insulated silver plated round copper wire braided shielded FEP sheath electrical wire and cable |
| FF4P21H5-2 | 镀银铜芯PTFE绝缘镍钎焊屏蔽层PTFE护套电线电缆 Silver-plated copper core PTFE insulated nickel plated round copper wire braided shielded PTFE sheath electrical wire and cable |
| FF4P31H5-2 | 镀银铜芯PTFE绝缘镍钎焊屏蔽层PTFE护套电线电缆 Silver-plated copper core PTFE insulated nickel plated round copper wire braided shielded PTFE sheath electrical wire and cable |

产品结构示意图 Structure diagram



163

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基本电缆规格和结构参数 Cable specification and structural parameter

| 导体标称截面 Nominal cross section area mm ² | 导体结构导体根数 Conductor structure number of wires/diameter mm | 成品电缆外径 Finished cable outer diameter mm | 导体直流电阻最大值 Conductor maximum DC resistance | 成品电缆重量 Finished cable maximum weight kg/km |
|--|--|--|---|--|
| 0.08 | 70/12 | 0.84±0.05 | 227 | 2.02 |
| 0.14 | 190/10 | 0.97±0.05 | 126 | 2.83 |
| 0.20 | 190/12 | 1.09±0.05 | 83.5 | 3.84 |
| 0.35 | 190/16 | 1.25±0.05 | 49.5 | 5.54 |
| 0.50 | 190/20 | 1.47±0.05 | 30.2 | 8.08 |
| 0.75 | 190/23 | 1.66±0.05 | 22.7 | 10.2 |
| 1.00 | 190/26 | 1.73±0.05 | 19.0 | 12.1 |
| 1.20 | 190/28 | 1.91±0.05 | 15.3 | 14.9 |
| 1.50 | 190/32 | 2.19±0.05 | 11.7 | 18.5 |
| 2.0 | 190/36 | 2.29±0.05 | 9.45 | 22.5 |
| 2.5 | 370/30 | 2.72±0.05 | 6.88 | 31.5 |
| 3.0 | 370/32 | 2.82±0.05 | 6.23 | 35.9 |
| 4.0 | 370/37 | 3.41±0.05 | 4.51 | 46.9 |
| 5.0 | 370/40 | 3.53±0.05 | 3.90 | 56.2 |
| 6.0 | 370/45 | 4.25±0.05 | 3.05 | 69.5 |

| 导体标称截面 (mm ²) Nominal cross section area | 挤出厚度H3 type sheath minimum thickness | 屏蔽层芯 Nominal thickness of shield | 电缆外径≤mm Cable outer diameter | | | 电缆重量≤kg/km Cable weight | | |
|---|---|---|--|--|--|--|--|--|
| | | | 无护套 With sheath and no sheath | 有护套 With sheath and sheath | 有护套 With sheath and no sheath | 有护套 With sheath and sheath | 有护套 With sheath and no sheath | 有护套 With sheath and sheath |
| 0.08 | 0.18 | 0.10 | - | 1.34 | 2.06 | - | 5.45 | 9.69 |
| 0.14 | 0.18 | 0.10 | - | 1.47 | 2.19 | - | 6.65 | 11.2 |
| 0.20 | 0.18 | 0.10 | - | 1.59 | 2.31 | - | 8.03 | 12.9 |
| 0.35 | 0.18 | 0.10 | - | 1.75 | 2.47 | - | 10.2 | 15.5 |
| 0.50 | 0.18 | 0.10 | - | 1.97 | 2.69 | - | 13.4 | 19.2 |
| 0.75 | 0.18 | 0.10 | - | 2.16 | 2.88 | - | 16.1 | 22.4 |
| 1.00 | 0.18 | 0.10 | - | 2.23 | 2.95 | - | 18.3 | 24.7 |
| 1.20 | 0.18 | 0.10 | - | 2.41 | 3.13 | - | 21.6 | 28.5 |
| 1.50 | 0.18 | 0.10 | - | 2.69 | 3.41 | - | 26.1 | 33.7 |
| 2.0 | 0.18 | 0.10 | - | 2.79 | 3.51 | - | 30.4 | 38.2 |
| 2.5 | 0.18 | 0.10 | - | 3.25 | 3.97 | - | 40.8 | 49.8 |

164

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续上表 Continued

| 导体标称截面 (mm ²) Nominal cross section area | 挤出厚度H3 type sheath minimum thickness | 屏蔽层芯 Nominal thickness of shield | 电缆外径≤mm Cable outer diameter | | | 电缆重量≤kg/km Cable weight | | |
|---|---|---|--|--|--|--|--|--|
| | | | 无护套 With sheath and no sheath | 有护套 With sheath and no sheath | 有护套 With sheath and sheath | 有护套 With sheath and no sheath | 有护套 With sheath and sheath | 有护套 With sheath and no sheath |
| 3.0 | 0.18 | 0.10 | - | 3.35 | 4.07 | - | 45.4 | 54.7 |
| 4.0 | 0.25 | 0.10 | - | 3.96 | 4.98 | - | 58.4 | 74.1 |
| 5.0 | 0.25 | 0.10 | - | 4.08 | 5.10 | - | 68.0 | 84.2 |
| 6.0 | 0.25 | 0.10 | - | 4.80 | 5.82 | - | 83.5 | 102 |
| 0.08 | 0.18 | 0.10 | 2.50 | 2.23 | 2.95 | 9.00 | 9.73 | 15.7 |
| 0.14 | 0.18 | 0.10 | 2.76 | 2.49 | 3.21 | 11.2 | 12.1 | 18.7 |
| 0.20 | 0.18 | 0.10 | 3.00 | 2.73 | 3.45 | 13.8 | 14.8 | 22.0 |
| 0.35 | 0.18 | 0.10 | 3.32 | 3.05 | 3.77 | 16.0 | 19.2 | 27.0 |
| 0.50 | 0.18 | 0.10 | 3.76 | 3.49 | 4.21 | 24.2 | 25.6 | 34.4 |
| 0.75 | 0.25 | 0.10 | 4.44 | 3.97 | 4.69 | 33.5 | 30.9 | 45.2 |
| 1.0 | 0.25 | 0.10 | 4.58 | 4.01 | 5.03 | 37.8 | 35.2 | 49.0 |
| 1.2 | 0.25 | 0.10 | 4.94 | 4.37 | 5.39 | 44.6 | 41.9 | 57.7 |
| 1.5 | 0.25 | 0.10 | 5.50 | 4.93 | 5.95 | 53.8 | 50.8 | 68.4 |
| 2.0 | 0.25 | 0.10 | 5.70 | 5.13 | 6.15 | 62.6 | 59.5 | 77.8 |
| 0.08 | 0.18 | 0.10 | 2.64 | 2.37 | 3.09 | 11.7 | 12.6 | 19.3 |
| 0.14 | 0.18 | 0.10 | 2.92 | 2.65 | 3.37 | 14.9 | 15.9 | 23.3 |
| 0.20 | 0.18 | 0.10 | 3.18 | 2.91 | 3.63 | 16.6 | 19.8 | 27.8 |
| 0.35 | 0.18 | 0.10 | 3.53 | 3.26 | 3.98 | 24.6 | 26.0 | 34.8 |
| 0.50 | 0.18 | 0.10 | 4.00 | 3.73 | 4.45 | 33.6 | 35.2 | 45.2 |
| 0.75 | 0.25 | 0.10 | 4.71 | 4.14 | 5.16 | 45.7 | 42.9 | 58.9 |
| 1.0 | 0.25 | 0.10 | 4.86 | 4.29 | 5.31 | 52.0 | 49.2 | 66.8 |
| 1.2 | 0.25 | 0.10 | 5.25 | 4.68 | 5.70 | 61.9 | 58.9 | 76.8 |
| 1.5 | 0.25 | 0.10 | 5.86 | 5.29 | 6.31 | 75.0 | 71.7 | 91.7 |
| 2.0 | 0.25 | 0.10 | 6.07 | 5.50 | 6.52 | 88.1 | 84.7 | 105 |
| 0.08 | 0.18 | 0.10 | 2.87 | 2.60 | 3.32 | 14.5 | 15.5 | 22.8 |
| 0.14 | 0.18 | 0.10 | 3.19 | 2.92 | 3.64 | 18.5 | 19.7 | 27.9 |
| 0.20 | 0.18 | 0.10 | 3.48 | 3.21 | 3.95 | 23.4 | 24.8 | 33.6 |
| 0.35 | 0.18 | 0.10 | 3.87 | 3.60 | 4.32 | 31.3 | 32.9 | 42.7 |
| 0.50 | 0.25 | 0.10 | 4.70 | 4.13 | 5.15 | 47.6 | 44.8 | 61.1 |
| 0.75 | 0.25 | 0.10 | 5.16 | 4.59 | 5.61 | 57.9 | 54.9 | 72.8 |
| 1.0 | 0.25 | 0.10 | 5.33 | 4.76 | 5.78 | 66.2 | 63.2 | 81.6 |
| 1.2 | 0.25 | 0.10 | 5.76 | 5.19 | 6.21 | 79.2 | 75.9 | 95.9 |
| 1.5 | 0.25 | 0.10 | 6.44 | 5.87 | 6.89 | 96.2 | 92.7 | 115 |
| 2.0 | 0.25 | 0.10 | 6.68 | 6.11 | 7.13 | 113 | 110 | 133 |

165

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| 导体标称截面 (mm ²) Nominal cross section area | 挤出厚度H3 type sheath minimum thickness | 屏蔽层芯 Nominal thickness of shield | 电缆外径≤mm Cable outer diameter | | | 电缆重量≤kg/km Cable weight | | |
|---|---|---|--|--|--|--|--|--|
| | | | 无护套 With sheath and no sheath | 有护套 With sheath and no sheath | 有护套 With sheath and sheath | 无护套 With sheath and no sheath | 有护套 With sheath and no sheath | 有护套 With sheath and sheath |
| 0.08 | 0.25 | 0.10 | - | 2.10 | - | 9.97 | - | - |
| 0.14 | 0.25 | 0.10 | - | 2.23 | - | 11.5 | - | - |
| 0.2 | 0.25 | 0.10 | - | 2.35 | - | 13.2 | - | - |
| 0.25 | 0.25 | 0.10 | - | 2.51 | - | 15.8 | - | - |
| 0.50 | 0.25 | 0.10 | - | 2.73 | - | 19.6 | - | - |
| 0.75 | 0.25 | 0.10 | - | 2.92 | - | 22.8 | - | - |
| 1.0 | 0.25 | 0.10 | - | 2.99 | - | 25.1 | - | - |
| 1.2 | 0.25 | 0.10 | - | 3.17 | - | 28.9 | - | - |
| 1.5 | 0.25 | 0.10 | - | 3.45 | - | 34.1 | - | - |
| 2.0 | 0.25 | 0.10 | - | 3.55 | - | 38.7 | - | - |
| 2.5 | 0.25 | 0.10 | - | 4.01 | - | 50.3 | - | - |
| 3.0 | 0.25 | 0.10 | - | 4.11 | - | 55.3 | - | - |
| 4.0 | 0.25 | 0.10 | - | 4.72 | - | 69.8 | - | - |
| 5.0 | 0.25 | 0.10 | - | 4.84 | - | 79.8 | - | - |
| 6.0 | 0.25 | 0.10 | - | 5.56 | - | 97.2 | - | - |
| 0.08 | 0.25 | 0.10 | 2.54 | 2.99 | 9.33 | 16.1 | - | - |
| 0.14 | 0.25 | 0.10 | 2.80 | 3.25 | 11.6 | 19.1 | - | - |
| 0.20 | 0.25 | 0.10 | 3.04 | 3.49 | 14.2 | 22.4 | - | - |
| 0.35 | 0.25 | 0.10 | 3.36 | 3.81 | 18.4 | 27.5 | - | - |
| 0.50 | 0.25 | 0.10 | 3.80 | 4.25 | 24.7 | 34.9 | - | - |
| 0.75 | 0.25 | 0.10 | 4.18 | 4.63 | 29.9 | 41.2 | - | - |
| 1.0 | 0.25 | 0.10 | 4.52 | 4.77 | 34.1 | 45.8 | - | - |
| 1.2 | 0.25 | 0.10 | 4.68 | 5.13 | 40.7 | 53.4 | - | - |
| 1.5 | 0.25 | 0.10 | 5.24 | 5.69 | 49.3 | 63.6 | - | - |
| 2.0 | 0.25 | 0.10 | 5.44 | 6.09 | 58.0 | 72.8 | - | - |
| 0.08 | 0.25 | 0.10 | 2.68 | 3.13 | 12.1 | 19.7 | - | - |
| 0.14 | 0.25 | 0.10 | 2.96 | 3.41 | 15.3 | 23.7 | - | - |
| 0.20 | 0.25 | 0.10 | 3.22 | 3.67 | 19.0 | 28.3 | - | - |
| 0.35 | 0.25 | 0.10 | 3.57 | 4.02 | 25.1 | 35.4 | - | - |
| 0.50 | 0.25 | 0.10 | 4.04 | 4.49 | 34.1 | 45.8 | - | - |
| 0.75 | 0.25 | 0.10 | 4.45 | 4.90 | 41.6 | 54.5 | - | - |
| 1.0 | 0.25 | 0.10 | 4.60 | 5.05 | 47.8 | 61.2 | - | - |
| 1.2 | 0.25 | 0.10 | 5.00 | 5.44 | 57.4 | 71.9 | - | - |
| 1.5 | 0.25 | 0.10 | 5.60 | 6.05 | 70.0 | 86.3 | - | - |
| 2.0 | 0.25 | 0.10 | 5.81 | 6.26 | 82.8 | 100 | - | - |
| 0.08 | 0.25 | 0.10 | 2.91 | 3.36 | 14.9 | 23.9 | - | - |
| 0.14 | 0.25 | 0.10 | 3.23 | 3.68 | 19.0 | 28.4 | - | - |
| 0.20 | 0.25 | 0.10 | 3.52 | 3.97 | 23.9 | 34.1 | - | - |
| 0.35 | 0.25 | 0.10 | 3.91 | 4.36 | 31.4 | 43.2 | - | - |
| 0.50 | 0.25 | 0.10 | 4.44 | 4.89 | 43.5 | 56.6 | - | - |
| 0.75 | 0.25 | 0.10 | 4.90 | 5.35 | 53.4 | 67.9 | - | - |
| 1.0 | 0.25 | 0.10 | 5.07 | 5.52 | 61.6 | 76.8 | - | - |
| 1.2 | 0.25 | 0.10 | 5.50 | 5.95 | 74.1 | 90.5 | - | - |
| 1.5 | 0.25 | 0.10 | 6.18 | 6.63 | 90.6 | 109 | - | - |
| 2.0 | 0.25 | 0.10 | 6.42 | 6.87 | 107 | 130 | - | - |

166

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