Solder Sleeve Closed End Splices
焊锡末端封帽

防水焊锡末端封帽
Waterproof Solder Sleeve End Caps

该产品专为多股线束的终端闭合连接而设计。它巧妙地在热缩管内植入了一个螺旋铜芯，安装时可将线束物理旋紧并预固定，加热后焊锡渗透线芯，配合热熔胶圈形成坚固的全密封绝缘体。这种设计不仅解决了传统螺旋接线帽不防水的痛点，更比冷压端子具备更强的导电性与抗拉力，是汽车、船舶及工业布线的升级首选。

Designed to terminate and seal multi-wire bundles efficiently. These connectors feature a unique internal copper coil that mechanically grips the wires prior to soldering. In a single heating step, the solder ring melts to fuse the conductors, while the adhesive-lined sleeve shrinks to create a compact, waterproof seal. It is a superior, high-reliability alternative to traditional crimp caps or twist-on connectors for harsh environments.

系列概览

- SE125AP：提供防溅密封，不含热熔胶环。
- SE125A：增加热熔胶环，实现全浸泡密封。
- SE125B：结合了热熔胶环与锡环满足环保要求的焊锡配方，实现浸没级密封保护

这三个系列均可在 –40 °C 至 125 °C 的温度范围内可靠运行。热缩套管在 150 °C 开始回缩，于 175 °C 达到完全回缩状态；焊锡环在 138 °C 至 160 °C 之间完成从初始熔化到完全回流的过程。

Series Overview

- SE125AP provides splash-proof sealing and is built without an adhesive ring.
- SE125A adds a hot-melt adhesive ring for full immersion sealing.
- SE125B combines the adhesive ring with a solder formulation which meet environmental protection requirements for immersion-grade sealing.

All three series operate reliably from –40 °C to 125 °C. The heat-shrink sleeve begins to recover at 150 °C, reaches full recovery at 175 °C, and the solder ring transitions from initial melt to complete reflow between 138 °C and 160 °C.

备注：

- 表 B-D 中列出的所有线径组合均可形成可靠的焊点；最终的抗拉性能取决于线束的总直径。
- 对于 ≥16 AWG (1.21 mm²) 或单根导线股数 >19 股 的电线，请先进行预镀锡处理，以获得最佳的效果。
- 对于表格中未涵盖的线束组合，请计算总 CMA，并选择能同时容纳该总 CMA 值和线束外径的最小型号。
- 详细的材料数据表可按需提供。
- 如需选型协助，请联系我们。

Notes:

- All wire-size combinations listed in Table B-D will form reliable solder joints; final strain-relief performance depends on bundle diameter.
- Pre-tin wires ≥16 AWG (1.21 mm²) or with >19 strands for optimal solder wetting.
- For wire bundles not covered in the tables, calculate total CMA (mm²) and select the smallest part that accommodates both CMA and outer diameter.
- Detailed material data sheets are available on request.
- Need assistance choosing the right part? Please contact us.

特性与优势 Features and benefits

- **低阻抗牢固焊接：**焊锡环完全熔融包裹铜丝，确保导电性能优于压接，且长期运行稳定不发热。
- **双重加固防护：**外层热缩管收缩紧致，提供绝缘保护的同时，大幅提升线束连接点的抗拉强度。
- **IP级防水密封：**内壁热熔胶冷却后形成严密防潮层，无惧水汽、油污及粉尘侵蚀。
- **可视化规格识别：**末端采用有色玻璃珠（或色环）编码，直观对应适用线径，便于快速选料与质检。
- **环保合规：**提供无铅版本，符合全球出口及高端环保项目标准。

- Superior Conductivity: Creates a soldered connection with minimal resistance, ensuring better performance than crimping under vibration.
- Reinforced Protection: The heat-shrink sleeve provides robust insulation and significantly enhances the tensile strength of the splice.
- Environmental Seal: Adhesive lining melts to form a watertight barrier against moisture, oils, and industrial dust.
- Visual Identification: Features a color-coded bead system for instant wire gauge verification, simplifying selection and inspection.
- Global Compliance: Available in lead-free versions to meet international environmental standards.

颜色 COLOR

表 A. 产品选项 Table A. Product Options		
产品系列 Product Series	应用环境 Environmental Protection	最高工作温度 Maximum Operating Temperature
SE125AP	防溅 Splashproof	125℃ [257°F]
SE125A	密封 Sealed	125℃ [257°F]
SE125B	密封 Sealed	125℃ [257°F]

表 B. SE125AP 产品尺寸与型号说明
Table B. SE125AP Product Dimensions and Part Number Descriptions

产品编码 Part No.	色标 Color Code	产品尺寸 Product Dimensions (Min.)		
		L	ØA	适用线径范围 Wire Range (Min.-Max.) CMA/mm²
SE125AP-1	绿色 Green	1.370 [34.8]	0.120 [2.9]	1400-4800 [0.7-2.4]
SE125AP-2	红色 Red	1.350 [34.2]	0.150 [3.7]	4000-8000 [2.0-4.0]
SE125AP-3	蓝色 Blue	1.610 [41.0]	0.200 [5.1]	7000-16000 [3.5-8.0]
SE125AP-4	黄色 Yellow	1.650 [42.0]	0.270 [6.8]	15000-24000 [7.5-12.0]

表 C. SE125A-x 产品尺寸与型号说明
Table C. SE125A-x Product Dimensions and Part Number Descriptions

产品编码 Part No.	色标 Color Code	产品尺寸 Product Dimensions (Min.)		
		L	ØA	适用线径范围 Wire Range (Min.-Max.) CMA/mm²
SE125A-1	绿色 Green	1.370 [34.8]	0.130 [3.4]	1400-4800 [0.7-2.4]
SE125A-2	红色 Red	1.350 [34.2]	0.190 [4.8]	4000-8000 [2.0-4.0]
SE125A-3	蓝色 Blue	1.650 [42.0]	0.290 [7.3]	7000-16000 [3.5-8.0]
SE125A-4	黄色 Yellow	1.630 [41.5]	0.360 [9.1]	15000-24000 [7.5-12.0]

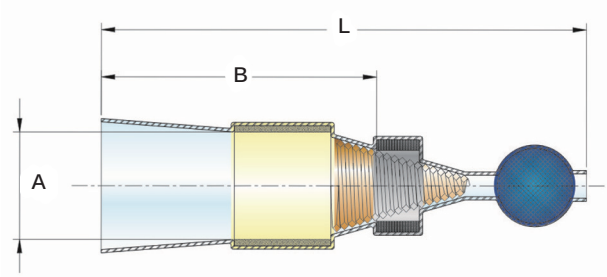

表 D. SE125B 产品尺寸与型号说明
Table D. SE125B Product Dimensions and Part Number Descriptions

产品编码 Part No.	色标 Color Code	产品尺寸 Product Dimensions (Min.)		
		L	ØA	适用线径范围 Wire Range (Min.-Max.) CMA/mm²
SE125B-1	绿色 Green	1.370 [34.8]	0.130 [3.4]	1400-4800 [0.7-2.4]
SE125B-2	红色 Red	1.350 [34.2]	0.190 [4.8]	4000-8000 [2.0-4.0]
SE125B-3	蓝色 Blue	1.650 [42.0]	0.290 [7.3]	7000-16000 [3.5-8.0]
SE125B-4	黄色 Yellow	1.630 [41.5]	0.360 [9.1]	15000-24000 [7.5-12.0]

表 E. 产品特性
Table E. Product Characteristics

材料规格 Material			
绝缘层 Insulation	辐照交联透明热缩聚偏氟乙烯 Radiation-crosslinked, transparent heat-shrinkable polyvinylidene fluoride		
焊料 Solder			
SE125B	焊料：Sn42 Bi58; Solder: Sn42 Bi58		
SE125A, SE125AP	焊料：Sn60 Pb40; Solder: Sn60 Pb40		
密封环 Sealing insert (SE125B, SE125A, SE125AP)	热熔胶 Hot melt adhesive		
螺旋缠绕嵌件 Spiral wound insert	铜合金 Copper alloy		
物理特性 Physical	**单位 Unit**	**测试方法 Method of test**	**规格要求 Requirement**
尺寸 Dimensions	英寸 Inches	RB-109	见产品尺寸表 See product dimensions
机电性能 Electromechanical	**单位 Unit**	**测试方法 Method of test**	**规格要求 Requirement**
介电耐压 Dielectric withstand voltage	千伏 kilovolts	RB-109	2.0
静态温升 Static heating	度 degrees	RB-109	温升小于 50℃ Less than 50℃ rise
环境指标 Environmental*	**单位 Unit**	**测试方法 Method of test**	**规格要求 Requirement**
浸水后绝缘电阻 Insulation resistance after water immersion (SE125A only)	兆欧 Megohms	RB-109	100
测试后接触电阻 Contact resistance after testing	毫欧 milliohms	RB-109	小于 6 毫欧 Less than 6 milliohms
工作条件 Operating Condition	**单位 Unit**	**测试方法 Method of test**	**规格要求 Requirement**
额定温度 Temperature rating	--	--	-55℃to +125℃ [-67°Fto 257°F]
额定电压 Voltage rating	V	--	600

注： 浸水密封性能取决于所使用的线缆组合。用户应针对具体的线缆组合进行测试。
*Immersion resistance sealing is dependent on the wire combinations used. The user test specific wire combinations.