



## **SolderSleeve Device for Space Applications**

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LOW OUTGASSING AND RESISTANCE TO EXTREME TEMPERATURES  
FOR SATELLITES IN LOW EARTH ORBIT (LEO) CONSTELLATIONS



## Description

TE Connectivity (TE)'s SolderSleeve device for space is our response to support the critical requirements of the space industry. This product is designed and developed for applications within this vertical market (including LEO satellites) which require low outgassing and resistance to extreme temperatures. SolderSleeve device for space helps provide reduced size, weight and power (SWaP) and environmentally protected shield termination on cables as well as insulation, protection and strain relief. This product can be used for splicing wires as well as shield terminations.

The space industry also demands solutions which have minimal to zero levels of foreign object damage (FOD) in key applications. The use of flux free solder leaves no traces of particles post installation and the sealing rings helps ensure that the installation remains intact.

SolderSleeve device for space can be used for silver plated cables. In addition, standard tools such as the heat gun and reflector will work and follow the RCPS-100-70.

### CONVENIENT

- Heat shrinkable technology for one-step shield results in easy inspection

### FAST

- Transparent insulation sleeve saves time during installation

### RUGGED

- Provides strain relief with ratings of up to 150°C

### EASY

- Minimal tools required to achieve connection, insulation and protection

### RELIABLE

- Inhouse design and quality controlled process offers reliability and traceability

## SPECIFICATIONS

- **Electrical:** Millivolt drop < 4.0 mV
- **Mechanical:** Tensile strength of 15 lbs  
Vibration up to 15 g

## APPLICATIONS

- Small, nano and cube satellites for LEO constellations
- Launch pads

## QUALIFICATIONS

- Tested and qualified for low outgassing parameters which are consistent with TE specification 108-160024, ASTM E-595 (ECSS-Q-ST-70-02C) and RT-1404

## TOOLING

- Standard TE offered tooling for installation



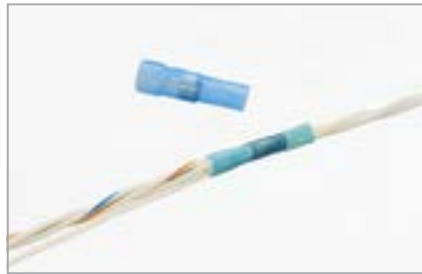
# SolderSleeve Device for Space Applications

| Product Name | Part Number | Product Dimension      |                  |                 |                       |                 | Cable Dimension |                 |                 |                 |                       |  |
|--------------|-------------|------------------------|------------------|-----------------|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------------|--|
|              |             | L ± 1.75<br>(L ± 0.07) | ØA<br>Min        | ØB<br>Min       | C ± 1.5<br>(C ± 0.06) | H<br>Min        | ØE<br>Max       | ØF<br>Min       | ØG<br>Min       | ØD<br>Max       | J ± 0.5<br>(J ± 0.02) |  |
| S01-6-R      | EM7793-000  | 22.0<br>(0.866)        | 4.445<br>(0.175) | 3.10<br>(0.120) | 7.0<br>(0.275)        | 6.00<br>(0.236) | 3.00<br>(0.118) | 1.40<br>(0.055) | 0.75<br>(0.030) | 2.65<br>(0.105) | 7.5<br>(0.295)        |  |
| S01-7-R      | EM7794-000  | 23.0<br>(0.906)        | 5.918<br>(0.233) | 4.95<br>(0.194) | 7.0<br>(0.275)        | 6.00<br>(0.236) | 4.90<br>(0.193) | 2.15<br>(0.085) | 1.25<br>(0.050) | 4.30<br>(0.170) | 7.5<br>(0.295)        |  |
| S01-8-R      | EM7795-000  | 24.0<br>(0.945)        | 7.214<br>(0.284) | 6.32<br>(0.248) | 7.0<br>(0.275)        | 6.00<br>(0.236) | 6.30<br>(0.248) | 3.30<br>(0.130) | 1.80<br>(0.070) | 5.95<br>(0.235) | 7.5<br>(0.295)        |  |

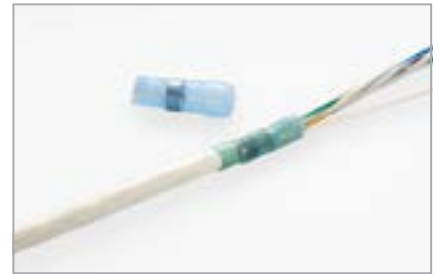
mm (inches)



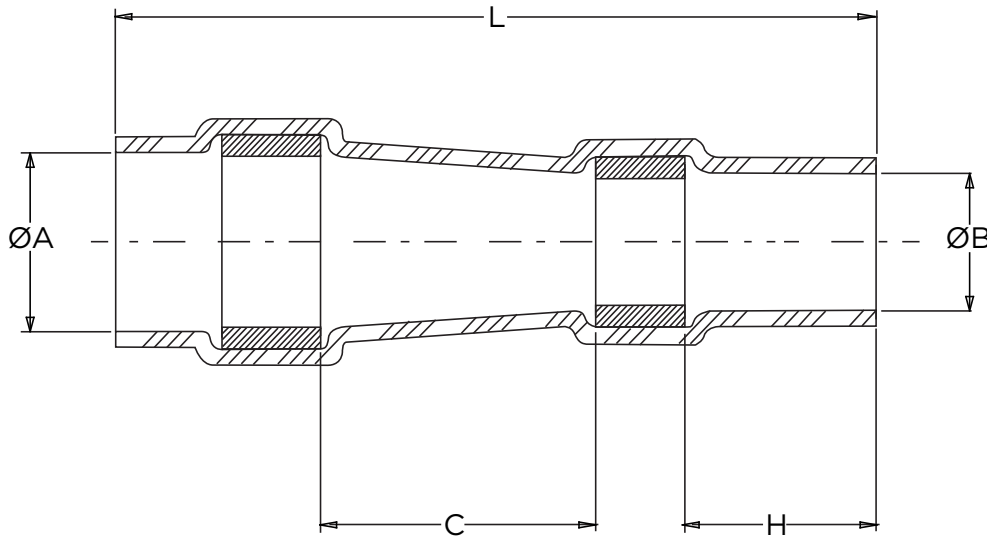
S01-6-R



S01-7-R



S01-8-R



## MATERIALS

**Insulation Sleeve:** Heat-shrinkable, transparent blue, radiation cross-linked polyvinylidene fluoride

**Barrier Ring:** Thermoplastics

**Solder Preform without Flux:**

**Solder:** Type Sn63 per ANSI-J-STD-006

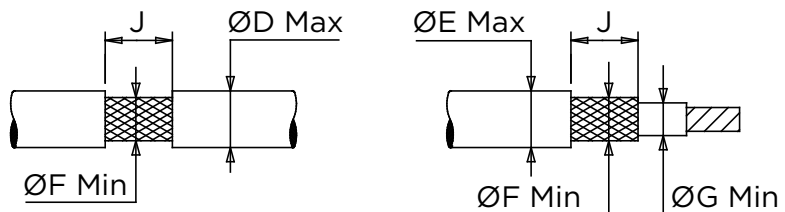
**Flux:** None

## Application

1. These parts are designed to provide shield termination on cables meeting the following criteria:

**Dimensions:** Per table. **Jacket Rating:** 150°C. **Shield Plating:** Silver. **Jacket Material:** Polyimide Insulated Cables.

2. For assembly information, refer to TE's Raychem document RCPS-100-70.



For best results, prepare the cable as shown above

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### SolderSleeve Device for Space Applications

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