

# 3M™ Slim Lock Mini and Nano Closure

SLC-A-Mini  
SLC-B-Nano

## Installation Instructions

*Tip: Plan ahead to ensure inner and outer shells are oriented in such a direction (i.e. axial seal is located outward/radially from adjacent installations) so that outer shells will have clearance from each other. Also, ensure the latch will remain accessible after installation.*

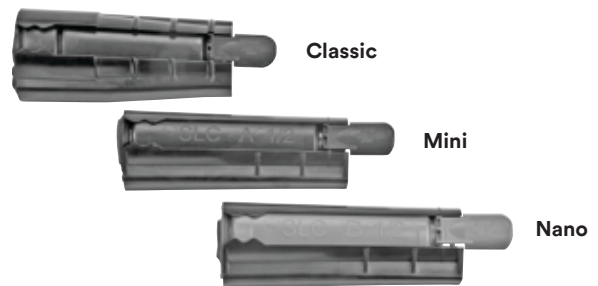
This instruction manual will cover the proper installation practices of the 3M™ Slim Lock Mini and Nano Closures. For installation instructions for the Slim Lock Classic Closure please see part number 78-0013-6460-9.

### 1.0 Intended Use

Coaxial cable assemblies, when installed in exterior environments, are known to routinely degrade due to water and contaminant penetration. As a deterrent to this degradation, current practice calls for the application of multiple wrap layers of PVC, butyl rubber, or other tape materials to the connector area. The 3M™ Slim Lock Closure family is intended to provide a reusable alternate weatherproofing solution that is reliable as well as quickly and easily installed.

The 3M™ Slim Lock Closure family includes:

Description	Range	Connector Types
SLC-Classic	1.00" - 1.03" (25.4 - 26.2 mm)	DIN-716
SLC-A-MINI	0.68" - 0.78" (17.3 - 19.8 mm)	MINI-DIN
SLC-B-NANO	0.51" - 0.62" (13.0 - 15.7 mm)	N-Type

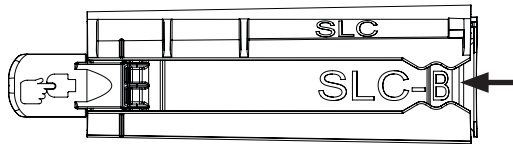
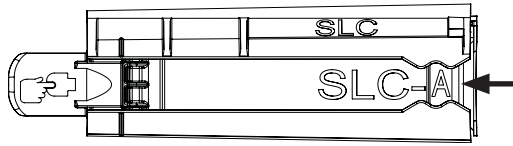


The “range” for each different closure refers to the outside diameter (O.D.) of the neck of the bulkhead connector that each closure will properly seal against. The neck length should be no less than 0.31 inch (7.9 mm) to ensure a proper seal. The coaxial cable that the closure is intended to seal against, is 0.50 inch (13 mm) nominal. It will seal most cables from 0.53 inch to 0.63 inch (13.5-16 mm).

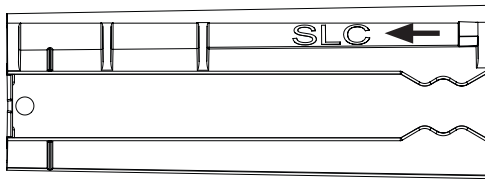
The 3M Slim Lock Mini and Nano Closures are clearly identified in multiple ways. First, the inner shell of each is a different color.

A = Black  
B = Blue

Next, the part number for each version is clearly molded into the side of the “inner” part of the closure.



Last, the model number is placed on the outside of the “outer” of the closure.



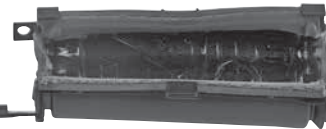
### 2.0 Features

The 3M™ Slim Lock Mini and Nano Closures incorporate a highly compliant gel web technology that provides weather sealing features even when used on varying cable and connector geometries. The product consists of two primary parts: a gel web holder and an outer compression sleeve. The gel web holder provides a convenient method to handle and locate the sealing web during installation and has the Slim Lock model molded on the plastic shell. The outer sleeve, when properly installed, is designed to impart a compressive load to the gel web holder resulting in an environmental seal.

Compression sleeve



Gel web holder



3M™ Slim Lock Closure components

### 3.0 Package Contents

- Gel web holder
- Compression sleeve
- Installation instructions/tipsheet

## 4.0 Limitation

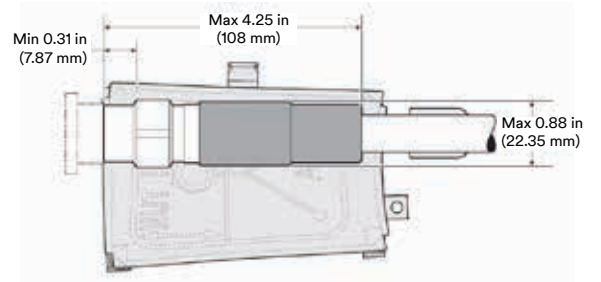
### 4.1 Application

#### a. Compatibility

These products are designed to seal a 0.50 inch nominal diameter jumper cable terminated to a variety of bulkhead receptacles, including MINI-DIN (4.1/9.5 as well as 4.3/10), N Type, etc. It will also seal against a bulkhead with a fully threaded barrel. A proper seal will occur on coaxial cables having an outside diameter within the range of 0.53 to 0.63 inch (13.5 mm to 16.0 mm).

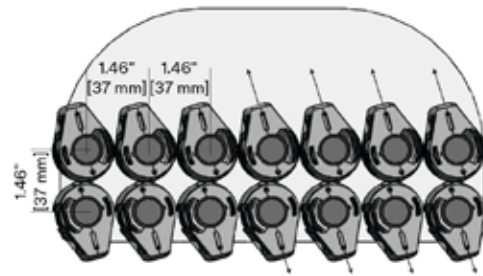
#### b. Clearance

For proper installation, adequate clearance must be provided between the assembly to be protected and adjacent hardware. The minimum axial distance between the center points of two bulkhead connectors cannot be less than 1.46 inches (37 mm). There must be at least 0.75 inch (19 mm) radially between a bulkhead connector center point and the nearest side obstruction. Additionally, any strain relief feature such as heat shrink must not extend beyond 4.25 inches (108 mm) from bulkhead. The strain relief feature must not be > 0.88 inch (22.35 mm) in diameter.

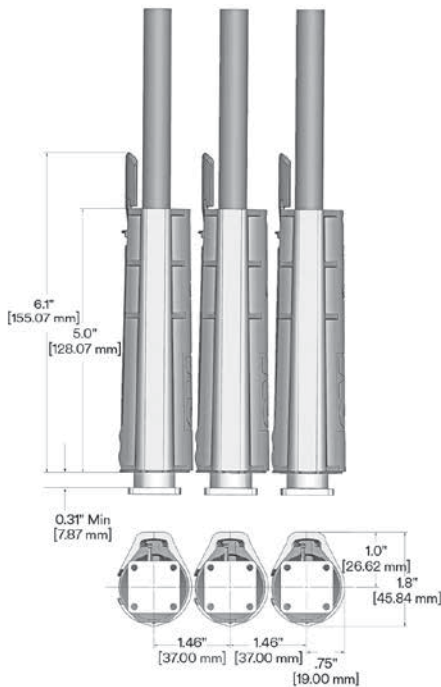


Required clearances

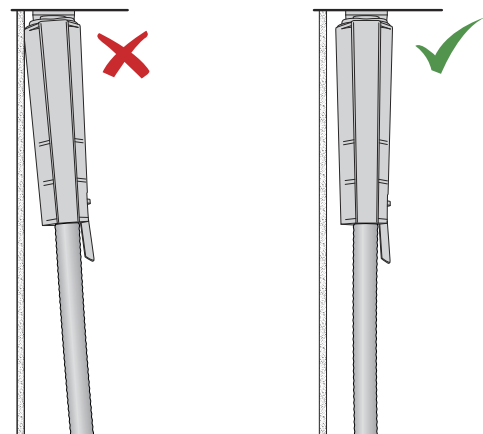
Not only can the 3M™ Slim Lock Mini and Nano Closures support linear distances as narrow as 1.46 inches (37 mm), but they can also support two rows of bulkhead connectors, with a minimum spacing of 1.46 inches (37 mm) between rows, as well as long as the closures are oriented back-to-back. If this type of density is required, all the “inners” of all the closures must be placed on all the connections first then all the “outers” can be put on. Failure to do this will not allow this type of density.



If a 3M Slim Lock Closure is installed without taking into account these required clearances, then an obstruction can actually push on the closure, causing a possible failure.



Required clearances



### c. Service

The 3M™ Slim Lock Mini and Nano Closures are designed for outside pole and tower-mounted installations. They are not compatible with buried or below ground applications.

### d. Reuse

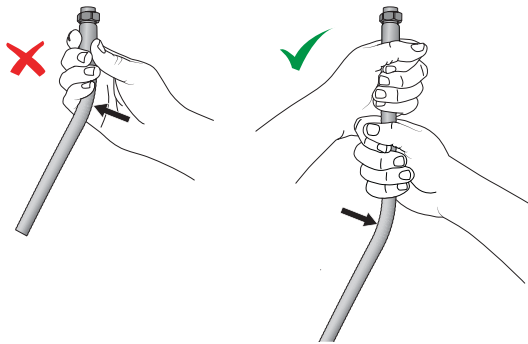
The 3M Slim Lock Closures may be installed and reinstalled up to 10 total times without seal degradation.

### e. Installation/Removal Thermal Limits

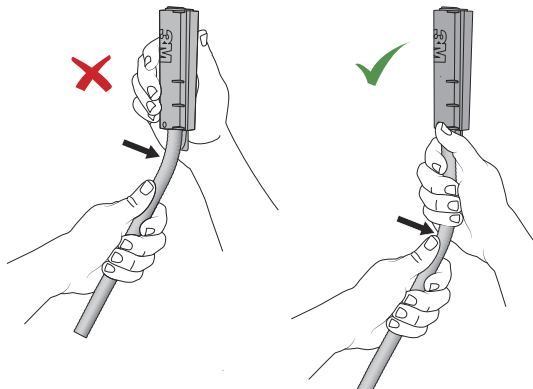
This product may be installed and/or removed when ambient temperatures range between 0°C (32°F) and +40°C (104°F).

## 4.2 Cable Bends

Prior to installing the closure, verify that the coaxial cable does not have a bend closer than 10 inches (254 mm) from the connector bulkhead. If a bend falls within this area a seal cannot be ensured. The bend should be removed.



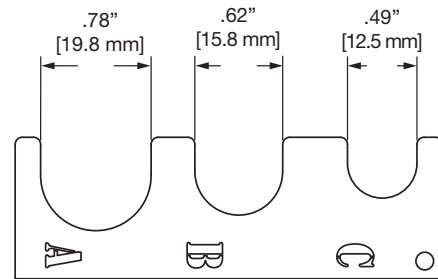
Once the closure is installed, a cable bend closer than 4 inches (102 mm) from the installed closure can compromise the seal. The bend should be removed.



**Note:** A cable bend must never occur inside the closure.

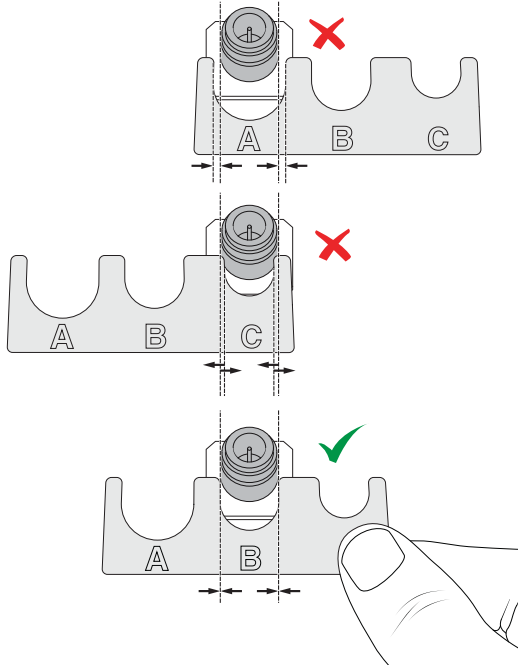
## 5.0 Installation

To determine which 3M Slim Lock Closure is the proper size for a particular application, a closure gauge is printed on the bag of the closure or a plastic version is available free of charge. Take the gauge and hold it against the bulkhead connector as close to the flange of the bulkhead as possible. There are 3 slots within the gauge (A/B/C). The A and B slots represent the largest outside diameter supported for the SLC-A-Mini and SLC-B-Nano closures. The C slot is an unsupported diameter. If the bulkhead connector falls within the C slot range there is not a Slim Lock closure for this application.



To determine the proper closure size for the bulkhead/s connections, the smallest slot on the gauge should be chosen that still fits around the neck of the bulkhead. This will ensure the best seal possible. Once the proper slot is chosen take note of the corresponding A or B letter. This is the closure needed.

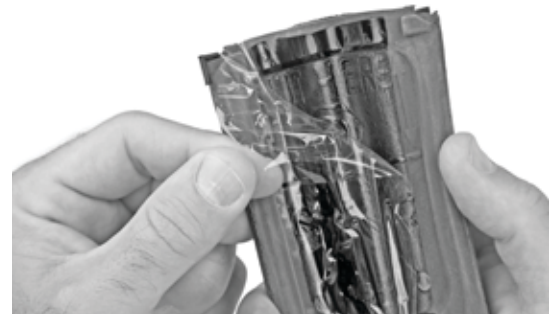
Be aware that manufacturers may place different sized bulkhead connectors on their electronics, (i.e. transmission ports vs. comm. ports). Ensure the proper size closure is used for each different type of connection. Failure to do so will void the product warranty and will probably cause a leak path.



Ensure the neck of the bulkhead is at least as long as 0.31 inch (7.87 mm). If it is not, a proper seal cannot be ensured.

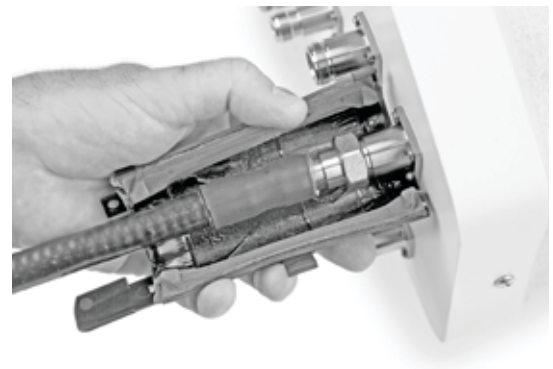


- a. Care should be taken to ensure all sealing surfaces are free of dust, liquids, and surface contaminants.
- b. If a liner is present, remove the clear release liner from the gel surface.



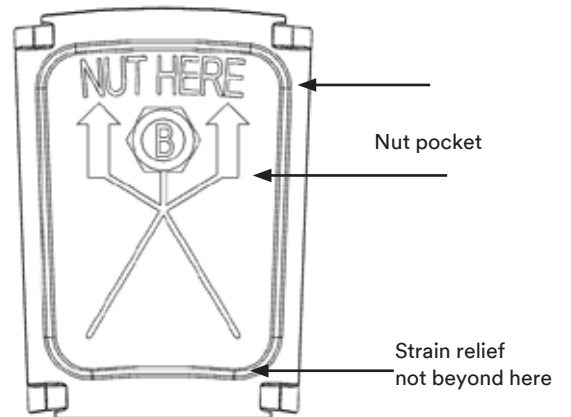
**Note:** Carefully follow safety, health and environmental information given on product label or the Material Safety Data Sheet (MSDS) for the sealing gel.

- c. Place the gel web holder around the cable connection to be protected.



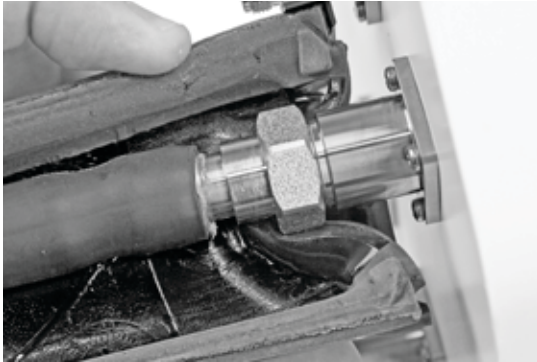
The connector nut needs to fall somewhere within the "nut pocket" of the gel pad as shown.

The cable's strain relief feature must not extend beyond the sealing area of the closure or a seal cannot be assured.





Care should be taken to avoid dragging the gel across the cable or connector nut once contact is made as this may degrade the sealing surface and could also cause the gel pad to “roll.”



Squeeze the gel web holder shut and simultaneously secure the bale in its locked position. This feature is used only to captivate the gel holder prior to compression sleeve installation.

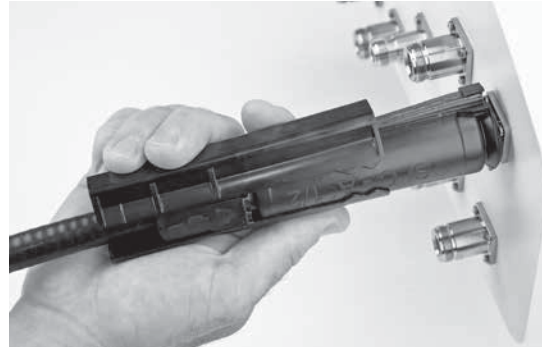


**Note:** *Inspect the sealing gel pad prior to the outer shell installation to ensure gel is in continuous contact with the connector body and that the foam pad is not folded.*

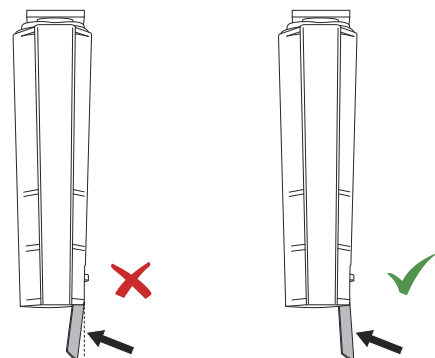
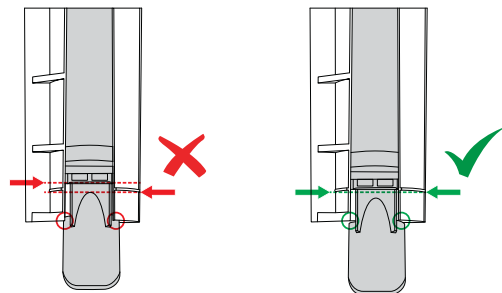
d. Optional: The compression sleeve may be temporarily stowed during installation by snapping the part on to the cable as shown. Do not perform this operation during windy conditions.



e. Slide the compression sleeve axially onto the gel web holder until the latch fully engages. When properly installed, the 3M™ Slim Lock Closures model number (SLC-A or SLC-B) will be visible in the slot of the outer sleeve.



Always verify that the locking tab on the closure is fully engaged, otherwise a proper seal cannot be ensured. This can easily be done referencing the engagement line on the outer shell of the closure and ensure the latch is straight in line with the closure body.



**Note:** *It is normal for the bale to open or release after the compression sleeve is installed.*

- f. Optional: If additional security is desired, install a 0.08 inch (2 mm) nominal width cable tie (not included) in the provided hole.



- d. Release the bale if still latched. Bale release may be initiated by squeezing the gel holder until the bale pops open.



## 6.0 Removal

- a. Cut and remove cable tie if installed.



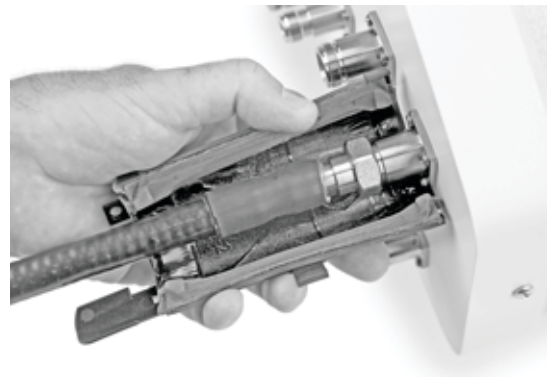
- b. Depress the latch using the thumb.



- c. Pull the compression sleeve downward and off, or stow on cable.



- e. Remove the gel web holder by spreading it open and remove.



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