# $3 M$ SLiC ${ }^{\text {" }}$ Aerial Closure with Spiral End Seals and Bond Assembly 

## Instructions

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### 1.0 General

1.01 This instruction bulletin describes the assembly of the $3 \mathrm{M}^{\mathrm{TM}}$ SLiC $^{T M}$ Aerial Closure with Spiral End Seals and Bond Assembly with external bonding hanger brackets. The closures are free breathing and suitable for straight, butt, and branch splices of non-pressurized communication cables.

|  | $\begin{gathered} \text { SLiC } \\ 2 \times 19 \text { BA } \end{gathered}$ | $\begin{gathered} \text { SLiC } \\ 2 \times 29 \text { BA } \end{gathered}$ | $\begin{gathered} \text { SLiC } \\ 3 \times 33 \text { BA } \end{gathered}$ | $\begin{gathered} \text { SLiC } \\ 5 \times 33 \text { BA } \end{gathered}$ | $\begin{gathered} \text { SLiC } \\ 7 \times 33 \text { BA } \end{gathered}$ | $\begin{gathered} \text { SLiC } \\ 9 \times 36 \text { BA } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Splice Opening | $\begin{gathered} 14 " \\ (356 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 17^{\prime \prime} \\ (432 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 21^{\prime \prime} \\ (533 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 21^{\prime \prime} \\ (533 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 21^{\prime \prime} \\ (533 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 25^{\prime \prime} \\ (635 \mathrm{~mm}) \end{gathered}$ |
| Maximum Bundle Diameter | $\begin{gathered} 2.2^{\prime \prime} \\ (55.9 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 2.6 " \\ (66 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 3.6^{\prime \prime} \\ (91.4 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 5.6 " \\ (142.2 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 7.6 " \\ (193.0 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 9.6 " \\ (244 \mathrm{~mm}) \end{gathered}$ |
| Approx. Cable Range Pair Count | 100 pair 26 or 24 AWG ( 0.4 or 0.5 mm ) | **200 pair 26 or 24 AWG ( 0.4 or 0.5 mm ) | *400 pair <br> 26 or 24 AWG <br> $(0.4$ or 0.5 mm$)$ | $\begin{gathered} \text { *1200 pair } \\ 26 \mathrm{AWG} \\ (0.4 \mathrm{~mm}) \end{gathered}$ | *2400 pair 26 AWG <br> ( 0.4 mm ) | *3600 pair 26 AWG <br> ( 0.4 mm ) |

* BASED ON 2-BANK STRAIGHT SPLICE USING 4000-DWP MODULE
** BASED ON MORE THAN ONE CABLE
1.02 End Seal Port Diameter Range:

| End Seal Port Diameter Range | $\begin{aligned} & \text { SLiC 2x19* } \\ & \text { SLiC 2x29* } \end{aligned}$ | SLiC 3x33 | SLiC 5x33 | $\begin{aligned} & \text { SLiC } 7 \times 33 \\ & \text { SLiC } 9 \times 36 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Port \#1 | $\begin{aligned} & 0.8 \text { to } 1.6 " \\ & 20 \text { to } 41 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 0.8 \text { to } 2.6 " \\ & 20 \text { to } 66 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 1.2 \text { to } 3.0 " \\ & 30 \text { to } 76 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 1.5 \text { to } 3.8 " \\ & 38 \text { to } 97 \mathrm{~mm} \end{aligned}$ |
| Port \#2 | $\begin{aligned} & \hline 0.5 \text { to } 1.0 " \\ & 13 \text { to } 25 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 0.5 \text { to } 1.0^{\prime \prime} \\ & 13 \text { to } 25 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 0.8 \text { to } 1.4 " \\ & 20 \text { to } 36 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 1.2 \text { to } 1.8{ }^{\prime \prime} \\ & 30 \text { to } 46 \mathrm{~mm} \end{aligned}$ |
| Port \#3 | $\begin{aligned} & * * 0.5 \text { to } 1.0 " \\ & 13 \text { to } 25 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 0.5 \text { to } 1.0 " \\ & 13 \text { to } 25 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 1.4 \text { to } 2.0 " \\ & 36 \text { to } 51 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 0.5 \text { to } 1.2^{\prime \prime} \\ & 13 \text { to } 30 \mathrm{~mm} \end{aligned}$ |
| Port \#4 | NA | NA | $\begin{aligned} & 0.5 \text { to } 1.2^{\prime \prime} \\ & 13 \text { to } 30 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 1.8 " \text { to } 2.4^{\prime \prime} \\ & 46 \text { to } 61 \mathrm{~mm} \end{aligned}$ |
| Port \#5 | NA | NA | NA | $\begin{aligned} & 0.5 \text { to } 1.2^{\prime \prime} \\ & 13 \text { to } 30 \mathrm{~mm} \end{aligned}$ |
| Between Wraps | $\begin{aligned} & 0.2 \text { to } 0.4 " \\ & 5.1 \text { to } 10.2 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 0.2 \text { to } 0.4 " \\ & 5.1 \text { to } 10.2 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 0.2 \text { to } 0.4 " \\ & 5.1 \text { to } 10.2 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 0.2 \text { to } 0.4 " \\ & 5.1 \text { to } 10.2 \mathrm{~mm} \end{aligned}$ |

* Total of all cable diameters cannot exceed 1.6" (41 mm) for the 2" SLiCs.
** The third port on the 2" endseal is labeled Port 2.



| Size | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| :---: | :---: | :---: | :---: |
| $2 \times 19$ | $19^{\prime \prime}(483 \mathrm{~mm})$ | $5.3^{\prime \prime}(135 \mathrm{~mm})$ | $3.2^{\prime \prime}(80 \mathrm{~mm})$ |
| $2 \times 29$ | $29^{\prime \prime}(737 \mathrm{~mm})$ | $5.9^{\prime \prime}(150 \mathrm{~mm})$ | $3.2^{\prime \prime}(80 \mathrm{~mm})$ |
| $3 \times 33$ | $33^{\prime \prime}(838 \mathrm{~mm})$ | $7.1^{\prime \prime}(180 \mathrm{~mm})$ | $4.7^{\prime \prime}(119 \mathrm{~mm})$ |
| $5 \times 33$ | $33^{\prime \prime}(838 \mathrm{~mm})$ | $9.2^{\prime \prime}(234 \mathrm{~mm})$ | $6.8^{\prime \prime}(173 \mathrm{~mm})$ |
| $7 \times 33$ | $33^{\prime \prime}(838 \mathrm{~mm})$ | $11.5^{\prime \prime}(292 \mathrm{~mm})$ | $8.9^{\prime \prime}(227 \mathrm{~mm})$ |
| $9 \times 36$ | $36^{\prime \prime}(914 \mathrm{~mm})$ | $13.5^{\prime \prime}(343 \mathrm{~mm})$ | $10.9^{\prime \prime}(276 \mathrm{~mm})$ |

### 2.0 Kit Contents

2.01 Kit Contents are as follows:

Closure Body with:
Bond Bar
Braid Assembly
Spiral End Seals
2.02 Additional Materials Required:


Shield Connectors
Cable Ties
Cable Spacers
Moisture Resistant Splicing Connectors
Vinyl tape

### 3.0 Cable Preparation

Note: For both single and double sheath cables, cut shield flush with outer sheath.
3.01 Single sheath cable.

3.02 Double sheath cable.


Note: On cables less than 3/4" (19 mm) in diameter, cut a 1 1/2" ( 38 mm ) slit in the sheath opposite connector location. Then complete procedure.

3.03 Make a 1" $(25 \mathrm{~mm})$ slit in the outer sheath and shield. Lift corners for base insertion.


Lashed cable support and spacer (use appropriate size of cable spacer to keep cable at the same level or slightly lower that the end seal openings)

Trim Core Wrap to extend approximately $1^{\prime \prime}$ ( 25 mm ) past the outer sheath. If core wrap is damaged, wrap with vinyl tape.
${ }^{* *} \mathbf{X}$ See table in Section 1.0

### 4.0 Closure Installation, Bonding and Splicing

4.01 Attach closure to strand using the proper position at the bottom of the external bond hanger bracket.
Note: $\quad$ Always use bottom notch with small groove. For 10M strand and larger, rotate hanger cap and use large groove. Secure the hanger brackets to strand using $50 \mathrm{in} \cdot \mathrm{lbs}(565 \mathrm{~cm} \cdot \mathrm{~N}$ ) torque. For self-supporting cable, tighten to $75 \mathrm{in} \cdot \mathrm{lbs}(850 \mathrm{~cm} \cdot \mathrm{~N})$ torque.

4.02 Remove connector base from bond assembly and insert it between shield and core wrap; inner sheath for double sheath cable, until stops meet outer sheath.

4.03 Place terminal wrench over stud and push down to bend corners and pull slit together.

4.04 Attach bond assembly over stud and tighten firmly with securing nut.

Note: Tail of base must contact connector top.

### 5.0 End Seal Installation

5.01 Remove plugs for the desired number of cables to be installed.
Note: Use appropriate port as needed for cable size to be installed (Check cable range shown on end seal.)
5.02 Install end seal on cable and put one wrap of vinyl tape around center of end seal.


Distance required between end seals shown below.

| SLiC | Distance Between End <br> Seal Centers |
| :--- | :---: |
| $2 \times 19$ | $16^{\prime \prime}(406 \mathrm{~mm})$ |
| $2 \times 29$ | $25^{\prime \prime}(635 \mathrm{~mm})$ |
| $3 \times 33$ | $29^{\prime \prime}(737 \mathrm{~mm})$ |
| $5 \times 33$ | $29^{\prime \prime}(737 \mathrm{~mm})$ |
| $7 \times 33$ | $29^{\prime \prime}(737 \mathrm{~mm})$ |
| $9 \times 36$ | $3 "^{\prime \prime}(813 \mathrm{~mm})$ |

Note: Location of end seal in SLiC is not flush with end.

5.03 Cut on dotted line, if necessary, according to the following chart:

|  | 2x19 | $\mathbf{3 \times 3 3}$ | $\mathbf{5 \times 3 3}$ | $\mathbf{7 \times 3 3}$ |
| :--- | ---: | :---: | :---: | :---: |
| SLiC | $\mathbf{2 \times 2 9}$ |  |  | $9 \times 36$ |
| If end seal diameter is <br> greater than: | $2.5 "$ <br> 64 mm | $3.8^{\prime \prime}$ <br> 99 mm | $5.8^{\prime \prime}$ <br> 147 mm | $7.4^{\prime \prime}$ <br> 188 mm |

## Note: Cut method and location indicated by dotted line on each End Seal.

Note: Dotted line configuration on largest end seal is different than others due end seal thickness.

5.04 End seal cutting is optional, but makes closing of closure easier with larger diameter cable. If end seal is not cut, then compress SLiC end by using a knife to slit through thin plastic membrane.

Then place a heavy duty cable tie, hose clamps or metal banding through the slit on each end and tighten to secure and compress seal.
5.05 For sheath repair of cables larger than maximum diameter as indicated on end seal, cut tail until end seal diameter is approximately $0.3^{\prime \prime}$ to $0.5^{\prime \prime}(8 \mathrm{~mm}$ to 13 mm ) greater than diameter of SLiC; i.e., the SLiC $3 \times 33$ should have a maximum end seal diameter in the range of 3.3 " to 3.5 " $(84 \mathrm{~mm}$ to 89 mm ).


### 6.0 Closure Assembly

6.01 Tie splice bundle and cable ends to bond bar.
6.02 Close latches to seal assembly.

Note: White cable ties used for clarity only.

### 7.0 Extending Closure

7.01 Remove bond bar with tubing from a second closure and cut off 6 " ( 152 mm ).
7.02 Cut second closure in half using center mark as a guide.

Note: Each half section will only fit over similar end of main closure body.
7.03 Install 6 " ( 152 mm ) bond bar with cover tubing on closure half.
Note: Use piece of braid from half section and attach to braid from main closure body or cut new braid to reach full length of extended closure.
7.04 Install half section over end of main body.
7.05 Tie cable to 6 " ( 152 mm ) bond bar.
7.06 Reposition end seal in extended body, close latches to seal.


Note: 2 x 19 and 9 x 36 BA Closures cannot be extended.

### 8.0 Accessories

8.01 • AC-HB1 Aerial Closure Offset Hanger Brackets

- AC-HB2 Extended Hanger Brackets

Designed to support and bond the SLiC Closures to the messenger strand when more than one cable is supported by the messenger.


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