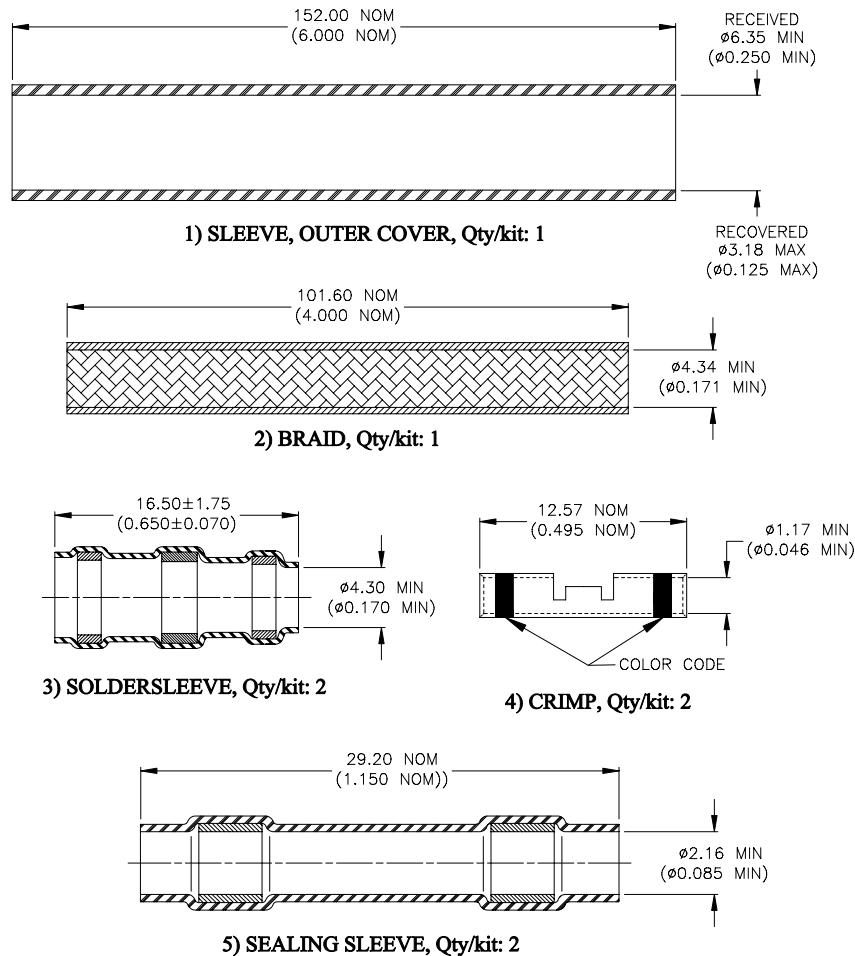



## SPECIFICATION CONTROL DRAWING



### MATERIALS

1. OUTER INSULATION SLEEVE: Heat-shrinkable, radiation cross-linked modified fluoropolymer. Color: black.
2. BRAID: Nickel-plated copper alloy.
3. SOLDERSLEEVE: Qty: 2  
 INSULATION SLEEVE: Heat-shrinkable, transparent blue, radiation cross-linked modified polyvinylidene fluoride.  
 SOLDER PREFORM WITH FLUX AND THERMAL INDICATOR:  
 SOLDER: TYPE Sn96 per ANSI-J-STD-006.  
 FLUX: TYPE ROM1 per ANSI-J-STD-004.  
 THERMAL INDICATOR: Color changes from orange to colorless.
4. CRIMP SPLICE: Nickel-plated copper alloy. Color code: red, Qty: 2  
 BASE METAL: Copper Alloy 101 or 102 per ASTM B-75.  
 PLATING: Ductile Nickel per AMS SAE-QQ-N-290.
5. SEALING SLEEVE: Qty: 2  
 INSULATION SLEEVE: Heat-shrinkable, transparent blue, radiation cross-linked modified polyvinylidene fluoride.  
 SEALING RINGS: Immersion resistant thermoplastic. Color: one clear, one red.

|   |   |   |                       |   |                  |                    |  |
|---|---|---|-----------------------|---|------------------|--------------------|--|
|                    |   | <b>Raychem</b><br>300 Constitution Drive<br>Menlo Park, CA 94025, USA   |                       | TITLE :<br><b>1 TO 1 SHIELDED TWISTED PAIR<br/>FLEXIBLE SOLDERSHIELD SPLICE KIT,<br/>SMALL, Ni-PLATED CRIMP AND BRAID</b> |                  |                    |  |
| Unless otherwise specified dimensions are in millimeters.<br>Inches dimensions are shown in brackets. |   |   |                       | DOCUMENT NO.:<br><b>D-150-0290-NF</b>   |                  |                    |  |
| TOLERANCES:<br>0.00 N/A<br>0.0 N/A<br>0 N/A   | ANGLES: N/A<br><br>ROUGHNESS IN<br>MICRON | Tyco Electronics reserves the right to amend<br>this drawing at any time. Users should<br>evaluate the suitability of the product for their<br>application. |                       | PROD. REV.:<br>A  | DOC. ISSUE:<br>3 | DATE:<br>17-Jan-03 |  |
| PREPARED BY:<br>mforonda  |   | REPLACES:<br>D020244  | DCR NUMBER<br>D030023 | SCALE:<br>None  | SIZE:<br>A       | SHEET:<br>1 of 2   |  |

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## SPECIFICATION CONTROL DRAWING

### APPLICATION

1. This kit is used to provide an environmentally protected 1 to 1 splice in twisted shielded pair cables having nickel-plated primaries and shield, and having an insulation rated for at least 135°C, (eg. 1-Raychem 55PC2126-20-9/0-9 to 1-Raychem 55PC2126-22-9/0-9).  
Cable jacket diameter: 4.75 (0.187) max.  
Cable braid diameter: 2.15 (0.085) min, 5.08 (0.200) max.
2. Temperature range: -55°C to +150°C.

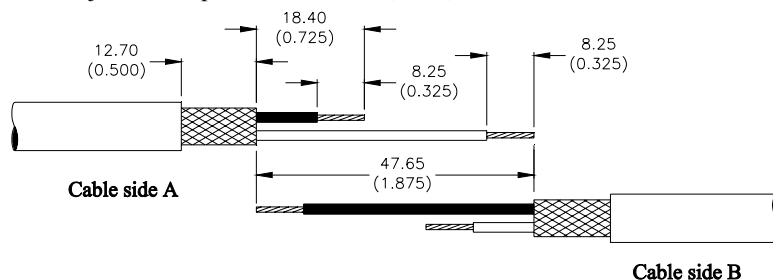
### INSTALLATION PROCEDURE

1. Cable preparation. See figure below.

Tolerances: All lengths  $\pm 0.50$  (0.020)

The short primary on cable side A is to be connected to the long primary on cable side B.

- a) Remove cable jacket and shield: 47.65 (1.875)
- b) Cut 1 primary: 18.40 (0.725) from cable jacket.
- c) Strip primary: 8.25 (0.325)
- d) Remove cable jacket to exposed braid: 12.70 (0.500)



2. Application Equipment

- a) AD-1377 crimp tool or equivalent.
- b) Steinel HL1802E Heat Gun with a soldersleeve reflector (Setting of 13 – 14)

3. Assembly Procedure



- a) Place the tubing on one end of the assembly.
- b) Place the soldersleeve on each cable side.
- c) Place the Nickel Braid shield splice onto the other cable assembly.
- d) Primary Conductor Splice:
  - 1) Place a sealing sleeve onto the longer lead.
  - 2) Crimp primaries into opposite ends of the crimp splices using a calibrated Raychem AD-1377 crimp tool or equivalent.
  - 3) Center the sealing sleeves over the splices.
  - 4) Apply heat to the center of the sleeve until it recovers, and then heat ends until sealing rings melt and flow along wires.
- e) Inspection:
  - 1) Conductors must be visible at point where they enter the crimp barrel.
  - 2) Both indentations of a crimp must be on the crimp barrel.
  - 3) Sealing sleeve inserts must have flowed along wire insulation.
  - 4) Sleeve must not have discolored to the degree that the crimp barrel cannot be inspected.
  - 5) Sleeve must not be cut or split.
- f) Shield Splice:
  - 1) Center the Nickel Braid shield splice over the splice and the exposed cable shields. Trim off excess length (as required) so that it will not cover the cable jacket. The jumper braid should overlap the cable braid.
  - 2) Position the soldersleeve over the end of the Nickel Braid and onto the cable jacket.
  - 3) Heat soldersleeves.
    - a) Apply heat to the center of the sleeve until the solder melts, flows and wets the solder to the cable shield and Nickel Braid.
    - b) Apply heat to end of sleeve until rings melt and flow along cable jacket.
    - c) Repeat for other end of sleeve.
  - 4) Position the tubing and center to overlap the splice equally on each end and apply heat to shrink the tubing.

Unless otherwise specified dimensions are in millimeters.

Inches dimensions are in between brackets.

|                                       |                 |                 |                        |                    |                  |
|---------------------------------------|-----------------|-----------------|------------------------|--------------------|------------------|
| DOCUMENT NO.:<br><b>D-150-0290-NF</b> | PROD. REV.<br>B | DOC ISSUE:<br>3 | DCR NUMBER:<br>D030023 | DATE:<br>17-Jan-03 | SHEET:<br>2 of 2 |
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