While this information is presented in good faith and believed to be accurate, A-D Technologies does not, however, guarantee satisfactory results from reliance on such information due to the many variables attendant with every situation. Persons or parties utilizing this publication are solely responsible for the proper selection, installation, operation, maintenance and utilization of all products. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding the performance, merchantability, fitness, or any other matter with respect to the products, nor as a recommendation to use any product in conflict with the intellectual property rights of any third party. A-D Technologies reserves the right, without notice, to alter or improve the design or specifications of the products described herein. [All sales are pursuant to A-D Technologies' terms and conditions of sale] Reproduction of this document, in part or in whole, is permitted solely for the purpose of distribution to other persons within your organization or contractors doing work for your company. All other distribution will require written consent from A-D Technologies.
1.0 GENERAL INFORMATION

1.1 PinPoint conduit is an ideal product for direct bury, Horizontal Directional Drilling (HDD), and plow applications where there is a need to have the ability to locate either a duct or a cable by electronic means. Utility protection is important to every provider due to the high cost of service outages, restoral, and customer inconvenience. PinPoint conduit provides a permanent, economical way to supply locate capabilities for buried facilities when placed into duct. This includes the use of dielectric fiber optic cable, which does not have any metal in the construction. A metallic conductor is necessary to provide a path for the electronic signal to pass. It is easy to locate PinPoint duct. A signal is applied to one end of the locate wire with a transmitter, and a portable receiver picks up the signal to help identify the route of the PinPoint. Note that soil conditions, depth of cover, and equipment type may affect the accuracy of the locate procedure. Typical transmitter and receiver combinations are shown (Figure 1). These include but are not limited to 3M, Metrotech, and Radio Detection.

1.2 The PinPoint wire is applied to the outside of the conduit during the manufacturing process. Narrow webbing connects the wire to the duct for ease of access for splicing. Placing the wire on the outside does not compromise the wall thickness or strength of the duct. PinPoint duct is available in 0.50” through 2-inch diameters. The copper clad wire is embedded in a layer of HDPE for corrosion and electrical protection. Specifications for PinPoint conduit are shown (Table A).
Table A

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50&quot; SDR-11</td>
<td>18</td>
<td>0.644&quot;</td>
<td>0.840 ± 0.004</td>
<td>0.076&quot;</td>
<td>0.096&quot;</td>
<td>9&quot;</td>
<td>497 lbs.</td>
<td>0.077</td>
</tr>
<tr>
<td>1&quot; SDR-11</td>
<td>18</td>
<td>1.042&quot;</td>
<td>1.315 ± 0.005</td>
<td>0.114&quot;</td>
<td>0.134&quot;</td>
<td>14&quot;</td>
<td>1,220 lbs.</td>
<td>0.189</td>
</tr>
<tr>
<td>1.25&quot; SDR-11</td>
<td>18</td>
<td>1.313&quot;</td>
<td>1.660 ± 0.006</td>
<td>0.151&quot;</td>
<td>0.171&quot;</td>
<td>17&quot;</td>
<td>1,962 lbs.</td>
<td>0.312</td>
</tr>
<tr>
<td>1.50&quot; SDR-11</td>
<td>18</td>
<td>1.506&quot;</td>
<td>1.900 ± 0.006</td>
<td>0.173&quot;</td>
<td>0.194&quot;</td>
<td>19&quot;</td>
<td>2,569 lbs.</td>
<td>0.407</td>
</tr>
<tr>
<td>2&quot; SDR-11</td>
<td>18</td>
<td>1.885&quot;</td>
<td>2.375 ± 0.006</td>
<td>0.216&quot;</td>
<td>0.242&quot;</td>
<td>24&quot;</td>
<td>4,008 lbs.</td>
<td>0.635</td>
</tr>
</tbody>
</table>

### CAUTION

The PinPoint wire may acquire induced foreign voltage during certain field conditions. Adjacent or parallel power lines may cause a voltage level that can be hazardous. Always test for foreign power prior to stripping or working with the PinPoint wire, using acceptable test equipment.

1.3 A cross-section of PinPoint duct is shown (Figure 2).

![PINPOINT DUCT SPECIFICATION](image)

Figure 2

No special tools are required for installing PinPoint conduit. PinPoint duct is available with an optional Silicore® super-slick permanent lining to reduce friction and maximize cable installation distances (Figure 3).
1.4 To install PinPoint conduit, employ standard HDPE duct installation procedures. When it is necessary to splice the PinPoint wire to maintain electrical continuity, it is recommended to use a utility knife with a hook blade to separate the wire from the duct. A general-purpose wire stripper is sufficient for removing the PinPoint wire jacket for splicing. The wire is spliced using the PinPoint Direct Bury Splice Kit; A-D Technologies part number 1-907132. The kit contains two gel filled water resistant splice closures and two twist-on wire connectors (Figure 4).

Figure 3

Figure 4

Connector Size: 2 23/32" x 1 1/2"
Wire Type: Copper/Copper
Wire Range: Min #18/Max #10
Petroleum Sealant Temperature: -29°F to 250°F

Measurements (Inches):
A - 2.71
B - 0.94
C - 1.50
D - 0.60
The PinPoint wire splice connector has the following capacities (Table B).

<table>
<thead>
<tr>
<th>2-5 #16 Solid or Stranded Wires</th>
<th>2-6 #18 Solid or Stranded Wires</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 each #12 Solid or Stranded Wires</td>
<td>4 each #14 Solid or Stranded Wires</td>
</tr>
<tr>
<td>2 ea. #14 and 1ea. #12 Solid or Stranded Wires</td>
<td>2 ea. #16 and 2 ea. #14 Solid or Stranded Wires</td>
</tr>
</tbody>
</table>

Table B

2.0 PREPARATION AND SPLICING OF PINPOINT WIRE

2.1 In order to splice the PinPoint locate wire, begin by cutting the duct perpendicular with duct cutters, so there is a clean face for coupling the duct. The ends of each duct should overlap slightly to allow coupling of the ducts. Measure and mark the ducts to be coupled at 10 and 17 inches from the end (Figure 4). Separate the PinPoint wire from the duct using a utility knife with a hook blade, or other approved knife. Cut through the web to the 17-inch mark. Make the cut as close to the duct wall as possible, to not leave a ridge on the duct when coupling the duct.

2.2 Cut each duct again at the 10-inch mark, and join the ducts with an approved coupler according to the manufacturer's directions (Figures 5-7).

Figure 5

Figure 6

Figure 7
If a ridge remains after separating the PinPoint wire from the duct, shave any remaining HDPE with the knife until smooth. Shave the duct for a length of 10 inches, which should be enough for the coupler length requirements. Should the coupler be longer than this, continue shaving the ridge until it matches half the length of the coupler.

2.3 Strip back 5/8” of the HDPE jacket from around the PinPoint wire (Figures 7-8). Using the wire splice connector from the kit, place the connector fully onto both wire ends, and twist (clockwise) until it becomes tight (Figures 10-11). Pull each wire separately to ensure the connector threads have captured the wire.

2.4 Insert the PinPoint wires with the connector into the gel-filled closure. Push the connector fully to the bottom of the closure so that it is surrounded by the silicone sealant (Figures 12-13). Place the PinPoint wires into the grooves at the entrance of the splice, fold and lock the cap into place (Figures 14-15).
2.5 Fold the Excess slack of the PinPoint wire back onto the duct, and tape or tie wrap to the duct (Figures 16-17).
3.0 PINPOINT® DIRECT BURY SPLICE KIT SPECIFICATIONS

3.1 Application
The PinPoint direct bury splice kit includes two electrical spring connectors to connect two or three pre-stripped copper clad steel wire ends, with two silicon sealed snap closures for water resistance.

3.2 Regulatory Agencies
UL Listed as a Wire Connector System for use with Underground Conductors. Tested per UL Standard 486D for use in damp or wet conditions. Not to be used in continuous submersion applications.

3.3 Engineering Specification
The direct bury splice kit effectively seals out moisture when using two or more conductors. The electrical connector shall be equipped with a steel spring shell, covered with a PVC insulator. The sealant tube is made of polypropylene and filled with silicone electrical insulating gel. Installation of the kit according to recommendations will help ensure a water-resistant connection for use in locating the PinPoint conduit.
3.4 Construction
Connector: Steel spring shell, flame retardant PVC insulator
Tube: Sunlight and Impact Resistant Blended Polypropylene
Gel: Silicone electrical insulating gel

3.5 The PinPoint splice connector specifications are shown (Figure 9 and Table B).

![Image](image_url)

**Figure 9**

<table>
<thead>
<tr>
<th>APPLICATION TEMPERATURE</th>
<th>32°F – 120°F (0°C – 49°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING TEMPERATURE</td>
<td>-29°F – 250°F (-34°C – 121°C)</td>
</tr>
<tr>
<td>VOLTAGE RATING</td>
<td>600 V</td>
</tr>
</tbody>
</table>

⚠️ DO NOT STORE OVER 120°F (49°C)

⚠️ NOT FOR USE IN DIRECT ULTRAVIOLET (SUNLIGHT) EXPOSURE

**TABLE B**

4.0 CONTACT INFORMATION

4.1 Customer Service 1-800-847-7661 or 1-865-218-3460
Fax 1-865-218-3461

3.6 Web: [www.adtechnologies.com](http://www.adtechnologies.com)

3.7 Email: moreinfo@adtechnologies.com

3.8 For further information on this product, contact Customer Service who can arrange for a Field Support Engineer to contact you directly.
3.9 A-D Technologies has a library of Technical Bulletins that are for use by our customers and their placing crews.