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› JRready ST6119 Deutsch Solid Pin Size 16 Contact Kit Instruction Manual

## JRready ST6119

# JRready ST6119 Deutsch Solid Pin Size 16 Contact Kit Instruction Manual

Comprehensive guide for installation and use of JRready ST6119 Deutsch solid contacts for DT connectors, 14-20AWG.

## 1. PRODUCT OVERVIEW

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The JRready ST6119 Deutsch Contact Kit provides high-quality solid barrel contacts designed for use with Deutsch DT series and other compatible connectors. These size 16 contacts are suitable for 14-20AWG wire, offering stable conductivity and robust connections for various electrical applications.



Image 1.1: Overview of the JReady ST6119 Deutsch Solid Contacts Kit, showing a large quantity of pin and socket contacts.

## 2. PACKAGE CONTENTS

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- 60 pairs of Size 16 contacts (total 120 pieces):
  - Pin contact: 0460-215-16141
  - Socket contact: 0462-209-16141
- Material: Copper with nickel plating.
- Green stripe for size 16 identification.

## 3. SPECIFICATIONS

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Specification	Detail
Model Number	ST6119
Contact Size	16
Wire Range	14-20 AWG (recommended for 14-16 AWG with JRD-HDT-48/ACT-M202 crimping tool)
Current Rating	13A
Contact Material	Tin Bronze (Nickel Plating)
Contact Type	Solid Barrel (Pin and Socket)
Compatible Connector Series	HD30 Series, HDP20 Series, DRC Series, HD10 Series, DT Series, DRB Series, DTV Series, AEC Series, STRIKE Series, Jiffy Splice
Product Dimensions	3.11 x 2.8 x 0.71 inches
Item Weight	1.59 ounces

## PERFECT COMBINATION OF HARDNESS & TOUGHNESS



**Pin**

**Soc**

<b>Model</b>	0462-215-16141
<b>Size</b>	16#Pin
<b>Material</b>	Tin Bronze
<b>Surface Treatment</b>	Nickelplate
<b>Heat Treatment</b>	Yes

<b>Model</b>	0462-209-16141
<b>Size</b>	16#Soc
<b>Material</b>	Tin Bronze
<b>Surface Treatment</b>	Nickelplate
<b>Heat Treatment</b>	Yes

Image 3.1: Detailed specifications for JRready Size 16 Pin and Socket contacts, including model numbers, size, material, surface treatment, and heat treatment.

## 4. CRIMPING INSTRUCTIONS

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Proper crimping is essential for reliable electrical connections. Always use a 4-way indent crimping tool designed for solid contacts, such as the JRD-HDT-48 or ACT-M202, for optimal results.

### 4.1. Preparation

1. **Select the Correct Contact:** Choose either a pin (male) or socket (female) contact based on your connector type.
2. **Strip the Wire:** Carefully strip approximately 5mm of insulation from the end of your wire (14-20 AWG). Ensure the wire strands are not damaged or twisted.
3. **Prepare the Crimping Tool:** If using a crimping tool with an adjustable positioner, ensure it is set to the correct wire gauge (e.g., 1.0/16 AWG for size 16 contacts).

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Video 4.1: Demonstration of preparing and crimping DT solid terminals, showing wire stripping and crimping tool usage.

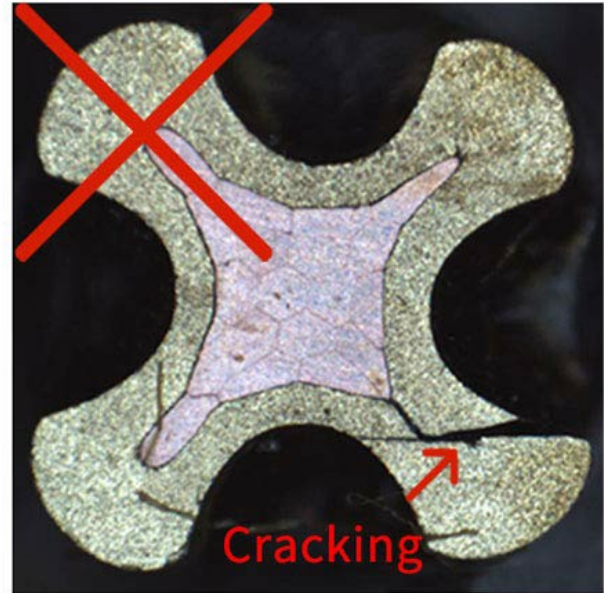
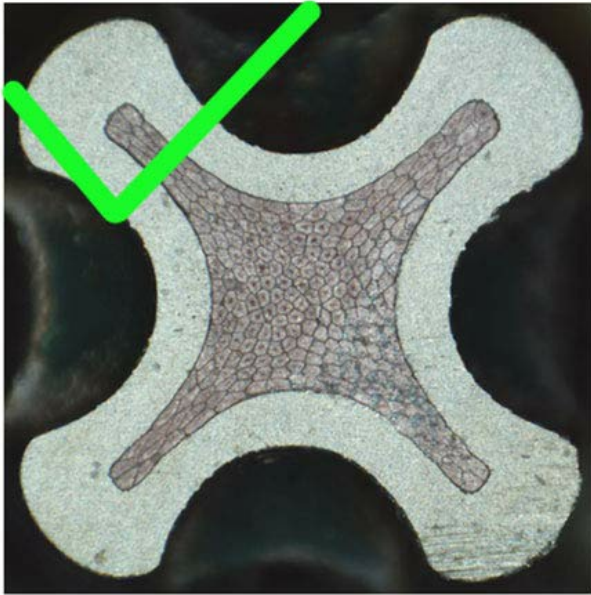
### 4.2. Crimping Process

4. **Insert Contact into Tool:** Place the contact into the crimping tool's positioner, ensuring the open end of the contact faces upwards.
5. **Insert Stripped Wire:** Insert the stripped end of the wire into the contact until it bottoms out.
6. **Crimp:** Squeeze the crimping tool handles firmly until the ratchet mechanism releases automatically. This ensures a complete and proper crimp.
7. **Inspect the Crimp:** After crimping, gently tug on the wire to ensure it is securely fastened to the contact. The crimp should be symmetrical with no visible wire strands outside the crimp barrel.

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Video 4.2: Step-by-step guide on using the JRready ST2169 Deutsch Crimping Tool for solid contacts, including positioner installation, wire stripping, and crimping.

## CONTACTS CROSS SECTION ANALYSIS & TENSILE TEST



CONTACT P/N: JRREADY 0460-215-16141 P  
WIRE SIZE: 16AWG  
CRIMP TOOL: JRD-HDT-48  
SELECTOR NO.: 1.0/16 mm<sup>2</sup>/AWG  
TENSILE: 247N  
TEST RESULT: Qualified

CONTACT P/N: Other 0460-215-16141 P  
WIRE SIZE: 16AWG  
CRIMP TOOL: Other 4 Indent Crimp Tool  
SELECTOR NO.: None  
TENSILE: ? N  
TEST RESULT: Test is invalid;  
(Reason: contact cracking)

Image 4.1: Cross-section analysis of a properly crimped JReady contact (left) showing no cracking, compared to an improperly crimped contact (right) with visible cracking.

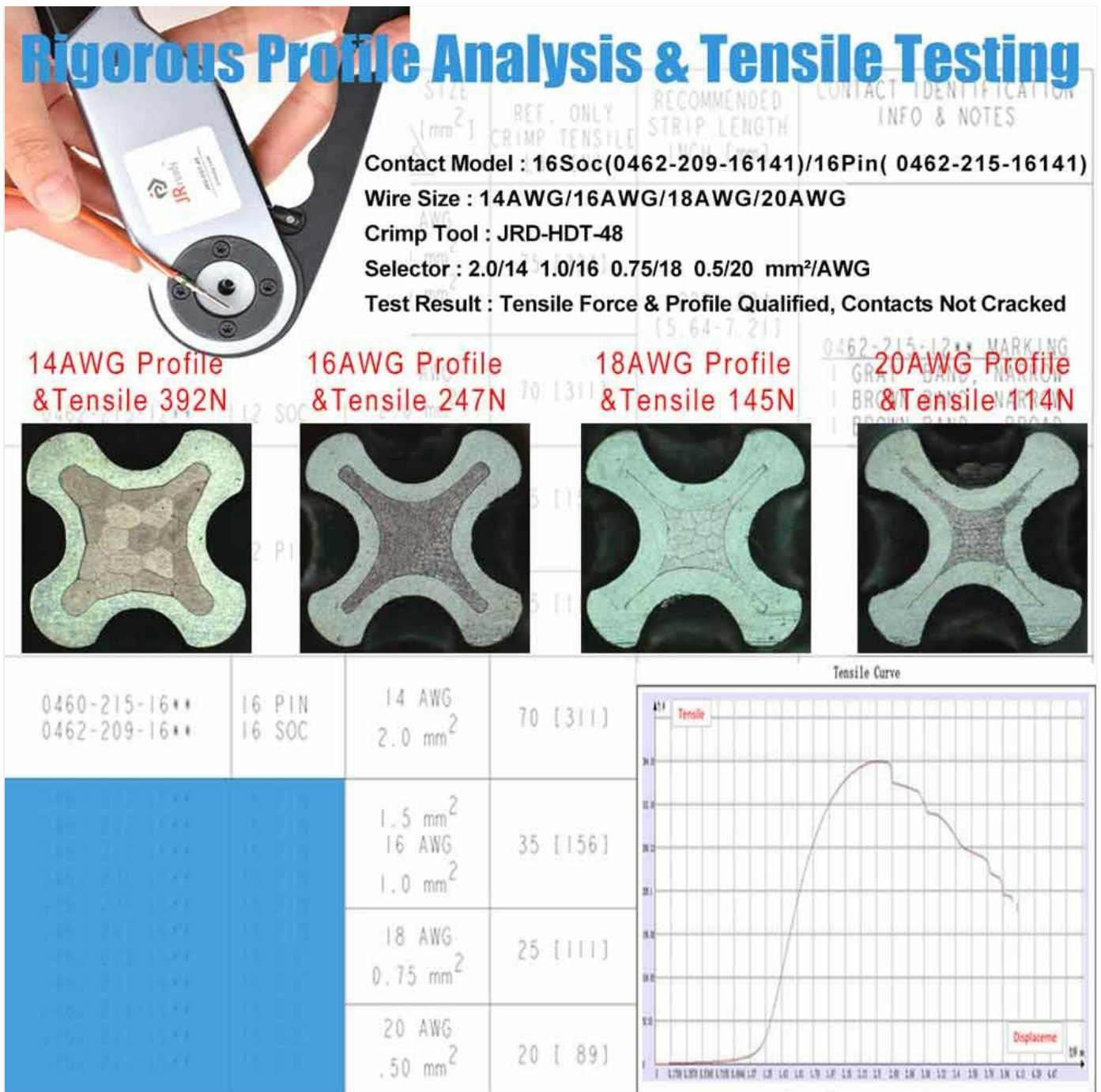


Image 4.2: Results from rigorous profile analysis and tensile testing of JRready contacts, demonstrating optimal crimp profiles and tensile strength for various AWG wires.

## 5. CONNECTOR ASSEMBLY

Once contacts are crimped onto the wires, they can be inserted into the appropriate Deutsch connector housings.

1. **Insert Contacts:** Push the crimped contacts into the correct cavities of the connector housing until a click is felt, indicating they are securely locked.
2. **Install Wedge Locks:** Insert the appropriate wedge lock (orange for plugs, green for receptacles) into the connector housing. Ensure it is fully seated to secure the contacts.

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Video 5.1: Detailed steps for installing DTM series contacts into their respective connector housings, including wedge lock insertion.

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Video 5.2: Comprehensive guide on how to use a JRready connector kit, demonstrating the crimping and assembly process for various Deutsch connectors.

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Video 5.3: Instructional video on using a JRready connector kit, covering the crimping of terminals and their insertion into connector bodies.

## 6. CONTACT REMOVAL

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If a contact needs to be removed or replaced, a specialized removal tool (e.g., DRK-RT1B) is required.

1. **Remove Wedge Lock:** Use needle-nose pliers or a suitable tool to carefully pull out the wedge lock from the connector housing.
2. **Release Contact:** Insert the contact removal tool into the front of the connector cavity, aligning it with the contact's locking finger. Gently push the tool to release the locking finger while simultaneously pulling the wire from the back of the connector.

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Video 6.1: Demonstration of how to crimp, assemble, and disassemble Deutsch DTP series connectors, including the use of a removal tool for contacts.

## 7. QUALITY ASSURANCE AND TESTING

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JRready contacts undergo rigorous testing to ensure high performance and durability.

- **Tensile Strength Testing:** Contacts are tested for tensile strength to ensure they can withstand significant pulling force without breaking, indicating a secure crimp.
- **Cross-Section Analysis:** Microscopic analysis of crimped contacts confirms proper wire compression and absence of voids or cracks.
- **Insertion and Extraction Force Testing:** Automated testing ensures consistent and appropriate force is required for mating and unmating contacts, contributing to reliable connections.
- **IP68 Waterproof Testing:** While this kit is for contacts, the compatible Deutsch connectors are often IP68 rated, and the contacts are designed to maintain this seal when properly installed.

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Video 7.1: Demonstration of JRready DT Deutsch series connector contacts crimping test, highlighting the strength and integrity of the crimped connection.

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Video 7.2: This video shows the quality of JRready solid contacts, emphasizing their robust design and resistance to cracking during crimping.

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Video 7.3: This video demonstrates the IP68 waterproof testing process for JRready DT connectors, showcasing the reliability of the sealed connections.



Image 7.1: Automated testing equipment performing overall detection of insertion and extraction force on JRready contacts.

## 8. MAINTENANCE AND STORAGE

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To ensure the longevity and performance of your JRready contacts:

- Store contacts in a dry, clean environment to prevent corrosion.
- Keep contacts separated by type (pin/socket) and size to avoid mixing.
- Regularly inspect contacts for any signs of damage or corrosion before use.

## 9. TROUBLESHOOTING

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- **Poor Crimp:** If the wire pulls out easily or the crimp appears deformed, ensure you are using the correct crimping tool and die setting for the wire gauge and contact size. Re-strip the wire and attempt crimping again.
- **Contact Not Locking in Housing:** Verify that the contact is fully crimped and that the locking tang is not bent. Ensure the wedge lock is correctly oriented and fully inserted.
- **Difficulty Removing Contact:** Ensure you are using the correct contact removal tool and applying gentle pressure to release the locking finger while pulling the wire.

## 10. SAFETY INFORMATION

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Always observe basic electrical safety precautions when working with electrical components:

- Disconnect power before working on any electrical system.
- Use appropriate personal protective equipment (PPE), such as safety glasses.
- Ensure all connections are secure and properly insulated to prevent short circuits.
- Do not exceed the specified current rating of the contacts.

