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KnuKonceptz Kolossus-Flex-Kable-4Gauge

KnuKonceptz Kolossus Flex Kable OFC 4 Gauge Power Wire Instruction Manual

Model: Kolossus-Flex-Kable-4Gauge

1. Introduction

The KnuKonceptz Kolossus Flex Kable OFC 4 Gauge Power Wire is designed for high-performance electrical applications, offering superior conductivity and flexibility. This cable features 2058 strands of tinned pure Oxygen Free Copper (OFC) encased in an ultra-flexible matte PVC jacket. Its robust construction ensures excellent resistance to abrasion, oil, and extreme temperatures, making it suitable for various environments.

This manual provides essential information regarding the proper installation, usage, and maintenance of your KnuKonceptz Kolossus Flex Kable to ensure optimal performance and longevity.

Key Features:

- **2058 Strands of Tinned Oxygen Free Copper (OFC):** Ensures maximum current transfer and corrosion resistance.
- **Ultra Flex Matte Soft Touch PVC:** Provides exceptional flexibility for easy routing and installation, while offering durability.
- **Exceeds American Wire Gauge (AWG) Standards:** Guarantees true gauge sizing for reliable power delivery.
- **Versatile Applications:** Ideal for automotive, truck, solar, and marine electrical systems.
- **Max Load:** Capable of handling loads up to 150A at 20 feet.



Image 1.1: A coiled length of KnuKonceptz Kolossus Flex Kable 4 Gauge Power Wire in blue, showcasing its flexibility and jacket finish.

2. Safety Information

Always prioritize safety when working with electrical systems. Improper installation can lead to electrical shock, fire, or damage to equipment. Adhere to the following safety guidelines:

- **Disconnect Power:** Before beginning any installation, ensure all power sources are disconnected. For vehicle installations, disconnect the negative terminal of the battery.
- **Wear Protective Gear:** Use appropriate personal protective equipment (PPE) such as safety glasses and insulated gloves.
- **Use Correct Tools:** Employ tools specifically designed for electrical work, including wire strippers, crimpers, and cutters.
- **Proper Fusing:** Always install appropriate inline fuses as close to the power source as possible to protect the circuit from overcurrent. Consult your equipment's manual for recommended fuse ratings.
- **Ventilation:** Ensure adequate ventilation when soldering or working with chemicals.
- **Professional Installation:** If you are unsure about any aspect of the installation, consult a qualified professional.

3. Installation Guidelines

Proper installation of the power wire is critical for system performance and safety. Follow these general steps:

1. **Plan the Route:** Determine the shortest and safest path for the power wire from the power source (e.g., battery) to the component (e.g., amplifier). Avoid routing near moving parts, sharp edges, or heat sources.

2. **Measure and Cut:** Measure the required length of wire, allowing for some slack. Cut the wire cleanly using appropriate wire cutters.
3. **Strip the Insulation:** Carefully strip the outer PVC jacket to expose the tinned copper strands. Ensure not to cut or damage the copper strands.
4. **Terminate the Wire:** Use high-quality connectors (e.g., ring terminals, ferrules) appropriate for 4 AWG wire. Crimp or solder the connectors securely to the exposed wire strands. For soldering, use a heat sink to prevent the PVC jacket from melting.
5. **Secure Connections:** Ensure all connections are tight and free from corrosion. Use heat shrink tubing over crimped or soldered connections for insulation and strain relief.
6. **Install Fusing:** Install an inline fuse holder with the correct fuse rating as close as possible to the power source (typically within 18 inches of the battery for automotive applications).
7. **Route and Secure:** Route the wire along the planned path, securing it with cable ties or clamps every 12-18 inches to prevent movement and abrasion. Use grommets when passing through metal panels to protect the wire from sharp edges.
8. **Connect to Components:** Connect the terminated wire to the power source and the component, ensuring correct polarity (+ to +).
9. **Test System:** Once all connections are made and secured, reconnect the power source and test the system for proper operation.

Wire Construction:

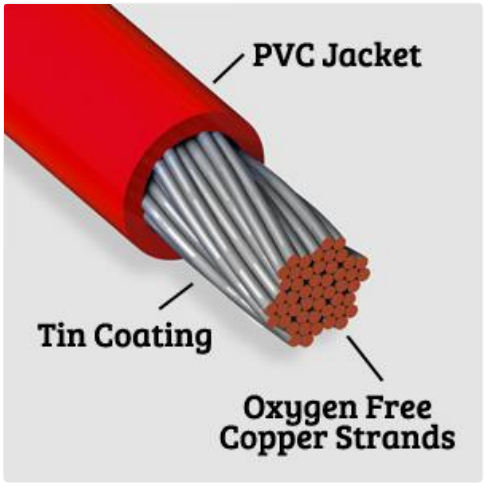


Image 3.1: Cross-section diagram illustrating the components of the Kolossus Flex Kable: PVC Jacket, Tin Coating, and Oxygen Free Copper Strands.



Image 3.2: A close-up view of the KnuKonceptz Kolossus Flex Kable, highlighting the tinned Oxygen Free Copper strands within the blue PVC jacket.

4. Usage Considerations

The KnuKonceptz Kolossus Flex Kable is designed for efficient power transfer in various demanding applications. Consider the following for optimal performance:

- **Gauge Selection:** Always use the appropriate wire gauge for your application's current draw and cable length to minimize voltage drop and prevent overheating. The 4 AWG cable is rated for up to 150 Amperes over a 20-foot length.
- **Environmental Factors:** The tinned OFC construction makes this cable suitable for high-moisture environments such as marine and outdoor solar installations, as it resists oxidation.
- **Temperature Range:** The ultra-flex jacket is designed to withstand temperatures from -40°C to 105°C, ensuring reliable performance in diverse climates.
- **Flexibility:** The high strand count and flexible PVC jacket allow for easier routing in tight spaces compared to less flexible cables.

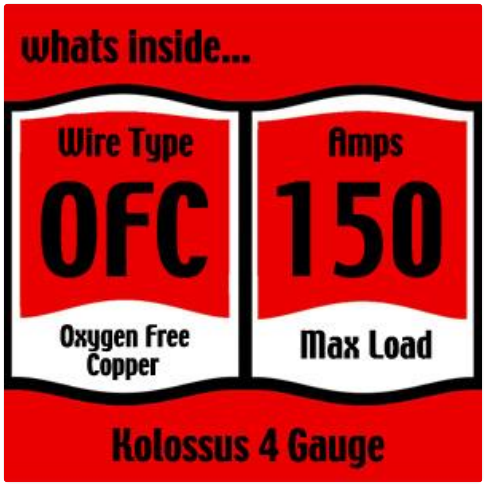


Image 4.1: Information graphic detailing the wire type (OFC) and maximum load (150 Amps) for Kolossus 4 Gauge wire.

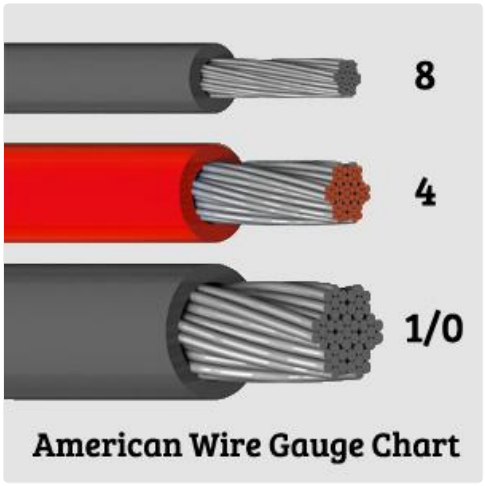


Image 4.2: An American Wire Gauge (AWG) chart visually comparing the cross-sectional area of 8 gauge, 4 gauge, and 1/0 gauge wires.

5. Maintenance

The KnuKonceptz Kolossus Flex Kable is designed for durability and requires minimal maintenance. However, periodic inspection can help ensure continued optimal performance:

- **Visual Inspection:** Regularly check the entire length of the cable for any signs of physical damage, such as cuts, abrasions, or kinks in the insulation.
- **Connection Integrity:** Inspect all connections (at the battery, fuse holder, and components) to ensure they remain tight and free from corrosion. Loose connections can lead to resistance, heat buildup, and power loss.
- **Cleanliness:** Keep the cable and its connections clean and free from dirt, dust, and moisture. Use a non-conductive cleaner if necessary.
- **Environmental Protection:** While the cable is resistant to various elements, ensure it is not exposed to unnecessary stress, extreme heat, or corrosive chemicals.

6. Troubleshooting

If you experience issues with your electrical system, consider the following troubleshooting steps related to the power wire:

Symptom	Possible Cause	Solution

Symptom	Possible Cause	Solution
No power to component	Blown fuse, loose connection, damaged wire	Check and replace fuse. Inspect all connections for tightness. Visually inspect wire for damage; replace if necessary.
Component underperforming (e.g., amplifier not reaching full power)	Voltage drop due to insufficient gauge, long wire run, or poor connections	Ensure correct wire gauge for application. Shorten wire run if possible. Tighten and clean all connections.
Wire or connections getting hot	Overcurrent, loose connections, insufficient gauge	Verify current draw does not exceed wire rating. Tighten connections. Ensure correct wire gauge for load.
Intermittent power	Loose or corroded connections, damaged wire	Inspect and clean all connections. Securely fasten terminals. Check wire for internal breaks.

7. Specifications

Feature	Detail
Brand	KnuKonceptz
Model Number	Kolossus-Flex-Kable-4Gauge-Blue-50ft
Wire Gauge	4 AWG (American Wire Gauge)
Conductor Material	Tinned Oxygen Free Copper (OFC)
Strand Count	2058 Strands (36 Gauge)
Insulation Material	Ultra Flex Matte PVC
Outer Diameter	11mm
Core Diameter (estimated)	8mm
Max Load Capacity	150A @ 20 feet
Temperature Rating	-40°C to 105°C
Compatible Devices	Amplifier, Speaker, Power Converters, Solar Applications
Product Dimensions (50 ft)	600 x 7.2 x 7.2 inches (uncoiled length x diameter x diameter)
Item Weight (50 ft)	10 Pounds

8. Warranty and Support

For specific warranty information regarding your KnuKonceptz Kolossus Flex Kable, please refer to the documentation provided with your purchase or visit the official KnuKonceptz website. KnuKonceptz is committed to providing quality products and customer satisfaction.

For technical support, product inquiries, or assistance with installation, please contact KnuKonceptz directly through their official channels.

You can find more information and contact details by visiting the KnuKonceptz Store on Amazon: KnuKonceptz Amazon Store

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