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› Stock Wire 16 AWG TFFN 26 Stranded Copper Fixture Wire Instruction Manual

Stock Wire TFFN16STR

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1. INTRODUCTION

This manual provides essential information regarding the Stock Wire 16 AWG TFFN 26 Stranded Copper Fixture Wire. It covers product specifications, intended applications, installation guidelines, and important safety considerations. Please read this manual thoroughly before handling or installing the wire to ensure safe and correct usage.

2. PRODUCT OVERVIEW



Image 1: A segment of the Stock Wire 16 AWG TFFN 26 Stranded Copper Fixture Wire. The wire features a white outer insulation, which is a combination of PVC and nylon, protecting the inner core. One end of the wire is stripped, revealing the multiple strands of bright copper conductor, indicating its stranded construction for flexibility.

3. APPLICATIONS

The Stock Wire 16 AWG TFFN 26 Stranded Copper Fixture Wire is versatile and suitable for various electrical applications. It may be used as:

- **Fixture Wire:** For internal wiring of lighting fixtures and other electrical apparatus.
- **Machine Tool Wiring (MTW):** Suitable for use in machine tools, appliances, and control circuits.
- **Appliance Wiring Material (AWM):** For internal wiring of appliances.

All applications are rated for 600 volts.

4. STANDARDS AND CERTIFICATIONS

This product adheres to recognized industry standards and certifications:

- **UL Standard 66:** Underwriters Laboratories standard for fixture wire.
- **National Electrical Code (NEC):** Complies with relevant sections of the NEC for TFFN, MTW, or AWM types.
- **RoHS Compliant:** Meets the Restriction of Hazardous Substances Directive.

5. CONSTRUCTION

The wire features a robust construction designed for durability and performance:

- **Conductor:** Annealed (soft) copper, stranded for flexibility.
- **Insulation:** Tough, heat and moisture-resistant Polyvinyl Chloride (PVC).
- **Jacket:** An outer layer of nylon (polyamide) applied over the PVC insulation for added protection.

6. SPECIFICATIONS

Specification	Value
Wire Size	16 AWG
Number of Strands	26
Conductor Material	Copper
Insulation Material	PVC with Nylon Jacket
Vinyl Insulation Thickness	0.015 Inches
Nylon Jacket Thickness	0.004 Inches
Outside Diameter	0.099 Inches
Weight	0.009 lbs/ft
Voltage Rating	600 Volts
Allowable Ampacity (TFFN)	8 Amps
Allowable Ampacity (MTW)	10 Amps
Temperature Rating (TFFN)	90°C (dry locations)
Temperature Rating (MTW)	60°C (wet/oil/coolant locations), 90°C (dry locations, ampacity limited to 75°C)

Specification	Value
Temperature Rating (AWM)	105°C (dry locations)
Color	White
Model Number	TFFN16STR
UPC	686175783148

7. SAFETY INFORMATION

WARNING: Electrical work can be dangerous and should only be performed by qualified individuals. Failure to follow safety precautions can result in serious injury, death, or property damage.

- **Professional Installation:** It is highly recommended that all electrical wiring be installed by a licensed electrician in accordance with local and national electrical codes.
- **Disconnect Power:** Always ensure power is disconnected at the circuit breaker or fuse box before beginning any electrical work. Verify with a voltage tester.
- **Proper Tools:** Use appropriate insulated tools for electrical work.
- **Inspect Wire:** Before installation, visually inspect the wire for any damage, cuts, or abrasions. Do not use damaged wire.
- **Environmental Conditions:** Ensure the wire's temperature ratings are suitable for the intended application's environmental conditions (wet, dry, oil, coolant exposure).
- **Voltage and Ampacity:** Do not exceed the rated voltage (600V) or allowable ampacity for the specific wire type (TFFN, MTW) to prevent overheating and fire hazards.

8. SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of electrical wiring. Follow these general guidelines:

1. **Plan Your Wiring:** Determine the path of the wire, ensuring it is protected from physical damage and excessive heat.
2. **Cut to Length:** Measure and cut the wire to the required length, allowing for sufficient slack for connections.
3. **Strip Insulation:** Carefully strip the outer insulation and inner conductor insulation using a wire stripper appropriate for 16 AWG wire. Avoid nicking the copper strands.
4. **Make Connections:** Connect the wire to terminals, connectors, or other wires using appropriate methods (e.g., wire nuts, crimp connectors, soldering) ensuring secure and tight connections.
5. **Secure Wiring:** Use appropriate fasteners (e.g., staples, clips) to secure the wire, preventing strain on connections and accidental damage.
6. **Verify Installation:** After installation, visually inspect all connections and the wire path. Test for continuity and proper voltage before restoring power.

Always consult the National Electrical Code (NEC) and local building codes for specific requirements in your area.

9. OPERATING

Once properly installed, the Stock Wire 16 AWG TFFN 26 Stranded Copper Fixture Wire operates as a conductor for electrical current within its specified voltage and ampacity limits. It is designed for continuous operation under normal conditions within its temperature ratings.

- Ensure the connected load does not exceed the wire's allowable ampacity to prevent overheating.

- The wire's insulation provides protection against electrical shock and environmental factors as per its TFFN, MTW, and AWM ratings.

10. MAINTENANCE

Electrical wiring generally requires minimal maintenance once installed correctly. However, periodic inspection can help ensure long-term safety and performance:

- **Visual Inspection:** Periodically inspect exposed sections of the wire for any signs of physical damage, fraying, discoloration, or degradation of the insulation.
- **Connection Integrity:** If accessible, check electrical connections for tightness and corrosion. Loose connections can generate heat and pose a fire risk.
- **Environmental Changes:** If the environmental conditions around the wiring change significantly (e.g., increased heat, moisture, or chemical exposure), reassess the suitability of the wire and consider professional inspection.
- **Cleaning:** Keep the area around wiring clean and free from dust, debris, or flammable materials.

Any signs of damage or unusual conditions should prompt immediate investigation by a qualified electrician.

11. TROUBLESHOOTING

Troubleshooting electrical wiring issues typically requires specialized knowledge and equipment. If you experience any problems related to the electrical circuit where this wire is installed, consider the following:

- **No Power/Intermittent Power:** Check circuit breakers or fuses. If they trip frequently, it may indicate an overload or short circuit.
- **Overheating:** If the wire or connected components feel hot to the touch, immediately disconnect power. This could indicate an overload, loose connection, or damaged insulation.
- **Burning Smell:** A burning smell is a serious indicator of an electrical fault. Disconnect power immediately and do not restore until the issue is identified and resolved by a professional.
- **Visible Damage:** If you observe any physical damage to the wire, such as cuts, exposed copper, or melted insulation, the wire must be replaced.

Always consult a licensed electrician for any electrical troubleshooting beyond basic circuit breaker resets. Do not attempt repairs if you are not qualified.

12. WARRANTY AND SUPPORT

Specific warranty information for the Stock Wire 16 AWG TFFN 26 Stranded Copper Fixture Wire is not provided in this manual. For details regarding product warranty, technical support, or further inquiries, please contact Stock Wire directly or refer to the product packaging and purchase documentation.

Ensure you retain your proof of purchase for any warranty claims.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question