User Manual - Dahua 2X18AWG-U

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1. Introduction

The **Dahua 2X18AWG-U** is an **unshielded fire alarm cable**, UL-certified, designed for use in **emergency lighting, fire detection, ventilation control, communication, and fire suppression systems**. Its construction with **solid or stranded copper conductors** ensures reliable and durable electrical conductivity.

This cable is ideal for commercial, industrial, and residential applications, offering **high-temperature resistance and flame retardant properties** to enhance safety in critical installations.

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2. Key Features

- **Solid or stranded copper conductor** for durability.
- **UL-certified** for fire alarm systems.
- **PVC insulation and jacket** for flame and heat resistance.
- **Weather-resistant**: Suitable for outdoor exposure.
- **High voltage resistance**: Tested at **2500V DC/2s**.
- **Flexible and adaptable design**, customizable to specific requirements.

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3. Installation

3.1. Prerequisites

Before installation, ensure you have:

- A proper installation area free of electrical interference.
- Wire cutting and fastening tools.

- Conduits and cable trays if additional protection is needed.
- Connection to compatible fire detection and control systems.

3.2. Installation Procedure

1. **Carefully unroll the cable** to avoid bends or damage.
2. **Determine the cable routing**, ensuring an efficient installation path.
3. **Secure the cable** within conduits or trays as required.
4. **Make secure connections** using certified terminals.
5. **Verify continuity and insulation** before powering the system.

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4. Usage and Maintenance

- **Periodic Inspection**: Check cable integrity every six months.
- **Proper Cleaning**: Prevent dust and debris buildup on connectors.
- **Resistance Testing**: Perform regular continuity and insulation tests.
- **Preventive Replacement**: Replace damaged or visibly deteriorated cables.

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5. Troubleshooting

Issue	Possible Cause	Solution
No signal in the system	Disconnected or damaged cable	Check connections and continuity
Insulation failure	Excessive heat exposure	Replace affected sections and reinforce protection

Overheating	Circuit overload	Verify system compatibility

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6. Technical Specifications

- **Model**: 2X18AWG-U
- **Conductor Type**: 1/1.02±0.02 mm bare copper
- **Maximum Resistance**: 21.4 Ω/KM at 20°C
- **Insulation**: Black and red PVC
- **Insulation Thickness**: Average 0.38 mm / Minimum 0.33 mm
- **Outer Jacket**: UL105°C PVC-55P red PVC
- **Outer Diameter**: 5.1 ± 0.3 mm
- **Jacket Thickness**: Average 0.58 mm / Minimum 0.46 mm
- **Maximum Temperature**: 105°C (221°F)
- **Voltage Resistance Test**: 2500V DC / 2s
- **Minimum Insulation Resistance**: 100MΩ/KFT at 15.6°C
- **Flame Retardant Rating**: VW-1
- **Certification**: UL Listed
- **Packaging Method**: 305-meter roll

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7. Warranty and Support

For technical assistance and updates, refer to Dahua’s official documentation or contact authorized technical support.