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› CAROL Comm Cable Shielded Riser 22/4 1000 Ft. Instruction Manual

CAROL E2004S.30.10

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Model: E2004S.30.10

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your CAROL Comm Cable Shielded Riser, 22/4, 1000 Ft. Model E2004S.30.10. This shielded riser-rated communication cable is designed for various low-voltage applications, offering protection against electromagnetic interference and suitable for vertical runs in buildings.



Figure 1: CAROL Comm Cable Shielded Riser 22/4. This image displays the internal structure of the cable, showing the protective metallic shield and the four individual insulated conductors, along with bare copper drain wires, essential for understanding its construction and termination.

SAFETY PRECAUTIONS

- Always disconnect power to equipment before installing or working with cables.
- Wear appropriate personal protective equipment (PPE), such as gloves and eye protection.
- Ensure proper grounding and shielding practices are followed to prevent electrical hazards and maintain signal integrity.
- Avoid sharp bends or excessive pulling force on the cable to prevent damage to conductors or shielding.
- Consult local electrical codes and regulations for specific installation requirements.

SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of the CAROL Comm Cable. Follow these steps for a

successful setup:

1. Planning the Cable Run:

- Determine the exact length of cable required, accounting for slack and termination points.
- Identify the path for the cable run, ensuring it avoids sources of excessive heat, physical damage, or strong electromagnetic interference.
- Verify that the chosen path complies with local building and electrical codes for riser-rated cables.

2. Cable Preparation:

- Carefully strip the outer jacket of the cable using a suitable cable stripper, exposing the metallic shield and insulated conductors.
- Gently unwrap or cut back the metallic shield, ensuring not to damage the inner conductors.
- Separate and strip the insulation from each of the four 22 AWG conductors as needed for termination.

3. Routing and Securing:

- Route the cable along the planned path, using appropriate cable ties, clips, or conduits to secure it.
- Maintain a minimum bend radius to prevent damage to the internal conductors and shield. Consult cable specifications for exact bend radius limits.
- For riser applications, ensure the cable is properly supported to prevent strain on connection points.

4. Termination:

- Terminate the conductors to the appropriate connectors or terminal blocks according to the equipment manufacturer's instructions.
- Ensure proper connection of the shield (drain wire) to ground at one end to provide effective EMI/RFI protection.
- Verify all connections are secure and free from shorts or open circuits.

OPERATION

Once installed, the CAROL Comm Cable operates passively as a signal transmission medium. Its primary function is to reliably carry low-voltage communication signals while providing protection against external interference. Ensure the following for optimal performance:

- **Signal Integrity:** The shielding helps maintain signal integrity by reducing electromagnetic interference (EMI) and radio frequency interference (RFI). Ensure the shield is properly grounded.
- **Environmental Conditions:** Operate the cable within its specified temperature and environmental ratings to prevent degradation of the jacket and insulation.
- **Connection Stability:** Periodically check connections to ensure they remain tight and free from corrosion, which can degrade signal quality.

MAINTENANCE

The CAROL Comm Cable is designed for long-term reliability with minimal maintenance. However, periodic inspection can help identify potential issues before they impact system performance.

- **Visual Inspection:** Regularly inspect exposed sections of the cable for any signs of physical damage, such as cuts, abrasions, or crushing.
- **Environmental Checks:** Ensure the cable is not exposed to conditions beyond its rated specifications, such as extreme temperatures or chemical exposure.
- **Connection Integrity:** Verify that all cable terminations remain secure and that there is no strain on the connection

points.

- **Cleaning:** If necessary, gently clean the outer jacket of the cable with a damp cloth. Avoid harsh chemicals that could degrade the jacket material.

TROUBLESHOOTING

If you experience issues with your communication system, consider the following troubleshooting steps related to the cable:

- **No Signal or Intermittent Signal:**
 - Check all connections for proper termination and tightness.
 - Inspect the cable for visible damage along its entire run.
 - Verify that the shield (drain wire) is correctly grounded at one end.
 - Test continuity of individual conductors using a multimeter.
- **Signal Interference (Noise):**
 - Ensure the cable's shield is properly grounded.
 - Check for proximity to strong electromagnetic sources (e.g., power lines, motors). Reroute if possible.
 - Verify that the cable is not damaged, compromising its shielding effectiveness.
- **Physical Damage:**
 - If the cable jacket or conductors are visibly damaged, the affected section may need to be replaced or repaired by a qualified technician.
 - Avoid splicing shielded cables unless proper shielding continuity can be maintained.

SPECIFICATIONS

Feature	Detail
Brand	CAROL
Model Number	E2004S.30.10
ASIN	B005T6RXQY
Cable Type	Communication Cable, Shielded Riser
Gauge / Conductors	22 AWG / 4 Conductors
Length	1000 Feet
Shape	Round
Specification Met	CSA
Manufacturer	Carol

WARRANTY AND SUPPORT

For information regarding product warranty or technical support, please refer to the official CAROL brand website or contact their customer service department. Keep your purchase receipt and product model number (E2004S.30.10) readily available when seeking support.

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