8354122/1PK

Cable Gland EMC Metallic Color Brass with Locknut M50 User Manual

Model: 8354122/1PK | **Brand:** Generic

1. Introduction and Overview

This manual provides essential information for the proper installation, operation, and maintenance of the Generic Cable Gland EMC Metallic Color Brass with Locknut M50. This product is designed to provide secure cable entry into enclosures, ensuring both environmental protection (IP68) and electromagnetic compatibility (EMC) shielding for cables ranging from 30mm to 38mm in diameter.

The cable gland is constructed from brass, offering durability and effective grounding for EMC applications. Its primary function is to seal cables against dust and water ingress while maintaining the integrity of the electrical system's shielding against electromagnetic interference.

2. Safety Information

Please read and understand all safety instructions before installing or handling the cable gland. Failure to follow these instructions may result in property damage, injury, or death.

- Always disconnect power to the equipment before performing any installation or maintenance.
- Ensure that the cable gland is suitable for the specific application, including environmental conditions and cable type.
- Use appropriate personal protective equipment (PPE), such as gloves and eye protection.
- Installation should be performed by qualified personnel familiar with electrical installations and relevant safety standards.
- Do not overtighten the gland, as this may damage the cable or the gland itself.
- Ensure proper grounding and bonding for effective EMC shielding.

3. Product Components and Features

The M50 Cable Gland consists of several key components designed to provide a robust and reliable cable entry solution.

Figure 1: Generic M50 Cable Gland EMC Metallic Color Brass. This image shows the complete cable gland assembly, highlighting its metallic finish and robust construction, with visible markings for M50 and IP68.

Key Features:

- **Material:** High-quality brass for durability and excellent conductivity for EMC.
- **Thread Size:** M50, suitable for standard metric threaded entries.
- **Cable Range:** Accommodates cables with diameters from 30mm to 38mm.
- **IP Rating:** IP68, providing complete protection against dust ingress and long periods of immersion under pressure.
- **EMC Shielding:** Designed to provide effective electromagnetic compatibility, reducing interference.
- **Locknut:** Included for secure fastening to the enclosure.

4. Setup and Installation

Follow these steps for proper installation of the cable gland:

1. **Prepare the Enclosure:** Ensure the enclosure has an M50 threaded entry hole. Clean the area around the hole to ensure a good seal and electrical contact.
2. **Disassemble the Gland:** Unscrew the sealing nut and remove the sealing insert and clamping ring from the main body of the gland.

3. **Insert Cable:** Thread the cable through the sealing nut, then through the clamping ring and sealing insert.
4. **Mount Gland Body:** Insert the threaded body of the cable gland into the M50 opening of the enclosure. If a sealing washer is provided, place it between the gland body and the enclosure.
5. **Secure with Locknut:** On the inside of the enclosure, thread the locknut onto the gland body and tighten it securely using an appropriate wrench. Ensure the gland is firmly seated against the enclosure.
6. **Insert Sealing Components:** Push the cable, with the sealing insert and clamping ring, into the gland body. Ensure the cable's outer sheath is clean and free of damage where it passes through the seal.
7. **Tighten Sealing Nut:** Screw the sealing nut onto the gland body. Hand-tighten first, then use a wrench to tighten until the sealing insert compresses firmly around the cable, providing a watertight and dust-tight seal. Do not overtighten.
8. **Verify EMC Contact:** For EMC applications, ensure that the cable's shield or braid makes proper contact with the gland body, which in turn should be properly grounded to the enclosure.

5. Operating Principles

Once properly installed, the cable gland operates passively to maintain the integrity of the cable entry point. Its primary functions are:

- **Cable Retention:** The clamping mechanism securely holds the cable in place, preventing pull-out or strain on internal connections.
- **Environmental Sealing (IP68):** The compressed sealing insert forms a barrier against the ingress of dust and water, protecting the internal components of the enclosure.
- **EMC Shielding:** The metallic construction and design facilitate a low-impedance path for electromagnetic interference, diverting it away from sensitive electronics within the enclosure. This is crucial for maintaining system performance in electrically noisy environments.

6. Maintenance

The Cable Gland M50 is designed for long-term, maintenance-free operation under normal conditions. However, periodic inspection is recommended to ensure continued performance:

- **Visual Inspection:** Periodically check the gland for any signs of physical damage, corrosion, or degradation of the sealing material.
- **Tightness Check:** Ensure that the sealing nut and locknut remain securely tightened. Vibrations or temperature fluctuations can sometimes cause loosening over time. Retighten if necessary, but do not overtighten.
- **Cleanliness:** Keep the exterior of the gland clean from excessive dirt or debris that might accumulate and affect its long-term integrity.
- **Environmental Assessment:** If the operating environment changes (e.g., increased exposure to chemicals, extreme temperatures), reassess the gland's suitability and inspect more frequently.

7. Troubleshooting

If you encounter issues with the cable gland, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Water or dust ingress into enclosure	Sealing nut not tight enough; incorrect cable diameter; damaged sealing insert.	Tighten sealing nut; ensure cable diameter is within 30-38mm range; replace gland if sealing insert is damaged.
Cable pulls out easily	Sealing nut not tight enough; cable too small for gland range.	Tighten sealing nut; verify cable diameter is within 30-38mm range.
Poor EMC performance / Increased interference	Improper grounding of gland to enclosure; poor contact with cable shield; damaged gland.	Ensure gland is properly grounded to the enclosure; verify cable shield makes good contact with gland body; replace gland if damaged.
Gland feels loose on enclosure	Locknut not tight enough.	Tighten the locknut securely.

8. Specifications

Detailed technical specifications for the Cable Gland EMC Metallic Color Brass with Locknut M50:

- **Manufacturer:** Nobranded
- **Part Number:** 8354122/1PK
- **Item Model Number:** 8354122/1PK
- **ASIN:** B0D6GYLSLR
- **Thread Size:** M50
- **Cable Diameter Range:** 30mm - 38mm
- **Ingress Protection (IP) Rating:** IP68
- **Material:** Brass
- **Color:** Metallic
- **EMC Functionality:** Yes
- **Item Package Quantity:** 1
- **First Available Date:** June 7, 2024

9. Warranty and Support

Information regarding product warranty and customer support is not provided in the available product details. For specific warranty terms or technical assistance, please refer to the manufacturer's official documentation or contact the seller directly.