

Elecbec EB-400-3050

ELECBEE M16 8-Pin Female Connector Instruction Manual

Model: EB-400-3050

1. INTRODUCTION

This manual provides comprehensive instructions for the ELECBEE M16 8-pin A-coded waterproof female connector, model EB-400-3050. This connector is engineered for reliable performance in demanding industrial environments, featuring a PCB front mount design and solder type connection. It is designed to offer robust and secure electrical connections, resistant to various environmental factors.

Key features include an IP67 protection rating, high resistance to acids, alkalis, chemical detergents, sweat sparks, oils, cooling lubricants, and emulsions. Its design facilitates simple and quick connection and disconnection, making it suitable for applications in the petroleum, chemical, iron and steel, electricity, and automotive industries.

2. SPECIFICATIONS

The following table details the technical specifications of the ELECBEE M16 8-pin female connector:

Parameter	Value
Series	M16
Coding	A
Connection Type	Panel Mount (Front Mount PCB)
Number of Contacts	8 poles
Gender	Female
Orientation	Straight
Connector Type	Solder
Rated Current	5 A / 7 A
Rated Voltage	200 V / 60 V

Parameter	Value
Temperature Range	-25 °C to +85 °C
IP Protection Class	IP67
Brand	Elecbec
Model Number	EB-400-3050
ASIN	B0B3MKX4TW

3. SETUP AND INSTALLATION

The M16 8-pin female connector is designed for PCB front mounting and requires soldering for electrical connection. Follow these steps for proper installation:

- 1. Prepare the PCB:** Ensure the Printed Circuit Board (PCB) has the correct footprint for the M16 connector. Clean the solder pads thoroughly to remove any contaminants.
- 2. Mount the Connector:** Insert the connector into the designated opening on the panel from the front, then secure it to the PCB. Ensure proper alignment of the pins with the PCB pads.
- 3. Solder the Pins:** Carefully solder each of the 8 pins to the corresponding pads on the PCB. Use appropriate soldering techniques to ensure strong, reliable electrical connections without bridging.
- 4. Secure Panel Mounting:** Once soldered, ensure the connector is securely fastened to the panel. The connector features a threaded body for secure panel mounting. Tighten any retaining nuts or rings as required to achieve a stable and waterproof seal.
- 5. Inspect Installation:** Visually inspect all solder joints for quality and check for any physical damage to the connector or PCB.



Image 1: View of the ELECBEE M16 8-pin female connector showing the gold-plated pins for soldering.



Image 2: Side view of the ELECBEE M16 8-pin female connector, highlighting the pin arrangement.

4. OPERATING INSTRUCTIONS

Once installed, the ELECBEE M16 connector is ready for operation. Follow these guidelines for optimal performance:

- **Connection:** Align the male plug (not included) with the female receptacle, ensuring the A-coding notch is correctly oriented. Push the plug firmly into the receptacle until it clicks or threads securely.
- **Disconnection:** To disconnect, unscrew any locking mechanism on the male plug, then pull the plug straight out from

the receptacle. Avoid twisting or pulling at an angle to prevent damage to the pins or housing.

- **Environmental Conditions:** The connector is rated IP67, meaning it is protected against dust ingress and temporary immersion in water (up to 1 meter for 30 minutes). It is also resistant to a wide range of chemicals, oils, and extreme temperatures (-25 °C to +85 °C). Ensure that the mating connector also provides adequate environmental protection if used in harsh conditions.
- **Rated Load:** Do not exceed the rated current of 5 A / 7 A or the rated voltage of 200 V / 60 V to prevent overheating and potential damage.



Image 3: Front view of the ELECBEE M16 8-pin female connector receptacle.



Image 4: Angled view of the ELECBEE M16 8-pin female connector receptacle.

5. MAINTENANCE

Regular maintenance ensures the longevity and reliable performance of your ELECBEE M16 connector:

- **Inspection:** Periodically inspect the connector for any signs of physical damage, corrosion, or wear on the pins and housing. Check the integrity of the panel mounting and ensure it remains secure.
- **Cleaning:** If the connector becomes dirty, gently clean the external surfaces with a soft, lint-free cloth. For stubborn dirt, a mild detergent solution can be used, followed by thorough drying. Avoid using harsh chemicals, abrasive cleaners, or solvents that could damage the connector materials or seals.
- **Sealing Integrity:** For applications requiring IP67 protection, regularly check the condition of any O-rings or sealing gaskets. Ensure they are free from cracks or degradation. Replace if necessary to maintain waterproof and dustproof capabilities.
- **Storage:** When not in use, store connectors in a clean, dry environment, away from direct sunlight and extreme temperatures.

6. TROUBLESHOOTING

If you encounter issues with your ELECBEE M16 connector, consider the following troubleshooting steps:

- **No Electrical Connection:**
 - Check solder joints on the PCB for cold joints, bridges, or breaks.
 - Ensure the male plug is fully inserted and securely mated with the female receptacle.
 - Inspect pins for bending or damage.
- **Intermittent Connection:**
 - Verify that the connector is securely mounted to the panel and that the mating plug is locked in place.
 - Check for loose solder connections or damaged wires connected to the PCB.
- **Water or Dust Ingress:**
 - Ensure the connector is properly tightened to the panel and that any sealing elements are intact and correctly seated.
 - Confirm that the mating plug is also waterproof and correctly engaged.
 - Inspect for cracks or damage to the connector housing or seals.
- **Difficulty Mating/Unmating:**
 - Check for foreign objects or debris in the connector interface.
 - Ensure correct alignment and A-coding orientation before attempting to mate.
 - Do not force the connection; inspect for bent pins or damaged housing.

7. WARRANTY AND SUPPORT

ELECBEE products are manufactured to high-quality standards. While specific warranty details are not provided in this manual, the manufacturer typically offers a 100% refund within 30 days of purchase for quality-related issues.

For technical support, further assistance, or to report any issues with your ELECBEE M16 connector, please contact your supplier or refer to the official ELECBEE website for customer service information.

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.

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