

**Installing the RFID Controller**

1. Attach the controller to the mounting bracket using the two sets of M4 screws, washers and nuts provided. Place the nuts in each of the hex-shaped recessed cavities at the rear of the Unit.
2. Align the mounting bracket with the two mounting holes on the controller, then insert both M4 screws (with washers) into the controller from the underside and secure completely using a standard Phillips #2 head screwdriver. Tighten screws to 0.7 Nm (6 lbs / inch) ±10%.
3. Fasten the other end of the mounting bracket to your work area. The Unit may be mounted horizontally or vertically, but should be aligned in such a manner that the LED indicators can be seen during operation.
4. Connect the 5-pin, female end of a Subnet16™ compatible cable to the 5-pin, male, M12 interface connector on the Unit. Connect the opposite end of this cable to an Subnet16 Gateway or Subnet16 Hub interface module. Connect the Gateway or Hub to a host computer via Category 5E Ethernet cabling\*.
5. Turn the power supply ON. The green power LED on the unit will illuminate when power is applied to the unit. The five amber colored Node LEDs, when lit, display the Node ID value (in binary format from right to left) currently assigned to the RFID Controller.  
Note: the factory default Node ID is Node 00 - in which case none of the amber Node LEDs will be lit.
6. To verify operations, download the TCP/IP version of the HF Dashboard Utility. The HF Dashboard Utility allows Gateway / Hub users to configure and control their controllers and send RFID commands for testing purposes.

\*For more information regarding the installation of a Subnet16 Gateway or Subnet16 Hub, refer to the Operator's Manual for each product.

Figure 1: Controller, Mounting Bracket and Hardware

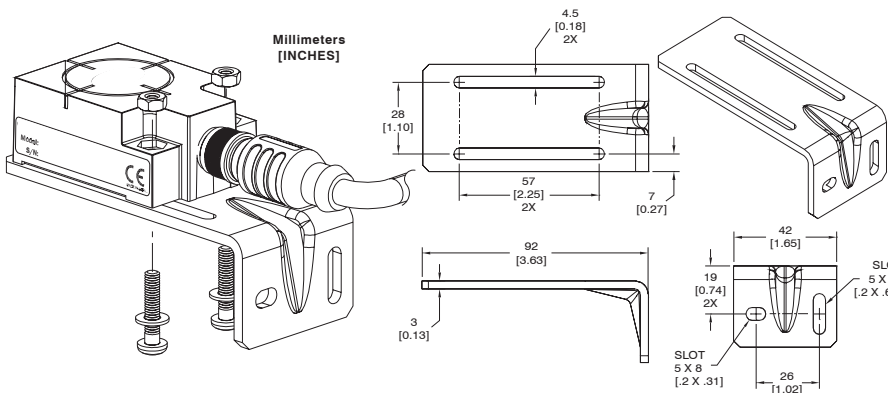
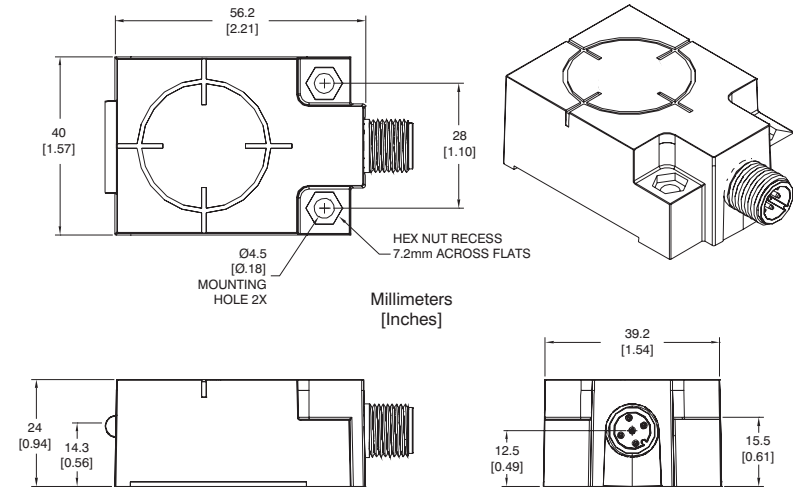


Figure 2: Dimensions



**Power Requirements**

The Unit obtains power directly from the network bus (multi-drop Subnet16) and requires 10~30 V DC, 2.4 W (100 mA @ 24 V DC, 1 Amp peak).

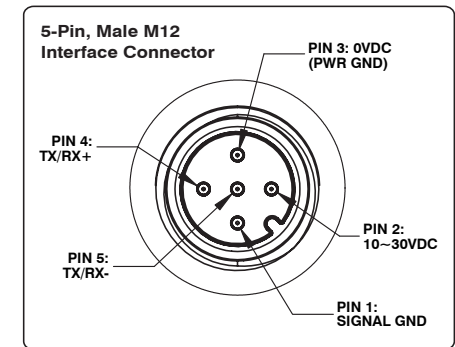
Figure 3: Interface Connector - Pinout

The Balluff RFID Controller has one 5-pin, male M12 connector that is used for data and power.

**Cabling Part Numbers**

- **CBL-1480-XX:** Cable (5-pin, male M12 to 5-pin, female M12, ThinNet)
- **CBL-1481-XX:** Cable (5-pin, male M12 to 5-pin, female M12, ThinNet)

(XX = CABLE LENGTH IN METERS)



**Installation Guidelines**

- RFID devices can be negatively affected by the presence of metallic objects near its RF field. Avoid mounting the unit within 5 cm (two inches) of metallic surfaces.
- Locate the unit away from sources of EMI (electro-magnetic interference) and away from devices that generate high ESD (electro-static discharge) levels.
- Do not route the Unit's cables near unshielded cables or near wiring that is carrying high voltage or high current (such as for motors or solenoids). Cross cables only at perpendicular intersections.
- Use the included polycarbonate mounting bracket or a similar non-metallic bracket. The bracket is provided to help reduce electrically conducted spurious noise by isolating the RFID controller from metallic surfaces.
- If multiple RFID controllers operating at the same frequency (13.56 MHz) are to be installed, maintain a minimum distance of 20 cm (8 inches) between adjacent RF devices.