

BIS M-628-075-A01-03-ST34

High Frequency Passive Radio Frequency,
Identification Processor unit

QUICK REFERENCE GUIDE

This document provides instructions and information designed to assist users in the hardware setup of the BIS M-628-075-A01-03-ST34 RFID Processor unit. For configuration details see the BIS M62_ Manual.

| PACKAGE CONTENTS | |
|------------------|--|
| Qty | Description |
| 1 | BIS M-628-075-A01-03-ST34 Processor unit |
| 1 | Cobalt HF Series Configuration Tag |
| 1 | This Installation Guide |
| 2 | M5 x 20 mm Antenna Mounting Screws |
| 2 | M5 Antenna Mounting Washers |
| 1 | Hex Wrench for Antenna Mounting |
| 1 | BCC06ZF M12 5PF Power Connector |

TECHNICAL DATA

| ELECTRICAL FEATURES | |
|-----------------------------------|---|
| Power Supply | 19.2 to 28.8 VDC |
| DC Input Current | 500 mA |
| Communication Interface Data Rate | Profinet IO up to 100 Mbps |
| RADIO FEATURES | |
| Frequency | 13.56 MHz |
| Air Protocols | ISO 14443A, ISO 15693 |
| Conducted Output Power | 1 W |
| ENVIRONMENTAL FEATURES | |
| Operating Temperature | -20° to +50 °C (-4° to +122 °F) |
| Storage Temperature | -20° to +70 °C (-4° to +158 °F) |
| Humidity max. | 90% non condensing |
| Protection Class EN 60529 | IP65* |
| PHYSICAL FEATURES | |
| Dimensions | 164 x 112 x 48 mm (6.48 x 4.41 x 1.88 in) |
| Weight | 560 g (19.8 oz) |
| Enclosure | Powder Coated Al |
| USER INTERFACE | |
| LED Indicators | READY, RF, COM, NET STATUS, MODE STATUS, LINK 1, LINK 2 |

* When all connectors, sealing caps, and antenna are correctly installed.

The BIS M-62_ Processor unit and its antenna are intended for indoor use only.

Minimum Mounting Distance Between Adjacent Antennas.

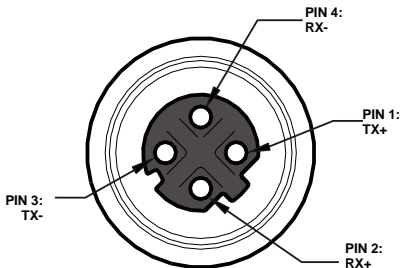
| BIS M | -371 | -372 | -373 | -370 |
|-------|-------|-------|-------|-------|
| -371 | 60 cm | 75 cm | 90 cm | 50 cm |
| -372 | 75 cm | 90 cm | 1.2 m | 65 cm |
| -373 | 90 cm | 1.2 m | 2 m | 90 cm |
| -370 | 50 cm | 65 cm | 90 cm | 50 cm |

GENERAL VIEW

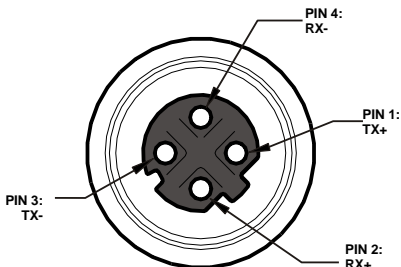


CONNECTIVITY

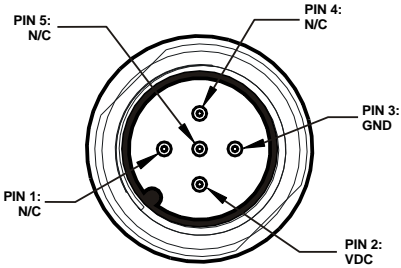
M12 4-pin D-Coded Female Connector (Profinet Port 1)



M12 4-pin D-Coded Female Connector (Profinet Port 2)

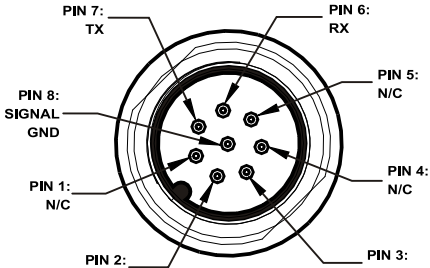


M12 5-pin Male Connector (Power Supply)









N/C = Not Connected

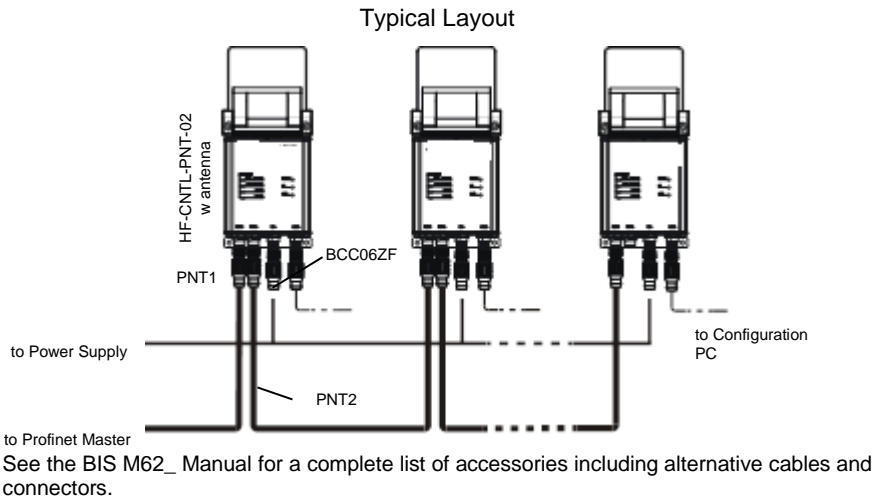
M12 8-pin Male Connector (RS232)



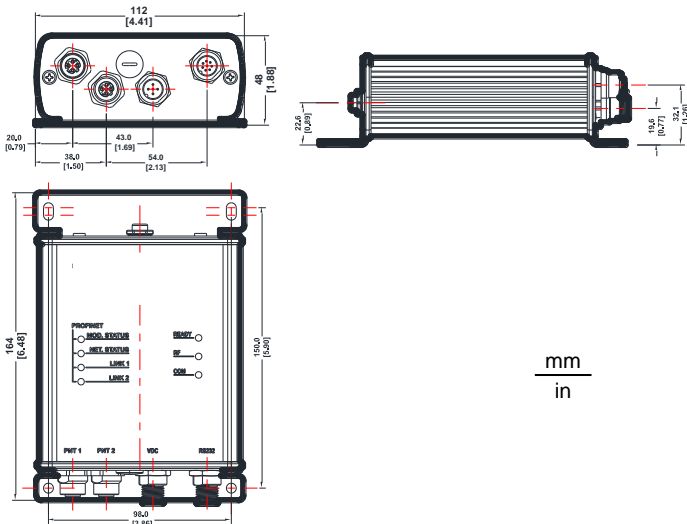
N/C = Not Connected

LED INDICATORS

| | | |
|--|----------------------------|--|
|  green | READY | The READY LED is ON after the power up sequence has completed. |
|  amber | RF | The RF LED illuminates when RF power is being transmitted by the antenna. |
|  amber | COM | The COM (communications) LED flashes ON and OFF when data is being transmitted between the antenna and a tag. When in Continuous Read mode, the COM LED will remain ON and will turn OFF briefly only while data is being read from or written to a tag. |
|  green/red | MOD STATUS | SOLID GREEN: initialized. Normal Operation FLASHING GREEN (1 FLASH): diagnostic event(s) present. SOLID RED: exception error (see HF Series Processor unit Reference Manual for other specific LED conditions) |
|  green | NET STATUS | SOLID GREEN: IO Processor unit connected in RUN FLASHING GREEN: IO Processor unit connected in STOP |
|  amber | (PNT) LINK1 (PNT) LINK2 | SOLID AMBER: Profinet link established |



DIMENSIONS



INSTALLATION GUIDELINES

- RF performance and read/write range can be negatively impacted by the proximity of metallic objects and liquids. Avoid mounting the BIS M-37_ within 15 cm (6 inches) of any metallic object or wet surface.
- Do not route cables near other unshielded cables or near wiring carrying high voltage or high current. Cross cables at perpendicular intersections and avoid routing cables near motors and solenoids.
- Avoid mounting the processor unit near sources of EMI (electro-magnetic interference) or near devices that generate high ESD (electro-static discharge) levels. Always use adequate ESD prevention measures to dissipate potentially high voltages.
- If electrical interference is encountered (as indicated by a significant reduction in read/write performance), relocate the processor unit to an area free from potential sources of interference.

INSTALLATION

The BIS M-628-075-A01-03_ processor unit is designed for Profinet RFID applications, where the processor unit is connected as a slave node in a Profinet IO network via compatible cables directly to a Profinet Master (host). **The default IP Address is 192.168.253.110.**

- Select a suitable location for the Cobalt HF Processor unit/Antenna.
- Mount the BIS M-37_ Antenna to the BIS M Processor, either Directly or Remotely, as described in the BIS M-37_ Installation Guide included with the antenna.
- Mount the processor unit and antenna to your mounting fixture using **M5 (or #10)** diameter screws (*not included*) and secure them with appropriate washers and nuts. Tighten screws to **1.7 Nm or 15 lbs per inch ± 10%**.
- Attach Profinet-compatible data cables to the 4-pin D-Coded, female M12 interface connectors on the Cobalt. Connect the other end of the cables to your Profinet network.
- Build a power supply cable using the BCC06ZF M12 5-pin female connector. Use 18 AWG (max) to 24 AWG (min) wires for connection to the power supply lines according to the Vdc connector pinout. Connect the BCC06ZF M12 5-pin female connector to the M12 5-pin male connector on the processor unit. Connect the other end of the cable (wires or user-supplied connectors) to the power supply.
- Apply power to the processor unit after all cable connections have been made. The LEDs on the unit will flash. The READY LED is ON after the power up sequence has completed.

To configure and control the BIS M-628-075-A01-03-ST34 processor unit and send RFID commands for testing purposes, download and install the Balluff Dashboard™ Utility from www.balluff.com. The Dashboard Configuration Tool uses the PC RS232 serial port to communicate to the processor unit's RS232 serial port. To enable communication:

(over)

1. To connect the processor unit's RS232 serial port to the PC you have two choices; the first one is the quickest:
a) Connect the BCC0ETJ M12 8-pin female connector to the M12 8-pin male interface connector on the BIS M-628-075-A01-03-ST34. Connect the BCC0ETJ 9-pin female D-sub connector to an RS232 COM port on the host computer, or, b) Build your own communication cable using the BCC0A03 connector M12 8-pin female connector and follow the schematic shown in the Reference Manual.
2. On the host computer, set COM port parameters to: 9600 baud, 8 data bits, 1 stop bit, no parity and no handshaking.
3. Run the Balluff Dashboard™ Utility.

COMPLIANCE

Only Balluff BIS M37_ antennas are certified for use with the BIS M-628-075-A01-03-ST34 processor units.

This product is intended to be installed by Qualified Personnel only.

This product must not be used in explosive environments.

Power Supply

This device is intended to be supplied by a UL Listed or CSA Certified Power Unit with «Class 2» or LPS power source.

