This page is intended for installer use in the installation of the BluePass 2-N-1 Multi-Tech Reader.

Introduction

This guide will walk a professional installer through the steps needed to attach a 2-N-1 BluePass Multi-Tech Reader to an access control panel. The 2-N-1 supports 125 KHz proximity fobs and cards as well as Linear BluePass mobile credentials. Please review the information below to ensure the reader is installed quickly and properly.

**WARNING:** DO NOT connect the reader up with energized wires until instructed to do so.

Grounding

- The shield must run continuously from the reader to the panel. At the panel, the reader ground, shield line, and earth ground must be connected together at a single point.
  - Do not ground the shield line at the reader end, as this will create a potential ground loop.

Power

- A non-switching power supply at the panel is recommended to power the reader for the highest noise immunity and best performance.
- For UL 294 Compliance, the readers shall be connected to a class two power limited power supply or control panel output.
- The recommended wire gauge is 24 AWG.

Voltage

- The minimum reader voltage required is +6 VDC to a maximum of +16.0 VDC, and 12.0 VDC is recommended.
- The reader will require 100 mA (typical @ 12 VDC) in standard mode, 220 mA (typical @ 12 VDC) in advanced mode.
- The reader is in “standard” mode by default. “Advanced” mode can be configured via in-app settings using the BluePass app.

Connection

- Connections must be in accordance with NFPA 70. DO NOT connect to a receptacle controlled by a switch.

Mounting the Reader

- If the unit is used to control a door or pedestrian gate, locate the unit as near as practical to the entry point. If the unit is mounted on or in a wall adjacent to the entry point, be sure the wall is sturdy. The repeated shock and vibration from a slamming access door or spring-loaded pedestrian gate must be isolated from the unit.
- Never mount the reader directly on a moving door or gate.
- Choose a well-lit location near the controlled opening. Wiring access for power, network, and earth ground must be available to the mounting location.

Mounting

- Both the Mullion and Single-gang readers can be mounted on a wall or any suitable flat surface.

Mobile Device and Software

- The 2-N-1 Multi-Tech Reader utilizes BLE version 4.0.
- The reader is to be used in conjunction with the BluePass Mobile App (Version 1.0 or higher).
- In order for the reader to function properly, the mobile device’s software must be up to date.
  - iOS Devices: iOS 10.0 or higher
  - Android Devices: v5.0 (Lollipop) or higher and peripheral mode supported.
- Refer to [http://bluepass.io](http://bluepass.io) or use the QR code for obtaining full versions of the User and Installation manuals.
Reader Wiring

<table>
<thead>
<tr>
<th>Wiegand</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>DC +6-16 VDC</td>
</tr>
<tr>
<td>Black</td>
<td>Ground</td>
</tr>
<tr>
<td>Green</td>
<td>Data 0</td>
</tr>
<tr>
<td>White</td>
<td>Data 1</td>
</tr>
<tr>
<td>Purple</td>
<td>Red LED</td>
</tr>
<tr>
<td>Orange</td>
<td>Beeper</td>
</tr>
<tr>
<td>Yellow</td>
<td>Card Present</td>
</tr>
<tr>
<td>Blue</td>
<td>Green LED</td>
</tr>
<tr>
<td>Drain</td>
<td>Shield Ground</td>
</tr>
</tbody>
</table>

Current Draw: 100mA (typical @ 12VDC)

UL 294 Performance Levels

<table>
<thead>
<tr>
<th>MODEL #</th>
<th>ACCESS CONTROL LINE SECURITY LEVEL</th>
<th>DESTRUCTIVE ATTACK LEVEL</th>
<th>ENDURANCE LEVEL</th>
<th>STANDBY POWER LEVEL</th>
<th>CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUEPASS 2-N-1 MULTI-TECH READER</td>
<td>Level I</td>
<td>Level I</td>
<td>Level III</td>
<td>Level I</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Certifications

- FCC Compliance Statement: This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
  - This device may not cause harmful interference.
  - This device must accept any interference received, including interference that may cause undesired operation.