



Where Automation Connects.



Wireless I/O System

May 6, 2016

QUICK START GUIDE

Your Feedback Please

We always want you to feel that you made the right decision to use our products. If you have suggestions, comments, compliments or complaints about our products, documentation, or support, please write or call us.

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1 Overview

This guide provides basic information to assist you in quickly getting started. Go to <http://www.prosoft-technology.com/> to download the full User Guide for detailed installation and other helpful information. Advanced User Interface software is also available at the site for download.

Warning 1: Ensure installation of the system meets applicable state and national electrical code requirements. The installation of the system should only be performed by a qualified installer or a factory representative.

Warning 2: To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.

Caution: The system must be installed within an enclosure that requires a tool to access. This is to prevent inadvertent disconnection of any of the power wiring, signal wiring or communication cables.

Caution: EXPLOSION HAZARD. Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

Caution: EXPLOSION HAZARD. Do not remove or replace fuse when energized.

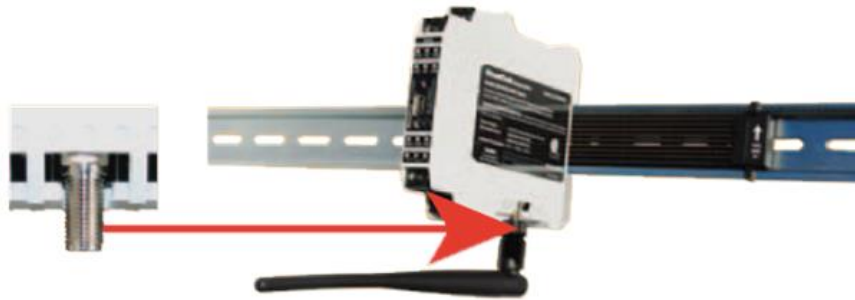
Note: This equipment is designed for use in Class I, Division 2 (Zone 2) or non-hazardous locations only.

2 Basic Setup

1. Attach DataRail™ and End Terminal Bracket to 35 mm x 7.5 mm DIN Rail. (Attach components from left to right without a gap)



2. Attach Radio module and connect antenna. (Lightning arrestor is optional)



3. Attach I/O module(s) and set slave IDs. When using more than a 5-module combination per radio, use the Power Budget Calculator to determine maximum I/O module capacity. <http://psft.com/A5D>



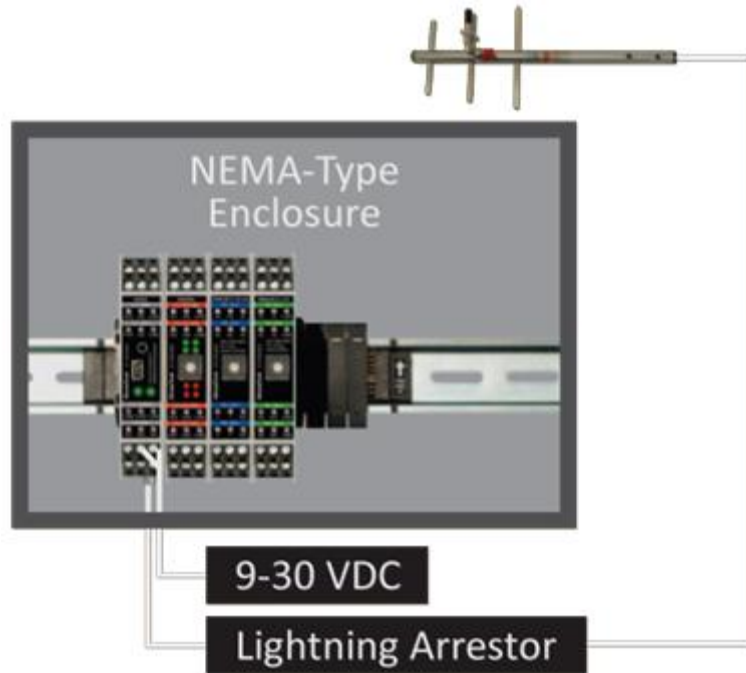
4. Cover unused DataRail slots.



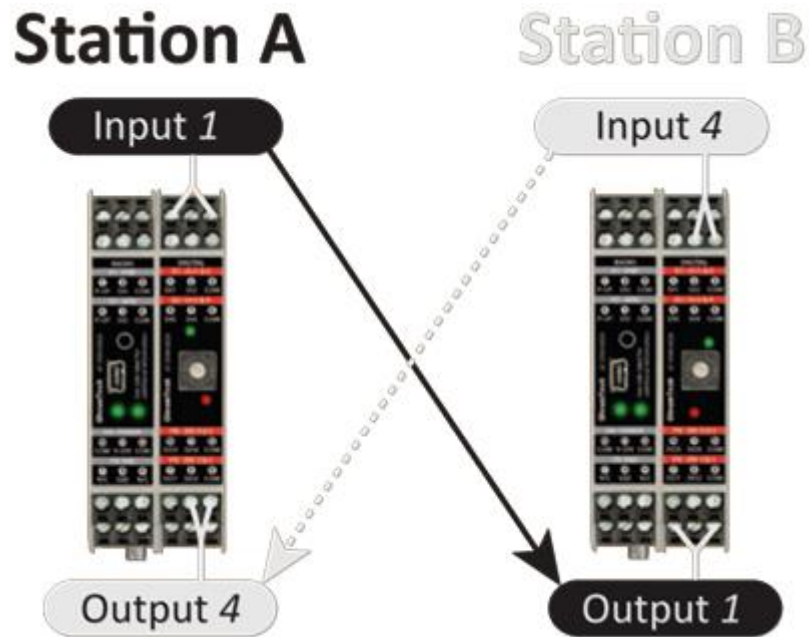
5. Terminate I/O and power supply as required. Use solid or stranded wire (AWG) 28-12. Always disconnect power when attaching or detaching I/O module(s) to or from DataRail to avoid damage.

Note: The power leads to the 9-30 VDC power terminals should be kept to a maximum of 1 meter in length.

2.1 Typical Installation



2.2 I/O Chain Diagram

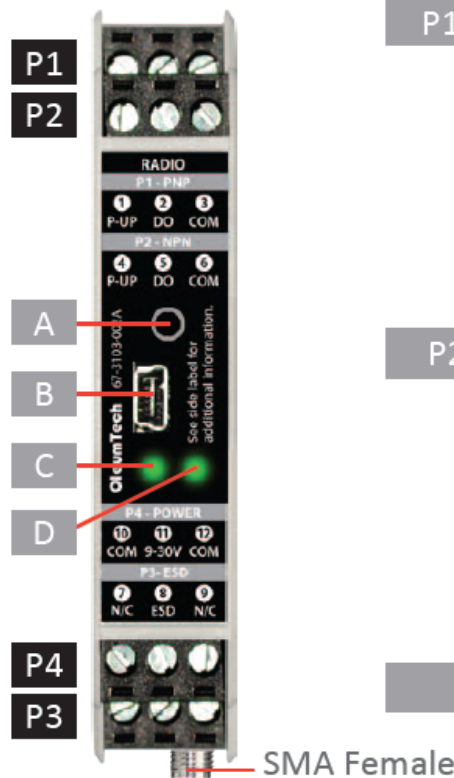


2.3 Power

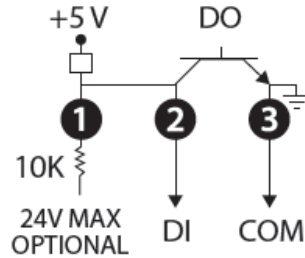
TYPE	POWER CONSUMPTION
RADIO	35 mA @ 12 VDC AVG (10% Duty Cycle)
DIGITAL	26 mA @ 12 VDC MAX
4-20 mA	83 mA @ 12 VDC MAX
0-10 V	58 mA @ 12 VDC MAX

3 Specifications

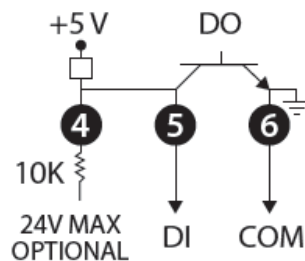
3.1 Radio



P1 - I/O LINK ALARM - NPN



P2 - RF LINK ALARM - NPN

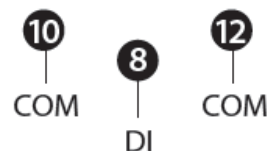


P4 - POWER



Reverse Polarity Protected

P3 - ESD - DRY CONTACT INPUT



Allows Manual FailSafe Override of Local Outputs

A - Tx Button (1 Sec / Turbo)

Press and hold for 1 second to switch between modes

B - Mini USB



Avoid ESD Damage
Connect USB to PC Before Connecting Mini-USB

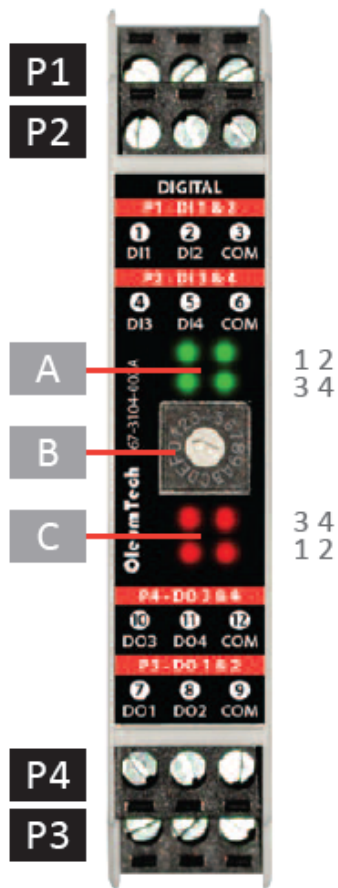
C - RF LED

Green - RF Traffic
Yellow Flashing - RF Failure
Yellow Solid - ESD Active


D - I/O LED

Green - Modules Detected
Red - I/O Link Failure

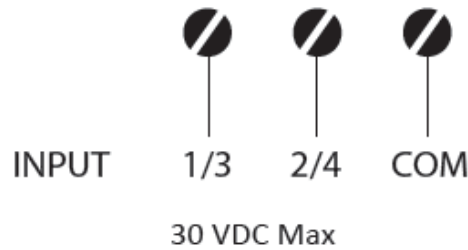
3.2 Digital



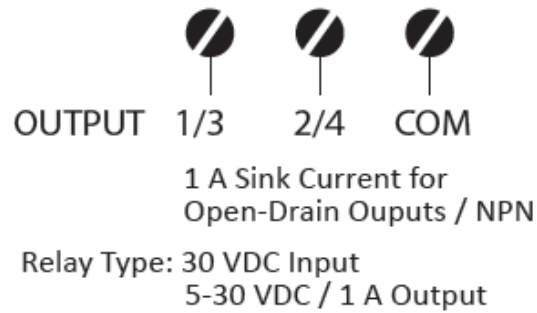
- A - Input LEDs
Illuminated When Active
- B - 16-Position ID Switch
For Matching Module ID
- C - Output LEDs
Illuminated When Active

 All inputs and outputs on I/O Modules provide field isolation. Please wire accordingly.

P1/P2 - INPUTS

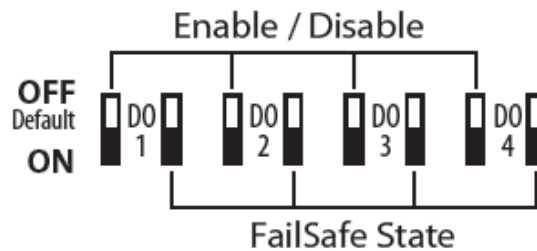


P3/P4 - OUTPUTS



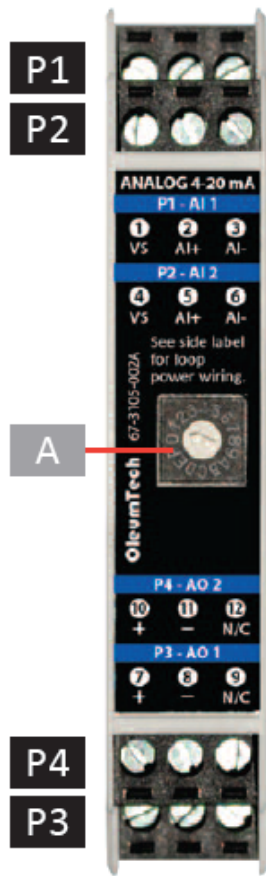
FAILSAFE OPERATION

DIP SWITCHES



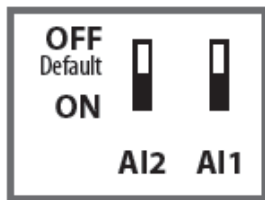
- When Enabled:**
FailSafe Mode selected for Output. Select On or Off.
- When Disabled:**
Normal Mode selected for Output. Outputs last received value.
- FailSafe State:**
Turns output to on or off when FailSafe enabled.

3.3 Analog 4-20 mA

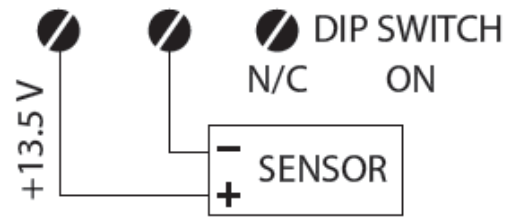


A - 16-Position ID Switch
For Matching Module ID

B - Dip Switches
Internal/External Loop Power

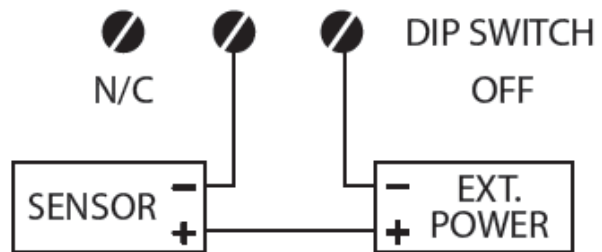


P1/P2 - INT. LOOP POWER

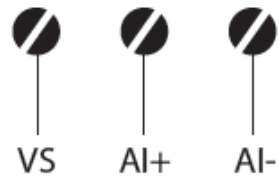


5 Modules max per Radio when using Internal Loop Power

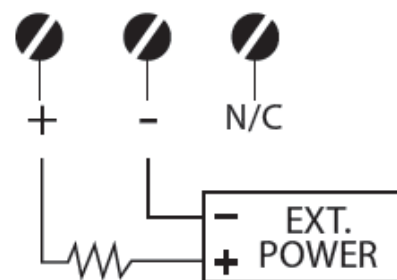
P1/P2 - EXT. LOOP POWER



P1/P2 - INPUTS



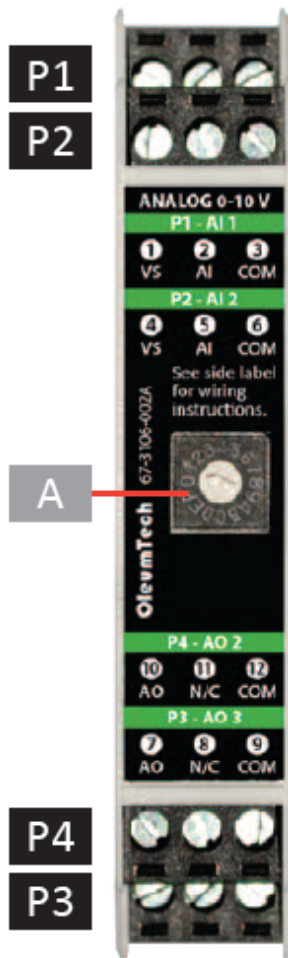
P3/P4 - OUTPUTS



$$VS/External\ Power\ (min) = 10 + Max\ Current\ (Amp) * R_{loop}$$

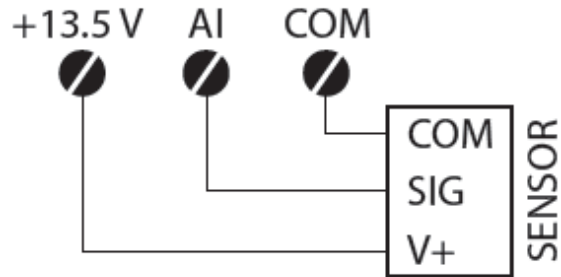
$$R_{loop} = Total\ Loop\ Impedance$$

3.4 Analog 0-10 V

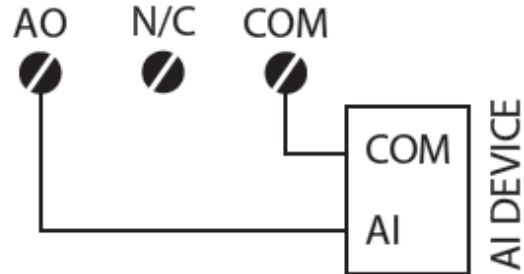


A - 16-Position ID Switch
For Matching Module ID

P1/P2 - INPUTS



P3/P4 - OUTPUTS



WARNING

Always disconnect power when attaching or detaching I/O Module(s) to or from DataRail to avoid damage.