ProSoft® TECHNOLOGY

Where Automation Connects.

BM-1000-PM1K

Modbus RS485 I/O System

June 10, 2015

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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RS485 I/O Expansion System Quick Start Guide

June 10, 2015

Contents

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.

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 RS485 I/O Expansion 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.

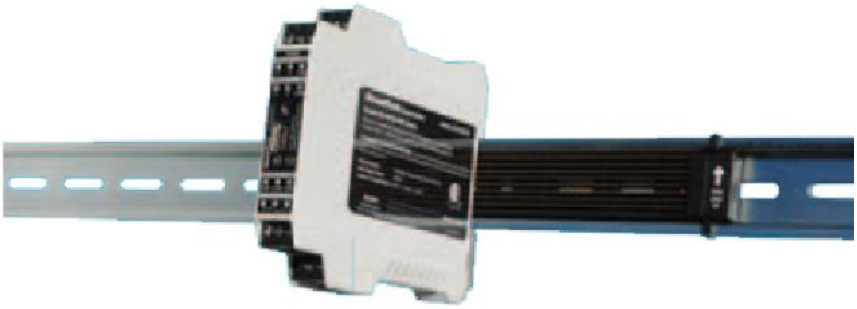
Caution: EXPLOSION HAZARD. Do not remove or replace fuse when energized.

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

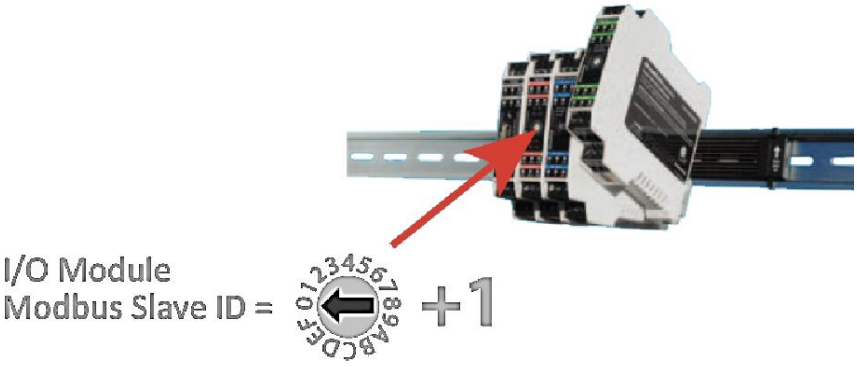
2 Basic Setup

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 RS485 I/O Expansion Module and connect antenna.



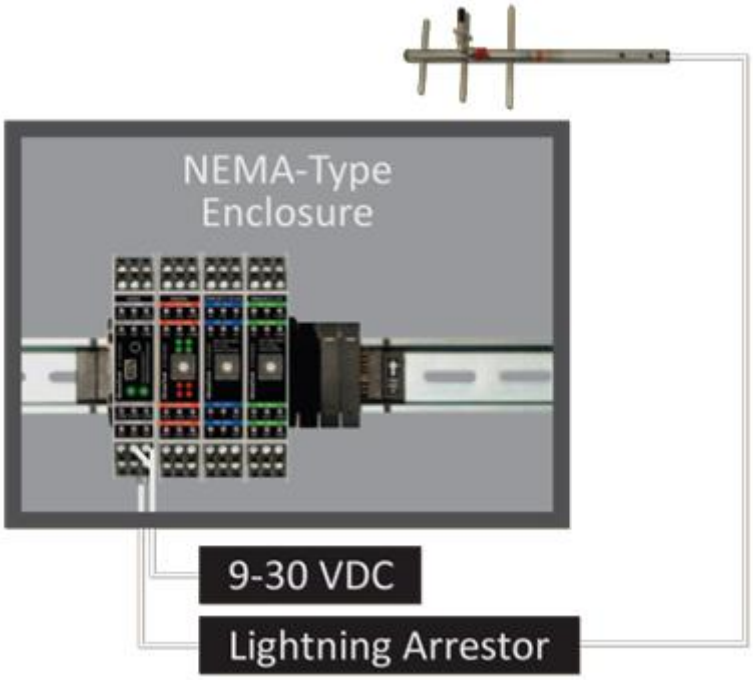
3. Attach I/O module(s) and set slave IDs. When using more than a 5-module combination per radio, use a Power Budget Calculator to determine maximum I/O module capacity: http://psft.com/A7V



4. Cover unused DataRail slots.

5. Connect to RS485 master device.
6. 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.

2.1 Typical Installation

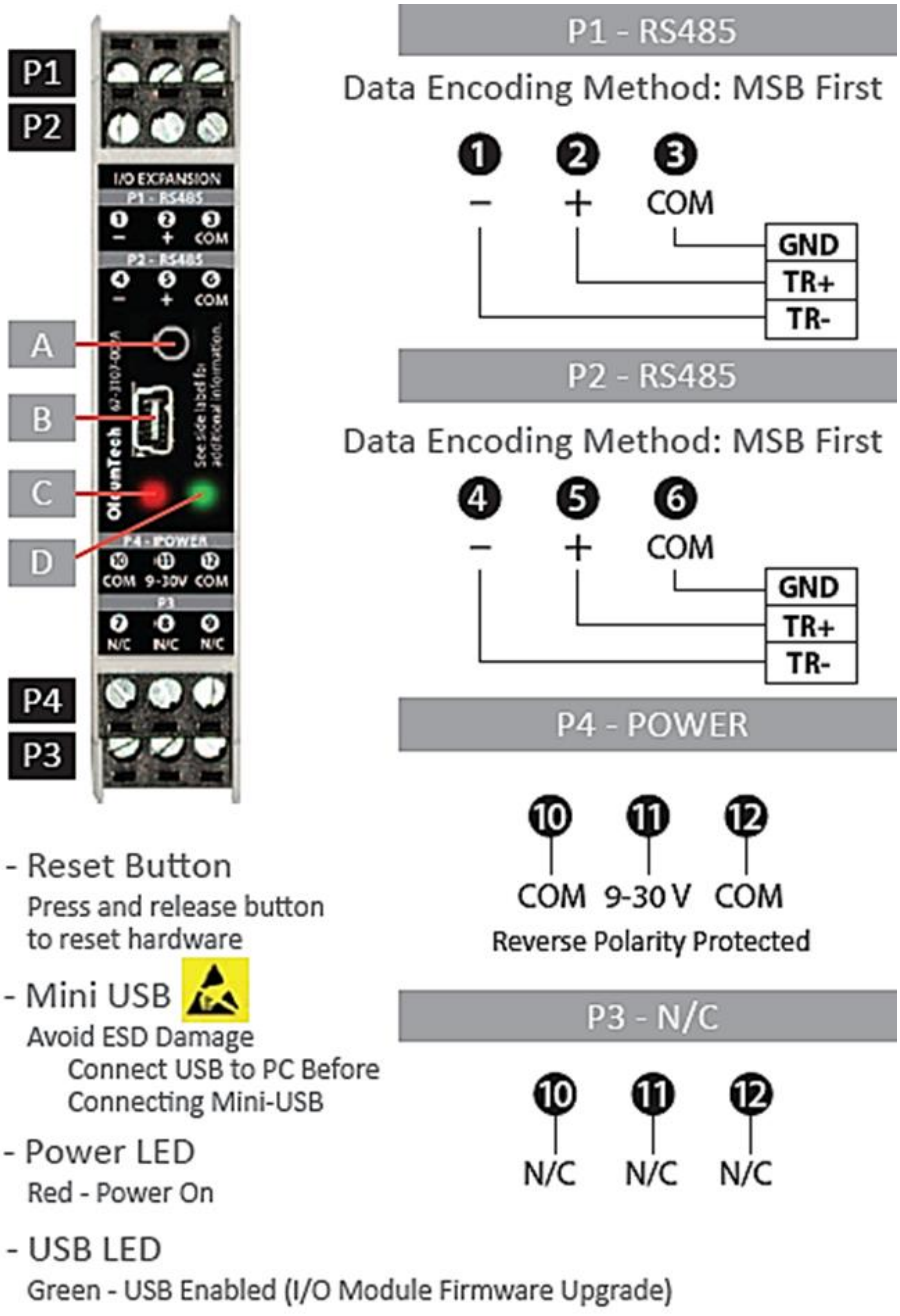


2.2 Power

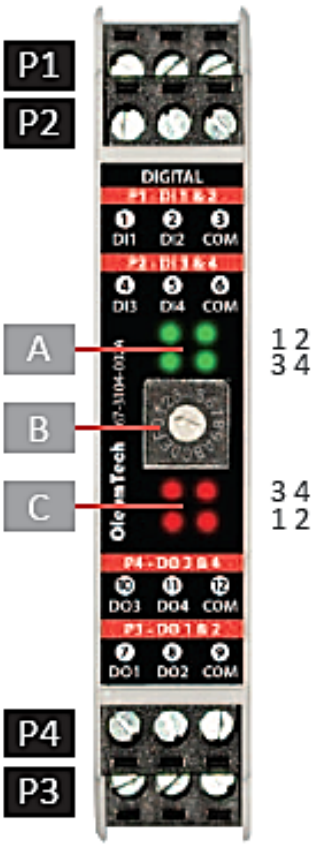
TYPE	POWER CONSUMPTION
RS485	24 mA @ 12 VDC MAX
DIGITAL	26 mA @ 12 VDC MAX
4-20 mA	75 mA @ 12 VDC MAX
0-10 V	45 mA @ 12 VDC MAX

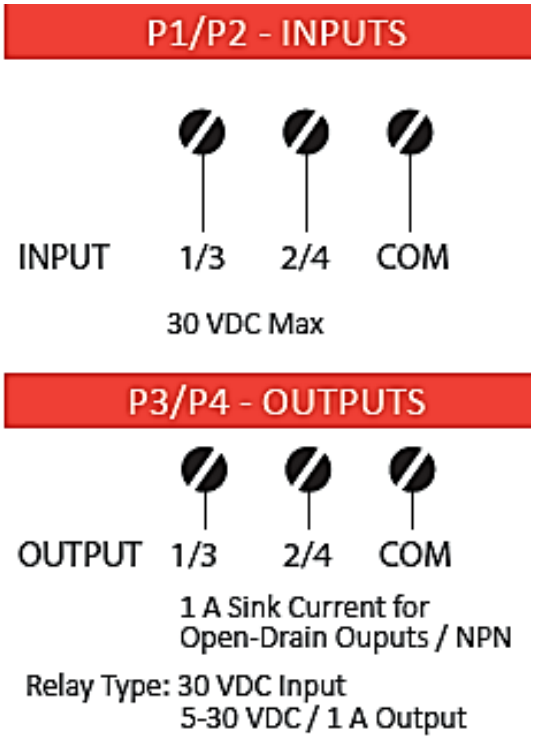
3 Specifications

3.1 RS485 I/O Expansion



3.2 Digital



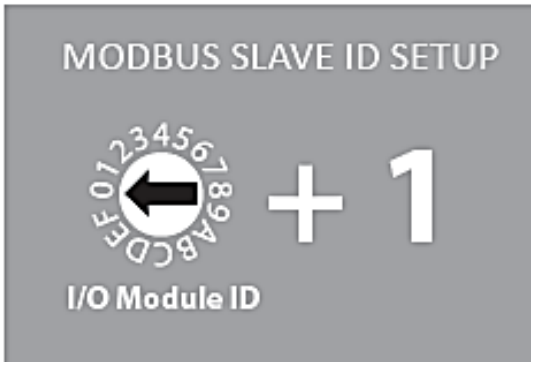


A - Input LEDs
Illuminated When Active

B - 16-Position Slave ID Switch
Slave ID = Switch Position + 1

C - Output LEDs
Illuminated When Active

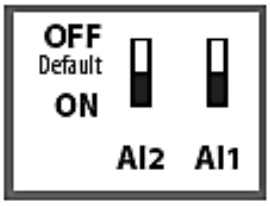
All inputs and outputs on I/O Modules provide field isolation.
Please wire accordingly.

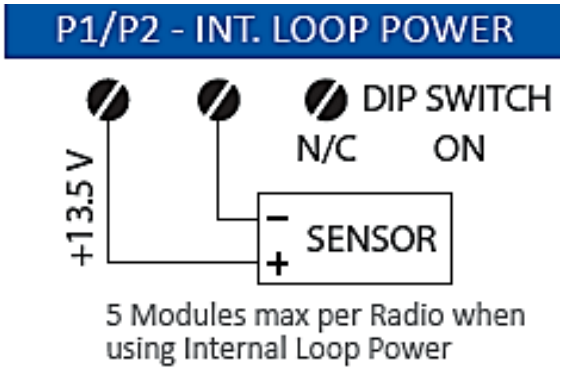


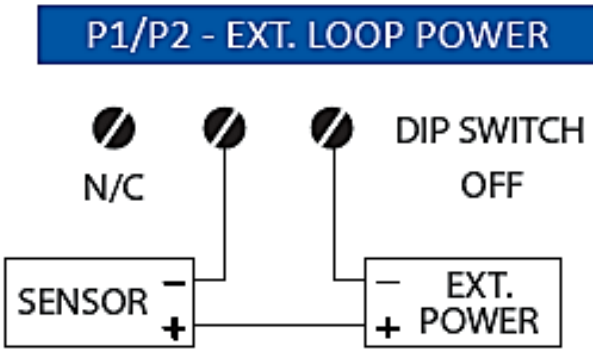
3.3 Analog 4-20 mA

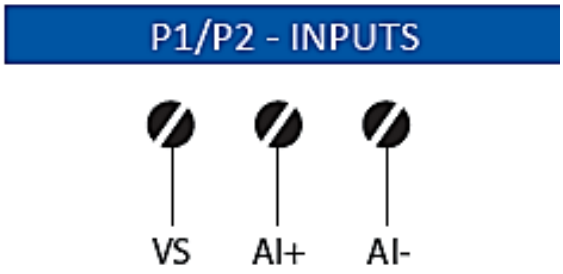
A - 16-Position
Slave ID Switch
Slave ID = Switch Position + 1

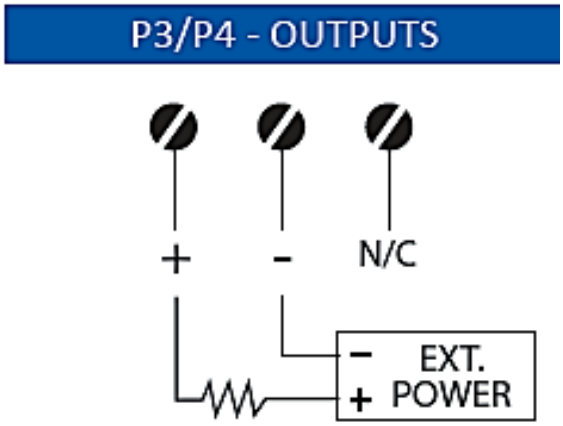
B - Dip Switches
Internal/External Loop Power







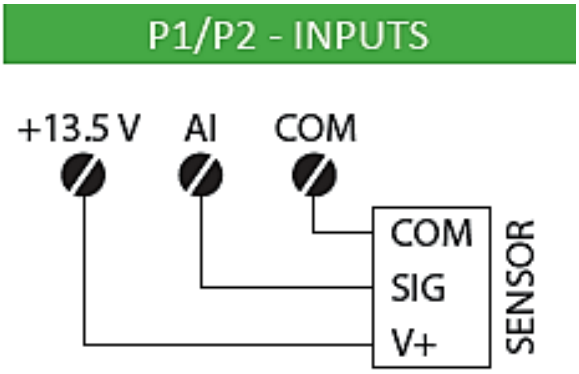


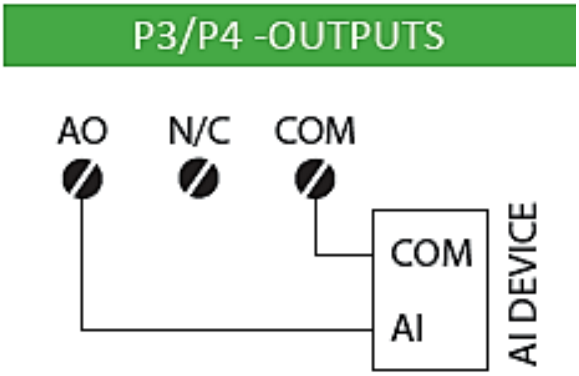


3.4 Analog 0-10 V

A - 16-Position Slave ID Switch

Slave ID = Switch Position + 1





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