Telemetry 1

I/O Interface

User Guide

Revision history—90001056

Revision	Date	Description
A	April, 2009	Initial release of the document.
B	March, 2011	Made content improvements.
C	March, 2012	Improved and corrected graphics.
D	August, 2017	Rebranded the document and made minor editorial changes.

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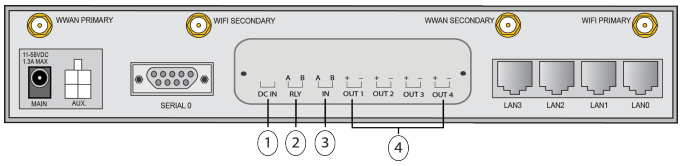
Telemetry 1 I/O Interface

The Telemetry 1 I/O Interface is a general purpose digital I/O interface for the TransPort WR41, WR44, and WR44 R.

Features

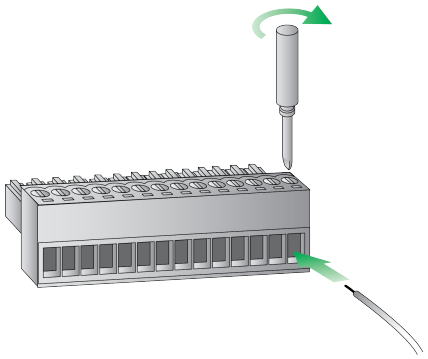


1. **Voltage Monitoring Port** - Measures the input voltage level and the internal temperature of the unit. It can also be used to provide a power source for the Digital-In port.
2. **Relay I/O Port** - The relay will make or break a circuit depending on the state of the Digital-In port.
3. **Digital-In Port** - A sensor such as a PIR or other switch / signal input device can be connected to this interface.
4. **Digital-Out Ports** - Can be programmed using Python to make or break a circuit.

All the ports are classified as SELV ports that do not use or generate voltage greater then 60 VDC. However, an isolation of a minimum of 1500 VRMS is supported.

Accessories

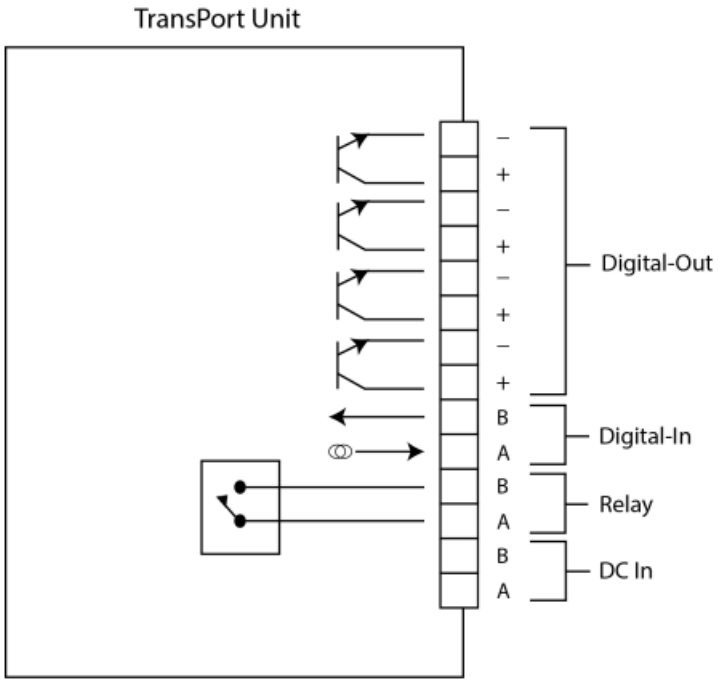
A 14-terminal female connector helps to facilitate wiring, cable management, and installation. Wires are secured to the connector via screw-down slots, and the connector is affixed tightly to the TransPort unit by tapered terminals. The recommended wire size is 16-26 AWG.



Hardware

The following section outlines the specifications and configuration of the Telemetry 1 I/O Interface.

Schematic



Voltage monitoring port (DC In)

Voltage supplied to this port powers an on-board micro-controller that measures the input voltage level and the internal temperature of the device. It can also be used to provide a power source for the Digital-In port. The maximum voltage is 24 VDC.

Note Terminal A should be connected to the common reference (typically earth/ground). For TransPort WR41 models that support the isolated wide range power supply input, the polarity of the supply voltage is non-critical.

Relay I/O port

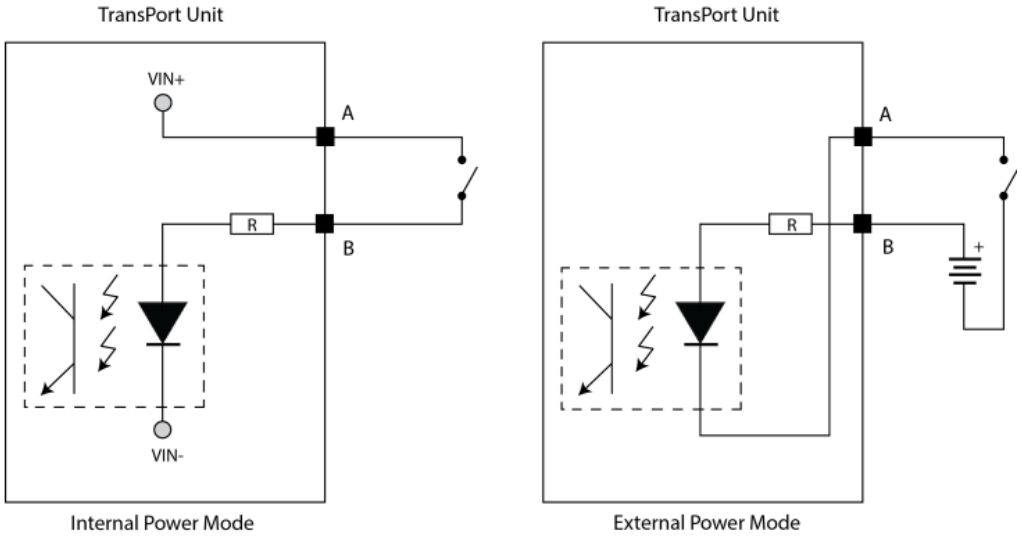
The Relay I/O port is capable of carrying up to 5A at 30 VDC resistive load. It is independent of the Voltage Monitoring Port.

Digital-In port

The Digital-In port has two modes of operation:

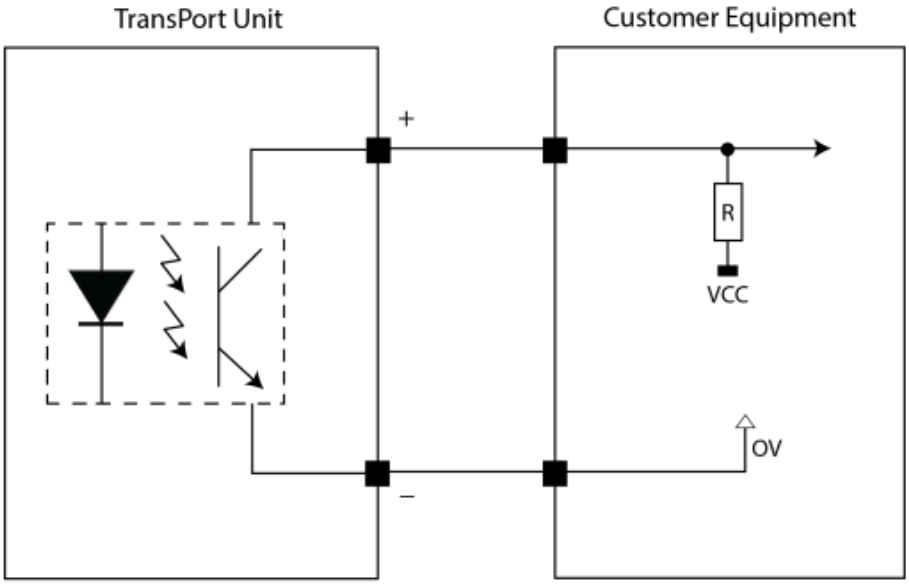
- **Internal Power Mode** - The voltage input from the Voltage Monitoring Port is used to power a downstream passive device, such as a micro-switch. Maximum voltage is 24 VDC.
- **External Power Mode** - An external power source is used. Maximum voltage supplied is 24 VDC.

The default mode of operation is Internal Power Mode. These schematics show how each mode operates.



Digital-Out ports

The Digital-Out ports present a transistor emitter and collector output pair. The diagram illustrates the typical application of a Digital-Out port. Maximum collector current is 12 mA.



Software

You can use CLI (command line interface) commands to configure the Telemetry 1 I/O Interface. If you choose, you can build these commands into Python or Basic scripts to automate functionality, or you can enter them manually via the CLI or SMS.

ANACONDA is the main command for the interface.

Example

ANACONDA `[-y 0|1] {-o1-4 0|1|pwm} [-r 0|1]`

Here are some frequently used commands. Commands are case sensitive.

ANACONDA	Current status of the interface
ANACONDA ?	Command usage
ANACONDA -y 0	Set the relay (-y) to open (default state)
ANACONDA -y 1	Set the relay (-y) to closed (switch something on)
ANACONDA –o1 1	Turn on digital output 1 (-o1 = digital output 1, -o2 = digital output 2, and so on)
ANACONDA -o1 pwm	Set digital output 1 to PWM mode (PulseWave Modulation)
PWM 100 10	Set PWM frequency and ratio (light runs at 10% brightness)
PWM 100 100	Set PWM frequency and ratio (light runs at 100% brightness)