

Using Sealevel Systems Equipment with APC NetBotz Appliances

By Peter Kokolski

Abstract

Sealevel Systems provides innovative hardware products that can enable additional connectivity and control of I/O devices that they are interfaced with. Using the manageability and flexibility of NetBotz products, a wide array of I/O devices can be managed, monitored, and controlled. Through the combination of these two elements, a robust and flexible, managed network of I/O devices emerges. This document provides the information necessary to create an environment using the Sealevel and NetBotz equipment.

Introduction

All old and new generation NetBotz appliances which have a USB port support the use of Sealevel Systems Seal/O-450U and Seal/O-462U devices to expand the number of managed dry contact sensors you can connect to your NetBotz appliances. Additionally, a customer may add multiple relay outputs that can be controlled using your NetBotz appliance as well. This document provides the information necessary to create an environment using the Sealevel and NetBotz equipment.

Output Relay Control – NetBotz & Seal/O-450U

All NetBotz appliances which have a USB port can send electronic control signals using the Seal/O-450U, which provides 16 low-current dry contact output switch closures, to turn a variety of devices on or off. Usage examples include door locks, light switches, flashing lights, and control relays to actuate other action. Output relay actions can be executed manually through the Advanced View or Basic View interfaces, or can be configured as automatic alert actions in response to a threshold event, or other alarm.

A Seal/O-450U connects directly to a NetBotz appliance via the USB port using a USB cable (included with the 450U). This Seal/O-450U device provides 16 SPDT (Single Pole Double Throw) Form C relays that are controlled by the NetBotz appliance. Each relay output is rated for switching up to 60VDC @ 2A. The outputs are grouped in four-bit segments that each shares a common ground for easy wiring. Please refer to the specifications provided by Sealevel before attempting any electrical connections as changes in the Sealevel products may occur without notice to APC.

Output control functions can be accessed interactively through the NetBotz Advanced View (AV) interface. 'Buttons' that activate a relay can be configured to appear on camera images in the AV Camera View. Output control functions also can be

triggered in response to any environmental or camera alert. Each relay port can be individually controlled, and each has an authorized user list to specify which users of the NetBotz appliance can execute that function.

Note the following regarding configuration of Sealevel device:

- Up to (4) Seal/O-450Us can be connected to a NetBotz 550 or 500 appliance.
- Connecting (4) Seal/O-450Us to a NetBotz 455 or 420x will use up the limit of (4) non-camera pods.

Additional equipment required for deployment

Note in addition to the Seal/O-450U device, a power supply to power this device must also be purchased. Both must be acquired at Sealevel Systems (<http://www.sealevel.com>) before you can deploy your NetBotz & Seal/O-450U solution.

Hi-Density Dry Contact Monitoring – NetBotz & Seal/O-462U

External sensor ports on NetBotz appliances and Sensor Pods support dry contact sensors. In applications where there is a need to connect a small amount of dry contact sensors, the external sensor ports are a good solution. However, some applications require connecting large numbers of dry contact sensors to a NetBotz appliance. In these cases, using the Seal/O-462U USB to 96 Channel TTL Digital Interface is the most robust and cost-effective solution.

Up to (2) Seal/O-462Us can be connected to a NetBotz 550 and 500, and (1) Seal/O-462U is supported on a NetBotz 455 and 420x. In either case the Seal/O-462U connects to the NetBotz appliance via a USB cable.

Note the following regarding configuration of Sealevel device:

- All ports are configured as inputs when a Seal/O-462U is connected to a NetBotz appliance (the 462U does have the capability to generate output signals, but this is not supported by the NetBotz appliance).
- While Sealevel has other high-density dry contact inputs, only the Seal/O-462U should be specified for new applications as it is the only NetBotz supported device for dry contact monitoring.

Additional equipment required for deployment

Each of the following products must be purchased from Sealevel Systems (<http://www.sealevel.com>) for each Seal/O-462U before you can deploy your NetBotz & Seal/O-462U solution:

- DB78 to Ribbon Cable (48 connections) – Item# CA237.
- Terminal Block Kit (each provides 24 connections) – Item# TB07-KT.
- Power Supply for the Seal/O-462U.

About the Author:

Peter Kokolski is the director of engineering for embedded technologies in the data center solutions group at APC by Schneider Electric. Peter is a 17 year veteran of the electronics industry and has worked in commercial, semiconductor, medical and military fields as an engineer and consultant. He received his Bachelor's degree in Electrical Engineering from Northeastern University in 1991, and is completing his JD coursework currently at Concord University School of Law. Peter is a member in good standing of IEEE and ASTQB.

