
Version 1.0
Analog Output: 0521



LONMARK[®]

Functional Profile:

Analog Output

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Overview

The Analog Output functional profile is designed to allow all general purpose analog output signals to be represented by a common object. Analog Output signals include currents and voltages of different ranges. These signals may actually control motor speed, valve position, etc.. The Analog Output functional profile is used when integrating devices that do not have the ability to interface directly to LONWORKS, but rather utilize an analog output conversion device that is LONMARK compliant.

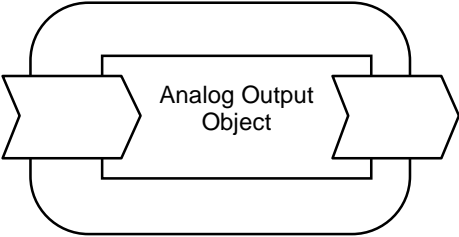


Figure 1.1 Analog Output Functional Profile

Example Usage

Devices implementing this function will be receiving SNVTs that are used to control actuator devices. An example of this would a device controlling valve position monitors SNVT_lev_percent from a flow meter. The only connectivity required is to the mandatory network variable SNVT_lev_percent. All other variables are considered to be optional.

Object Details

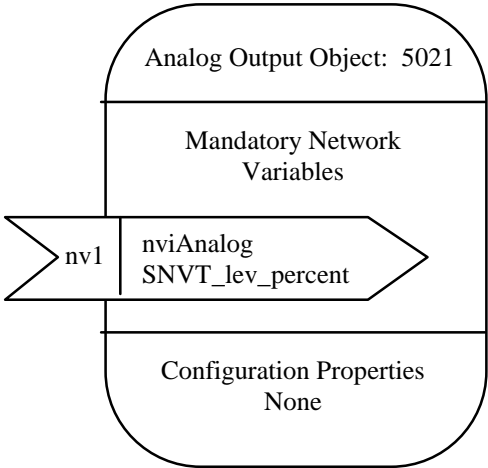


Figure 1.2 Analog Output Object Details

Mandatory Network Variables

Analog Percent of Full Scale Input

network input SNVT_lev_percent nviAnalog;

This input network variable controls the value of an analog output signal from 0% to 100% of full scale.

Valid Range

The valid range is from -163.84% to 163.84%. However, a value of -163.84% should be interpreted as an invalid signal. Any other value below 0% or above 100% should be limited to 0% or 100% respectively.

Configuration Properties

None specified.

Data Transfer

None specified.

Power-up State

All network variable inputs and the output signal should be set to zero scale until the first update is received unless otherwise specified by the Default Output configuration variable `nciDefault`.

Boundary and Error Conditions

If the value of -163.84% is received for `nviAnalog` it should be interpreted as a warning that there is a problem with sending device. For values of `nviAnalog` that are below zero scale or above full scale, the output signal should track as far as the hardware will permit; typically 0% to 100%.

Additional Considerations

If calibration or linearization are required, or if the variable `nviAnalog` (SVNT_lev_percent) does not have the required resolution, please review the Extended Analog Output functional profile.