

LabView

9

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Temat na dziś

Kontrola urządzeń – myDAQ
diody LED

Programowanie w środowisku (cd.)



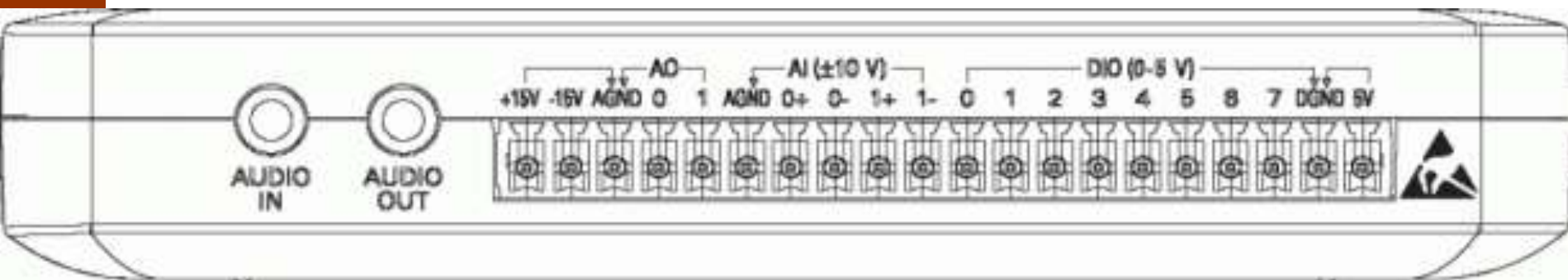
ni.com

(część materiałów zaczerpnięta ze
strony producenta)

myDAQ



myDAQ



MAX

The screenshot displays the NI Measurement & Automation Explorer (MAX) interface. The title bar reads "NI myDAQ 'myDAQ1' - Measurement & Automation Explorer". The menu bar includes "File", "Edit", "View", "Tools", and "Help". The left-hand tree view shows the following structure:

- My System
 - Data Neighborhood
 - Devices and Interfaces
 - NI myDAQ "myDAQ1" (selected)
 - NI USB-6001 "usb3902"
 - Network Devices
 - Scales
 - Software
 - Remote Systems

The main pane shows the "Settings" for the selected device:

Settings	
Name	myDAQ1
Vendor	National Instruments
Model	NI myDAQ
Serial Number	030E9582
Status	Present

The right-hand pane displays the "NI-DAQmx Device Basics" section, which includes the question "What do you want to do?" and three actionable items:

- ▶ Run the NI-DAQmx Test Panels
- ▶ Remove the device
- ▶ View or change device configuration

The top toolbar contains the following buttons: Save, Refresh, Configure..., Reset, Self-Test, Test Panels..., and Create Task... The right-hand pane also features a "Back" button and a "Hide Help" button.

MAX

Test Panels : NI myDAQ: "myDAQ1" ✕

Analog Input | Analog Output | Digital I/O | Counter I/O

Channel Name
myDAQ1/ai0

Mode
On Demand

Input Configuration
Differential

Max Input Limit: 10 Min Input Limit: -10

Rate (Hz): 1000 Samples To Read: 1000

Amplitude vs. Samples Chart Auto-scale chart

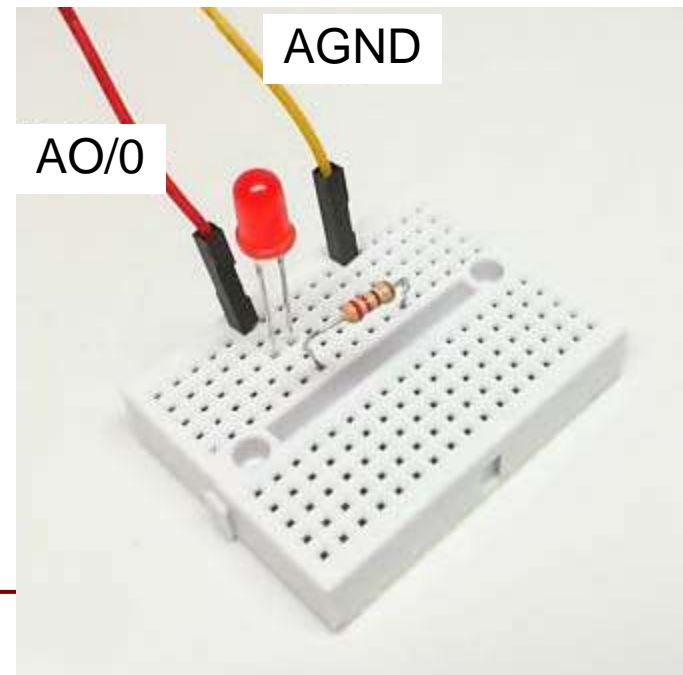
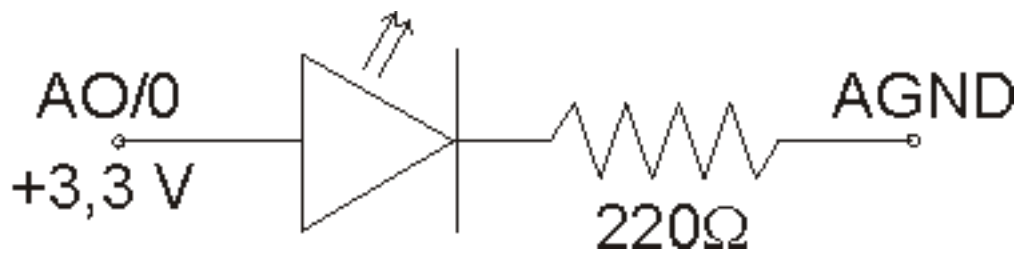
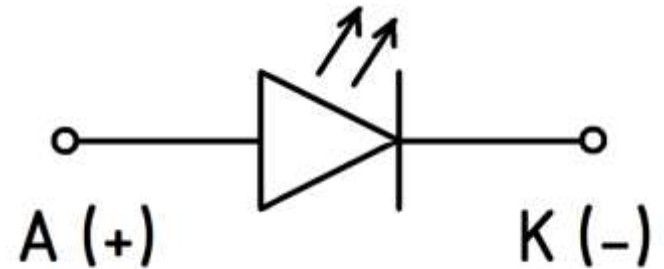
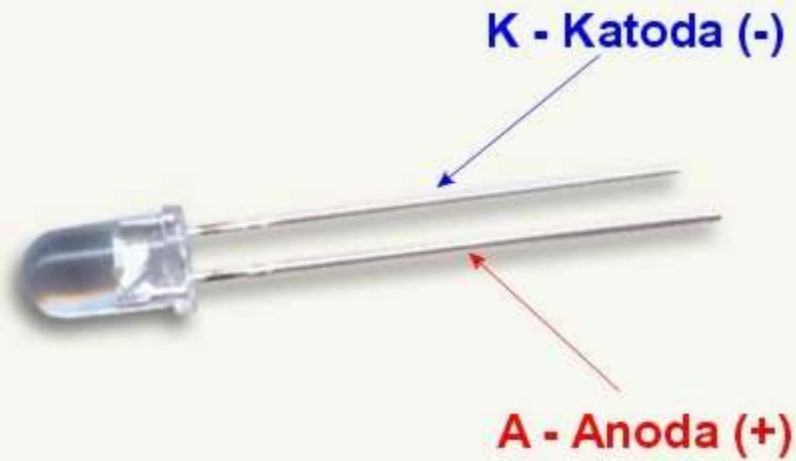
Start Stop

Close Help

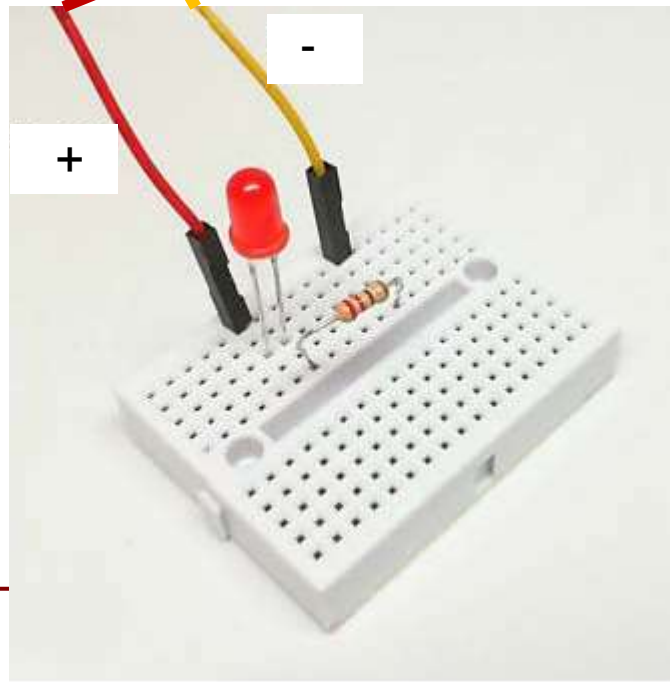
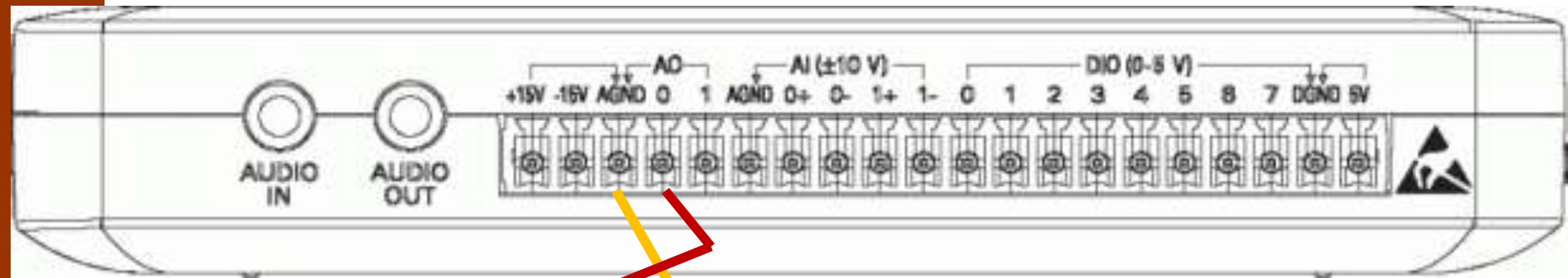
Diody LED



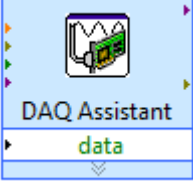
Diody LED



Dioda LED - analogowo



Dioda LED - analogowo



DAQ Assistant

data

DAQ Assistant



data

device name

error in

stop (T)

timeout (s)

error out

task out

Create New ...

NATIONAL INSTRUMENTS

Select the measurement type for the task.

A [task](#) is a collection of one or more virtual channels with timing, triggering, and other properties.

To have [multiple measurement types](#) within a single task, you must first create the task with one measurement type. After you create the task, click the **Add Channels** button to add a new measurement type to the task.

- Acquire Signals
- Generate Signals
 - Analog Output
 - Voltage
 - Current
 - Counter Output
 - Digital Output

< Back Next > Finish Cancel

Dioda LED - analogowo

The screenshot shows the 'Create New ...' dialog box in National Instruments software. The title bar includes a question mark and a close button. The National Instruments logo is in the top right corner. The main area is divided into two panes. The left pane contains instructions on how to select physical channels, including a note about global virtual channels and TEDS. The right pane, titled 'Physical', shows a tree view of supported physical channels under the device 'myDAQ1 (NI myDAQ)'. The channels listed are 'ao0', 'ao1', 'audioOutputLeft', and 'audioOutputRight'. Below the list, there is a note: '<Ctrl> or <Shift> click to select multiple channels.' At the bottom of the dialog, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

Create New ...

NATIONAL INSTRUMENTS

Select the physical channel(s) to add to the task.

If you have previously configured [global virtual channels](#) of the same measurement type as the task, click the **Virtual** tab to add or copy global virtual channels to the task. When you copy the global virtual channel to the task, it becomes a local virtual channel. When you add a global virtual channel to the task, the task uses the actual global virtual channel, and any changes to that global virtual channel are reflected in the task.

If you have TEDS configured, click the **TEDS** tab to add TEDS channels to the task.

For hardware that supports [multiple channels](#) in a task, you can select multiple channels to

Physical

Supported Physical Channels

- myDAQ1 (NI myDAQ)
 - ao0
 - ao1
 - audioOutputLeft
 - audioOutputRight

<Ctrl> or <Shift> click to select multiple channels.

< Back Next > Finish Cancel

Dioda LED - analogowo

Undo Redo Run Add Channels Remove Channels

0	Apply Value to All
VoltageOut	1,1

Configuration Triggering Advanced Timing

Channel Settings

+ X Details >>

VoltageOut

Click the Add Channels button (+) to add more channels to the task.

Voltage Output Setup

Settings

Signal Output Range

Max 3,3

Min 0

Scaled Units

Volts

Terminal Configuration

RSE

Custom Scaling

<No Scale>

Timing Settings

Generation Mode

1 Sample (On Demand)

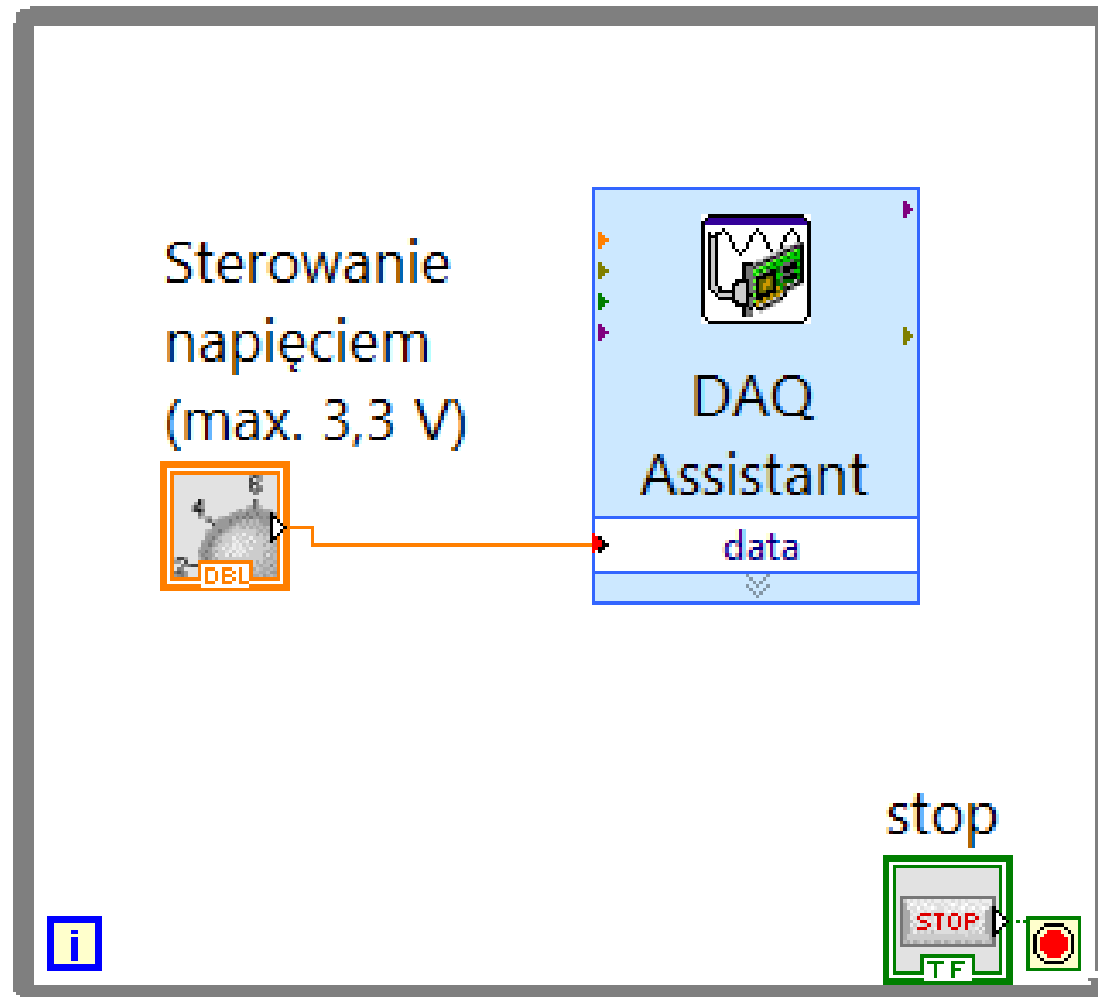
Samples to Write

100

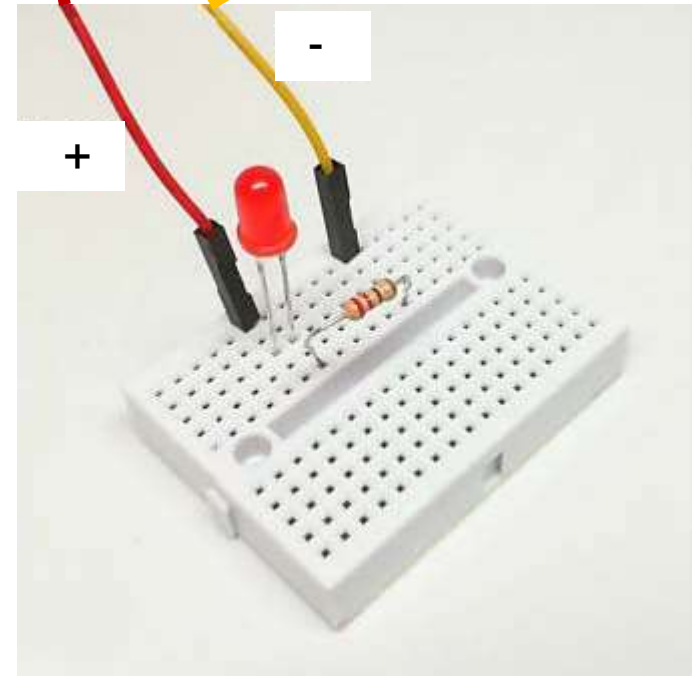
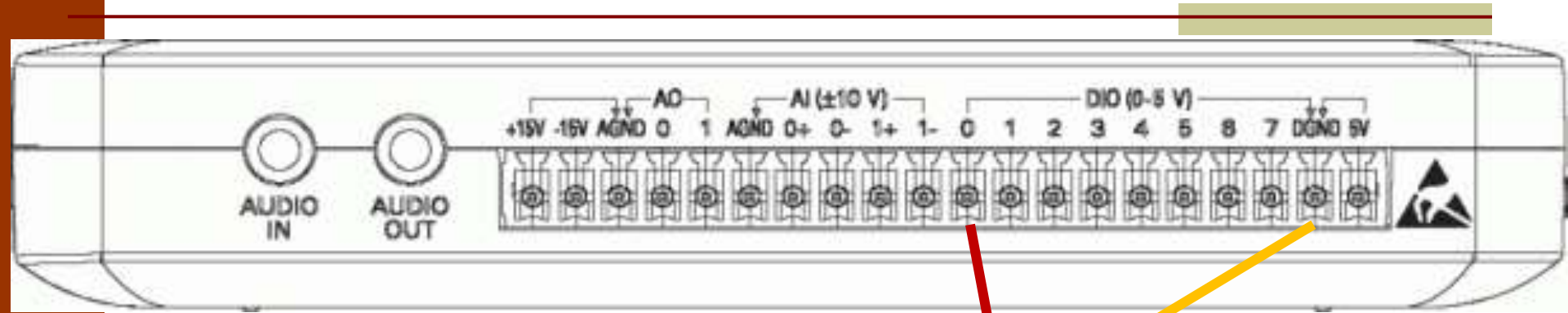
Rate (Hz)

1k

Dioda LED - analogowo



Dioda LED - cyfrowo



Dioda LED - cyfrowo

Create New ...

?

×

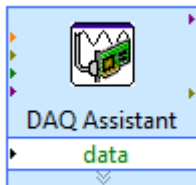
NATIONAL INSTRUMENTS

Select the measurement type for the task.

A **task** is a collection of one or more virtual channels with timing, triggering, and other properties.

To have **multiple measurement types** within a single task, you must first create the task with one measurement type. After you create the task, click the **Add Channels** button to add a new measurement type to the task.

- Acquire Signals
- Generate Signals
 - Analog Output
 - Counter Output
 - Digital Output
 - Line Output
 - Port Output



< Back

Next >

Finish

Cancel

Dioda LED - cyfrowo

Create New ...

NATIONAL INSTRUMENTS

Select the physical channel(s) to add to the task.

If you have previously configured [global virtual channels](#) of the same measurement type as the task, click the **Virtual** tab to add or copy global virtual channels to the task. When you copy the global virtual channel to the task, it becomes a local virtual channel. When you add a global virtual channel to the task, the task uses the actual global virtual channel, and any changes to that global virtual channel are reflected in the task.

If you have TEDS configured, click the **TEDS** tab to add TEDS channels to the task.

For hardware that supports [multiple channels](#) in a task, you can select multiple channels to

Physical

Supported Physical Channels

- myDAQ1 (NI myDAQ)
 - port0/line0
 - port0/line1
 - port0/line2
 - port0/line3
 - port0/line4
 - port0/line5
 - port0/line6
 - port0/line7

<Ctrl> or <Shift> click to select multiple channels.

< Back Next > Finish Cancel

Dioda LED - cyfrowo

The screenshot displays a software interface for configuring a digital output task. At the top, a toolbar includes buttons for Undo, Redo, Run, Add Channels, and Remove Channels. The main workspace shows a vertical label 'DigitalOut' with a small circle next to it.

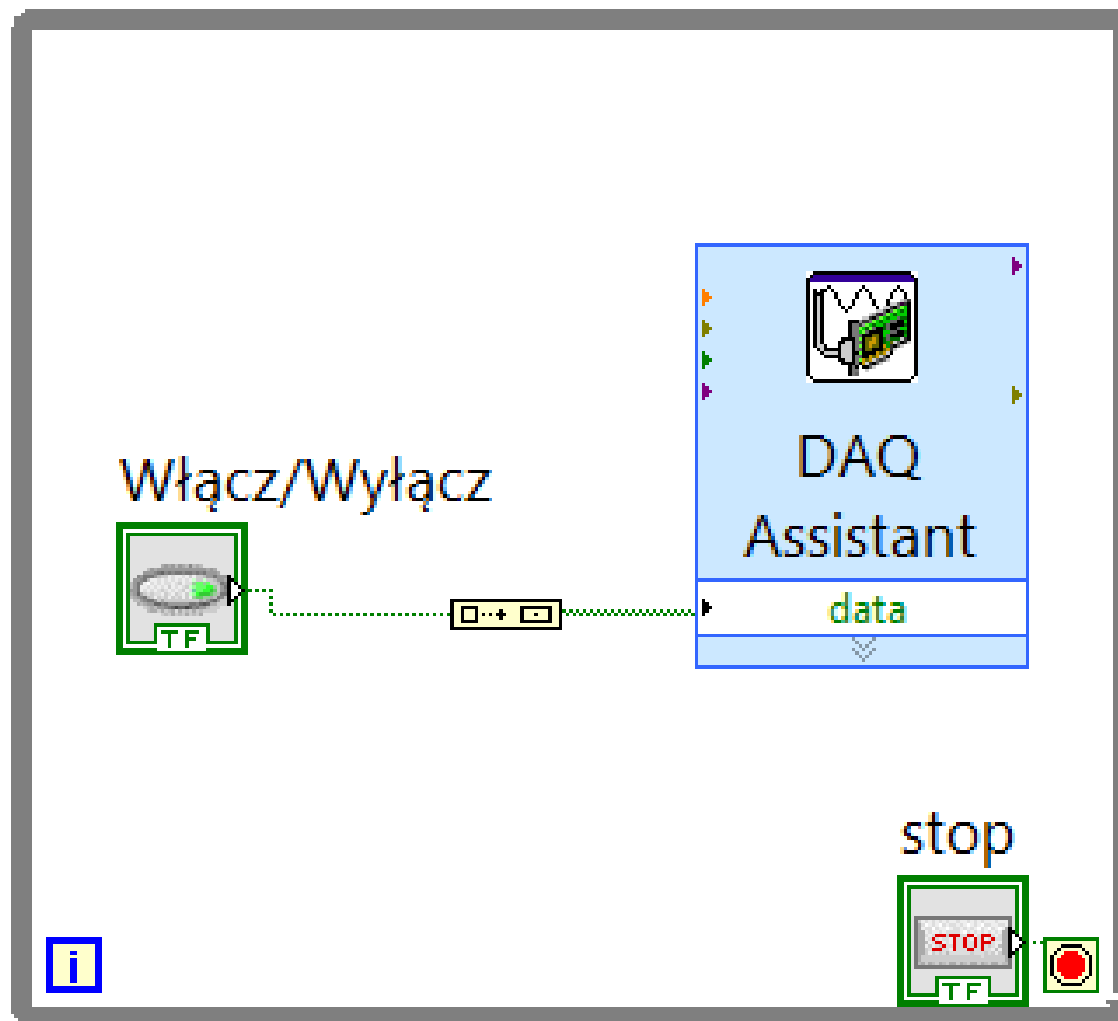
The configuration panel is divided into three tabs: Configuration, Triggering, and Advanced Timing. The Configuration tab is active and contains two sections:

- Channel Settings:** A list of channels with 'DigitalOut' selected. Above the list are buttons for adding (+), removing (X), and refreshing (circular arrow) channels, along with a 'Details' button and a scroll arrow. A note at the bottom reads: "Click the Add Channels button (+) to add more channels to the task."
- Digital Line Output Setup:** A sub-panel with a 'Settings' icon and a checkbox labeled 'Invert Line'.

At the bottom, the **Timing Settings** section includes:

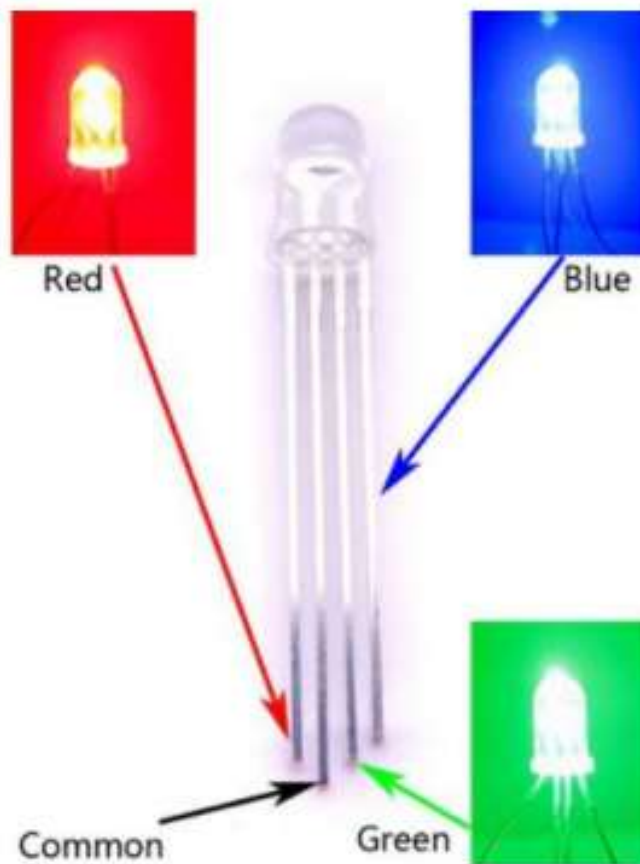
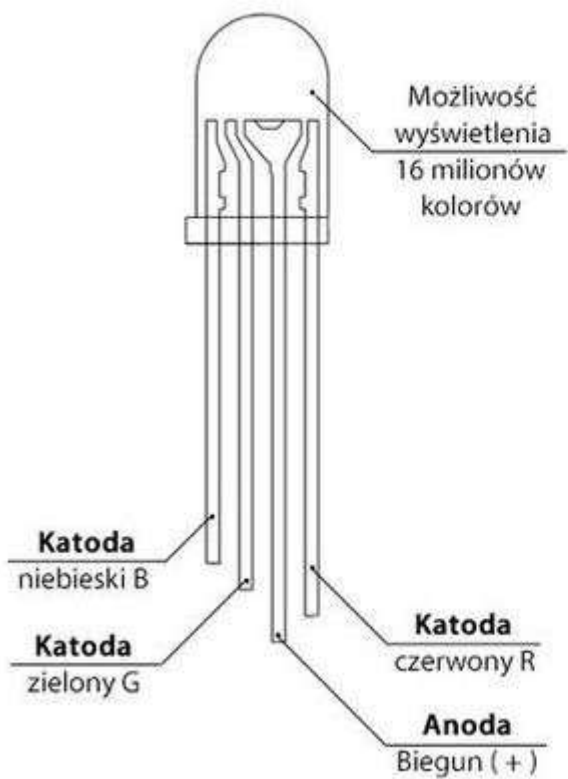
- Generation Mode:** A dropdown menu set to '1 Sample (On Demand)'.
- Samples to Write:** A text input field containing '100'.
- Rate (Hz):** A text input field containing '1k'.

Dioda LED - cyfrowo

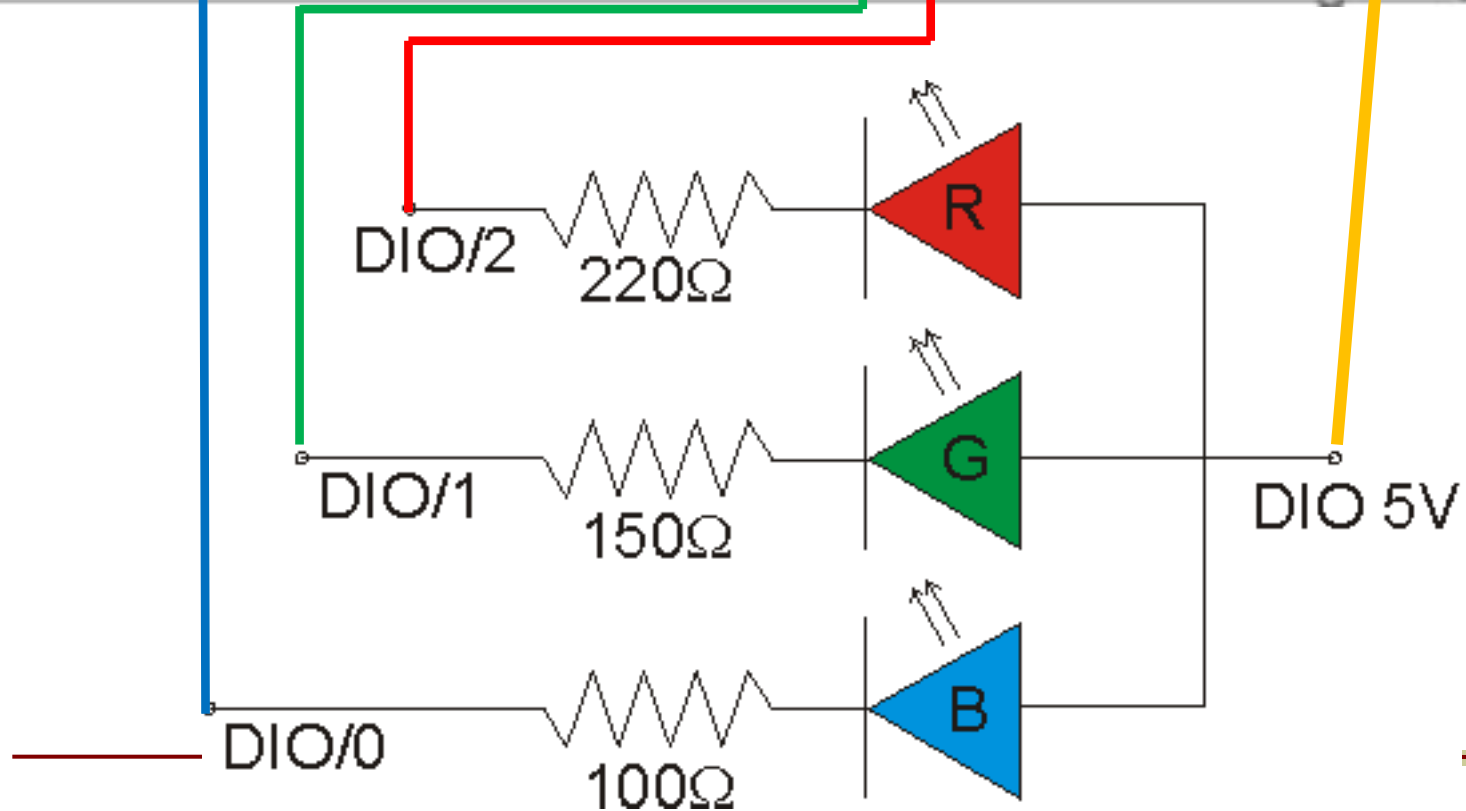
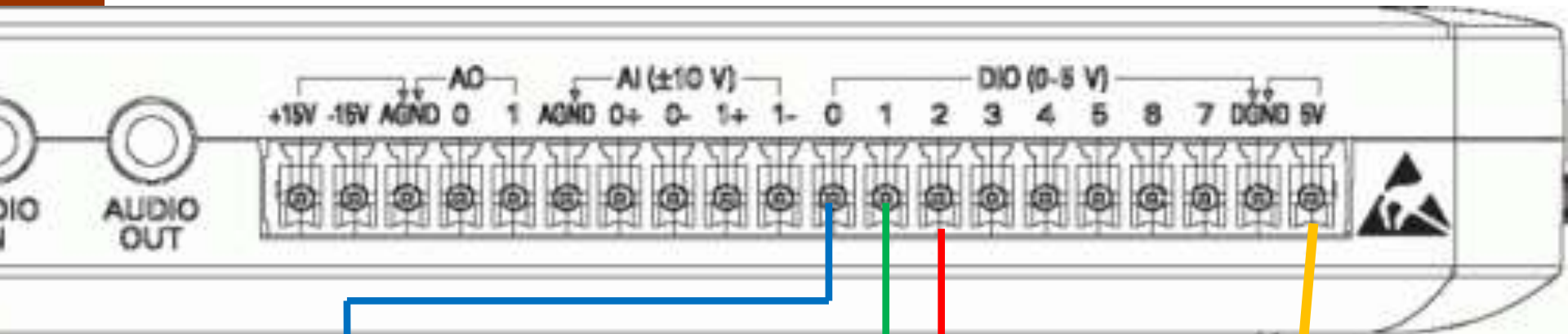


Dioda RGB

WSPÓLNA ANODA



Dioda RGB



Dioda RGB

Create New ...



Select the physical channel(s) to add to the task.

If you have previously configured [global virtual channels](#) of the same measurement type as the task, click the **Virtual** tab to add or copy global virtual channels to the task. When you copy the global virtual channel to the task, it becomes a local virtual channel. When you add a global virtual channel to the task, the task uses the actual global virtual channel, and any changes to that global virtual channel are reflected in the task.

If you have TEDS configured, click the **TEDS** tab to add TEDS channels to the task.

For hardware that supports [multiple channels](#) in a task, you can select multiple channels to

Physical

Supported Physical Channels

- myDAQ1 (NI myDAQ)
 - port0/line0
 - port0/line1
 - port0/line2
 - port0/line3
 - port0/line4
 - port0/line5
 - port0/line6
 - port0/line7

<Ctrl> or <Shift> click to select multiple channels.

< Back

Next >

Finish

Cancel

Dioda RGB

The screenshot shows a software interface with a top toolbar containing 'Undo', 'Redo', 'Stop', 'Add Channels', and 'Remove Channels'. On the right side, there are three vertical labels: 'DigitalOut_2', 'DigitalOut_1', and 'DigitalOut_0'. The main window has three tabs: 'Configuration', 'Triggering', and 'Advanced Timing'. The 'Configuration' tab is active and contains two sections: 'Channel Settings' and 'Timing Settings'. The 'Channel Settings' section has a list of channels: 'DigitalOut_0', 'DigitalOut_1', and 'DigitalOut_2', with 'DigitalOut_1' selected. Below this list is a note: 'Click the Add Channels button (+) to add more channels to the task.' The 'Digital Line Output Setup' section has a 'Settings' sub-section with a checked 'Invert Line' checkbox. The 'Timing Settings' section at the bottom includes 'Generation Mode' set to '1 Sample (On Demand)', 'Samples to Write' set to '100', and 'Rate (Hz)' set to '1k'.

Undo Redo Stop Add Channels Remove Channels

DigitalOut_2
DigitalOut_1
DigitalOut_0

Configuration Triggering Advanced Timing

Channel Settings

+ X Details >>

DigitalOut_0
DigitalOut_1
DigitalOut_2

Click the Add Channels button (+) to add more channels to the task.

Digital Line Output Setup

Settings

Invert Line

Timing Settings

Generation Mode Samples to Write Rate (Hz)

1 Sample (On Demand) 100 1k