APPLICATION NOTE

YASKAWA

Title: How to View PDD Variables	
Product(s): MP3200iec, MP2300iec, MP2600iec, MP3300iec, MotionWorks IEC Version 3 Pro	**Doc. No.** AN.MPIEC.23

Application Overview

A Process Data Directory (PDD) variable is a variable that is written onto the PLC and can be accessed through the Web User Interface (WebUI). Please see Figure 1 below.

Figure 1: WebUI with PDD Variables

Application Highlights

A PDD variable list (CSV) file is now downloaded to the controller when a project is downloaded and PDD variables are defined. Variables selected as PDD can be watched at the controller's WebUI Status page in the PLC Variables tab. The watch list will only include up to the first 50 PDD variables defined. Only PDD variables of basic data types may be monitored, not user defined datatypes.

Note: If downloading PDD variables for the very first time, the variables will be displayed on the controller's WebUI Status page as soon as the download is complete. All further downloads will require a reboot of the controller as the PDD.csv file is read on power up.
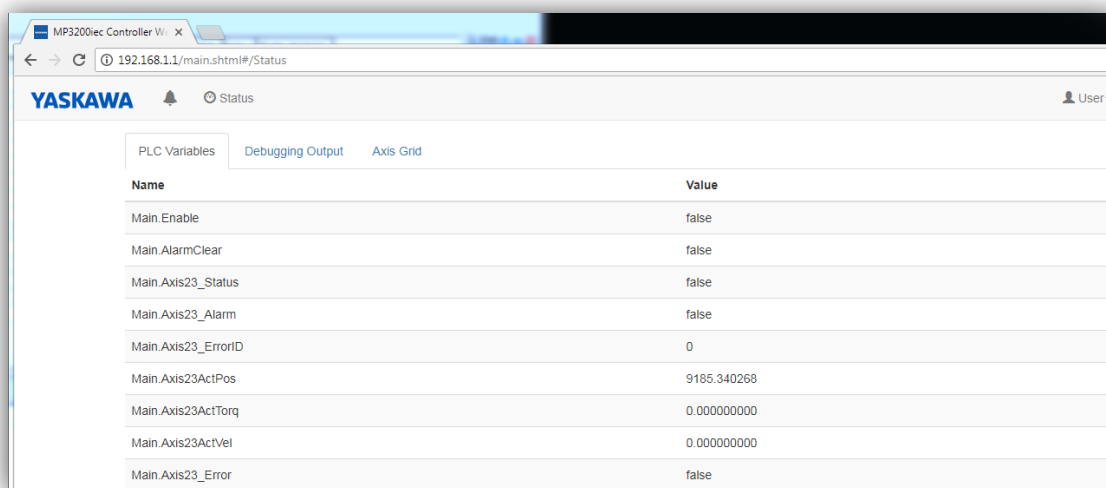
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Products Used

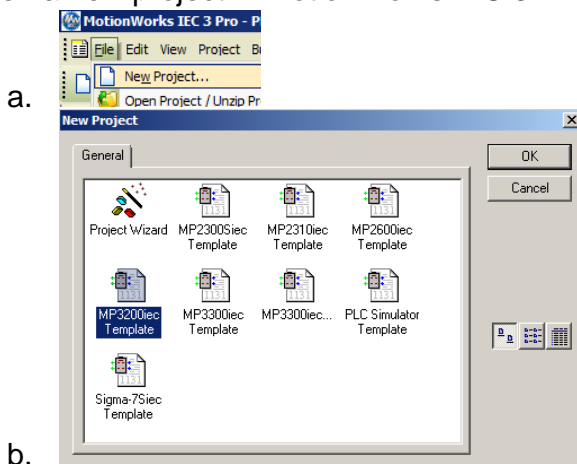| Component	Product and Model Number
Servopack	Sigma-5 and Sigma-7 Series
Motor	Sigma-5 and Sigma-7 Series
Controller	MPiec Series
Software	MotionWorks IEC 3.2.0.197 and higher

Application Requirements

MotionWorks IEC Version 3.2.0.197 and higher

Firmware version 3.2.0.197 and higher

MPiec Series Controller

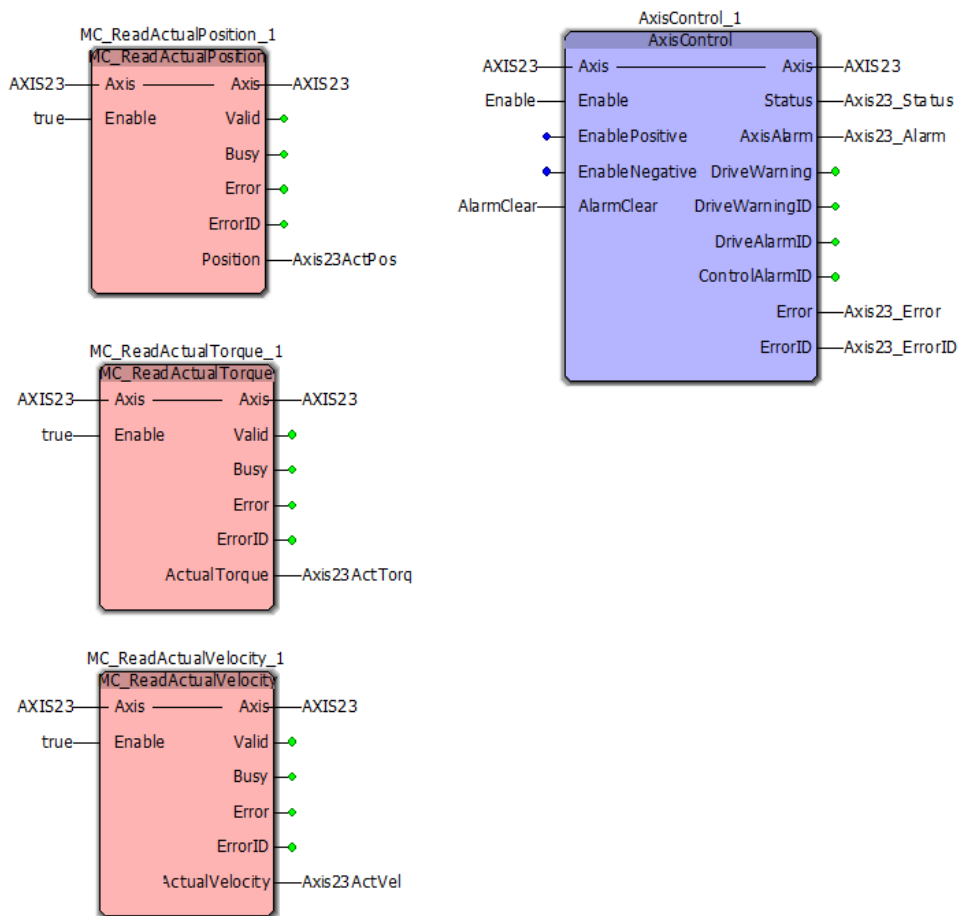## Implementation

1. Open a new project in MotionWorks IEC 3

    a.

    b.

2. If needed, connect to the Hardware Configuration to allocate axes and utilize actual positions, torques, velocities, etc.
   a. See video: Basic Concepts (MotionWorks IEC Hardware Configuration)
3. Open any POU and create local or global variables
   a. *Example in 'Main' POU using MC_ReadActualTorque, MC_ReadActualPosition, MC_ReadActualVelocity and AxisControl function blocks*

i.

4. Open the variables list for the 'Main' POU and check the 'PDD' checkbox for specific variables to monitor

a.

Name	Type	Usage	Description	Address	Init	Retain	PDD	O
⊟ **Default**								
AlarmClear	BOOL	VAR				☐	☐	
AXIS23	AXIS_REF	VAR_EXTER…	SGDV Rotary - 23 (* Do Not Modify!! *)			☐	☐	
Axis23_Alarm	BOOL	VAR				☐	☐	
Axis23_Error	BOOL	VAR				☐	☑	
Axis23_ErrorID	UINT	VAR				☐	☑	
Axis23_Status	BOOL	VAR				☐	☑	
Axis23ActPos	LREAL	VAR				☐	☑	
Axis23ActTorq	LREAL	VAR				☐	☑	
Axis23ActVel	LREAL	VAR				☐	☑	
AxisControl_1	AxisControl	VAR				☐	☐	
Enable	BOOL	VAR				☐	☐	
MC_ReadActualPosition_1	MC_ReadActualPosition	VAR				☐	☐	
MC_ReadActualTorque_1	MC_ReadActualTorque	VAR				☐	☐	
MC_ReadActualVelocity_1	MC_ReadActualVelocity	VAR				☐	☐	

5. Compile and download project to the controller
6. Reboot the controller
7. Connect to the MPiec Series Controller's WebUI (IP Address)

a. View the WebUI Status Page

b.

Name	Value
Main.Axis23_Status	false
Main.Axis23_ErrorID	0
Main.Axis23ActPos	9185.340266
Main.Axis23ActTorq	0.000000000
Main.Axis23ActVel	-0.000238418
Main.Axis23_Error	false