Kollmorgen Automation Suite

Web Diagnostic Panels User Manual

Document Edition: A, February 2026
Valid for KAS Software Revision: 4.05
Part Number: N/A

For safe and proper use, follow these instructions.
Keep for future use.

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Table of Contents

1 Web Diagnostic Panels

This document describes how to:

- "Create Control Panel Views" (➔ p. 5)
- "Create and Configure an Application" (➔ p. 4) for a KAS project.
- "Access Web Diagnostic Panels in a Browser" (➔ p. 12).

1.1 Overview

The Web Diagnostic Panels is used to interact with and manage control panels designed in the KAS-IDE through a browser-based interface.

This feature provides a convenient way to visualize and operate control logic without requiring native applications or additional software installations.

IMPORTANT

This feature is specific for PCMM2G only.

1.2 Key Features

- **Browser-Based Access**: Control panels can be accessed via standard desktop web browsers.
- **Real-Time Interaction**: Users can monitor, and control system parameters live.
- **Custom Panel Layouts**: Panels designed in the IDE retain their layout and styling when rendered in the browser.
- **No Installation Required**: Runs directly in supported browsers without additional plugins.

1.2.1 Prerequisites

- The KAS-IDE must be installed on the computer.
- A project must be configured with the **Generate Web-based Control Panels** check box selected.
- The target controller must support web content generation (e.g., PCMM2G).

1.3 Overall Procedures

These are the overall steps to configure an application and access the web-based diagnostic panels:

1. "Create and Configure an Application" (➔ p. 4)
2. "Access Web Diagnostic Panels in a Browser" (➔ p. 12).

2 Create and Configure an Application

2.1 Project Initialization

1. Verify the "Prerequisites" (→ p. 3) are completed.
2. Start the KAS-IDE.
3. Create a new project or open an existing KAS project.
4. Continue with "Create Control Panel Views" (→ p. 5).

2.2 Create Control Panel Views

Control Panels are created and managed in the KAS-IDE Project Explorer.

1. In the Project Explorer tree, right-click the Controller and select **Add Control Panel**. (Figure 2-1)

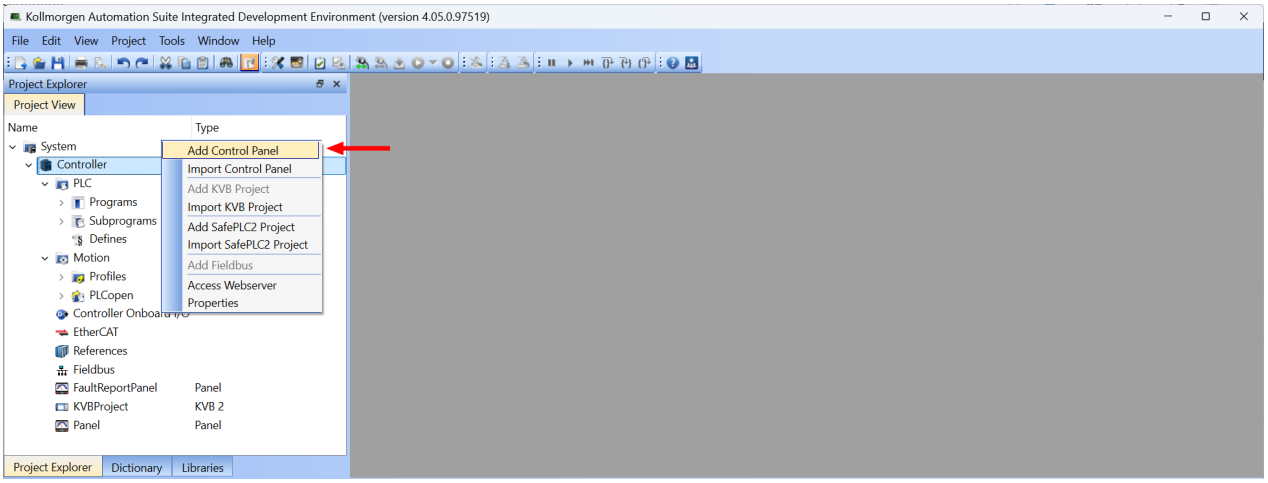

Figure 2-1: Add Control Panel option

2. Right-click the new Panel and select **Rename**. (Figure 2-2)

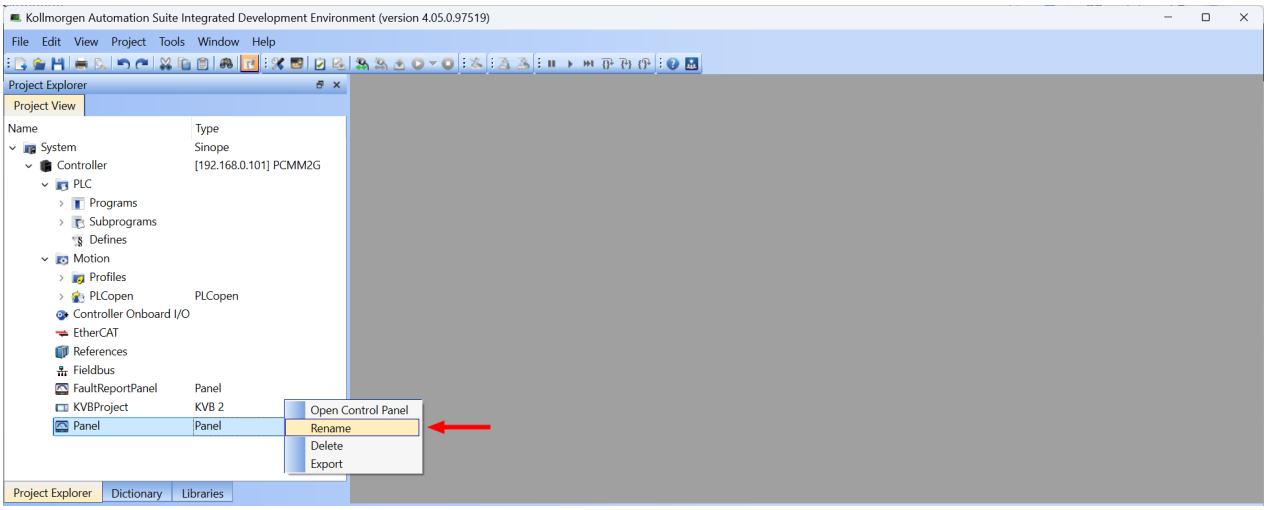

Figure 2-2: Rename option

The **Rename**dialog box opens.

3. Change the Panel name. (Figure 2-3)

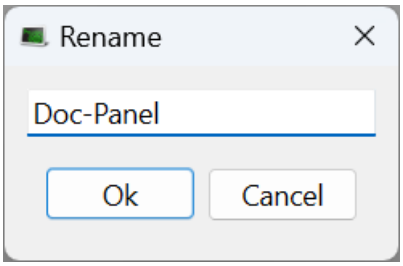

Figure 2-3: Rename dialog box with changed name

4. Click **OK** to save the changes or selections and close the dialog box.
5. In the Project Explorer tree, double-click the new Control Panel to open it in the KAS-IDE graphical editor. (Figure 2-4)

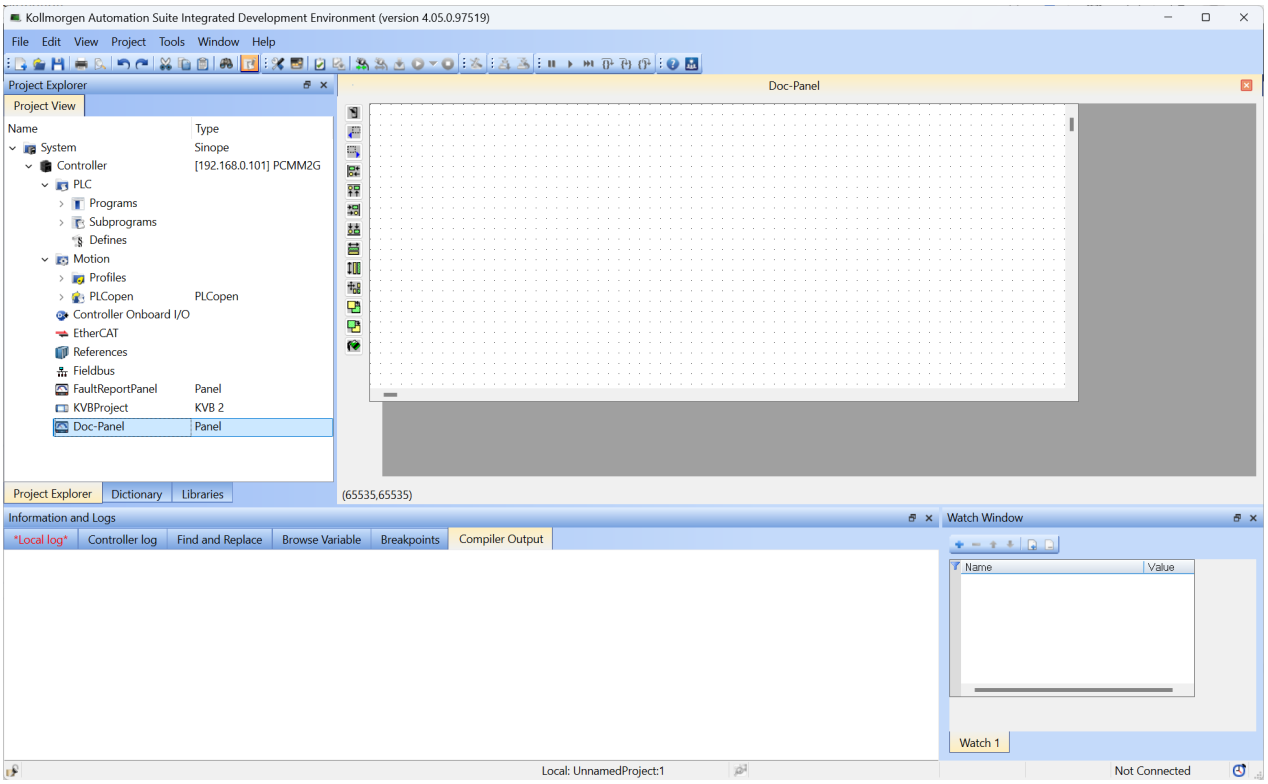

Figure 2-4: New Control Panel

2.3 Activate Web-based Content Generation Configuration

1. On the **Project** menu, click **Settings**.
   The **Project Settings** dialog box opens.

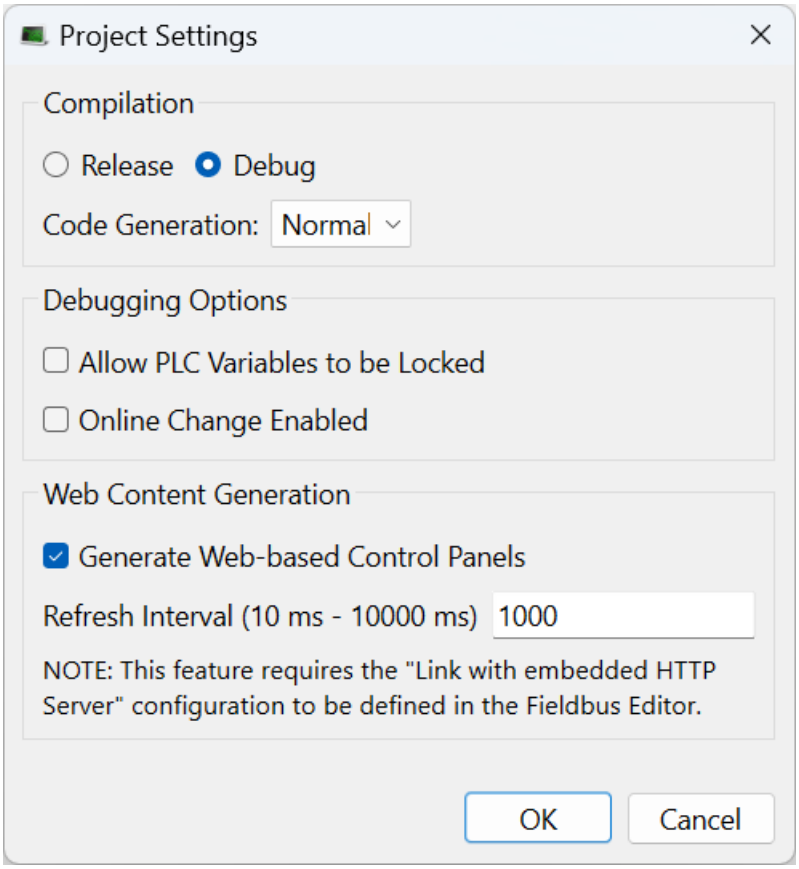

Figure 2-5: Project Settings dialog box

2. In the **Web Content Generation** section, select the **Generate Web-based Control Panels** check box. (Figure 2-5)
3. Optional: In the **Refresh Interval** text box, specify the interval at which web pages are refreshed to receive PLC variable updates from the KAS Web server.
4. Click **OK** to save the changes or selections and close the dialog box.
5. Continue with "Fieldbus Configuration" (→ p. 8).

2.4 Fieldbus Configuration

1. In the Project Explorer, double-click the Fieldbus node to open the Fieldbus Editor.
2. On the vertical toolbar, click the **Insert Network** (Configuration) button ( ). (Figure 2-6)

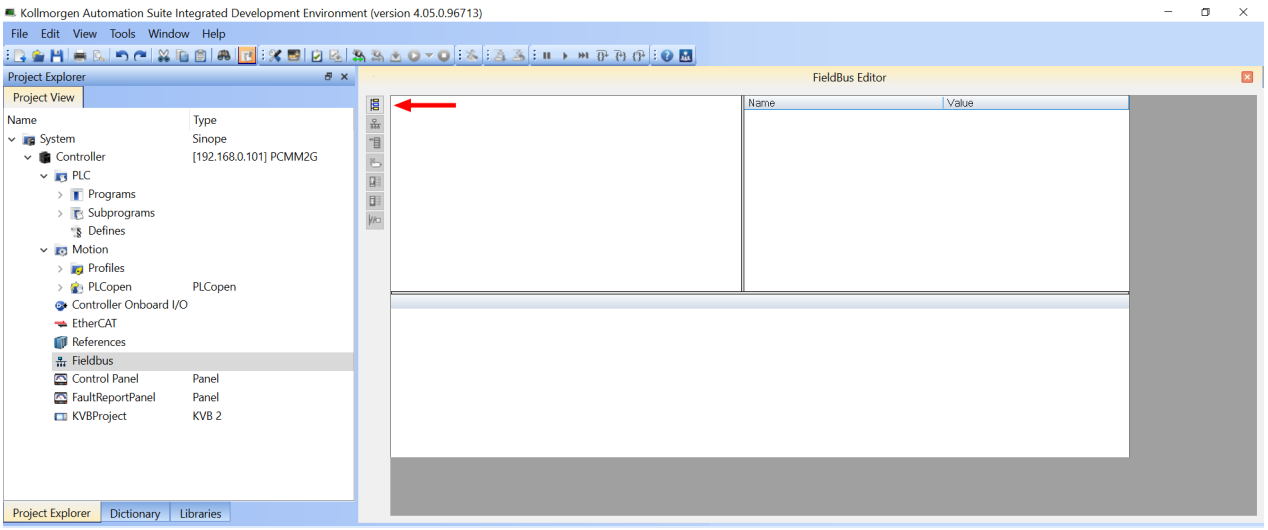

Figure 2-6: Insert Network (Configuration) button

The **Add Configuration** dialog box opens.

3. In the configuration tree, select **Link with embedded HTTP Server**. (Figure 2-7)

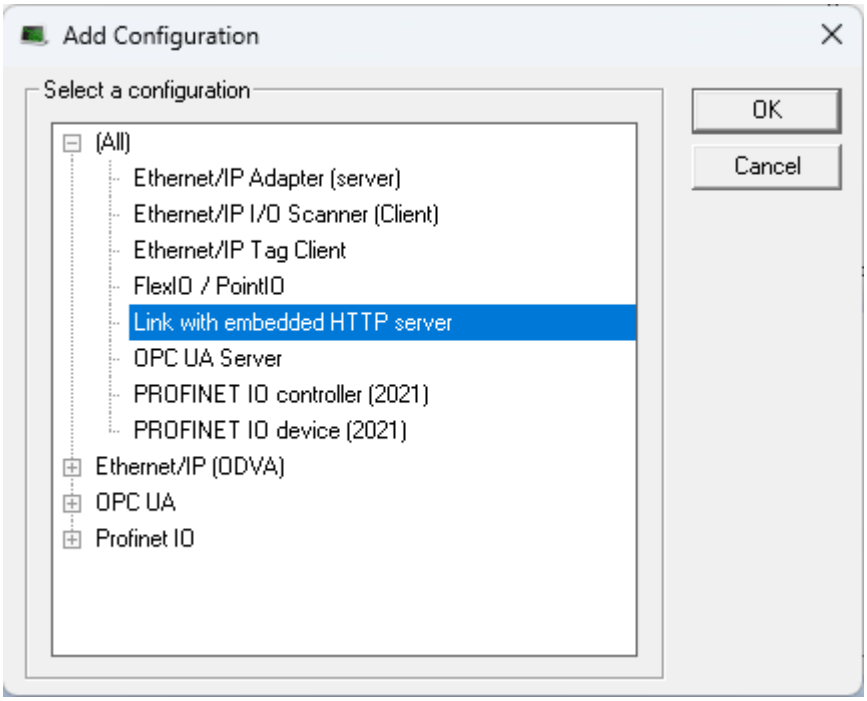

Figure 2-7: Add Configuration dialog box

4. Click **OK** to save the changes or selections and close the dialog box.

The **Link with embedded HTTP Server** dialog box opens. (Figure 2-8)

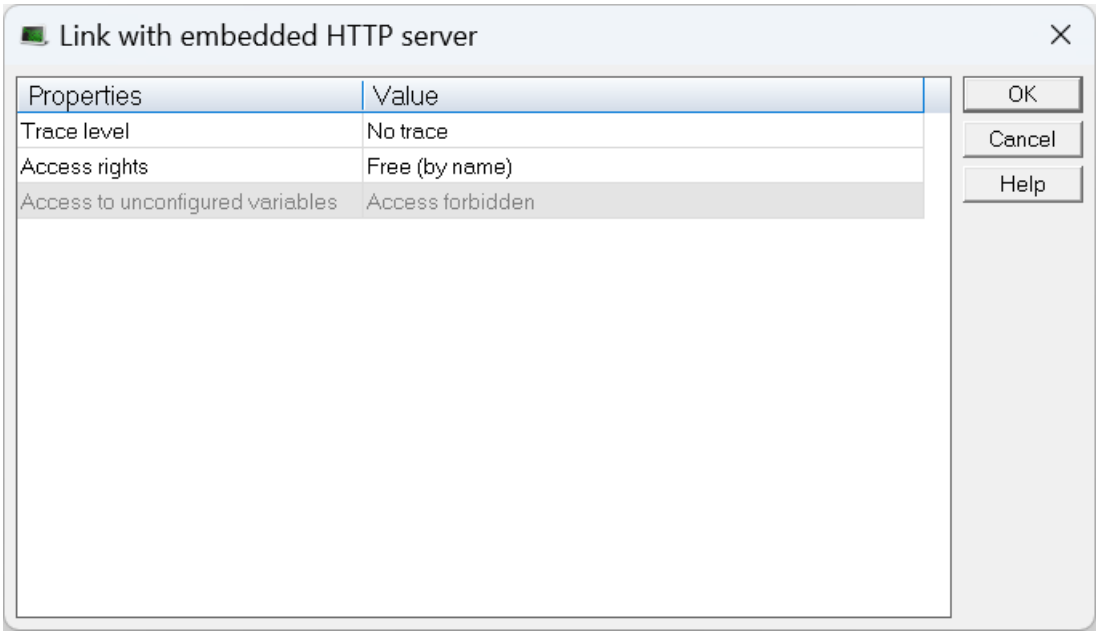

Figure 2-8: Link with embedded HTTP server dialog box

5. In the **Trace Level - Value** column cell, double-click the cell to open the **Trace Level - Value** list box.
6. In the **Trace Level - Value** list box, select the option that defines the type of information written to the controller log output.
   The options are:
   - No trace (default)
   - Information
   - Debug
7. In the **Access Rights** row, double-click the **Value** column cell to switch the selection between **Free (by name)** or **Configured variables only**.
   - **Free (by name)**: When selected, the KAS Web server gives full Read / Write access to any PLC variable present in the KAS project.
   - **Configured variables only**: When selected, the PLC variables must be enumerated in the configuration tree.

IMPORTANT

Kollmorgen recommends using the **Configured variables only** option to avoid any possible unintended remote access to PLC variables.

8. In the **Access to unconfigured variables** row, double-click the **Value** column cell to open the **Access to unconfigured variables - Value** list box.
9. In the **Access to unconfigured variables - Value** list box, select the option that defines the default access rights for any variable not explicitly configured in this tree.
   - The options are:
     - Read-only
     - Read / Write
     - Access forbidden (default)

NOTE

- This setting is only available when the **Configured variables only** option is selected in the **Access Rights - Value** cell.
- If the **Access to unconfigured variables - Value** cell is grayed out when **Configured variables only** access rights is selected, close the **Link with embedded HTTP Server** dialog box and re-open the dialog box.

10. Optional: If using the **Access to unconfigured variables - Value** list box, complete Steps 10a to 10i:
    a. On the vertical toolbar, click the **Insert Master/Port** button ( ).
    This inserts a new node, Channel, under the Link with embedded HTTP Server node in the Fieldbus Editor.
    b. On the vertical toolbar, click the **Insert Slave/Data Block** button ( ).
    The **Group** dialog box opens. (Figure 2-9)

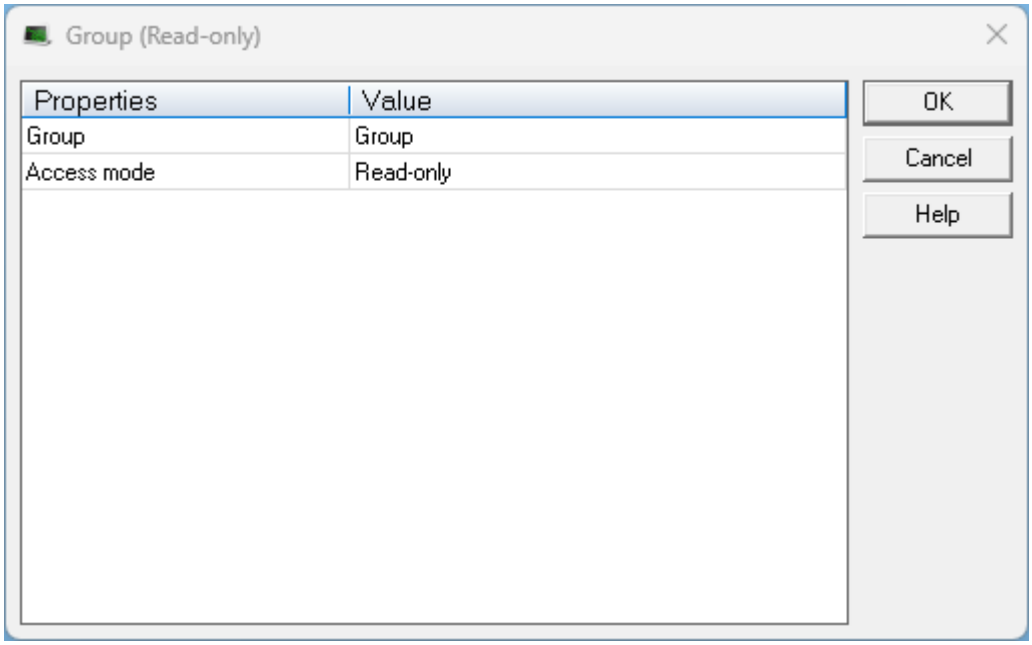

Figure 2-9: Group dialog box

    c. Double-click the **Access Mode - Value** table cell and select either:
    - Read / Write
    - Read-only
    - Access Forbidden

    d. Click **OK** to save the changes or selections and close the dialog box.
    The Fieldbus Editor returns.
    e. On the vertical toolbar, click the **Insert Variable** button ( ).

The **Insert Variables** dialog box opens. (Figure 2-10)

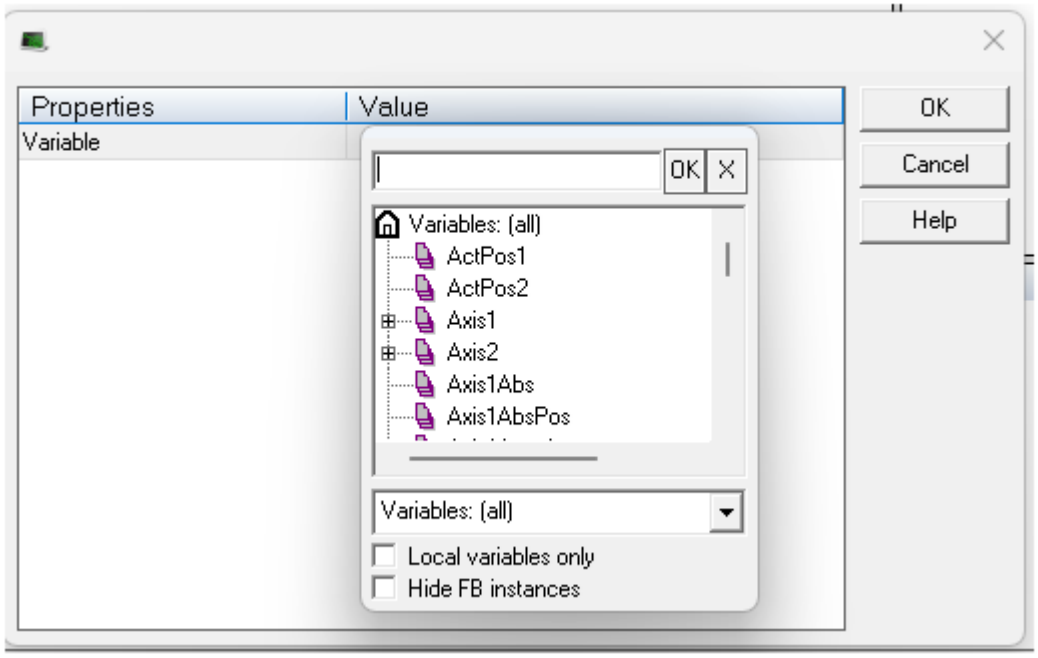

Figure 2-10: Insert Variables dialog box

f. Double-click in the Variables-Value cell.
   The **Variables** combo-box opens.
g. In the **Variables** combo-box, select the applicable variable.
h. Click **OK** to save the selection and close the combo-box.
   The **Insert Variables** dialog box returns showing the selection.
i. Click **OK** to save the changes or selections and close the dialog box.
j. Repeat Steps 10a to 10i to insert all the PLC variables mapped to the widgets in the Control Panel.

11. Continue with "Compile and Download Project" (➔ p. 11).

2.5 Compile and Download Project

1. Compile the project and download it to the controller.
2. Start the KAS project.
3. Continue with "Access Web Diagnostic Panels in a Browser" (➔ p. 12).

3 Access Web Diagnostic Panels in a Browser

1. Open a web browser.
2. Enter the controller's IP address for the URL.
   The Web server Home page opens.

   NOTE

   See Find the Controller IP Address.

   TIP

   Enter the URL as https://(Controller_IP_Address)/kas_app_view in the web browser to directly access the web diagnostic panels.
3. Click the KAS Application tab.
4. Click the **Diagnostic Panels** sub-tab on the right of the window. (Figure 2-11)

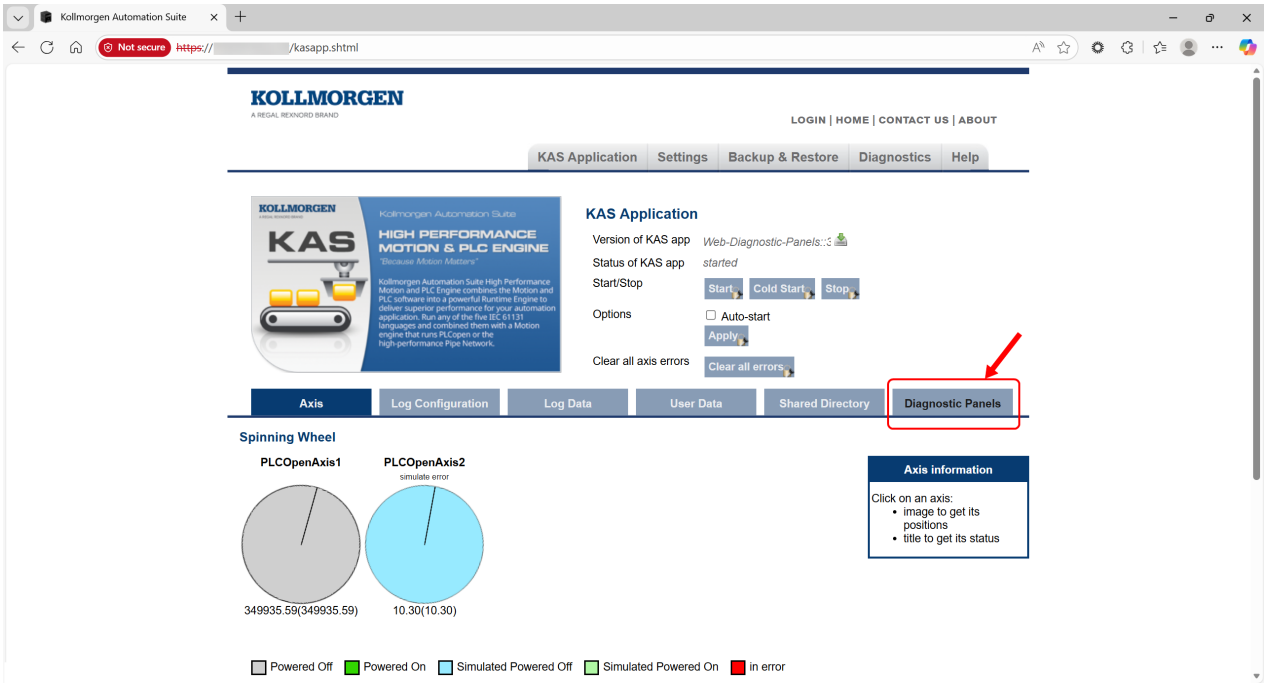

Figure 2-11: Diagnostic Panels sub-tab

The **Diagnostic Panels - Home page** opens in a new web browser window. (Figure 2-12)

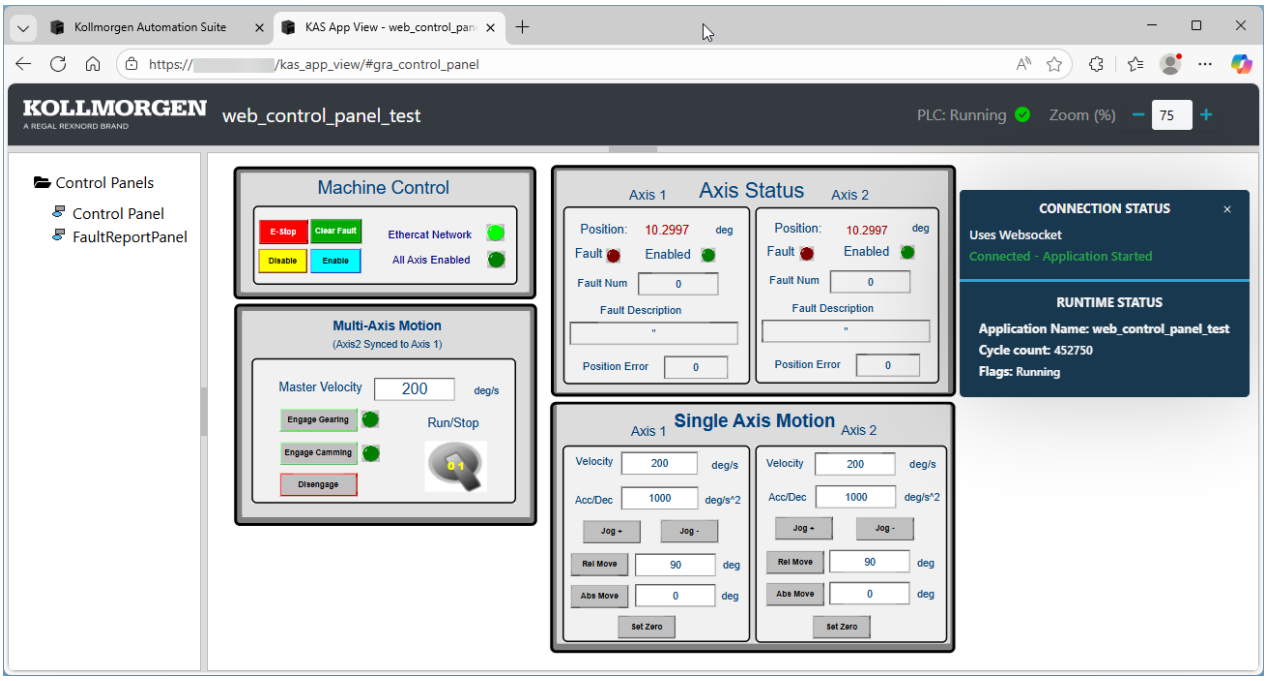

Figure 2-12: Example: Diagnostic Panels - Home page

5. In the **Diagnostic Panels - Home** page, navigate to a control panel and interact with the widgets as needed.

Notes

- After a period of inactivity, the Diagnostic Panel session times out and disconnects from the KAS Web server.
  - This is indicated by the message Connection is closed displayed on the top bar. (Figure 2-11)

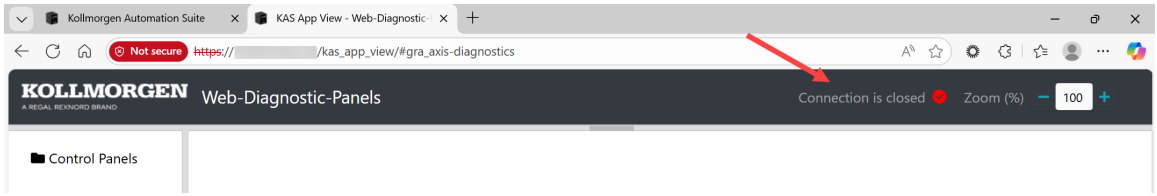

Figure 2-13: Diagnostic Panel - Connection closed

- During this time, widgets in the panel stop refreshing with new data.
  - Text widgets may display a question mark (?) or remain blank.
  - This indicates there is no active connection to the KAS Web server.
- To restore the connection and update the data, reload the page using the browser's refresh option.
- When the KAS project is not running, the top bar shows this message: **PLC: Stopped**. (Figure 2-14)

Figure 2-14: Diagnostic Panel - PLC Stopped

- During this time, widgets in the panels are inactive.
  - Text widgets may show a question mark (?) or remain blank.
- When the project starts, the status bar and data update automatically.
  - If data does not refresh, reload the page using the browser's refresh option.

4 Limitations

The Web Diagnostic Panels feature has these limitations:

4.1 Firefox Browser Compatibility

- Firefox is not supported.
- Even though the control panel widgets are visible, they do not update with the data from the KAS Runtime.
- The status bar will show “WebSocket connection Closed” to indicate connection issues.

4.2 Responsive Design

While the Web Diagnostic Panels offers robust functionality on desktop browsers, it does not support responsive design, which introduces the following limitations:

4.2.1 Device Compatibility

- Mobile and tablet devices are not fully supported.
- Layouts may appear distorted or require horizontal scrolling.
- Touch interactions may not behave as expected.

4.2.2 Fixed Layout Behavior

- Control panels are rendered with fixed dimensions.
- Panels may not scale or reposition based on screen size.
- Users may need to zoom manually to view content on smaller screens.

4.2.3 User Experience Constraints

- Limited usability on non-desktop devices.
- No automatic adaptation to portrait or landscape orientation.

4.3 Custom Graphics Support Limitations

- No integration with external graphic editors or design tools.
- Users cannot create or edit graphics outside the KAS-IDE for use in the Web Diagnostic Panel.
- Importing or downloading externally created graphic assets is not supported.

4.4 Testing and Support

- Only desktop browsers (Chrome, Firefox, Edge) are officially supported.
- Mobile browser issues are not addressed in standard QA cycles.
- Users are advised to access the Web Diagnostic Panels from a desktop environment for optimal performance.

5 Recommendations

- For mobile access, consider using remote desktop solutions or redesigning panels with mobile-friendly layouts in mind.
- Avoid placing critical controls near screen edges to reduce layout clipping.
- Use consistent screen resolutions during design and testing to ensure layout fidelity.

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PCMM2G

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- The OS image and its corresponding sources file is identified by an "OS-Sources" designator, followed by its version number: OS-Sources-x.xx.x.xxxxx.
- The compilation scripts and sources file are available at the Kollmorgen webpage PCMM2G Operating System (OS) Build Sources.
- See PCMM2G - File Naming Conventions in the KAS online help.

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