Weintek HMI to Ethernet/IP (Explicit Messaging) Server Device
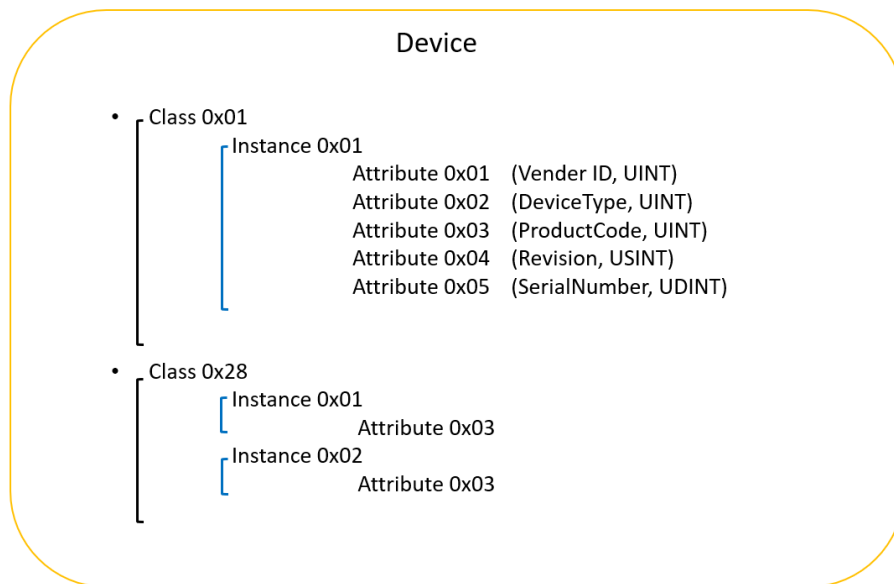
Weintek HMI to Ethernet/IP (Explicit Messaging) Server Device

Introduction: This instruction manual discusses how to communicate with an Ethernet/IP server device. In this manual, a Weintek HMI acts as an Ethernet/IP client and queries an Ethernet/IP server using explicit messaging format, which contains addressing and service information. The addressing information, including Class ID, Instance ID, and Attribute ID, should be documented in the user manual made by the device manufacturer. Weintek HMIs support simple read (0x0E Get_Attribute) and write (0x10 Set_Attribute) **service codes** to access data from the devices. For example, the *Vender ID* of an Ethernet/IP server is categorized into Class ID 0x01, Instance ID 0x01, Attribute ID 0x01, accessed by the 0X0E service code.


Equipment & software:

1.EasyBuilder Pro v6.03.02.294

2. Weintek HMI cMT3090

3. Ethernet/IP server device

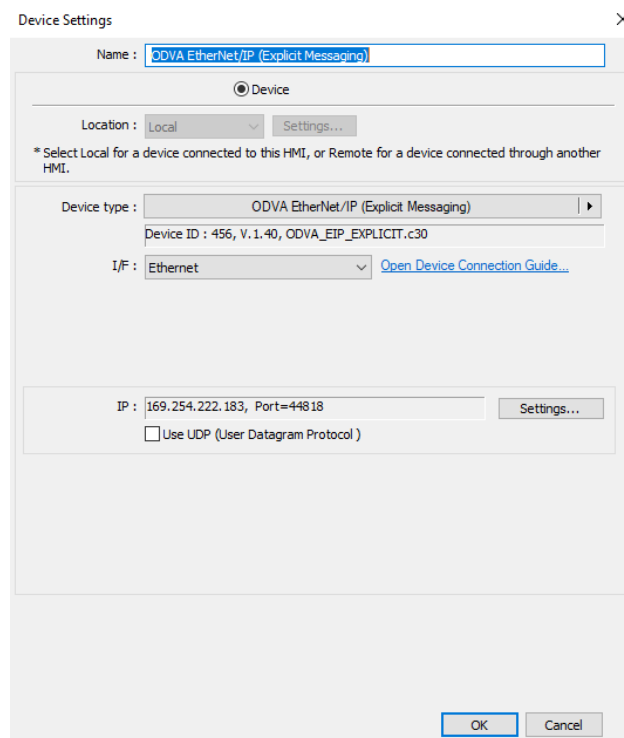# Weintek HMI to Ethernet/IP (Explicit Messaging) Server Device

Detail of the HMI Programming: Open a new project and choose the HMI model cMT3090. To get the HMI talking to the Ethernet/IP server, go to the [HOME] tab on the top of the menu and then click on the [System Parameters] button.
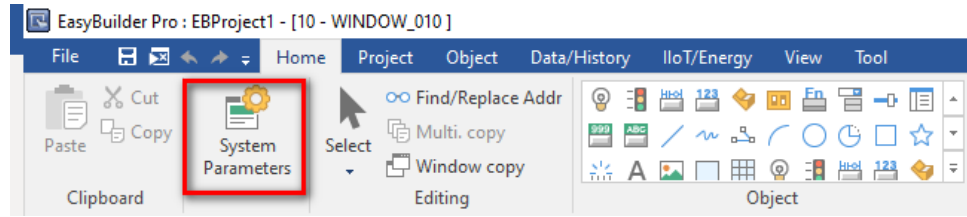
Search for **[ODVA Ethernet/IP (Explicit Messaging)]** driver from the list of the device drivers.

I/F: Ethernet

Use UDP: Please **uncheck** this option

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Click on the [Settings..] button to enter the IP address of your **Ethernet/IP** server device and the port number.

Click on [Tag Editor…] to create tags (CIP objects).

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You will need to add the CIP objects available in your device to the [Object-Defined] section. To do this, right-click on the [Object-Defined] and then select [New data type..].
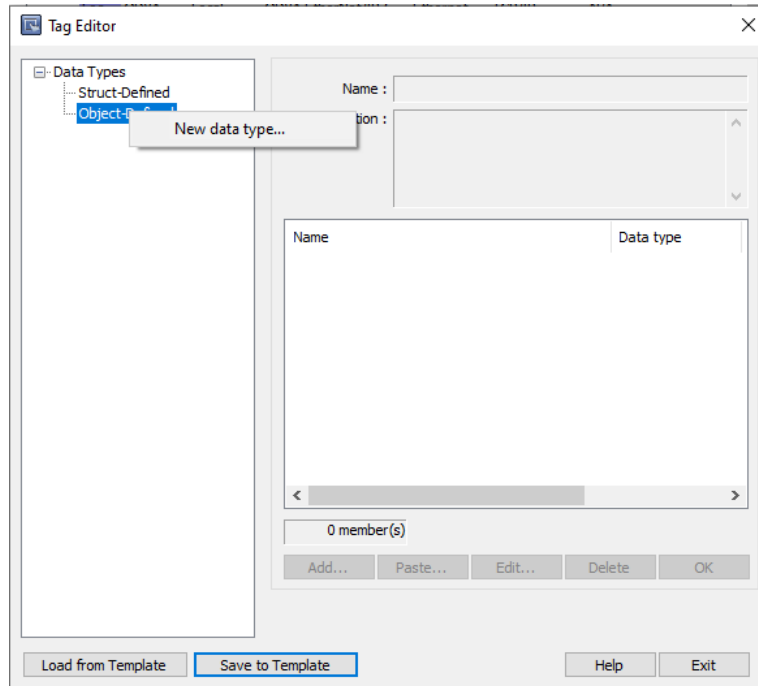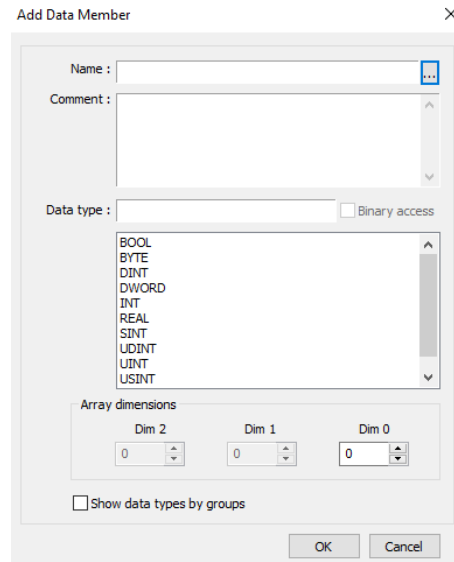

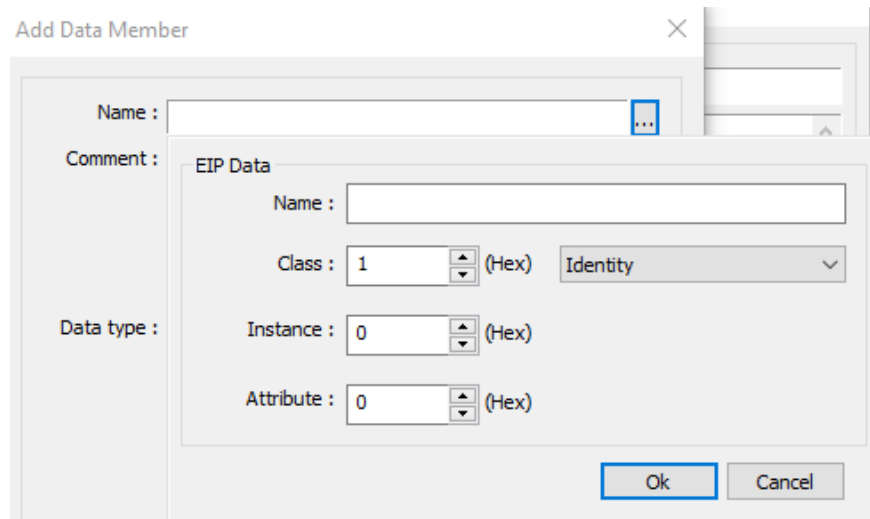Fill out the [Name] and click the [Add] button to create a new object.
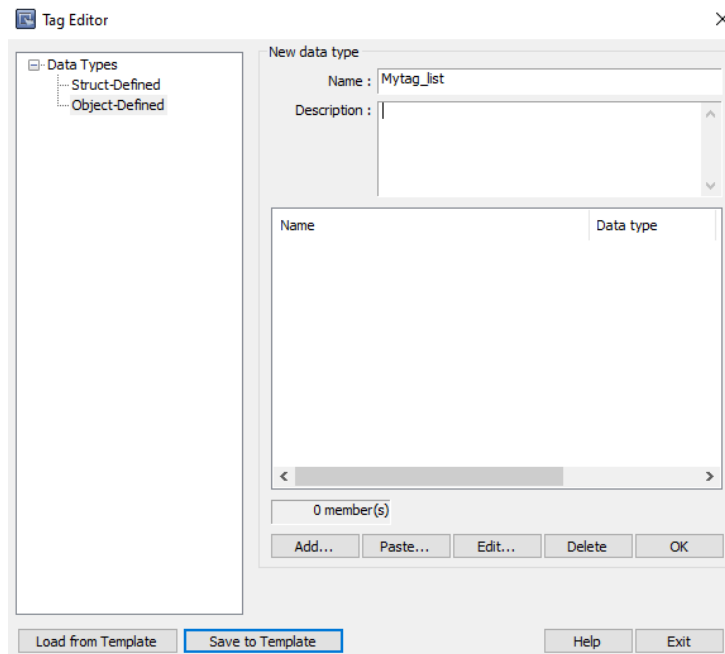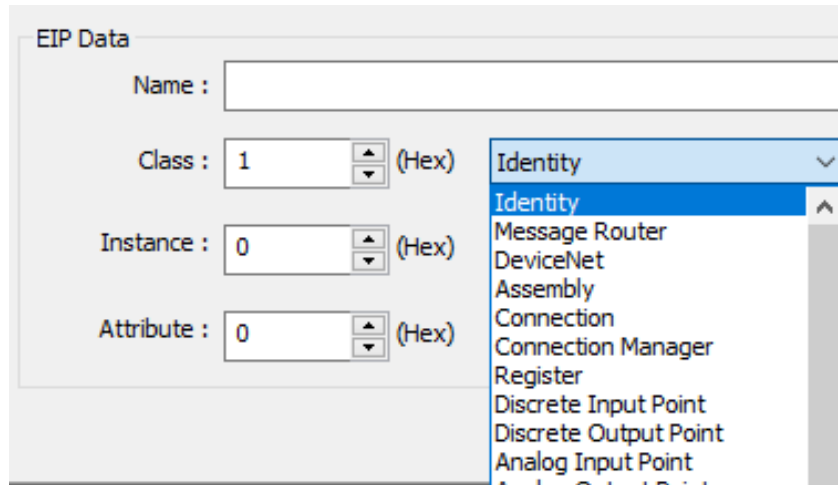
Click the […] button.

This dialog will prompt you to enter the three IDs of a parameter. Please refer to the user manual of the device to find out the Class ID, Instance ID, and Attribute ID for the parameter.
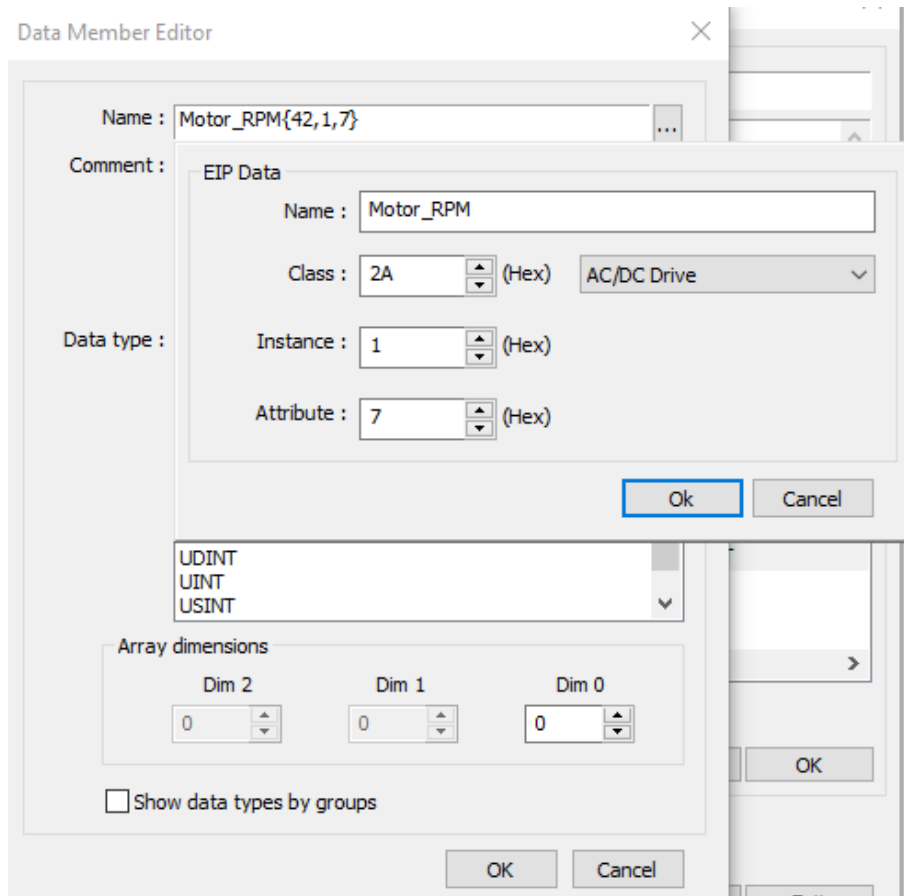
Via the drop-down list, select a Class ID by the Class name.

For example, to access a **Motor RPM** parameter, enter the following ID numbers in heximal format to the dialog and enter the name for this object. Click the [Ok] button.
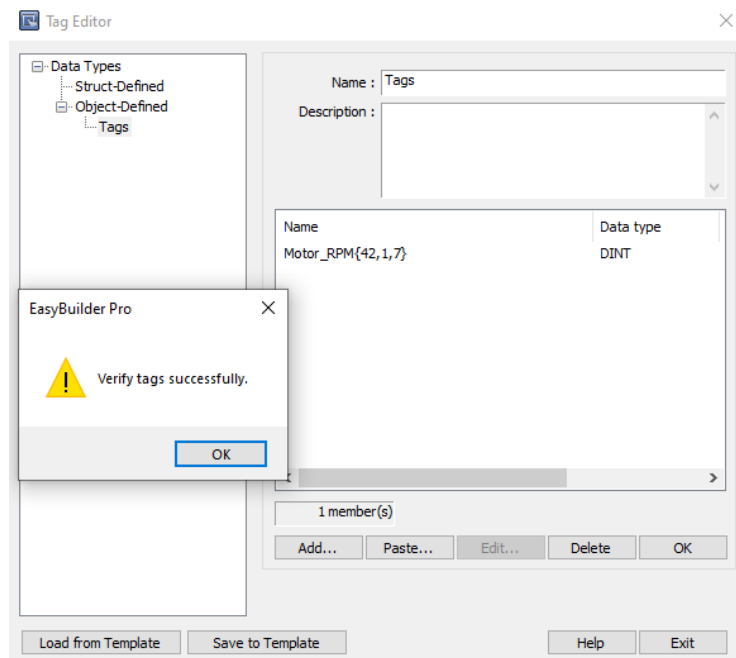
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According to the user manual of the device, the data type of this parameter is 32-bit signed data, so the **DINT** should be selected for this object. Click the [Ok] button. The image below is the finished setting for the Motor RPM parameter.

Note: the {Class ID, Instance ID, Attribute ID} are shown in decimal format.
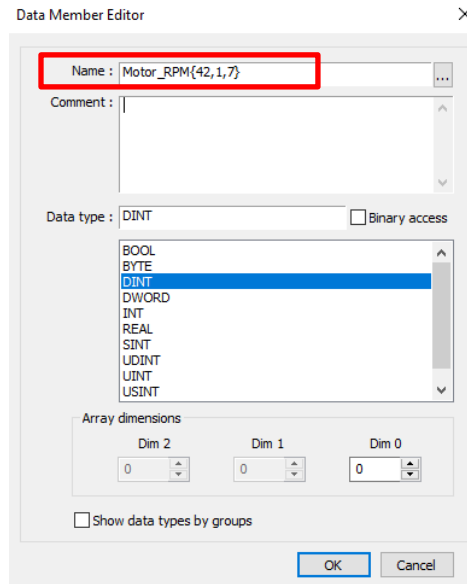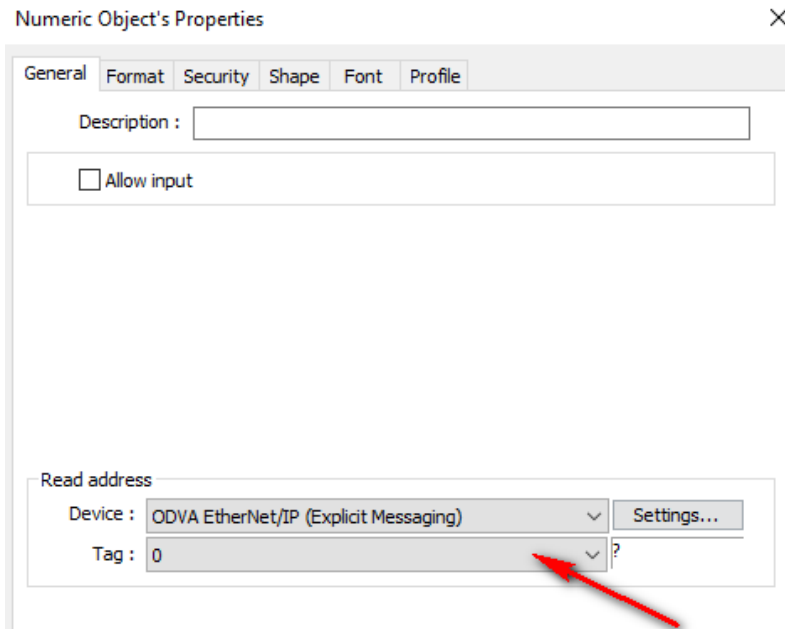

You can create more CIP objects using the [Add] button. Once finished, click on the [OK] button to verify your objects. If you get "Verify tags successfully" message, click the [Exit] button.

The objects added to the [Object-Defined] section will be available to select in this project. To monitor the Motor RPM, create a Numeric object. Click on the [Tag] box.
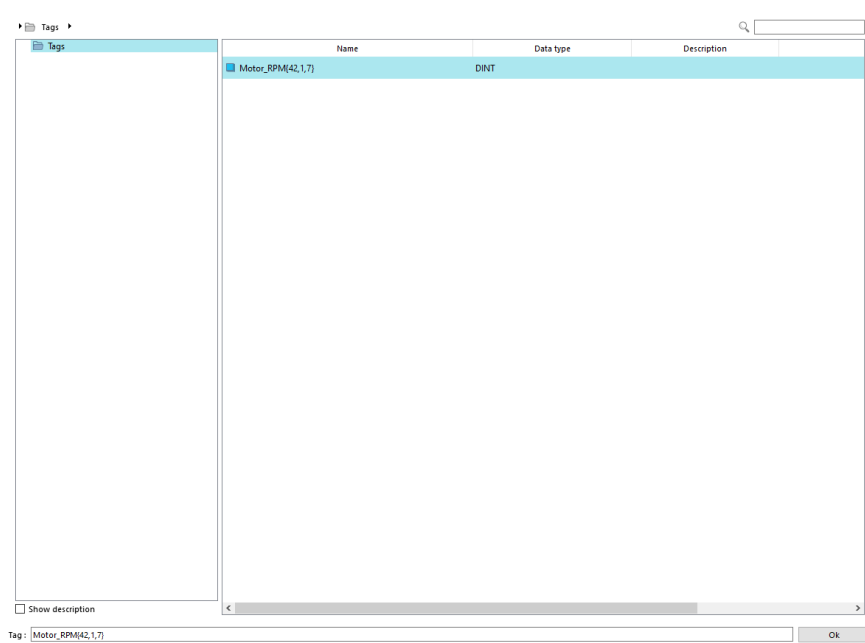
Select the Motor RPM parameter.
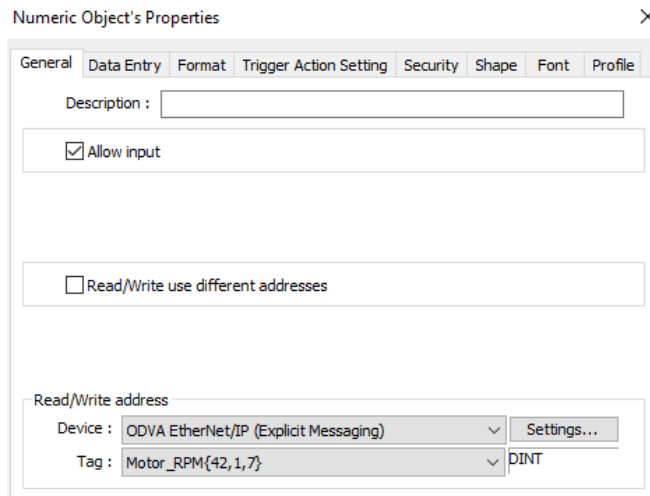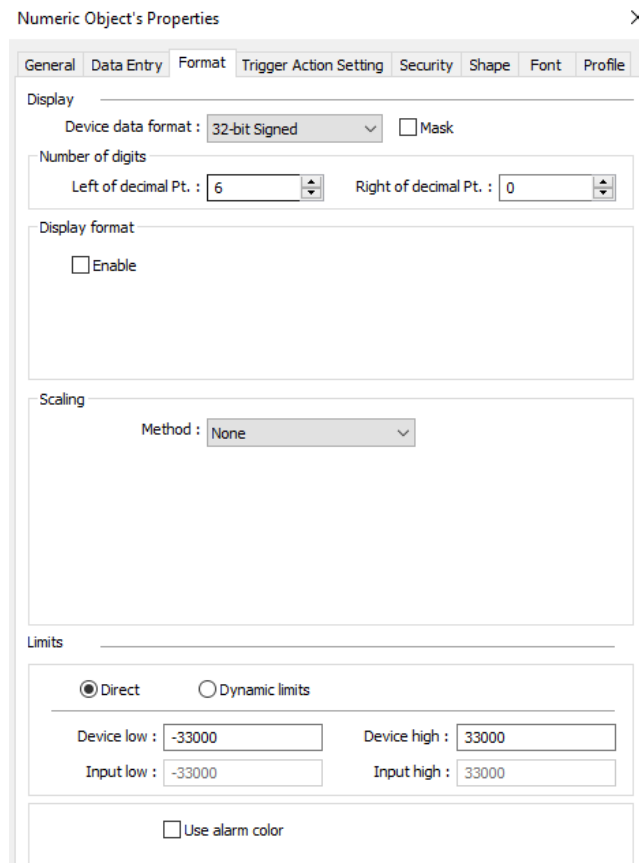
Once the tag is selected, go to the [Format] tab.

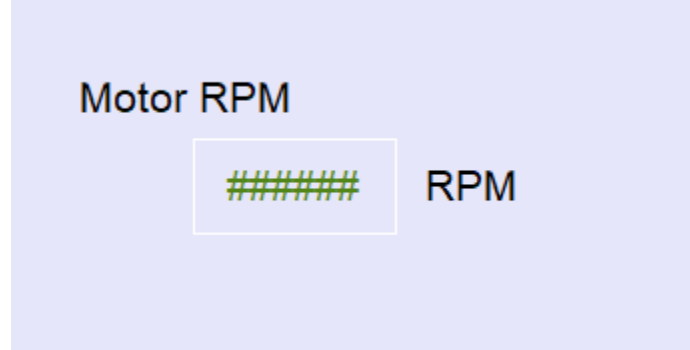Under the [Format] tab, enter the number of digits used in this parameter as well as the device's low limit and high limit. Click the [OK] button to finish setting up this object.
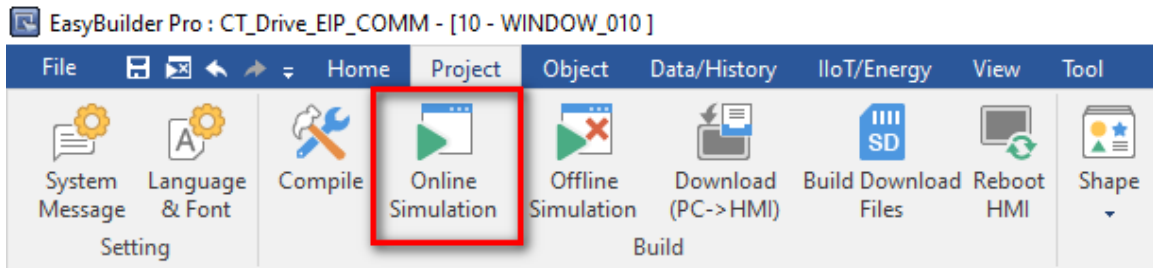
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Place the Numeric object onto the editing area.

You can run [Online Simulation] to use the emulator on the laptop. The emulator will pull out data from the Ethernet/IP server.

ODVA CIP

https://www.odva.org/Portals/0/Library/Publications_Numbered/PUB00123R1_Common-Industrial_Protocol_and_Family_of_CIP_Networks.pdf

Founded in 1996, WEINTEK LABS is a global-leading HMI manufacturer and is dedicated to the development, design, and manufacturing of practical HMI solutions. WEINTEK LAB's mission is to provide quality, customizable HMI-solutions that meet the needs of all industrial automation requirements while maintaining customer satisfaction by providing "on-demand" customer service. WEINTEK LABS brought their innovative technology to the United States in 2016, WEINTEK USA, INC., to provide quality and expedient solutions to the North American industrial market.

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