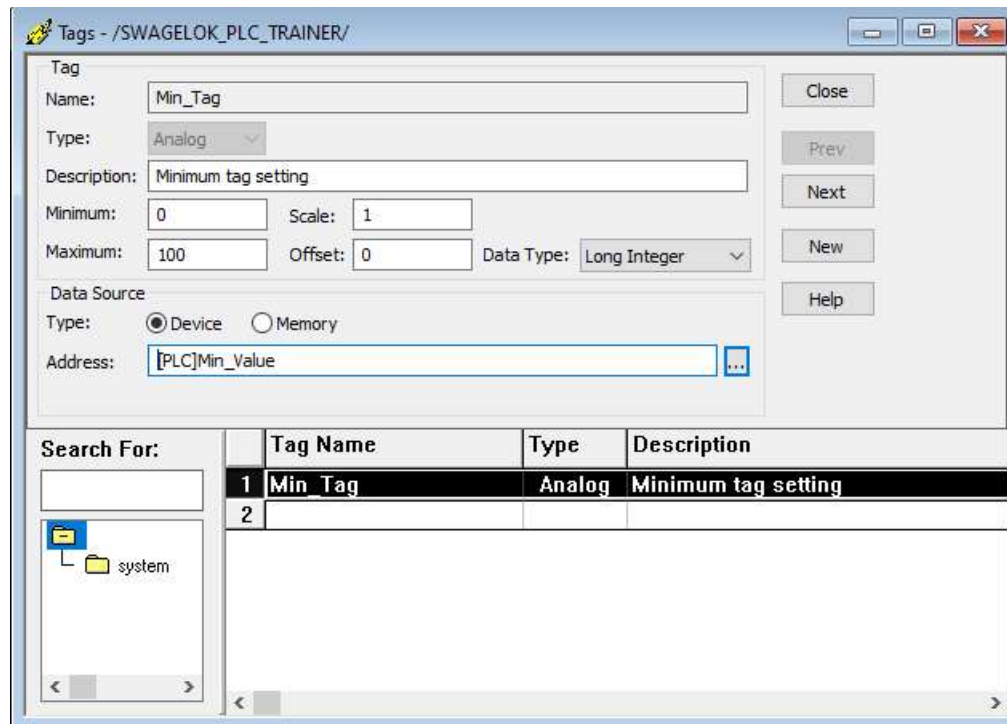# Using HMI Tags

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HMI Tags

- For most applications, the use of direct reference tags is preferred. However, HMI tags must be used for the following situations:

  - When values from a direct reference tag requires scaling or offsetting, the resulting value must be stored in an HMI tag

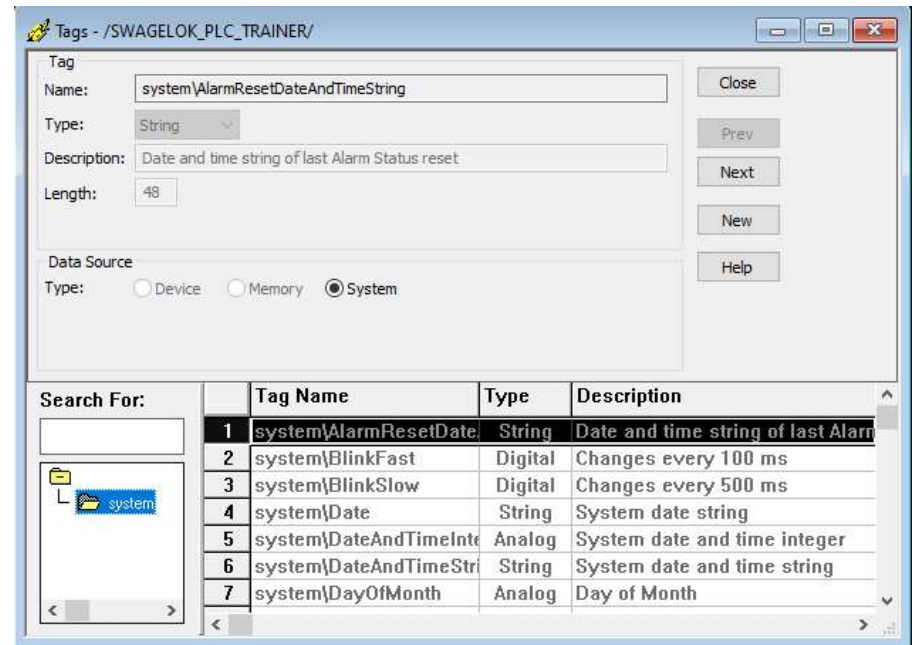 - Wen a tag being referenced requires specific minimum and maximum values, an HMI tag is required.

You can create and use three types of HMI tags based on the data that they can store:

Swagelok

- **<u>Analog tag</u>** stores a numeric value from a range of values defined for the tag.

  - Used to represent devices that can have a range of values such as temperature, pressure, flow, or the position of a rotary control.

- **<u>Digital tag</u>** accepts any numeric value. Zero will be written as False (0) and any non-zero number will be written as True (1).

  - Used to represent devices that have two states: on or off, such as switches, contacts and relays.

- **<u>String tag</u>** stores ASCII strings that can be a string of characters or whole words.

  - The maximum size string allowed is 82 characters.

  - Use string tags to represent devices that use text, such as a bar code scanner that uses an alphanumeric product code.
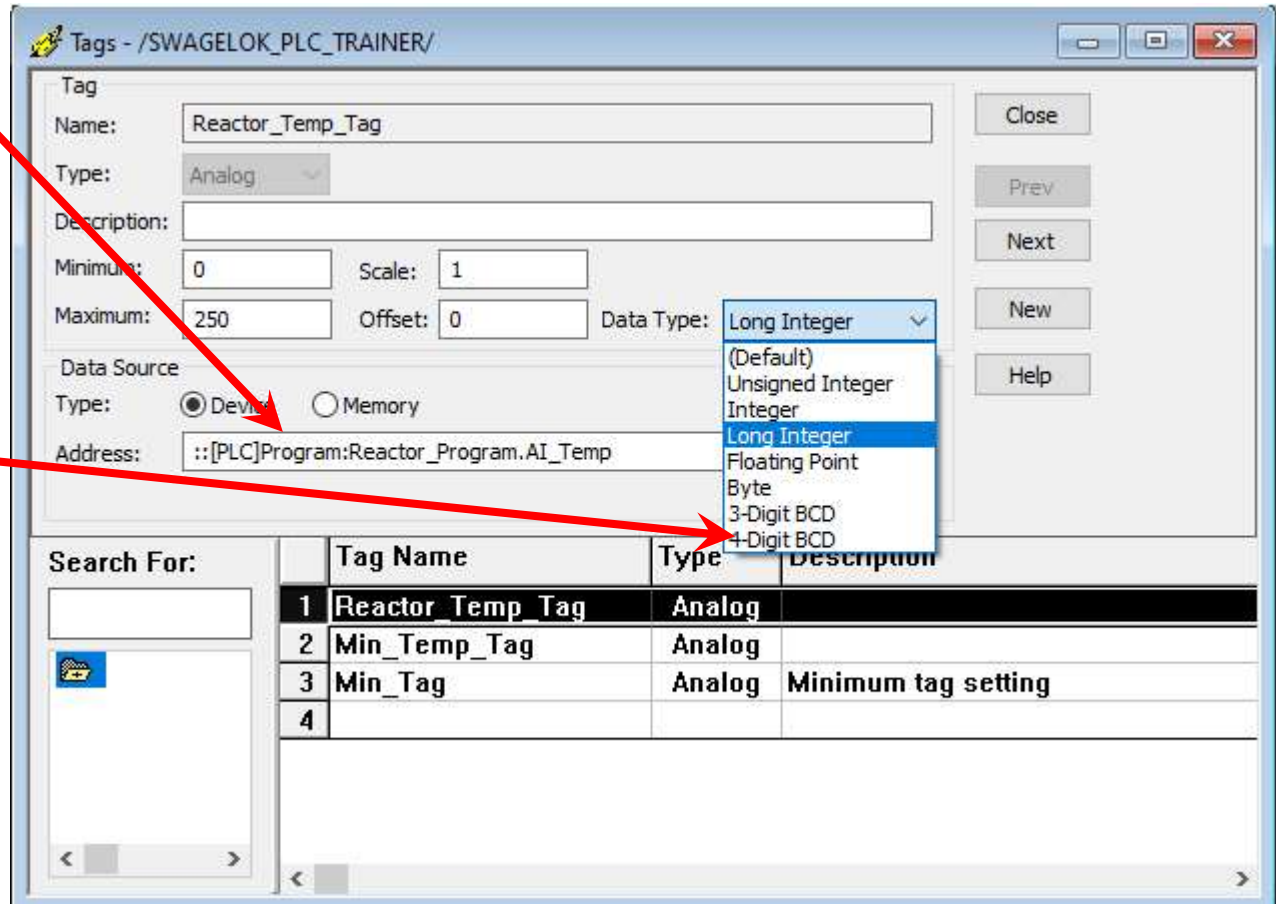
System tags

- System tags store information generated while the system is running, such as the name of the logged-in user, system time and date, and the like.

- FactoryTalk View creates system tags when you create an application.

- The system tags are stored in the folder called system in the HMI tag database, and their data source is system.

- Used anywhere you would use any other type of tag, but cannot create or edit them.

Data Sources

- When creating an HMI tag, you must specify a data source. The data source determines whether the tag receives its values externally or internally.

  - **Device** - A tag with device as its data source receives its data from a source external to FactoryTalk View.

    - The data can come from a programmable controller or other device via FactoryTalk Linx, or from another OPC server. You can use up to 5,000 device tags.

  - **Memory** - A tag with memory as its data source receives its data from (and stores values in) the FactoryTalk View internal value table.

    - Tags with memory as the data source do not count toward the total tag limit.

Device Tag

- Select source using the tag browser
- Set data types and min and max values

Selecting HMI Tags

- HMI tags are shown when you click on the Application Name