

# Pin

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## Description

A Pin represents a connection point for the input and output values of an action. There is one input Pin for each input parameter, and one output pin for each output parameter.



Using MagicDraw, you can create the following types of Pins:

- Input Pin. An input pin is a pin that holds input values to be consumed by an action.
- Output Pin.
- Value Pin.
- Action Input Pin.



- When a new action is created that must have mandatory Pins, they are automatically added to that action on the diagram pane, as well as in the Containment tree.
- As of MagicDraw 17.0.4 version, the [Pins Displaying validation](#) suite has been introduced. It includes the *Action Containing Hidden Pins* validation rule that detects all hidden pins for the concrete action symbol.
- When deleting the last Pin symbol from the diagram, the Pin element is deleted from the project. This is valid when the Display All Pins in Diagrams option value is true.
- For a send signal action, a Pin is created, but the symbol of the Pin is not represented on the diagram pane.
- You can navigate to the associated parameter from the Pin shortcut menu. From the Pin shortcut menu, select Go To and choose a parameter.

You can format the pin symbol properties in the [Symbol Properties dialog](#).

You can [specify pin properties](#) in the pin [Specification window](#). In the [Specification window](#), you can find the description of each property, which are located in the description area of the [Specification window](#).

## Assigning Pins

To assign Pins for an action on the diagram pane

1. In the activity diagram, draw an action.
2. In the activity diagram palette, select a Pin you want to create.
3. On the diagram pane, click the action. The Pin for this action is created.

To assign Pins for an action in the action [Specification window](#)

1. In the action [Specification window](#), in **Pins** property group, select one of the following:
  - Input Pin. Select Argument, and, in the property specification cell, click the Add button. Select one of the preferred pins from the list.
  - Output Pin. Select Result, and in the property specification cell, click the Add button.
2. In the opened Pin [Specification window](#), type the Pin name.
3. Click **Close** or **Back** to return to the action [Specification window](#).

## Specifying Pin type

After the Pin is assigned to an action, you can specify its type. Use one of the following way:

- Using the **Specify Type** button.
- Using the **Specification** window.

To specify Pin type by using the **Specify Type** button


1. Select the Pin shape.
2. Click **T** on the **smart manipulator toolbar**.
3. Do one of the following:
  - Select an existing element from the **Select Type** menu.
  - Create new type:
    - a. Type a name.
    - b. Press Enter.
    - c. In the **Create <type name> As** dialog, select element kind.The type is specified for a Pin.

To specify Pin type by using the **Specification** window

1. Right-click the Pin and select the **Specification** command.
2. In the **Specification window**, select the **Type** property value cell.
3. Do one of the following:
  - Select an existing element from the list.
  - Click **...** and in the **Select Element** dialog do the following:
    - Select an existing elements from the **Tree** or **List** tab.
    - create new element by switching on the **Creation Mode** and clicking the **Create** button.
4. Click **Close**.  
The type is specified for a Pin.

## Displaying Pins

To display Pins on shapes

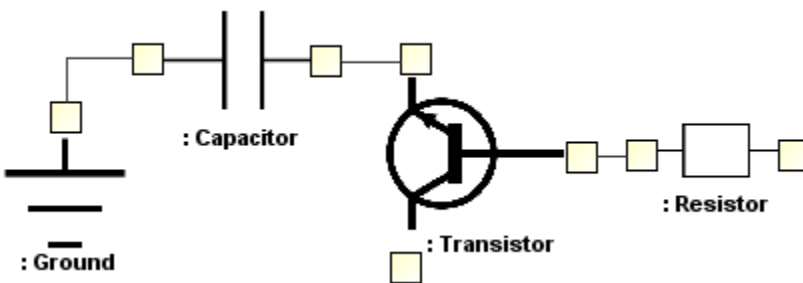
1. On the diagram pane, select any number of shapes on which you want to display Pins.
2. Open the **Select Pins** dialog by performing one of the following steps:
  - From the shortcut menu, select **Display > Display Pins**.
  - On the diagram toolbar, click  and select **Display Pins**.
3. In the dialog, select the Pins you want to display.
4. In the **Layout options** area, specify the Pins' layout on the shape:
  - **Top/Bottom** - displays Pins on the shape from its top to bottom.
  - **Left/Right** - displays Pins on the shape from its left to right.
5. When you are finished, click **OK**.



If you want all Pins to be displayed automatically when creating a new Activity diagram, go to **Options > Project** on the main menu, and set the **Display All Pins in Diagrams** option to *true*.



If you have an element displayed as an image, you can connect a Pin to that element with no gaps.



## Showing Pin's type

To show the Pin's type, perform one of the following steps

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- From the Pin shortcut menu, select **Show Type**.
- In the Pin [Symbol Properties dialog](#), set the **Show Type** property to true.

## Converting a Pin

To convert an input Pin to an output Pin and vice versa

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1. From the Pin shortcut menu, select **Refactor > Convert To**.
2. From the opened list, select one of the following:
  - Input Pin (Output Pin)
  - Action Input Pin
  - Value Pin

To [convert a Pin](#) to an object node

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1. From the Pin shortcut menu, select **Refactor > Convert To**.
2. From the opened list, select **Object Node**.

## Navigating from a Pin to the associated parameter

To navigate from a Pin to the associated parameter

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- From the Pin shortcut menu, select **Go To**, and choose a parameter.

### Related pages

- [Model Elements](#)
- [Specification Window](#)