

CADvizer 2025

User's Manual

[Library Module]



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Library

CADvizer Library is a database system designed to efficiently manage and access material data required for design. It allows registering and retrieving attribute information for each part, as well as searching and utilizing desired data. In addition, drawing templates can be stored and managed to facilitate standardized design drawings. The following sections provide detailed explanations of the data field for each part.

Library Data Field

This section explains the key terms used in CADvizer, including components such as wires, cables, connectors, terminals, seals, and devices, along with list of data fields and their meanings for each component. Fields marked with an asterisk (*) are mandatory values that must be entered when registering the component.

Wire

* Required item

Item	Description
Part Number *	Unique Identification Number of the product provided by the manufacturer Set as Material_CSA_Color by default Ex) AVSS_0.3_Gr
Internal Number *	Identification number used within the company
Manufacturer	The company that manufactured the product
Description	Details or additional description of the product
Weight	Weight per unit Length Ex) 0.1 (g/m)
Cost	Unit price per length No fixed currency unit Ex) 0.15 (\$/m)
Material *	Materials used to make the wire Ex) AESSXF, AVSS
Color *	Color of the wire Must use pre-registered abbreviations from the color list Ex) R
Outer Diameter (ODR)	Total outer diameter of the wire, including insulation and protective layers Ex) 1.5 (mm)
Cross-Sectional Area * (CSA)	Cross-sectional areas of the wire Ex) 0.75 (mm ²)
American Wire Gauge (AWG)	Thickness of the wire according to American Wire Gauge standard Ex) 18 (AWG)
Allowable Current	Maximum current the wire can safely withstand Ex) 10(A)
Contact Resistance	Resistance value between contact points Ex) 0.005 (ohms)
Unit Resistance	Resistance per unit length or inherent resistance of the component itself Ex) 0.02 (ohms/m) or 0.02 ohms

Cable

* Required item

Item	Description
Part Number *	Unique Identification Number of the product provided by the manufacturer
Internal Number *	Identification number used within the company
Manufacturer	The company that manufactured the product
Description	Details or additional description of the product
Material *	Materials used to make the cable Ex) AESSXF
Color *	Color of the wire Must use pre-registered abbreviations from the color list Ex): R
Outer Diameter (ODR)	Total outer diameter of the cable, including insulation and protective layers Ex) 1.5 (mm)
Group name	Group name of the cable specified by the user Ex) Twist, Shield, TwistShield

Connector

* Required item

Item	Description
Part Number *	Unique Identification Number of the product provided by the manufacturer
Internal Number *	Identification number used within the company
Customer Number	Identification number given by the customer
Series	Product line or series name
Number Of Cavities	Number of cavities on the connector Ex) 18
Sub Type *	- General: Cavities with different input value - Multi: Cavities with equal input value - Earth: Grounding connector Ex) General
Manufacturer	The company that manufactured the product
Description	Details or additional description of the product
Cost	Price per unit No fixed currency unit Ex) 0.15 (\$)
Weight	Weight per unit Ex) 0.1 (g)
Plating Material	Plating material of cavity terminal Ex) Tin
Unit Resistance	Resistance value of the connector itself Ex) 0.005 (ohms)
Insertion Force	Force required to insert terminals into connector cavities Ex) 15 (N)
Insertion Sound	Sound volume caused during terminal cavity insertion Ex) 0.5 (dB)
Pair	Part number of the other connector joining to form an inline connector Ex) Part Number
Gender *	Indicates plug (Male) or socket (Female) Ex) Male, Female

Connector Cavity

Item	Description
Number	Order number within the connector
Waterproof Type (WP-Type)	Method of waterproof capability - W (Wire-Seal): Apply seal to each wire of the connector - T (Terminal-Seal): Apply seal to each terminal (pin end) of the connector - P (Pin-Seal): Apply seal to each pin of the connector
Direction	Terminal Insertion Direction - U: Up - L: Left - R: Right - D: Down
Blank	Component to fill the cavity if the wire is not coupled to a cavity Ex) Part number of Blankseal

Terminal

* Required item

Item	Description
Part Number *	Unique Identification Number of the product provided by the manufacturer
Internal Number *	Identification number used within the company
Customer Number	Identification number given by the customer
Series	Product line or series name
Manufacturer	The company that manufactured the product
Description	Details or additional description of the product
Min CSA	Minimum wire cross-sectional area Ex) 0.5 (mm ²)
Max CSA	Maximum wire cross-sectional area Ex) 2.5 (mm ²)
Strip	Length of wire sheathed from the connection Ex) 5 (mm)
Plating Material	Plating material used for contact area Ex) Tin (Commentary)
Unit Resistance	Resistance value of the terminal Ex) 0.005 (ohms)
Weight	Weight per unit Ex) 0.1 (g)
Cost	Price for unit No fixed currency unit Ex) 0.15 (\$)

Seal

* Required item

Item	Description
Part Number *	Unique Identification Number of the product provided by the manufacturer
Internal Number *	Identification number used within the company
Manufacturer	The company that manufactured the product
Description	Details or additional description of the product
Min ODR	Minimum total outer diameter of wires, including insulation and protective layers Ex) 0.5 (mm ²)
Max ODR	Maximum total outer diameter of wires, including insulation and protective layers Ex) 2.5 (mm ²)
Weight	Weight per unit Ex) 0.1(g)
Cost	Price for unit No fixed currency unit Ex) 0.15 (\$)

ETC

* Required item

Item	Description
Part Number *	Unique Identification Number of the product provided by the manufacturer
Internal Number *	Identification number used within the company
Manufacturer	The company that manufactured the product
Description	Details or additional description of the product
Type	Type of part Ex) Clip, Grommet, Cover, BlankSeal, Fuse

Device

* Required item

Item	Description
Part Number *	Unique Identification Number of the product provided by the manufacturer
Internal Number *	Identification number used within the company
Customer Number	Identification number given by the customer
Manufacturer	The company that manufactured the product
Description	Details or additional description of the product
Current Rating	Maximum tolerable current Ex) 5 (A)
Rated Voltage	Normal operating voltage Ex) 12 (V)
Allowable Current	Maximum current the wire can safely withstand Ex) 5 (A)
Contact Resistance	Resistance measured at the contact point of the device Ex) 0.01 (ohm)
Unit Resistance	Electrical resistance of the device Ex) 0.02 (ohm)
Watt	Power consumption of the device Ex) 10 (W)
Type	Type of part Ex) Fuse, Motor, Battery

Wire

The Wire tab provides the ability to manage wires that carry electrical signals and cables wrapped in a single shell with multiple wires. This section describes the basic concepts of wires and cables, covering the workspace configuration and key functions of the wire part. It also guides through how to create, delete, modify, and retrieve data, as well as the concept and management of Child Wire included in the cable.

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The wire and cable management screen consists of three main sections. At the top, information for individual wires can be viewed and edited if necessary. The section right below displays cable information, where the list of child wires included in each cable can be managed.

At the very bottom, functions available in the Wire part are located, providing quick access to essential operations.

1. Wire List
Check and edit detailed information for each wire.
2. Cable list
Provides cable information and management of child wires within the cable. For details on registering or editing child wires, refer to [\[Wire – Child Wire\]](#).
3. Key Features
Provides essential tools for device management, such as adding, editing, and deleting data. Detailed explanations of each function are provided in the following section.

Key Features

The following features are available in the wire part.

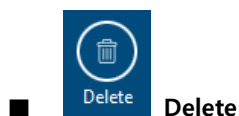
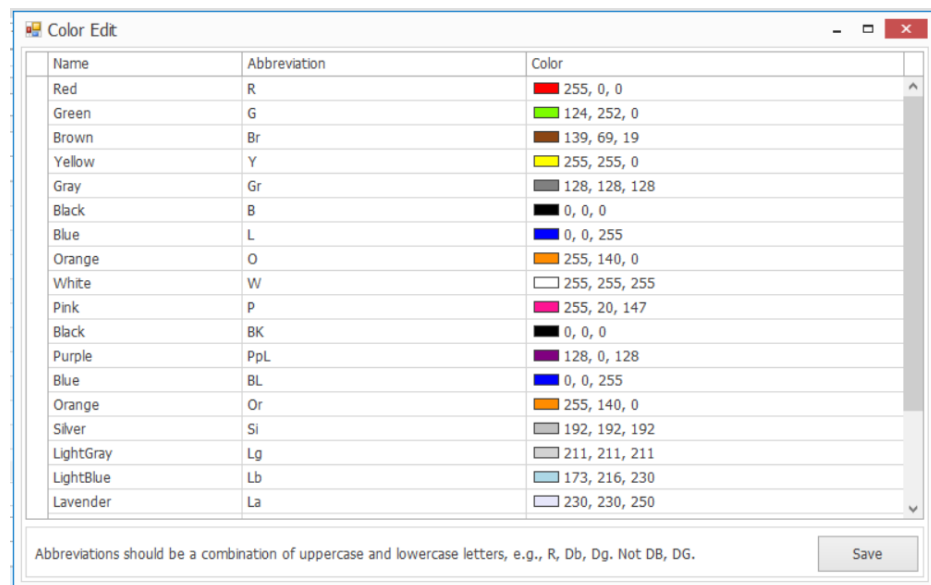


Displays a list of usable colors. This feature is only available in the Wire tab.

Only colors defined in this color list can be applied to wires and cables to ensure consistency in color notation and prevent confusion due to different markings for each user.

To add a new color, right click the list and select Add Color. Then, set the name, abbreviation, and RGB value of the color. The registered color can then be used consistently afterward. It is displayed as an abbreviation in the display for color differentiation.

Color abbreviations can only be a combination of uppercase and lowercase letters. Abbreviations must begin with an uppercase, followed by lowercases afterward. For example, the Light Blue color can be specified as "Lb" or "Lbl" rather than "LB".



Removes selected item from the list. Deleted data cannot be recovered so it must be used carefully. In order to keep the data for future use instead of deleting it completely, it is more appropriate to change the status to "disabled". For more information about changing status, see [\[Wire-Edit Data-Change Status\]](#).



New

Add new object on the currently active tab.



Import

Imports external files previously exported from CADvizer into existing data, appending or merging the new content into the list.



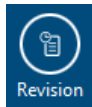
Replace

Removes all existing data and imports external files previously exported from CADvizer, replacing the list with new content. Removed data cannot be recovered.



Export

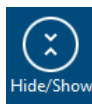
Exports current data into an external file for backup or to transfer to other systems. The exported file can be re-imported through the import or replace function.



Revision

Track and manage the revision history of a selected object. It provides details such as the modification date, editor, revision type (Modify, Create, Delete), description, and total revision count. Clicking the + button next to the date reveals detailed data changes, including Before/After Data.

Revision				
Date	Author	Action	Description	Total Revision
2024-09-10	KJWS774	Modify		2
Detail Revision List				
Action	Type	Before Data	After Data	
Modify	Wire-OutsideDiameter	0	2	
Modify	Wire-Color	Red	R	
2024-09-10	KJWS774	Modify		1



Hide/Show

Hide or show the top main tab for efficient workspace management

Edit Data

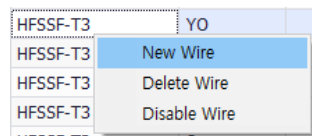
This section describes how to create, modify, delete, change status, and retrieve wire and cable data. Wire and cable are edited the same way, so this section will use wire as the main reference.

Create Object

There are two ways to create a new object:

- Right-Click

Right-click on the wire/cable info list to open a pop-up menu. Then, select [New Wire] / [New Cable] to open the creation window.



- New Button

Hover over the  [New] button in the bottom menu, then select either Wire or Cable to open the creation window.

Two side-by-side screenshots of the 'New Wire' and 'New Cable' creation windows. The 'New Wire' window on the left has fields for Part Number *, Internal Number, Material *, Color *, Cross Sectional Area *, AWG, Outer Diameter (OD), Manufacturer, Description, Allowable Current, Contact Resistance, Unit Resistance, Weight, Cost, and Status. The 'New Cable' window on the right has fields for Part Number *, Internal Number, Color *, Material *, Manufacturer, Group Name, Outer Diameter (OD), Description, and Status. Both windows have 'Save' and 'Cancel' buttons at the bottom.

Required fields, which are marked with *, must be filled in order to register a new part. Required fields for wires are Part Number, Material, Color, and Cross Section Area, and required fields for cables are Part Number, Color, and Material. For more detail about each field, refer to the [\[Library Data Field – Wire\]](#) or [\[Library Data Field – Cable\]](#).

Part Numbers cannot be registered in duplicate. For wires, entries with the same CSA, Material, and Color values are also considered duplicates.

The Part Number of the wire is set in "Material_CSA_Color" format by default. Custom Part Number can be applied by selecting the check box at the top of the input field.

Only predefined colors can be selected, with up to two per wire. To assign colors, check the desired boxes in the right column. The first selected color becomes the Main Color, and the second becomes the Sub Color.

Br				
Name	Abbreviation	Color	Check	
Red	R	255, 0, 0	☐	
Green	G	124, 252, 0	☐	
Brown	Br	139, 69, 19	☒	
Yellow	Y	255, 255, 0	☐	
Gray	Gr	128, 128, 128	☐	
Black	B	0, 0, 0	☐	
Purple	Pp	128, 0, 128	☐	
Blue	L	0, 0, 255	☐	
Orange	O	255, 140, 0	☐	
White	W	255, 255, 255	☐	
Pink	P	255, 20, 147	☐	

In addition, the wire's Allowable Current, Contact Resistance, and Unit Resistance values are the information used in Voltage Drop function. Details about how voltage drop and wiring protection are utilized can be found on the [\[Voltage Drop – Wiring Protection\]](#) page. Additionally, Cost and Weight values are utilized in design optimization and cost reduction in [\[Topology\]](#) feature.

Modify Object

To modify an object from the list, double-click the target object to open the Modify Data window. After making changes, click the Update button to save. The Part Number must be unique; the changes will not be saved if a duplicate Part Number already exists in the list.

Part Number	Internal Number	Material	Color	Cross-Sectional Area	AWG
M22759/33-24-9	1P24	XLET		0.22	0.22

Part Number:

Internal Number:

Material:

Color:

Cross-Sectional Area:

AWG:

Outer Diameter(ODR):

Manufacturer:

Description:

Allowable Current:

Contact Resistance:

Unit Resistance:

Weight:

Cost:

Update

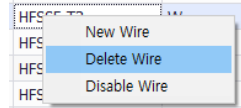
Cancel

Delete Object

There are two ways to delete an object:

- Right-Click

Right-click the target item to open a pop-up menu. Select the [Delete Wire] / [Delete Cable] option, then click "Yes" on the confirmation window to delete that object.

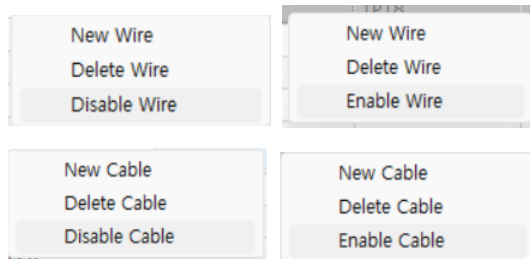


- Delete Button

Select the target item, then hover over the  [Delete] button in the bottom menu. Choose either Wire or Cable, then click "Yes" on the confirmation window to delete that object.

Change Status

To change the status of an object, right-click the target object from the list to open a pop-up menu. If the object is still enabled, the [Disable Wire] / [Disable Cable] option is displayed, and selecting it changes the object to a disabled state. If the object is already disabled, the [Enable Wire] / [Enable Cable] option is displayed, which can be selected to re-enable the object.



Disabled data is moved to the bottom of the list and displayed with a gray background, making it easy to distinguish. This feature is useful for data that is no longer in use, has a renewed version with the same part number, or has been discontinued.

Search Object

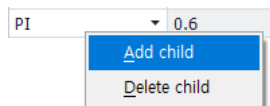
There are two ways to search for wire and cable objects. Detail about this function is available on the [\[Data Table – Search\]](#) page.

Set Child Wire

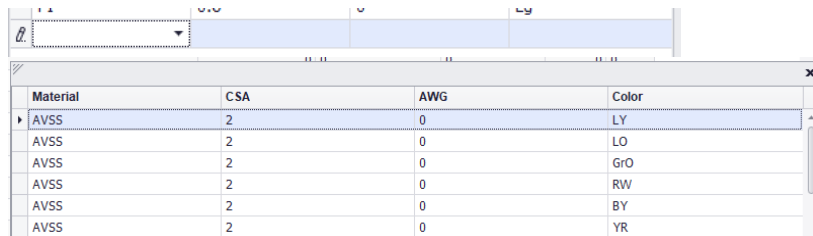
Child Wire are wires that are managed separately within a single cable. Each wire within a cable can be configured individually.

Add Child Wire

1. From the Cable info list, select the target cable.
2. Right-click on the Child Wire tab on the right and select [Add Child] to add a new row.

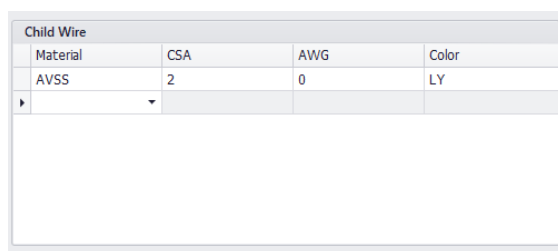


3. Click on the first cell of the new row to open a wire selection window. If there are already existing Child Wires, the list is filtered to show **only wires with the same Material and CSA as the existing Child.**



Material	CSA	AWG	Color
AVSS	2	0	LY
AVSS	2	0	LO
AVSS	2	0	GrO
AVSS	2	0	RW
AVSS	2	0	BY
AVSS	2	0	YR

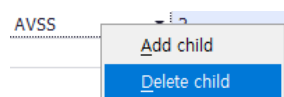
4. Double-click the desired wire in the wire selection window to register it as a Child Wire. If a registered Child Wire is selected in the Child Wire list, the Wire Info List automatically shifts focus to the corresponding wire, making data tracking easier.



Material	CSA	AWG	Color
AVSS	2	0	LY

Delete Child Wire

1. Right-click the target Child Wire and select [Delete Child].



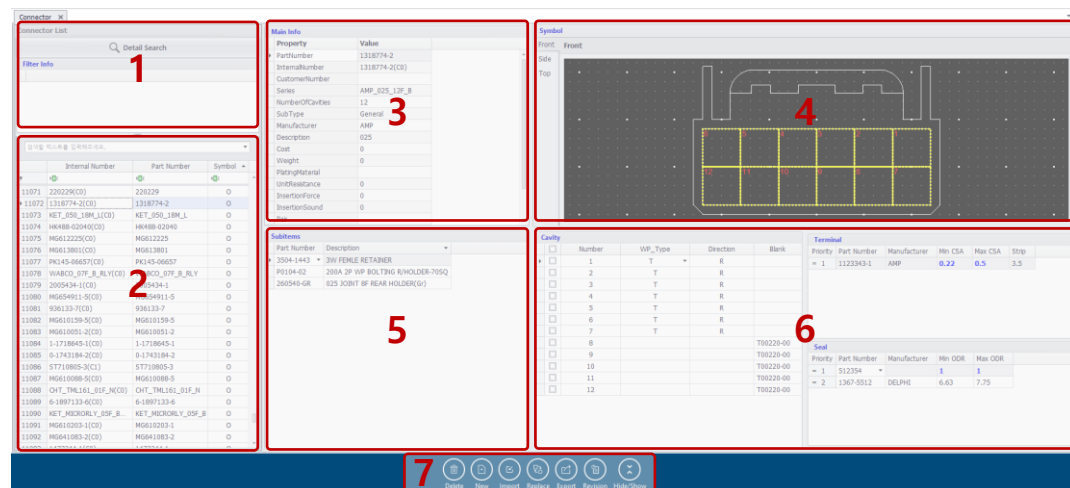
2. Click "Yes" on the confirmation window to delete the Child Wire.

Connector

Connectors are key components in electrical circuits, enabling stable transmission of electrical signals between wires. This section explains the workspace layout and main functions of the Connector part, as well as how to create, modify, delete, and search connector data.

Workspace

In the connector management screen, the connector list can be viewed and edited. Each connector includes a subitem list and a cavity list. The cavity list can be used to configure waterproof type and orientation, assign blank seals, and link of each cavity with the appropriate terminals and seals. The upper area of the screen displays the connector list and key information, while the lower area provides various functions available from the Terminal part.



1. Find Connector

Allows quick search to easily locate a desired connector. For more detail, see [\[Connector – Search Object\]](#).

2. Connector list

The connector list displays all currently registered connectors. Selecting a connector allows its properties to be viewed and edited. The list includes the Part Number, Internal Number, and Symbol columns.

3. Main Info

Displays detailed information of the selected connector, including its properties and settings.

4. Symbol

Shows the visual symbol shape of the connector, which represents how it appears in the diagram. Tabs on the left switches the shape between Front View, Side View, and Top View. For more detail about registering a symbol, see [\[Symbol\]](#).

5. Subitems

Displays and manages the list of sub-items included in the connector. For more information on registering or editing sub-items, see [\[Connector – Sub Item Settings\]](#).

6. Cavity

Displays information about each cavity of the connector, including waterproofing type, direction, and terminal/seal connections. For more details on registering or editing cavity information, see [\[Connector – Cavity Settings\]](#).

7. Key Features

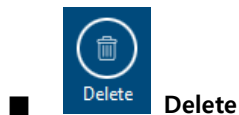
Provides the primary functions for connector management, including add, edit, and delete operations. These are covered in detail in the following section.

Key Features

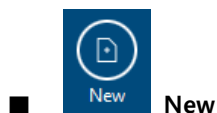
The following features are available in the connector part.



Available only in the Connector tab. This function saves changes made to the selected connector in the list. If unsaved changes exist when switching connectors or tabs, a confirmation prompt appears asking whether to save.



Removes selected item from the list. Deleted data cannot be recovered so it must be used carefully. In order to keep the data for future use instead of deleting it completely, it is more appropriate to change the status to "disabled". For more information about changing status, see [\[Connector – Edit Data – Change Status\]](#).



Add new object on the currently active tab.



Import

Imports external files previously exported from CADvizzor into existing data, appending or merging the new content into the list.



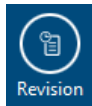
Replace

Removes all existing data and imports external files previously exported from CADvizzor, replacing the list with new content. Removed data cannot be recovered.



Export

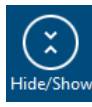
Exports current data into an external file for backup or to transfer to other systems. The exported file can be re-imported through the import or replace function.



Revision (Revision Management)

Track and manage the revision history of a selected object. It provides details such as the modification date, editor, revision type (Modify, Create, Delete), description, and total revision count. Clicking the + button next to the date reveals detailed data changes, including Before/After Data.

Revision				
Date	Author	Action	Description	Total Revision
2024-09-03	KJWS774	Modify		1
2024-09-03	KJWS774	Modify		1
2025-03-21	KJWS774	Modify		6
Detail Revision List				
Action	Type	Before Data		After Data
Modify	Conn-Gender			Female
Modify	Conn-Pair			37250-3T040
Modify	Cavity 1- WP_Type			P
Add	Cavity 1 -Terminal			CBR698-012/15/20
Add	Subitem			KW4A(S)-23F100
Add	Subitem			RL5-2-G-BK-P8-L1-Y



Hide/Show

Hide or show the top main tab for efficient workspace management

Edit Data

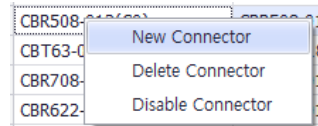
This section describes how to create, modify, delete, change status, and retrieve connector data.

Create Object

There are two ways to create a new object:

- Right-Click

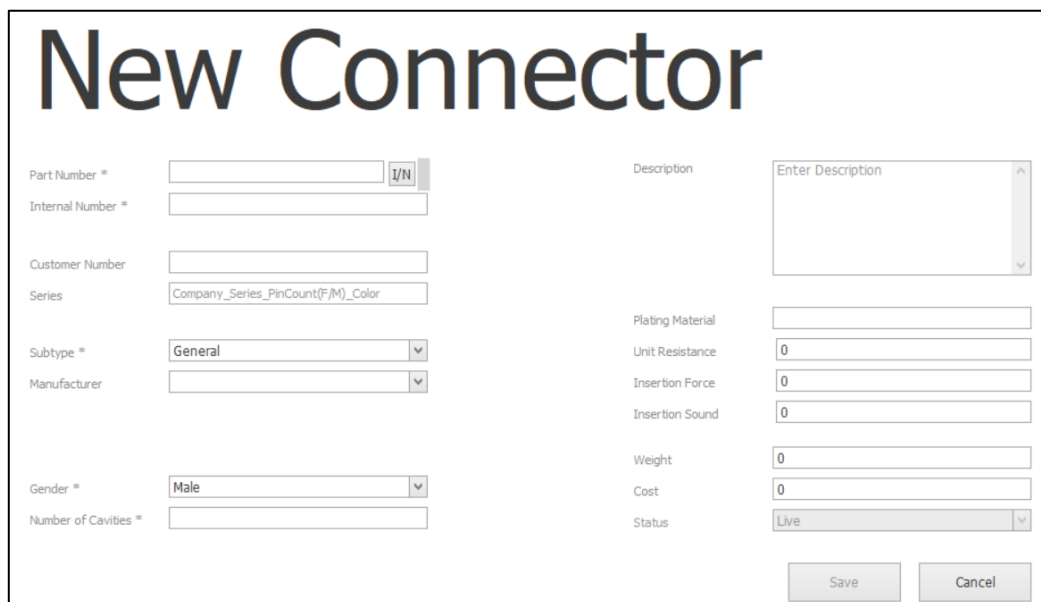
Right-click on the connector info list to open a pop-up menu. Then, select [New Connector] to open the creation window.



- New Button



Click [New] button in the bottom menu to open the creation window.

A screenshot of the 'New Connector' form window. The title 'New Connector' is at the top in large black font. The form is divided into two columns. The left column contains fields for 'Part Number *' (with a 1/N indicator), 'Internal Number *', 'Customer Number', 'Series' (with a dropdown menu showing 'Company_Series_PinCount(F/M)_Color'), 'Subtype *' (with a dropdown menu showing 'General'), 'Manufacturer' (with a dropdown menu), 'Gender *' (with a dropdown menu showing 'Male'), and 'Number of Cavities *'. The right column contains fields for 'Description' (with a text area), 'Plating Material', 'Unit Resistance' (with a value of 0), 'Insertion Force' (with a value of 0), 'Insertion Sound' (with a value of 0), 'Weight' (with a value of 0), 'Cost' (with a value of 0), and 'Status' (with a dropdown menu showing 'Live'). At the bottom right are 'Save' and 'Cancel' buttons.

Required fields, which are marked with *, must be filled in order to register a new part. Required fields for Connectors are Part Number, Internal Number, Sub Type, Gender, and Number of Cavities. For more detail about each field, refer to the [\[Library Data Field – Connector\]](#).

Modify Object

The object's property values can be edited in the Main Info tab, except for Number of Cavities, which is fixed. Once all modifications are complete, click the  Save button at the bottom to apply the changes.

Main Info	
Property	Value
PartNumber	0-1897301-2
InternalNumber	0-1897301-2(C0)
CustomerNumber	
Series	02506011d0
NumberOfCavities	94
Sub Type	Multi
Manufacturer	AMP
Description	R-PCU 94F(B)
Cost	12
Weight	0
PlatingMaterial	
UnitResistance	
InsertionForce	8.222
InsertionSound	75.198
Pair	1897356-3

Pair Registration and Unpair

Pair values for inline connectors can be modified from the Main Info tab.

■ Pair Registration

1. Click the Value box in the Pair row to open the connector list pop-up. The list is automatically filtered to show only compatible connectors with the same number of cavities and opposite gender.
2. Double-click the desired connector to connect.
3. Click the  Save button at the bottom to complete the registration.
4. Selecting a connector will now highlight the paired connector in the list.

4	2381TS1P1(C1)	2381TS1P1
5	2352CT1P1(C1)	2352CT1P1

■ Unpair

1. Click the Value box in the Pair row to open the connector list pop-up.
2. Double-click the UnPair option at the top of the list.

0-1897301-2 [Female / 94]		
찾기 초기화		
Part Number	Internal Number	Gender
▼	▼	▼
UnPair		
2-1897301-2	2-1897301-2(C0)	
1897301-2	1897301-2(C0)	Male
1-1897301-2	1-1897301-2(C0)	Male

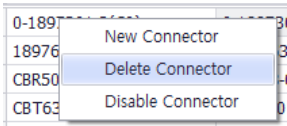
3. Click the  Save button to unpair the connectors.

Delete Object

There are two ways to delete objects.

■ Right-click

Right-click the target object from the connector list to open a pop-up menu. Select the [Delete Connector] option, then click the "Yes" button from the confirmation window to delete the object.

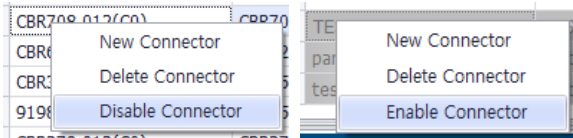


■ Bottom Menu

Select the target object from the connector list then click the  [Delete] button in the bottom menu. Click the "Yes" button from the confirmation window to delete the selected object.

Change Status

To change the status of an object, right-click the target object from the list to open a pop-up menu. If the object is still enabled, the [Disable Connector] option is displayed, and selecting it changes the object to a disabled state. If the object is already disabled, the [Enable Connector] option is displayed, which can be selected to re-enable the object.

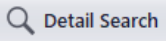


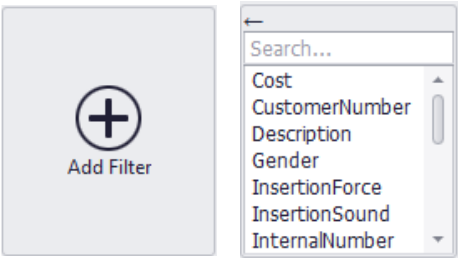
Disabled data is moved to the bottom of the list and displayed with a gray background, making it easy to distinguish. This feature is useful for data that is no longer in use, has a renewed version with the same part number, or has been discontinued.

	Internal Number	Part Number	Symbol
▼	🔍	🔍	🔍
11857	2322TS2P4(C0)	2322TS2P4	
11858	2381TS1P2(C0)	2381TS1P2	
11859	2381TS1P1(C0)	2381TS1P1	
11860	2322MG2P1(C0)	2322MG2P1	
11861	2352CT1P1(C0)	2352CT1P1	
11862	2353CT1P1(C0)	2353CT1P1	
11863	2381TS1P1(C1)	2381TS1P1	
11864	CBR508-012(C0)	CBR508-012	
11865	YURA_18F(C0)	YURA_18F	
11866	TEST_CONNECTOR	TEST_CONNECTOR	

Search Object

There are multiple ways to search for terminal objects. The first method is to search from the connector list, which is explained in detail on the [\[Data Table Usage-Search\]](#) page. The second method is using the Detail Search feature.

To use Detail Search, click the  Detail Search button at the top left to open the search pop-up, then click the  Add Filter button to select either connector's Main Info or Symbol as the search column. Once selected, a list of available values appears, allowing the desired value to be specified for search. A search box is also provided at the top of the list for quick keyword searches. For the Symbol and Pair columns, only two options are available — Symbol Registered / Not Registered and Pair Connected / Not Connected, respectively.



Multiple columns can be added as search filters, where conditions between columns are applied with AND logic, and multiple values within the same column use OR logic. After setting the search conditions, click the Apply button at the bottom right to apply the filters and update the connector list. The applied filter details can be viewed in the Filter Info window.

Filter Info	
Gender	Male
Pair	Not Connected
Symbol	Exists
SubType	Earth, General

To reset the search conditions, click the Detail Search button again, then click Reset followed by Apply to restore the connector list to its original state.

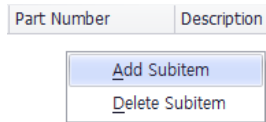
When selecting multiple values from the list, click one item and drag the cursor to select consecutive items. Hold Ctrl to select individual items, or Shift to select all items within a range between two clicks.

Sub-Item Settings

A Sub-Item is an additional component included in a connector, allowing management of individual parts that belong to a specific connector. Through Sub-Items, detailed configuration of a connector's components can be defined.

Register Sub Item

1. Right-click on the Sub-Item screen and select [Add Sub-Item] to add a new row.



2. Click on the first cell of the added row to open a sub-item selection window with list of objects registered in the ETC section.

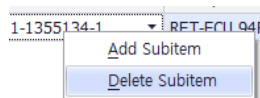
Part Number	Description	Number	WP_Type	Direction	Blank	Priority
1						
Part Number	Type	Manufacturer	Description	Cost		
RLS-2-G-BK-P8-L1-Y	ETC	RLEIL		0		
SJD-1101	ETC	SUNGJIN		0		
KW-1-25-5A	ETC	Mitsubishi		0		
KW4A(S)-23F100	ETC	유명전자		0		
ID-1022-S	ETC	DONG IL		0		
BNF-1525	ETC	FEELUX		0		
DC POWER JACK	ETC			0		
STEREO 3.5 PLUG	ETC			0		
P804	ETC			0		
YGDA4070A 8Ω 5W	ETC			0		
936103-3	RETAINER	AMP	RET-025 WP 2F (Gr)	0		
PU475-02630	RETAINER	KUM	RET-NDWP-2F(G) KUM	0		

3. Double-click the desired item in the selection window to register it. Columns can be sorted in ascending or descending order by clicking the header, and **Ctrl + F** can be used to quickly search for specific items.

Part Number	Description
1-1355134-1	RET-ECU 94F (1.5mm)AMP

Delete Sub Item

1. Right-click the target Sub-Item and choose [Delete Sub-Item].



2. When the confirmation message appears, click **"Yes"** to delete the selected Sub Item.

Cavity Settings

Cavity				
	Number	WP-Type	Direction	Blank
☐	1	W	R	8126
☐	2	T	R	8126
☐	3	W	R	8126
☐	4	W	R	8126
☐	5	W	R	8126
☒	6	T	R	8126
☐	7	T	U	0001
☐	8	T	U	9231
☐	9	T	U	0001
☐	10	T	U	0001
☐	11		U	
☐	12		U	0001
☐	13	W	U	
☐	14		U	9231
☐	15		U	
☐	16		U	

Terminal					
Priority	Part Number	Manufacturer	Min CSA	Max CSA	Strip
= 1	316838-1	AMP	0.55	1.25	4.5
= 2	ST780873-3	KET	0.3	0.5	5
= 3	ST730767-3	KET	1.25	2	4

Apply

Seal				
Priority	Part Number	Manufacturer	Min ODR	Max ODR
= 1	1532-4979	DELPHI	1.6	2.15
= 2	AK6124	DELPHI	2.2	2.6
= 3	368889-1	AMP	1.2	1.7

Apply

In Cavity Settings, each cavity can be configured with a waterproof type, orientation, and blank seal status. Terminals and seals can also be pre-registered to apply automatically when connecting wires with specific CSA/ODR values. Registered terminals and seals are automatically selected based on the CSA/ODR range of the wire, which enables efficient management of cavity-specific components.

Waterproof/Direction/Seal Properties

Each cavity's waterproof type, orientation, and blank seal status can be set individually. The waterproof type determines whether the cavity supports waterproof capability, orientation specifies the mounting direction of the terminal, and the blank seal option is used to close off any unused cavities. Together, these settings allow the connector to be precisely configured to match its installation environment and functional requirements.

■ Waterproof Type

Click the WP_Type cell of the cavity to be configured. A dropdown menu with options W, T, and P will appear. For detailed meanings of each option, refer to [\[Library – Library Data Components – Connector Cavity\]](#).

WP-Type
W
T
P

■ Direction

Click the Direction cell of the cavity to be configured. A dropdown menu with options U, L, R, and D will appear. For detailed explanations and usage of each option, see [\[Library – Library Data Components – Connector Cavity\]](#).

Direction
R
U
L
D

■ Blank Seal

Double-click the Blank cell of the cavity to open a pop-up window with list of items registered in the ETC section. Select an item to apply it as the blank seal. to Press Control + F to search for a specific item.

Part Number	Manufacturer	Internal Number	Description	Type
108 00 50726 0	KOSTAL		ELB 3.6DUMMY SEAL K...	BlankSeal
10800-47263-2091-816	KOSTAL		PIN (0.3~0.85)(W) KO...	BlankSeal
10800-47274-3	KOSTAL		SEAL (8.0~15.0)(Br) KOS	WireSeal
108-00-58340-0	KOSTAL		SEAL 35Q(Y) KOST	WireSeal
1-0968317-3	AMP		R-MODULE 24P COVER (...)	COVER
1-0968321-2	AMP		R-MODULE 40P COVER (...)	COVER
1-0968325-3	AMP		R-MODULE 52P COVER (...)	COVER
1-1355034-1	AMP		RETAINER (V)	RETAINER

Terminal & Seal

Each cavity can be registered with terminals and seals for specific CSA/ODR ranges. When a wire is inserted, the appropriate terminal and seal are automatically selected based on the wire's CSA/ODR value. Multiple terminals and seals can be registered to a single cavity to provide flexible configuration options

■ Add Terminal & Seal

1. Select a cavity from the cavity list.
2. Right-click on the terminal/seal and click Add Row to add a new blank row.

Priority	Part Number	Manufacturer	Min CSA	Max CSA	Strip
I					

3. Click the Part Number cell in the new row to open a list of registered terminal/seal parts. Search and select a desired part.

Direction

Blank

Priority

Part Number

Manufacturer

Min CSA

Max CSA

Strip

R

8126

I

✕

Enter text to search...

Find

Clear

Part Number	Manufact...	Series	Plating Ma...	Min CSA	Max CSA	Strip
170342-2	AMP	T	0.5	0.75	4	
316837-2	AMP	G	0.3	0.85	4	
1530-4702	APTIV	T	0.75	0.75	5	
1530-4724	APTIV	T	2	2.5	5	
1530-4725	APTIV	T	5	5	5	
1532-6397	APTIV	T	1.5	1.5	5	
1534-5367	APTIV	T	0.35	0.5	5	
1534-5368	APTIV	T	0.75	0.75	5	
8230-5222	SUMITOMO	T	0.35	0.35	0	
8230-5223	SUMITOMO	T	0.5	0.75	0	

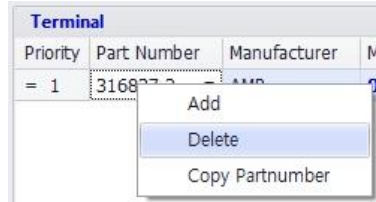
4. Double-click the desired terminal or seal to add it to the cavity.

Priority	Part Number	Manufacturer	Min CSA	Max CSA	Strip
= 1	316837-2	AMP	0.3	0.85	4

5. Click the apply button at the bottom to save the changes.

■ Delete Terminal & Seal

1. Select a cavity from the cavity list.
2. Right-click an item, then select Delete to remove it.



3. Click the apply button at the bottom to save the changes.

■ Change Terminal & Seal Priority

The priority of terminals or seals can be configured to determine which item is used first when the CSA/ODR range of wires overlap. When multiple items share the same CSA/ODR range, the item with the smallest priority number is applied first.

Priority can be adjusted through drag and drop within the Priority column. Items with overlapping CSA/ODR range are highlighted with Min/Max CSA values shown in blue. After modifying the priorities, click the apply button to save the changes.

Terminal						Seal				
Priority	Part Number	Manufacturer	Min CSA	Max CSA	Strip	Priority	Part Number	Manufacturer	Min ODR	Max ODR
= 1	316838-1	AMP	0.55	1.25	4.5	= 1	1532-4979	DELPHI	1.6	2.15
= 2	ST780873-3	KET	0.3	0.5	5	= 2	AK6124	DELPHI	2.2	2.6
= 3	ST730767-3	KET	1.25	2	4	= 3	368889-1	AMP	1.2	1.7

Bulk Edit

In the Cavity window, the bulk edit function allows the same configuration to be applied to multiple cavities at once. It is a fast and efficient way to apply common attributes such as waterproof type, insertion direction, waterproof seal, and terminal/seal information.

1. Select Cavity

In the first column (checkbox column) of the cavity list, select the target cavities to which the settings will be applied. All checked cavities will receive the same configuration.

Cavity				
	Number	WP-Type	Direction	Blank
☒	1			
☒	2			
☒	3			
☒	4			
☐	5			
☐	6			

2. WP-Type / Direction / Blank Bulk Edit

While the cavities are checked, modify the desired values directly in the cavity table.

☐	Number	WP-Type	Direction	Blank
☒	1			
☒	2			
☒	3	W		
☒	4	T		
☐	5			
☐	6			

☐	Number	WP-Type	Direction	Blank
☒	1	W		
☒	2	W		
☒	3	W		
☒	4	W		
☐	5			
☐	6			

3. Terminal / Seal Bulk Edit

☐	Number	WP-Type	Direction	Blank
☒	1	W		
☒	2	W		
☒	3	W		
☒	4	W		
☐	5			
☐	6			
☐	7			
☐	8			
☐	9			0001
☐	10			0001
☐	11			
☐	12			0001
☐	13			
☐	14			9231
☐	15			
☐	16			

Priority	Part Number	Manufacturer	Min CSA	Max CSA	Strip
= 1	CBR67-012	창원전자	5	8	13

Apply

Priority	Part Number	Manufacturer	Min ODR	Max ODR
= 1	1201-5899	DELPHI	1.29	1.7

Apply

Terminal/seal information can be edited in the panel on the right side of the cavity list. The data shown reflects the cavity currently selected in the table. When multiple cavities are selected, modifying terminal or seal information and clicking Apply will apply the changes to all selected cavities.

To copy one cavity's terminal/seal information to multiple cavities, check the boxes of the target cavities, select the representative cavity, and make any modification. The representative cavity's information will be synced and applied to all checked cavities.

Note that while a checkbox is checked, only those checked cavities can be modified. Unchecked cavities, even if selected, cannot be edited. To modify a specific cavity, either check its box or uncheck all others before making changes.

Terminal

A terminal is a connection point where wires are joined and secured, serving as an essential element for electrical connectivity within a circuit. This section introduces the workspace layout and main functions of the Terminal part, as well as how to create, delete, modify, and search terminal data.

Workspace

Part Number	Internal Number	Customer Number	Series	Manufacturer	Description	Min CSA	Max CSA	Strip	Plating Material	Unit Resistance	Weight	Cost
1	380000			가산(가산)	CRMP BRACKET		40	40	0 T			0
2	CR824-012			정품(정품)	BATT(TML 15-20.05Q	15	20	13 T				0
3	CR8725-012			정품(정품)	BODY_GND_TH (15-20.05Q)(91980-32050)	15	20	16 T				0
4	KCXT0865-0702AA			정품(정품)	R/THL TRANSMISSION EARTH	15	20	0 T				0
5	CR8412-012			정품(정품)	BATTERY TML 20.05Q HH	20	20	16 T				0
6	CR8661-022			정품(정품)	BATT(TML 20.05Q	20	20	15 T				0
7	CR8696-012			정품(정품)	BATT 15-20.05Q EARTH_RNG	15	20	16 T				0
8	CR8660-022			정품(정품)	BATT(TML 20.05Q	20	20	15 T				0
9	91985-08020			정품(정품)	RING TERMINAL(C20.05Q)	20	20	16 T				0
10	CR8726-012			정품(정품)	THL_GND (15-20.05Q)	15	20	16 T				0
11	CR8724-012			정품(정품)	BATT_STR_U_DS6 (25-30	25	30	16 T				0
12	CR817-012			정품(정품)	BATT(TML)(30-40.05Q)	30	30	0 T				0
13	320020			정품(정품)	1.0P FEMALE ROUND TML	0.5	0.5	7 V				0
14	CR8690-012			정품(정품)	THL-START MTR_DS6	25	30	16 T				0
15	CR867-012			정품(정품)	RNG THL(CR867-012)	5	8	13 T				0
16	91980-A2020			정품(정품)	STARTER_F-GND_THL(C5-20)	15	20	16 T				0
17	91961-08050			정품(정품)	R/THL_BOX_POWER_RH	30	30	16 T				0
18	91961-08070			정품(정품)	THL-START MTR_TAU 30.05Q	30	30	16 T				0
19	91985-01150			정품(정품)	THL ALT 8FT(25-30.05Q)	25	30	16 T				0
20	CR8687-012			정품(정품)	THL-BATT ALT	15	20	16 T				0
21	91985-02010			정품(정품)	THL - JOINT BLOCK A 25-30.05Q	25	30	16 T				0
22	48020-5			정품(정품)	BATT RING TML	20	20	14.5 T				0
23	CR8420-012			정품(정품)	BATT(TML 119 20.05Q	15	20	0 T				0
24	211 CC 20-4160P		960	FG	9100MA3 1.500 75-0.805S	0.75	1	4.5 T				0
25	CR8660-012			정품(정품)	TH_L_LDC_POS 20.05Q	20	20	15 T				0
26	CR8621-012			정품(정품)	TH 10.05Q	10	10	13 T				0
27	CR8710-012			정품(정품)	R/THL ALT 04.0	30	30	16 T				0
28	964282-1		110	AMP	8.0P(TL-0.5-315H) AMP	0.2	0.35	3.5 T				0
29	CR8454-012			정품(정품)	BATTERY TML 30.05Q(VQ)	30	30	16 T				0
30	221-24-61412-0			KOOSTAL	W-HUX-KG KOOSTAL	0.75	1.25	3 V				0

1. Terminal List

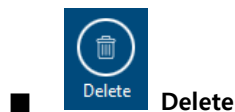
Displays the list of registered terminals and allows editing of selected terminals

2. Key Features

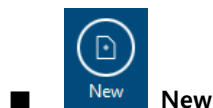
Provides essential tools for terminal management, such as adding, editing, and deleting data. Detailed explanations of each function are provided in the following section.

Key Features

The following features are available in the terminal part.



Removes selected item from the list. Deleted data cannot be recovered so it must be used carefully. In order to keep the data for future use instead of deleting it completely, it is more appropriate to change the status to "disabled". For more information about changing status, see [\[Terminal – Edit Data – Change Status\]](#).



Add new object on the currently active tab.



Import

Imports external files previously exported from CADvizzor into existing data, appending or merging the new content into the list.



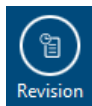
Replace

Removes all existing data and imports external files previously exported from CADvizzor, replacing the list with new content. Removed data cannot be recovered.



Export

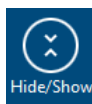
Exports current data into an external file for backup or to transfer to other systems. The exported file can be re-imported through the import or replace function.



Revision

Track and manage the revision history of a selected object. It provides details such as the modification date, editor, revision type (Modify, Create, Delete), description, and total revision count. Clicking the + button next to the date reveals detailed data changes, including Before/After Data.

Revision				
Date	Author	Action	Description	Total Revision
2024-09-03	KJW5774	Modify		1
2024-09-03	KJW5774	Modify		1
2025-03-21	KJW5774	Modify		6
Detail Revision List				
Action	Type	Before Data	After Data	
Modify	Conn-Gender		Female	
Modify	Conn-Pair		37250-3T040	
Modify	Cavity 1- WP_Type		P	
Add	Cavity 1 -Terminal		CBR698-012/15/20	
Add	Subitem		KW4A(S)-23F100	
Add	Subitem		RL5-2-G-BK-P8-L1-Y	



Hide/Show

Hide or show the top main tab for efficient workspace management

Edit Data

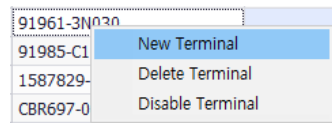
This section describes how to create, modify, delete, change status, and retrieve terminal data.

Create Object

There are two ways to create a new object:

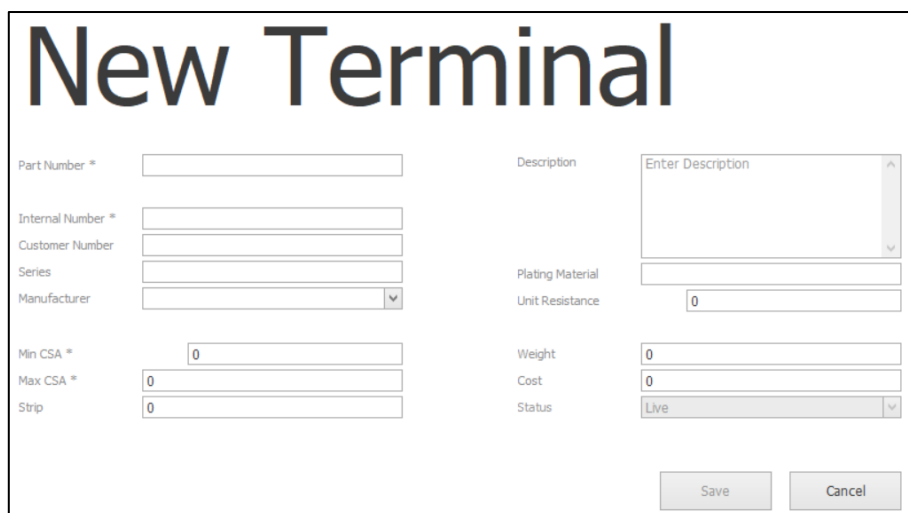
- Right-Click

Right-click on the terminal list to open a pop-up menu. Then, select [New Terminal] to open the creation window.



- New Button

Click the  [New] button in the bottom menu to open the creation window.

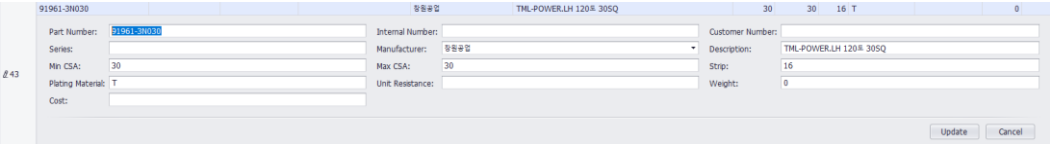
A screenshot of the 'New Terminal' creation window. The title 'New Terminal' is at the top in a large, bold font. Below the title, there are two columns of input fields. The left column contains: 'Part Number *' (text box), 'Internal Number *' (text box), 'Customer Number' (text box), 'Series' (text box), 'Manufacturer' (dropdown menu), 'Min CSA *' (text box with '0'), 'Max CSA *' (text box with '0'), and 'Strip' (text box with '0'). The right column contains: 'Description' (text area with placeholder 'Enter Description'), 'Plating Material' (text box), 'Unit Resistance' (text box with '0'), 'Weight' (text box with '0'), 'Cost' (text box with '0'), and 'Status' (dropdown menu with 'Live' selected). At the bottom right, there are 'Save' and 'Cancel' buttons.

Required fields, which are marked with *, must be filled in order to register a new part. Required fields are Part Number, Internal Number, and Cross Section Area (Min/Max). For more detail about each field, refer to the [\[Library Data Field – Terminal\]](#).

The Cross Section Area (CSA) defines the wire size range that the terminal supports. This value is used in manufacturing drawings (MFG) to filter and ensure correct wire selection when linking connectors and terminals.

Modify Object

To modify an object from the list, double-click the target object to open the Modify Data window. After making changes, click the Update button to save. The Part Number must be unique; the changes will not be saved if a duplicate Part Number already exists in the list.

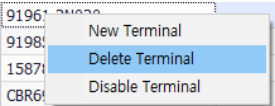


Delete Object

There are two ways to delete an object:

■ Right-Click

Right-click the target item to open a pop-up menu. Select the [Delete Terminal] option, then click "Yes" on the confirmation window to delete that object.

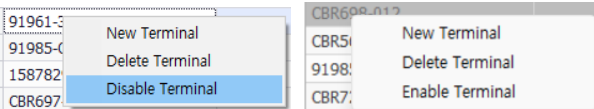


■ Delete Button

Select the target object from the terminal list then click the  [Delete] button in the bottom menu. Click the "Yes" button from the confirmation window to delete the selected object.

Change Status

To change the status of an object, right-click the target object from the list to open a pop-up menu. If the object is still enabled, the [Disable Terminal] option is displayed, and selecting it changes the object to a disabled state. If the object is already disabled, the [Enable Terminal] option is displayed, which can be selected to re-enable the object.



Disabled data is moved to the bottom of the list and displayed with a gray background, making it easy to distinguish. This feature is useful for data that is no longer in use, has a renewed version with the same part number, or has been discontinued.

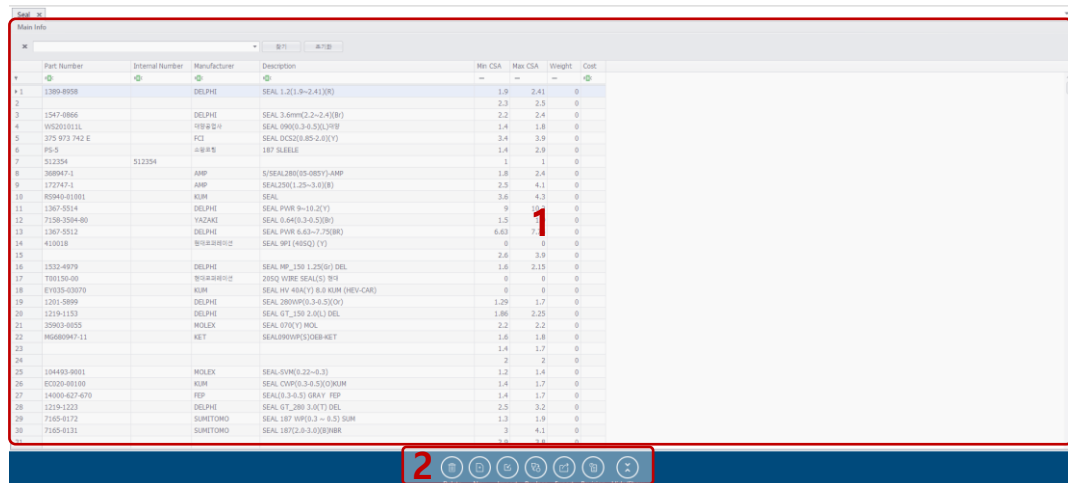
Search Object

There are two ways to search for terminal objects. Detail about this function is available on the [\[Data Table – Search\]](#) page.

Seal

A seal is a component that seals the connection points of connectors or cables, providing protection such as waterproofing and dust resistance. This section describes the Seal workspace layout and main functions, as well as how to create, delete, modify, and search seal data.

Workspace



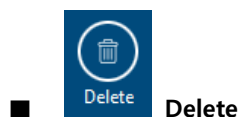
The screenshot shows the Seal workspace interface. It features a table with columns: Part Number, Internal Number, Manufacturer, Description, Min. CSA, Max. CSA, Weight, and Cost. The table contains 24 rows of seal data. Below the table is a toolbar with icons for various functions. A red box highlights the toolbar, and a red number '2' is placed next to the 'New' icon.

Part Number	Internal Number	Manufacturer	Description	Min. CSA	Max. CSA	Weight	Cost
1389-8958		DELPHI	SEAL 1.2(1.9~2.4)(X)	1.9	2.4	0	
1547-0866		DELPHI	SEAL 3.6mm(2.2~4.1)(B)	2.2	2.4	0	
W5201011L		DELPHI	SEAL 090(0.3~0.5)(H)	1.4	1.8	0	
375 973 742 E		PCZ	SEAL DC52(0.85~2.0)(V)	3.4	3.9	0	
PS-5		187	BLEBLE	1.4	2.9	0	
512354	512354			1	1	0	
368947-1		AMP	S/SEAL280(05-085V)-AMP	1.8	2.4	0	
172747-1		AMP	SEAL250(1.25~3.0)(B)	2.3	4.1	0	
85940-0101		KUM	SEAL	3.6	4.3	0	
1367-0014		DELPHI	SEAL PV8 9~18.2(V)	9	18	0	
7158-3504-60		VAZAKI	SEAL 0.64(0.3~0.5)(B)	1.5	0		
1367-5512		DELPHI	SEAL PV8 6.63~7.75(BR)	6.63	0		
410018			SEAL WPI (H95Q) (V)	0	0	0	
				2.6	3.9	0	
1532-4979		DELPHI	SEAL MP_150 1.25(G) DEL	1.6	2.15	0	
780150-00			20SQ VIRE SEAL(S) R1	0	0	0	
01035-03070		KUM	SEAL HV 40A(V) 8.0 KUM (NEW-CAR)	0	0	0	
1201-5899		DELPHI	SEAL 280(WP) 3.4-5.0(X)	1.29	1.7	0	
1219-1153		DELPHI	SEAL GT_150 2.0(X) DEL	1.86	2.25	0	
35903-0105		MOLEX	SEAL 070(Y) MOL	2.2	2.2	0	
W6889947-11		NET	SEALW6889947-11	1.6	1.8	0	
				1.4	1.7	0	
				2	2	0	
104493-8001		MOLEX	SEAL 070(S) 2.2~4.3	1.2	1.4	0	
80320-00100		KUM	SEAL CVP01.3-0.5(2)KUM	1.4	1.7	0	
14000-627-670		REP	SEAL(0.3~0.5) GRAY REP	1.4	1.7	0	
1219-1223		DELPHI	SEAL GT_280 3.0(T) DEL	2.5	3.2	0	
7165-6172		SUNTOMO	SEAL 187 HPS 3 ~ 6.5) SUN	1.3	1.9	0	
7165-6131		SUNTOMO	SEAL 187(2.0~3.0)SUN	3	4.1	0	
				0	1.0	0	

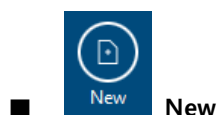
1. Seal List
Displays the list of registered seals and allows editing of selected seals.
2. Key Features
Provides essential tools for seal management, such as adding, editing, and deleting data. Detailed explanations of each function are provided in the following section.

Key Features

The following features are available in the seal part.



Removes selected item from the list. Deleted data cannot be recovered so it must be used carefully. In order to keep the data for future use instead of deleting it completely, it is more appropriate to change the status to "disabled". For more information about changing status, see [\[Seal – Edit Data – Change Status\]](#).



Add new object on the currently active tab.



■ Import

Imports external files previously exported from CADvizer into existing data, appending or merging the new content into the list.



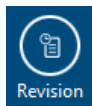
■ Replace

Removes all existing data and imports external files previously exported from CADvizer, replacing the list with new content. Removed data cannot be recovered.



■ Export

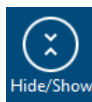
Exports current data into an external file for backup or to transfer to other systems. The exported file can be re-imported through the import or replace function.



■ Revision

Track and manage the revision history of a selected object. It provides details such as the modification date, editor, revision type (Modify, Create, Delete), description, and total revision count. Clicking the + button next to the date reveals detailed data changes, including Before/After Data.

Revision				
Date	Author	Action	Description	Total Revision
2024-07-09	KJWS774	Modify		4
Detail Revision List				
Action	Type	Before Data	After Data	
Modify	Seal-PartNumber		512354	
Modify	Seal-InternalNumber		512354	
Modify	Seal-CSAMin	0	1	
Modify	Seal-CSAMax	0	1	



■ Hide/Show

Hide or show the top main tab for efficient workspace management

Edit Data

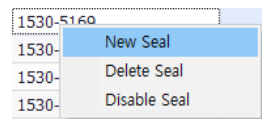
This section describes how to create, modify, delete, change status, and retrieve seal data.

Create Object

There are two ways to create a new object:

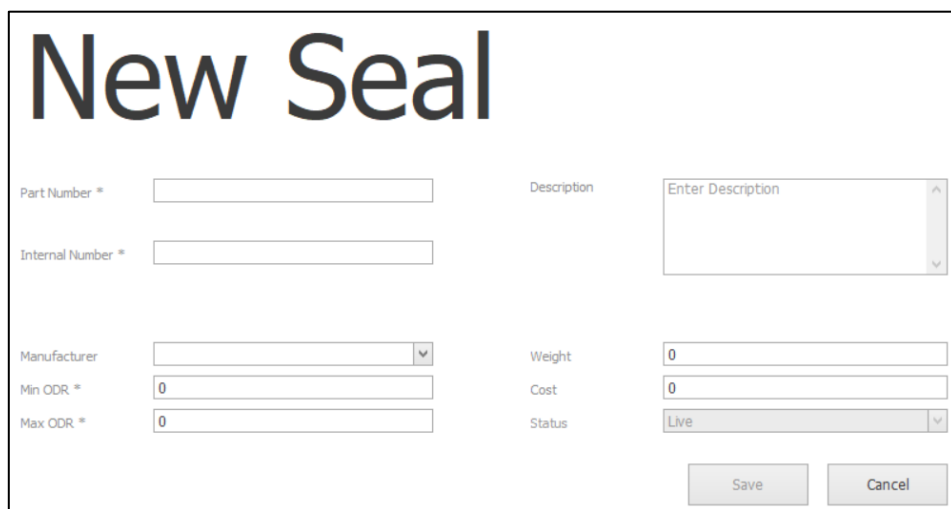
- Right-Click

Right-click on the seal list to open a pop-up menu. Then, select [New Seal] to open the creation window.



- New Button

Click the  [New] button in the bottom menu to open the creation window.



You must enter a required input to register a new seal. Required inputs include Part Number, Internal Number, and Outer Diameter (Min/Max). For more detail about each field, refer to the [\[Library Data Field – Seal\]](#).

The Outer Diameter (ODR) defines the wire size range that the terminal supports. This value is used in manufacturing drawings (MFG) to filter and ensure correct wire selection when linking connectors and seals.

Modify Object

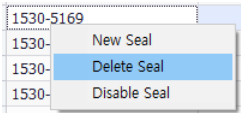
To modify an object from the list, double-click the target object to open the Modify Data window. After making changes, click the Update button to save. The Part Number must be unique; the changes will not be saved if a duplicate Part Number already exists in the list.

The screenshot shows the 'Modify Data' window for a seal object. The window has a header bar with the following information: '1530-5169', 'DELPHI', 'PIN-GT150MINI(O) DEL', and '0 0 0 0'. Below the header, there are several input fields: 'Part Number' (containing '1530-5169'), 'Internal Number' (empty), 'Manufacturer' (a dropdown menu showing 'DELPHI'), 'Description' (containing 'PIN-GT150MINI(O) DEL'), 'Min CSA' (containing '0'), 'Max CSA' (containing '0'), 'Weight' (containing '0'), and 'Cost' (containing '0'). At the bottom right, there are two buttons: 'Update' and 'Cancel'.

Delete Object

There are two ways to delete an object:

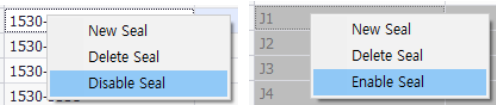
- Right-Click
Right-click the target item to open a pop-up menu. Select the [Delete Seal] option, then click "Yes" on the confirmation window to delete that object.



- Delete Button
Select the target object from the seal list then click the  [Delete] button in the bottom menu. Click the "Yes" button from the confirmation window to delete the selected object.

Change Status

To change the status of an object, right-click the target object from the list to open a pop-up menu. If the object is still enabled, the [Disable Seal] option is displayed, and selecting it changes the object to a disabled state. If the object is already disabled, the [Enable Seal] option is displayed, which can be selected to re-enable the object.



Disabled data is moved to the bottom of the list and displayed with a gray background, making it easy to distinguish. This feature is useful for data that is no longer in use, has a renewed version with the same part number, or has been discontinued.

Search Object

There are two ways to search for seal objects. Detail about this function is available on the [\[Data Table – Search\]](#) page.

Device

A device is a component in an electrical circuit that performs specific functions to control various electronic or mechanical equipment. This section explains the Device workspace layout and key feature, and provides guidance on how to create, delete, modify, and search device data.

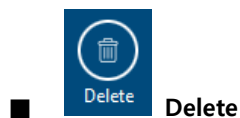
Workspace

Part Number	Internal Number	Customer Number	Manufacturer	Description	Current Rating	Rated Voltage	Allowable Current	Contact Resistance	Unit Resistance	Watt	Type
BATT_12.0V	BATT_12.0V				0	12	0	0.000012	0	0	Battery
BATT_14.5V	BATT_14.5V				0	14.5	0	0.000012	0	0	Battery
BATT_12.5V	BATT_12.5V				0	12.5	0	0.000012	0	0	Battery
BATT_14.2V	BATT_14.2V				0	14.2	0	0.000012	0	0	Battery
BATT_11.83 V	BATT_11.83 V				0	11.83	0	0.000012	0	0	Battery
MINI FUSE 20A	MINI FUSE 10A				0	0	20	0.016	0	0	Fuse
MINI FUSE 25A	MINI FUSE 25A				0	0	25	0.016	0	0	Fuse
SLOW BLOW 25A	SLOW BLOW 25A				0	0	25	0.005	0	0	Fuse
MINI FUSE 15A	MINI FUSE 15A				0	0	15	0.016	0	0	Fuse
SLOW BLOW 20A	SLOW BLOW 20A				0	0	20	0.00448	0	0	Fuse
SLOW BLOW 30A	SLOW BLOW 30A				0	0	30	0.005	0	0	Fuse
MINI FUSE 30A	MINI FUSE 30A				0	0	30	0.016	0	0	Fuse
SLOW BLOW 40A	SLOW BLOW 40A				0	0	40	0.005	0	0	Fuse
SLOW BLOW 60A	SLOW BLOW 60A				0	0	60	0.005	0	0	Fuse
SLOW BLOW 50A	SLOW BLOW 50A				0	0	50	0.005	0	0	Fuse
MINI FUSE 7.5A	MINI FUSE 7.5A				0	0	7.5	0.01091	0	0	Fuse
SLOW BLOW 70A	SLOW BLOW 70A				0	0	70	0.005	0	0	Fuse
SLOW BLOW 80A	SLOW BLOW 80A				0	0	80	0.00055	0	0	Fuse
HIDI 80A	HIDI 80A				0	0	80	0.00055	0	0	Fuse
HIDI 100A	HIDI 100A				0	0	100	0.00044	0	0	Fuse
HIDI 125A	HIDI 125A				0	0	125	0.00036	0	0	Fuse
HIDI 150A	HIDI 150A				0	0	150	0.00029	0	0	Fuse
HIDI 200A	HIDI 200A				0	0	200	0.00024	0	0	Fuse
Motor (180W)	Motor (180W)				0	0	0	0	0	180	Motor
Motor (200W)	Motor (200W)				0	0	0	0	0	200	Motor
Motor (27.4W)	Motor (27.4W)				0	0	0	0	0	27.4	Motor
Motor (276.37W)	Motor (276.37W)				0	0	0	0	0	276.37	Motor
Motor (276W)	Motor (276W)				0	0	0	0	0	276	Motor
Motor (280W)	Motor (280W)				0	0	0	0	0	280	Motor
Motor (330W)	Motor (330W)				0	0	0	0	0	330	Motor

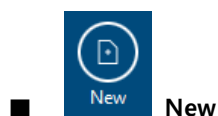
1. Device List
Displays the list of registered devices and allows editing of selected terminals.
2. Key Features
Provides essential tools for device management, such as adding, editing, and deleting data. Detailed explanations of each function are provided in the following section.

Key Features

The following features are available in the device part.



Removes selected item from the list. Deleted data cannot be recovered so it must be used carefully. In order to keep the data for future use instead of deleting it completely, it is more appropriate to change the status to "disabled". For more information about changing status, see [\[Device – Edit Data – Change Status\]](#).



Add new object on the currently active tab.



■ **Import**

Imports external files previously exported from CADvizzor into existing data, appending or merging the new content into the list.



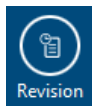
■ **Replace**

Removes all existing data and imports external files previously exported from CADvizzor, replacing the list with new content. Removed data cannot be recovered.



■ **Export**

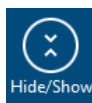
Exports current data into an external file for backup or to transfer to other systems. The exported file can be re-imported through the import or replace function.



■ **Revision**

Track and manage the revision history of a selected object. It provides details such as the modification date, editor, revision type (Modify, Create, Delete), description, and total revision count. Clicking the + button next to the date reveals detailed data changes, including Before/After Data.

Revision				
Date	Author	Action	Description	Total Revision
2023-05-16	lmh	Modify		2
Detail Revision List				
Action	Type	Before Data	After Data	
Modify	Device-UnitResistance	0	0.000012	
Modify	Device-Type		Battery	



■ **Hide/Show**

Hide or show the top main tab for efficient workspace management

Edit Data

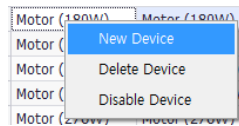
This section describes how to create, modify, delete, change status, and retrieve device data.

Create Object

There are two ways to create a new object:

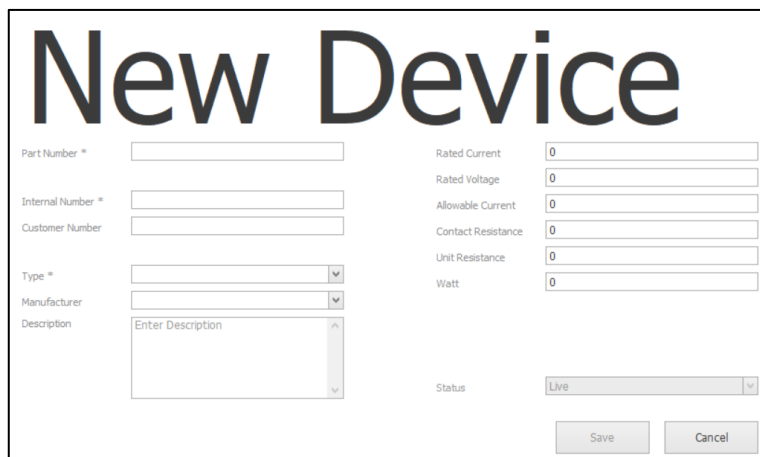
- Right-Click

Right-click on the device list to open a pop-up menu. Then, select [New Device] to open the creation window.



- New Button

Click the  [New] button in the bottom menu to open the creation window.



Required fields, which are marked with *, must be filled in order to register a new part. Required fields are Part Number, Internal Number, and **Type**. For more detail about each field, refer to the [\[Library Data Field – Device\]](#).

Device Type

The device type can be selected from the existing list or newly added by directly entering a value in the creation window. These types are mainly linked with schematic design in the Logic module. Common types include:

- **Motor**

Converts electrical energy into mechanical energy. Common types include DC, AC, stepper, and servo motors, each offering different speed and torque characteristics. Frequently used for fans, pumps, and actuators.

■ **Relay**

An electronic switch that allows a low-voltage/current signal to control a high-voltage/current circuit. Enables safe control of high-power loads; available in mechanical and solid-state (SSR) types.

■ **Fuse**

A protective component that disconnects power when excessive current flows, preventing short circuits. It operates only once and must be replaced after activation.

■ **Switch**

A device that turns the circuit on or off. Available in toggle, push-button, and rotary types, and operates mechanically or electronically (semiconductor switch).

■ **GND (Ground)**

Establishes a reference potential (0V) and reduces noise in circuits. Includes protective (safety) ground and signal ground. In vehicles and electronic devices, chassis ground is commonly used.

■ **Power**

Supplies power to the circuit. Includes batteries, adapters, and power supply units (PSUs). Power is typically provided as DC (5V/12V/24V) or AC (110V/220V).

■ **Resistor**

Limits current flow to adjust voltage or stabilize the circuit. Includes fixed and variable types (potentiometers), measured in ohms (Ω).

Modify Object

To modify an object, double-click the item you want to modify to open the Modify Data window. After modification, click the Update button to save your changes. PartNumber must be set to not overlap with other objects and will not be saved if duplicate values are present.

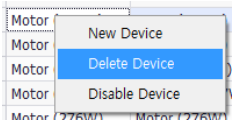
	MIDI 200A	MIDI 200A				0	0	200	0.00024
Z 24	Part Number:	MIDI 200A	Internal Number:	MIDI 200A	Customer Number:				
	Manufacturer:		Description:		Current Rating:	0			
	Rated Voltage:	0	Allowable Current:	200	Contact Resistance:				
	Unit Resistance:	0.00024	Watt:	0	Type:	Fuse			
Update Cancel									

Delete Object

There are two ways to delete objects.

■ Right-Click

Right-click the target item to open a pop-up menu. Select the [Delete Device] option, then click "Yes" on the confirmation window to delete that object.

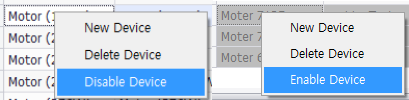


■ Delete Button

Select the target object from the device list then click the  [Delete] button in the bottom menu. Click the "Yes" button from the confirmation window to delete the selected object.

Change Status

To change the status of an object, right-click the target object from the list to open a pop-up menu. If the object is still enabled, the [Disable Device] option is displayed, and selecting it changes the object to a disabled state. If the object is already disabled, the [Enable Device] option is displayed, which can be selected to re-enable the object.



Disabled data is moved to the bottom of the list and displayed with a gray background, making it easy to distinguish. This feature is useful for data that is no longer in use, has a renewed version with the same part number, or has been discontinued.

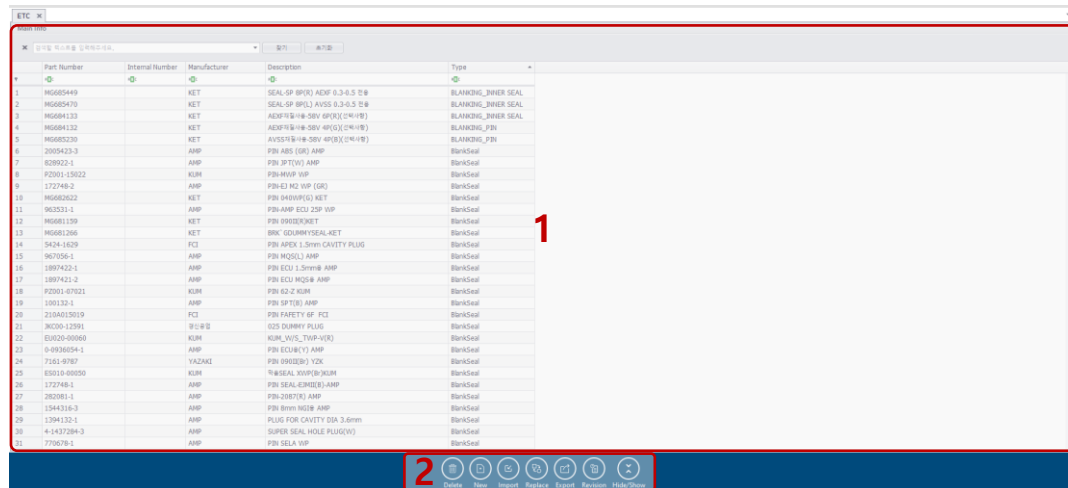
Search Object

There are two ways to search for device objects. Detail about this function is available on the [\[Data Table – Search\]](#) page.

ETC

The ETC section allows registration and management of components other than Seal, Terminal, Wire, Connector, and Device. Users can define custom component types as needed. This section explains how to create, edit, delete, and search ETC data.

Workspace



1. ETC List

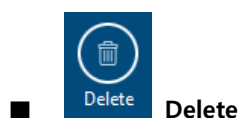
Displays the list of registered ETC objects and allows editing of selected objects.

2. Key Features

Provides essential tools for ETC item management, such as adding, editing, and deleting data. Detailed explanations of each function are provided in the following section.

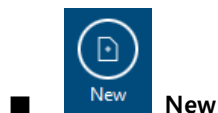
Key Features

The following features are available in the ETC part.



Delete

Removes selected item from the list. Deleted data cannot be recovered so it must be used carefully. In order to keep the data for future use instead of deleting it completely, it is more appropriate to change the status to "disabled". For more information about changing status, see [\[ETC – Edit Data – Change Status\]](#).



New

Add new object on the currently active tab.



■ **Import**

Imports external files previously exported from CADvizer into existing data, appending or merging the new content into the list.



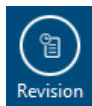
■ **Replace**

Removes all existing data and imports external files previously exported from CADvizer, replacing the list with new content. Removed data cannot be recovered.



■ **Export**

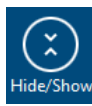
Exports current data into an external file for backup or to transfer to other systems. The exported file can be re-imported through the import or replace function.



■ **Revision**

Track and manage the revision history of a selected object. It provides details such as the modification date, editor, revision type (Modify, Create, Delete), description, and total revision count. Clicking the + button next to the date reveals detailed data changes, including Before/After Data.

Revision				
Date	Author	Action	Description	Total Revision
2025-03-20	KJWS774	Modify		1
2025-03-20	KJWS774	Modify		2
Detail Revision List				
Action	Type	Before Data	After Data	
Modify	ETC-PartNumber	2005423-3	2005423-4	
Modify	ETC-InternalNumber	2005423-3	2005423-4	



■ **Hide/Show**

Hide or show the top main tab for efficient workspace management

Edit Data

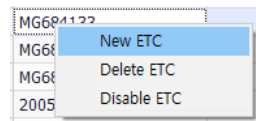
This section describes how to create, modify, delete, change status, and retrieve ETC item data

Create Object

There are two ways to create a new object:

- Right-Click

Right-click on the ETC item list to open a pop-up menu. Then, select [New ETC] to open the creation window.



- New Button

Click the  [New] button in the bottom menu to open the creation window.

New ETC

Part Number *

Internal Number *

Description

Type *

Manufacturer

Status

Required fields, which are marked with *, must be filled in order to register a new part. Required fields are Part Number, Internal Number, and Type. For more detail about each field, refer to the [\[Library Data Field – ETC\]](#).

ETC Type

In the ETC section, the Type can either be selected from an existing list or entered manually. To use a type not included in the list, simply enter it directly in the creation window. The default types provided are linked to the sub-material addition function in MFG. Main types include:

- Jig

Auxiliaries used to place or process certain parts in the correct position. It holds the cable in a certain position when assembling the wiring, or maintains a certain interval and direction during the assembly process.

■ **Tube**

A cylindrical material used to protect wires or cables. The heat-shrink tube shrinks when heated, tightly wrapping around wires to provide insulation and protection.

■ **Clip**

A small fixture used to secure wiring or parts. It prevents wires from moving and ensures stable positioning. Clips come in various materials such as plastic and metal.

■ **Grommet/Protector**

Protective components used to prevent wires or cables from being damaged by sharp metal or plastic edges. Grommets insulate and protect wires passing through holes, and protectors wrap around wiring paths to prevent abrasion.

■ **Tape**

Tapes are used for various purposes such as wire protection and identification. Each type serves a different function:

- Cross Tape
Fixes intersecting wires in place and prevents separation.
- Marking Tape
Marks or identifies sections within wires, often color-coded based on roles.
- Bundling Tape
Groups multiple wires together. It acts like a cable tie, allowing easy removal and rewinding during maintenance.

■ **Connector Sub Material**

Sub materials support and enhance the functionality of connectors, which are key components for transmitting power and electrical signals. They provide added strength, sealing, insulation, alignment, and protection. Common examples include:

- Blank Seal
Closes unused cavities to block dust, moisture, or debris from entering. It is essential in areas where waterproofing is important.
- Cover
Protects terminals and circuits from impact, contaminants, and moisture. It also adds waterproof capability.
- Lever
Makes connector coupling more secure and enables easier connection and disconnection through simply rotating.
- Retainer
Keeps terminals firmly locked in position to prevent loosening, ensuring stable electrical and mechanical connections.

Modify Object

To modify an object from the list, double-click the target object to open the Modify Data window. After making changes, click the Update button to save. The Part Number must be unique; the changes will not be saved if a duplicate Part Number already exists in the list.

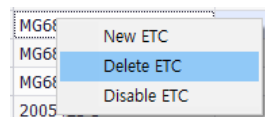
The screenshot shows the 'Modify Data' window for object MG684133. The window has a header bar with the object name 'MG684133', manufacturer 'KET', description 'AEXF재질사용-58V 6P(R)(선택사항)', and type 'BLANKING_INNER SEAL'. Below the header, there are input fields for 'Part Number' (MG684133), 'Internal Number', 'Manufacturer' (KET), 'Description' (AEXF재질사용-58V 6P(R)(선택사항)), and 'Type' (BLANKING_INNER SEAL). At the bottom right, there are 'Update' and 'Cancel' buttons.

Delete Object

There are two ways to delete an object:

■ Right-Click

Right-click the target item to open a pop-up menu. Select the [Delete ETC] option, then click "Yes" on the confirmation window to delete that object.

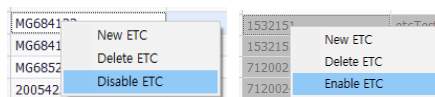


■ Delete Button

Select the target object from the ETC item list then click the  [Delete] button in the bottom menu. Click the "Yes" button from the confirmation window to delete the selected object.

Change Status

To change the status of an object, right-click the target object from list to open a pop-up menu. If the object is still enabled, the [Disable ETC] option is displayed, and selecting it changes the object to a disabled state. If the object is already disabled, the [Enable ETC] option is displayed, which can be selected to re-enable the object.



Disabled data is moved to the bottom of the list and displayed with a gray background, making it easy to distinguish. This feature is useful for data that is no longer in use, has a renewed version with the same part number, or has been discontinued.

Search Object

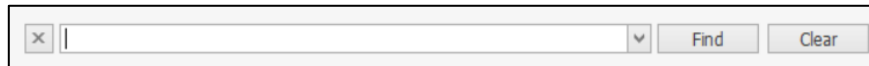
There are two ways to search for ETC objects. Detail about this function is available on the [\[Data Table – Search\]](#) page.

Data Table

Search

There are two ways to search for objects using data tables. The first is a Full Search, which searches all columns for data containing the entered text and displays the matching results. The second is a Field Search, which searches only within a specified column based on defined conditions. Various search conditions can be applied for more precise filtering.

Full Search

A search dialog box with a text input field, a dropdown arrow, and two buttons labeled 'Find' and 'Clear'.

Full search searches for all items in the database using the search box at the top. When text is entered, all data containing the entered text—regardless of field—is filtered and displayed. If the search bar is not visible, it can be activated by pressing Ctrl + F.

Field Search

There are two ways to perform a Field Search: search box and filter box.

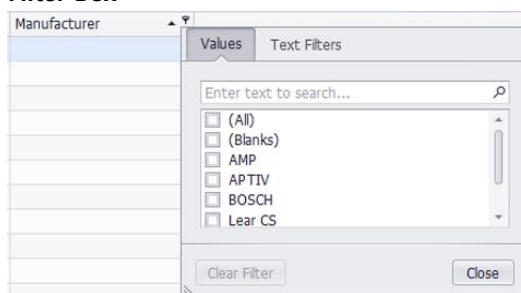
■ Search Box

	Part Number	Internal Number	Material	Color	Cross-Sectional Area
▼	⌵ M2	⌵	⌵	⌵	=
1	M22759/33-24-9	1P24	XLET		0.22
2	M22759/33-28-9	1P28	XLET		0.095
3	M22759/44-22-0	1P22	XLET		0.28

Each column (field) has a search box located below its header. Entering a value in this box displays matching data. Clicking the  or  icon opens a menu where various filtering options can be configured. The default filtering options based on field types are:

- Text Field: Displays data that contains the entered value (partial match).
- Numeric Field: Displays data that exactly matches the entered value (exact match).

■ Filter Box

A filter box dialog with a 'Manufacturer' header, a 'Values' tab, and a 'Text Filters' tab. The 'Values' tab is active, showing a list of manufacturers: (All), (Blanks), AMP, APTIV, BOSCH, and Lear CS. There is a search input field at the top and 'Clear Filter' and 'Close' buttons at the bottom.

When hovering over a column header, a  Filter icon appears in the upper-right corner. Clicking this icon opens a filter box that allows for more specific filtering.

- Values: Filters data by selecting specific values currently displayed in the list.
- Text Filters: Configure filtering options based on data type (char, number).

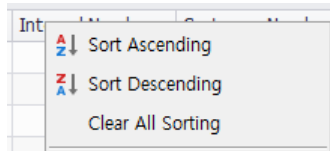
■ Filtering Options

The filtering options in the data table allow for more precise data filtering based on selected conditions.

	Search conditions	Description
	Is equal to	Search for data that exactly matches the value entered
	Is not equal to	Search for data that does not match the value entered
	Is like	Search for data that matches a particular pattern (Can use special character _ or %) _ : Single letter replacement Ex) "A_n" → "Ann", "Ain" % : Multiple letter replacement Ex) "A%n" → "Ann", "Aaron"
	Is not like	Search for data that does not match a particular pattern
	Contains	Search for data containing the values entered
	Does not contain	Search for data that does not contain the entered value
	Begins with	Search for data starting with the value entered
	Ends with	Search for data ending with the value entered
	Is greater than	Search for data greater than the value entered (Alphabetical comparison also applies to text).
	Is greater than or equal to	Search for data greater than or equal to the value entered
	Is less than	Search for data less than the value entered
	Is less than or equal to	Search for data less than or equal to the value entered

Sorting

The sorting function organizes data in ascending or descending order based on a selected column. Clicking a column header once applies ascending order; clicking it again switches to descending order. Alternatively, right-clicking a column header allows manual selection of the following options: Sort Ascending, Sort Descending, and Clear All Sorting.



Custom View

The custom view feature allows configuring the table layout according to user preferences. Columns can be rearranged, resized, or hidden to create a personalized workspace.

■ Change Column Order

Drag and drop the column header to the desired position to rearrange the order.

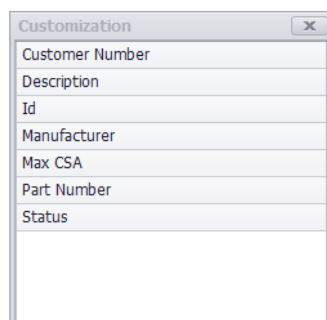
■ Adjust Column Width

Drag the border between columns to resize them. Alternatively, right-click the column header and select  Best Fit (this column) or Best Fit (All Columns) to automatically adjust column widths based on content.

■ Show/Hide Columns

To hide a column, drag the header outside the data table or right-click it and select Hide This Column.

To restore a hidden column, right-click any header and select  Column Chooser, then drag the desired column back into the table.

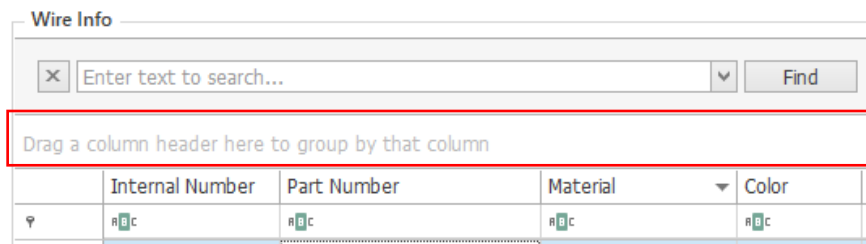


Grouping

The grouping function allows data to be organized according to specific criteria, enabling more structured and detailed views.

■ Group Data

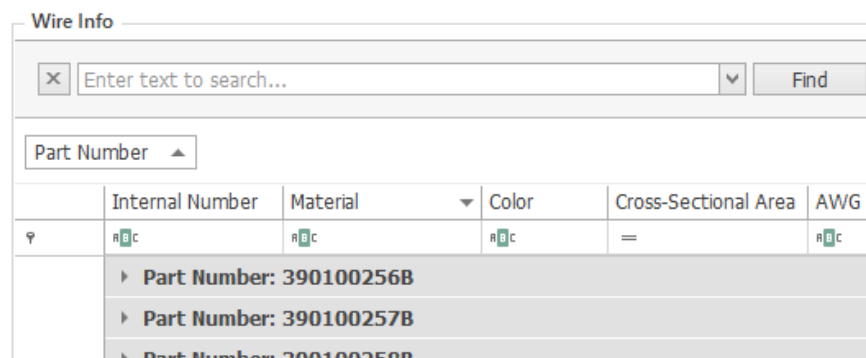
To group data by specific criteria, drag the column header to the group panel or right-click the header and select  **Group By This Column**.



If the group panel is not visible, right-click any header and select  **Show Group By Box** to activate it.

■ Ungroup Data

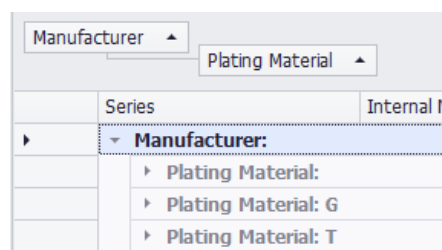
To ungroup, drag the grouped column from the group panel back to its original position or right-click it and select  **UnGroup**.



To remove all groups at once, right-click the group panel and select  **Clear Grouping**.

■ Multi Group

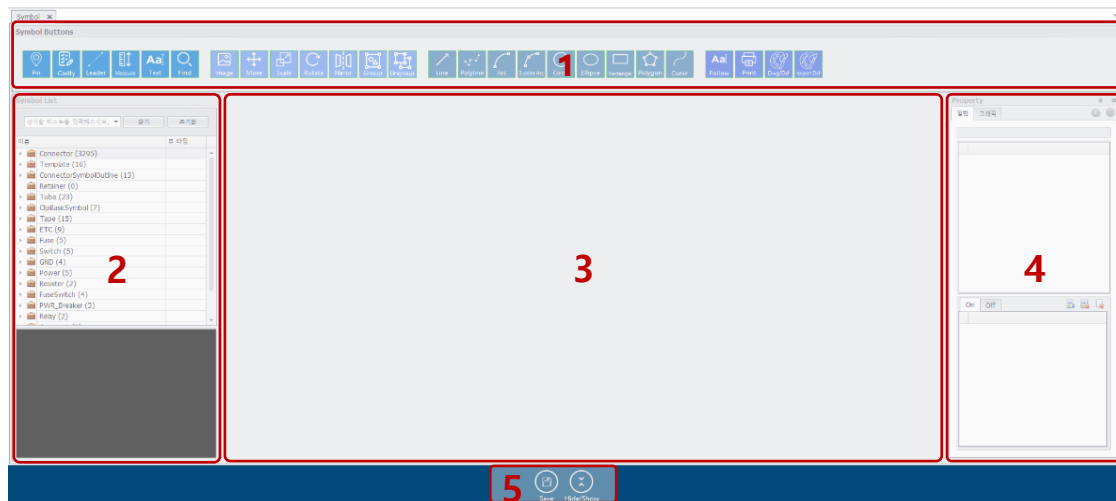
Multiple columns can be grouped simultaneously. The order of columns in the group panel determines the grouping priority and can be rearranged by drag-and-drop.



Symbol

2

Workspace



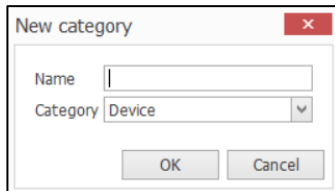
1. Symbol Buttons
Provides various tools required to edit and print symbol drawings. For detailed descriptions of each feature, refer to [\[Symbol – Edit Symbol Drawings\]](#).
2. Symbol List
Displays a list of registered symbols. Symbols can be activated, created, edited, or deleted from this list. Categories can also be added to organize symbols, and a preview of the symbol is displayed at the bottom.
3. Symbol Editor Window
Displays the selected symbol from the list, allowing users to view and edit the associated drawing.
4. Symbol Properties
Displays the properties of the selected symbol. The displayed information varies depending on the selected object, providing detailed information for each.
5. Save + Show/Hide
Saves the active drawing and toggles visibility of the main tab for flexible workspace management.

Category

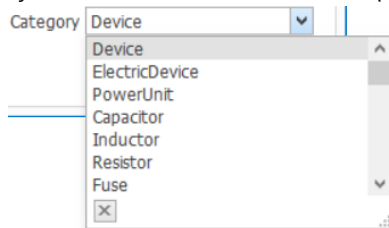
Categories are used to classify symbols. This makes it possible to group various symbols for easier management. Examples of items that can be categorized include connectors, templates, auxiliary materials, and fuse elements required for internal device design.

Create Category

1. Right-click Symbol List
Right-click on an empty area of the symbol list, or select any existing category and then right-click anywhere on the symbol list to open the menu.
2. Select  Add Category
From the menu, click Add Category to open the New Category window.
3. Set Category Name
Enter the name for the new category.



4. Set Category Format
From the category list, select the type for the new category. The type depends on the kinds of symbols to be included (for example, Connector, Template, Fuse, etc.).



Delete Category

Deleting a category permanently removes all symbols associated to that category and cannot be undone, so proceed with caution.

1. Select Category
Click the category to be deleted in the symbol list.
2. Right-Click Symbol List
Right-click anywhere on the symbol list to open the menu.
3. Select  Delete
From the menu, click Delete to remove the category from the list.

Template

A template is a feature in Logic or MFG that allows preset drawing templates to be created and reused. Different templates can be prepared for each page size, and the appropriate one can be applied when creating drawings. This reduces repetitive setup work and ensures consistency across all drawings.

Create Template

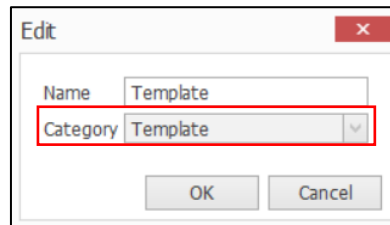
There are two ways to create a template: building a new template using built-in tools provided in CADvizzor, or importing an external template file.

■ Build New Template

1. Select Template Category

Select a **Template** category from the symbol list.

Note that the selected category type must be Template. To check the type of the selected category, right-click then choose  Edit.

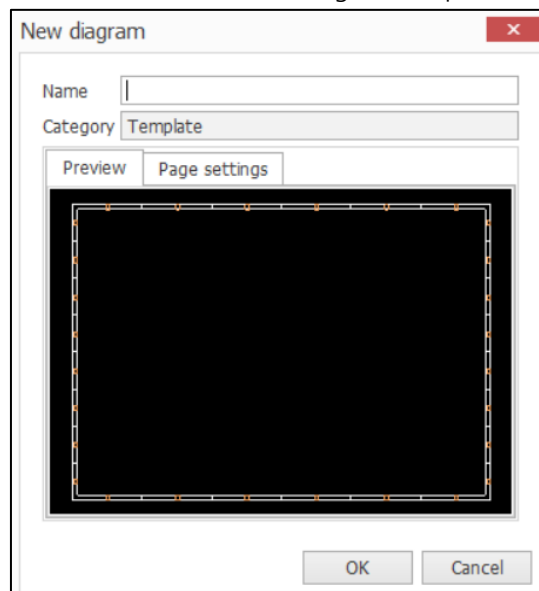


2. Right-Click Symbol List

Right-click anywhere on the symbol list to open the menu.

3. Select  Add Diagram

From the menu, click Add Diagram to open the New Diagram(template) window.



If the category type is not Template, a different window will appear.

4. Page Setup

Select a page size from the dropdown menu or choose Custom to set a user-defined size. The page orientation can be set to Landscape or Portrait.

Page	A3	Unit	mm
Shape	☒ Horizontal long ☐ Vertical long		
Size	297	X	420
	Grid step		2

5. Area Setup

Configure the area of the template by setting the number of rows/columns and the starting character.

Rows	6	Start char	A
Columns	8	Start char	1

6. Border Setup

Define the border thickness. To hide the border line, clear the Show frame sections checkbox.

Frame thick	5
Show frame sections	☒

7. Click OK

After configuring template name and page settings, click OK to create the new template.

■ Import Template

1. Create New Template

Create a new template as stated in the [\[Build New Template\]](#) section, but skip the page settings step, as it won't be needed. Simply enter the name in the New Diagram window and click OK.

2. Clear Template

A new template is automatically created with default objects. To start with a blank template, press Ctrl + A to select all objects, then press Delete to remove them.

3. Import Dwg/Dxf File

Click the  Import Dwg/Dxf button at the top to import external file into the template.

4. Edit and Save

After importing the existing template, make any necessary edits or additions, then save the template file.

Symbol Drawing

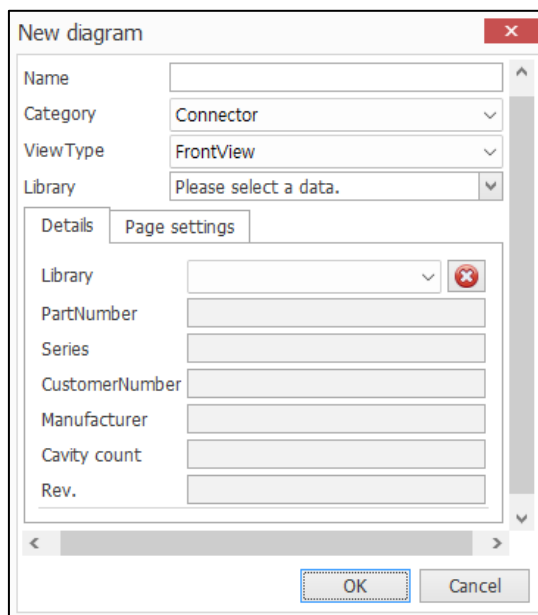
This section explains how to create symbol drawings and register them in the library for management. The required design elements vary depending on the symbol category — for example, connectors require cavity design, and devices require pin design.

The following steps describe how to create a symbol drawing.

Create Drawings

1. Right-Click Category

Select a category, then right-click and choose  Add Diagram to open the New Diagram window.



The 'New diagram' window is a dialog box with a title bar containing a close button. It contains several input fields and a 'Details' section. The 'Name' field is empty. The 'Category' dropdown is set to 'Connector'. The 'ViewType' dropdown is set to 'FrontView'. The 'Library' dropdown is set to 'Please select a data.'. Below these fields are two tabs: 'Details' (selected) and 'Page settings'. The 'Details' tab contains a 'Library' dropdown with a red 'X' icon, and several empty text fields for 'PartNumber', 'Series', 'CustomerNumber', 'Manufacturer', 'Cavity count', and 'Rev.'. At the bottom are 'OK' and 'Cancel' buttons.

2. Enter Name

In the New Diagram Window, enter the name of the diagram.

3. Set View Type

Select the view type for the diagram. Available options are Front View, Side View, and Top View. The default selection is Front View.

4. Add Library

Library data can be added to symbols in advance when creating a diagram. For details on how to add to the library, refer to [\[Symbol – Symbol Drawing – Library\]](#).

5. Create Drawing

After creating the diagram, use the [\[Symbol – Edit Symbol Drawing\]](#) feature to create and edit the drawing.

Library

The process of connecting a library to a drawing is the same across category types, so this section will use connector as the main reference.

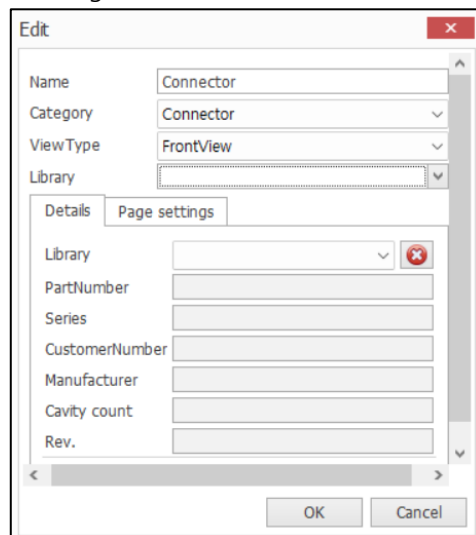
Connect Library

Connecting a library can be done either in advance via the New Diagram window when creating a new diagram or through the Edit Diagram window for existing diagrams. The two windows have identical layout.

1. Open New / Edit Diagram Window

For a new diagram, open New Diagram window via [\[Symbol Drawing – Create Drawings\]](#).

For an existing diagram, open Edit Diagram window by right-clicking the diagram and selecting  Edit.



The 'Edit' dialog box is shown with the following fields:

- Name: Connector
- Category: Connector
- ViewType: FrontView
- Library: (empty dropdown)

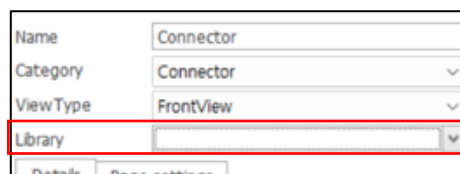
Below these fields are two tabs: 'Details' and 'Page settings'. The 'Details' tab is active, showing:

- Library: (empty dropdown with a red 'X' icon)
- PartNumber: (empty text box)
- Series: (empty text box)
- CustomerNumber: (empty text box)
- Manufacturer: (empty text box)
- Cavity count: (empty text box)
- Rev.: (empty text box)

At the bottom are 'OK' and 'Cancel' buttons.

2. Open Library List

Click the Library dropdown box to open list of pre-registered libraries.



A close-up of the 'Library' dropdown menu in the 'Edit' dialog box. The dropdown is open, showing a list of libraries. The 'Library' label is highlighted with a red box.

Enter text to search...

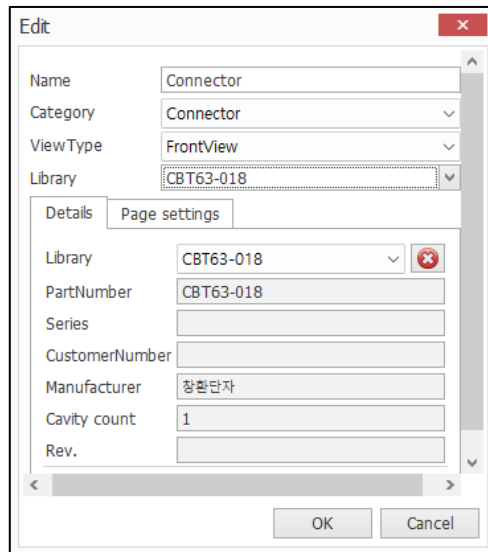
Find

Clear

	Obsolete	Part Number	Series	Customer Number	Manufacturer	Cavity count	Sub Type	Contact resistance	Part Description	Pair Part Number	Pair
1	☐	0-1897301-2	02506011d0		AMP	94	Female		R-PCU 94F(B)		
2	☐	1897663-1				1	Male				
3	☒	CBR508-012				1	Female			37250-3T040	8053...
4	☐	CBT63-018			정원전자	1			B/TM'L(-)VQ 9...		
5	☐	CBR708-012				1					
6	☐	CBR622-012				1					
7	☐	CBR350-012			정원전자	1			정원전자_RING_...		
8	☐	91985-1W010				1					
9	☐	CBR379-012			정원전자	1			정원전자_RING_...		
10	☐	CBR693-022				1					
11	☐	CBR696-012				1					

3. Add Library

Double-click the target library to add it to the diagram.



4. Add Multiple Libraries.

To add multiple libraries, repeat the same process by opening the Library List and double-clicking the desired library. See [\[Symbol Drawing – Library – Check Connected Libraries\]](#) to view the complete list of added libraries.

5. Complete

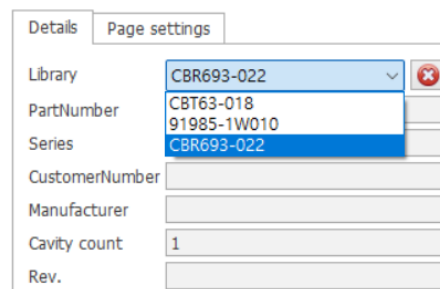
After adding all the necessary libraries, click OK to save the changes.

Check Connected Libraries

There are two ways to check the list of added libraries.

■ New / Edit Diagram Window

Click the library dropdown in the Details tab of the New / Edit Diagram window to view list of connected libraries.



■ Symbol List

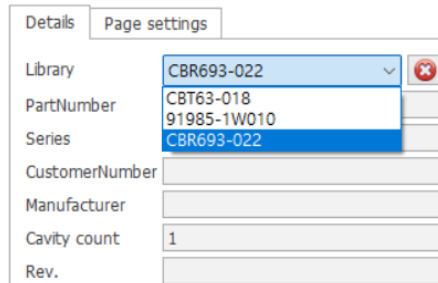
Connected libraries can be viewed in the symbol list as child items under the diagram.

Connector		FrontView
	CBT63-018	
	91985-1W010	
	CBR693-022	

Disconnect Library

Library connections can be removed in the New / Edit Diagram window.

1. Click the library dropbox in the Details tab of the New / Edit Diagram window to open the list of connected libraries.



2. Select the library to be disconnected.
3. Click the  X button on the right to remove it.
4. Click the OK button to save the changes.

Find Diagram

When searching for drawings, make sure all symbol list trees are expanded beforehand.

1. Select any Category
Click any category from the symbol list.
2. Expand Tree
Right-click to open the menu and choose  Open All.
If only  Close All is visible, click it first, then select  Open All again.
3. Search
Enter a keyword in the search bar at the top, such as a diagram name or the part number of a library connected to the diagram.



4. Search Result
The symbol list will display items with  diagram names and  connected library part numbers that contain the entered keyword. Doubling clicking an item will open the corresponding or the associated symbol diagram.

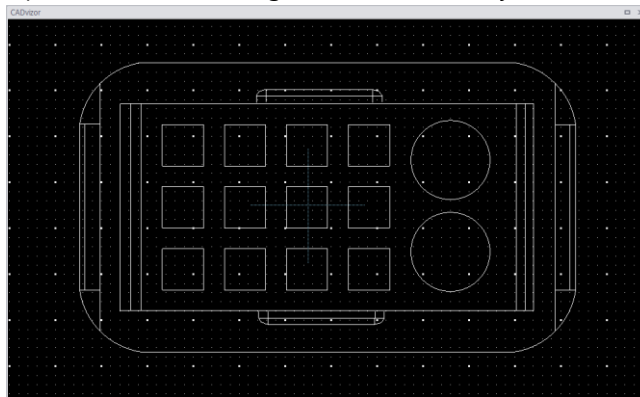
Design Elements by Category

Connector - Cavity Design

Cavity is an important factor when designing connector symbols. The cavity represents the internal space of the connector, which must be designed accurately to ensure proper symbol representation. In MFG, cavities must also be precisely defined in the symbol drawing to display wire information correctly on manufacturing diagram.

1. Open Diagram

Open the connector diagram where the cavity will be added.

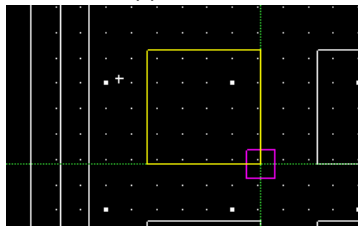


2. Cavity Button

Select the  Cavity button at the top Symbol Buttons bar.

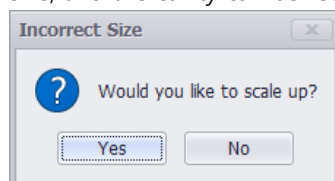
3. Draw Cavity

Draw a rectangular cavity in the diagram. Click once to set the first corner, then click again to set the opposite corner.



4. Scale Cavity

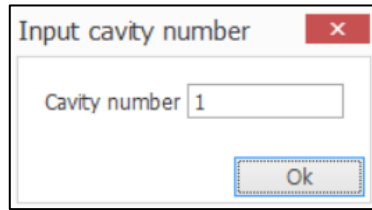
The cavity must meet the minimum size in order to display correctly in the manufacturing diagram. If the cavity is too small, a message will appear asking whether to enlarge the symbol so that it can fit a bigger cavity. Selecting "Yes" automatically adjusts the symbol size, and the cavity can be redrawn.



If the cavity size already meets the minimum requirement, this notification will not appear.

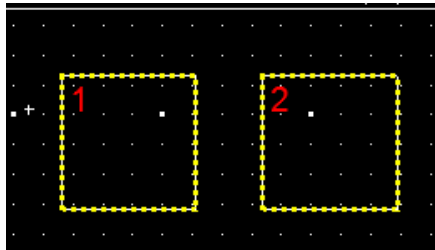
5. Cavity Number

After drawing the rectangle, enter the starting cavity number. Each subsequent cavity will be automatically numbered in ascending order.



6. End Process

Once drawn, the cavity appears as a yellow dotted box with the cavity number shown at the top-left corner, as illustrated below.



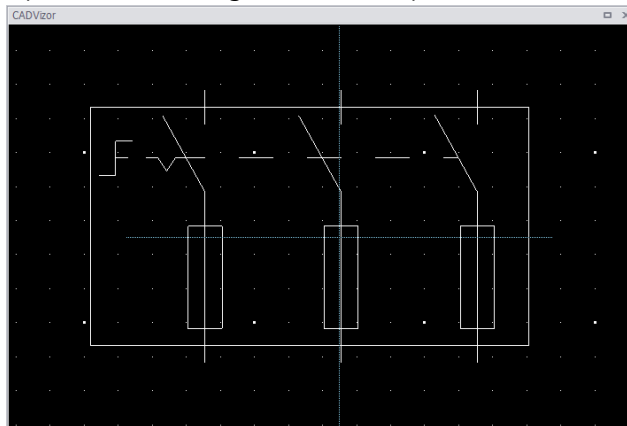
Multiple cavities can be drawn until the Esc key is pressed to end the session.

Device – Pin Design

When designing device symbols, pin design is required for devices such as motors, batteries, fuses, etc. The pins represent the electrical connection of the device and must be designed according to the role of each pin.

1. Open Diagram

Open the device diagram where the pin will be added.



2. Pin Button

Select the  Pin button at the top Symbol Buttons bar.

3. Configure Pin

Before creating a pin, configure its settings. The following options are available:

A dialog box for configuring a pin. On the left is a black square with 'CAD1' in cyan and a white '1' with a plus sign below it. On the right are three fields: 'Name' with 'CAD' in a text box, 'Type' with 'None' in a dropdown menu, and 'Number' with '1' in a spinner box.

Name	CAD
Type	None
Number	1

■ Name

The display name of the pin. The default value is PIN.

■ Pin Type

Defines the role of the pin. The available types are as follows:

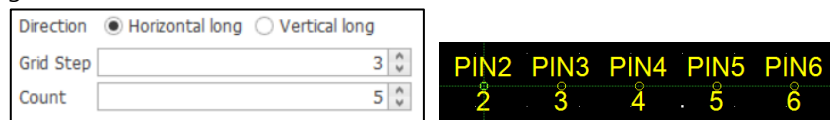
- None: General pin without a specific role
- U: User-defined pin
- GND: Ground pin
- IN: Input pin
- IxO: Input/Output pin
- IxO Terminated: Input/Output terminated pin
- NC: Not connected pin
- OUT: Output pin
- PWR: Power pin
- Coil: Coil pin

■ Number

Sets the pin number displayed on the diagram. The default value is an increment from the previous pin number, starting from 1.

4. Multi Pin

Multiple pins can be created simultaneously by configuring the following options before generation:

A dialog box for creating multiple pins. It has 'Direction' with 'Horizontal long' selected, 'Grid Step' set to 3, and 'Count' set to 5. To the right is a black rectangle showing six pins labeled PIN2 through PIN6 with numbers 2 through 6 below them.

Direction	☒ Horizontal long ☐ Vertical long
Grid Step	3
Count	5

A black rectangle containing six pins. Each pin is represented by a yellow label (PIN2, PIN3, PIN4, PIN5, PIN6) and a white number (2, 3, 4, 5, 6) below it.

■ Direction: Sets whether the pins are aligned horizontally or vertically.

■ Grid Step: Defines the distance between each pin.

■ Count: Specifies how many pins to create.

Properties Tab

Right-click the pin and select "Show Properties" to open the properties tab on the right.

	Classify	Value
▶	Name	CAD1
	Pin Type	None
	Pin Number	1

Edit Symbol Drawings

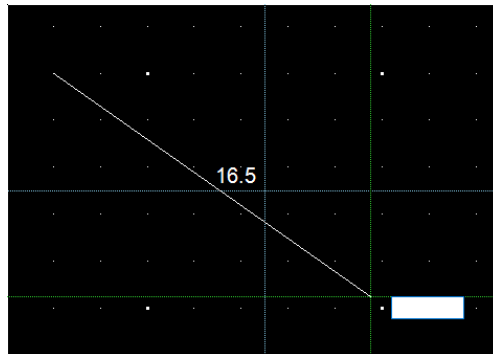
Create Drawing Element

Various basic shapes such lines, circles, rectangles, and polygons can be utilized to create the desired symbol drawing.



■ Line

Creates a straight line by specifying two points with the mouse.

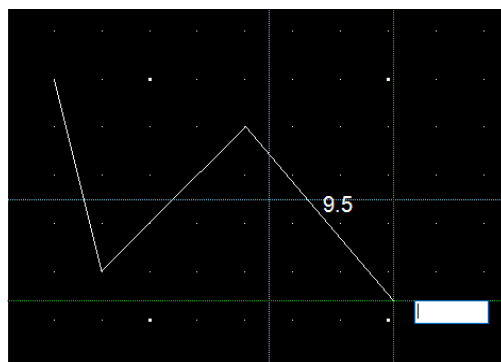


1. Click to set the start point of the line.
 2. Click again to set the end point and create the line.
- Alternatively, adjust the direction with the mouse, enter the length, and press Enter.



■ Polyline

Creates a continuous object composed of multiple connected lines. Additional segments can be added as needed.

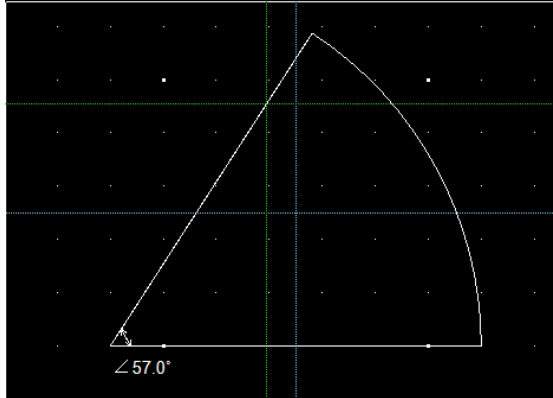


1. Select the first point to define the starting position of the polyline.
2. Click the next point or enter a value to set the desired length and direction.
3. Continue adding points to extend the polyline.
4. Press Enter to complete the polyline.



Arc

Creates a curved line by specifying the center point, radius, and angle.

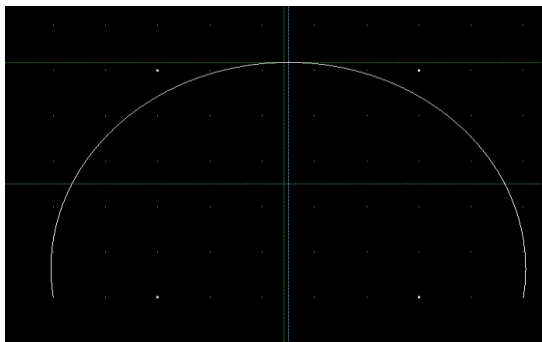


1. Click to set the center point of the arc.
2. Select the second point to define the radius.
3. Select the third point to set the angle and generate the arc.



3 Point Arc

Creates a curved line by defining the chord and arc shape.

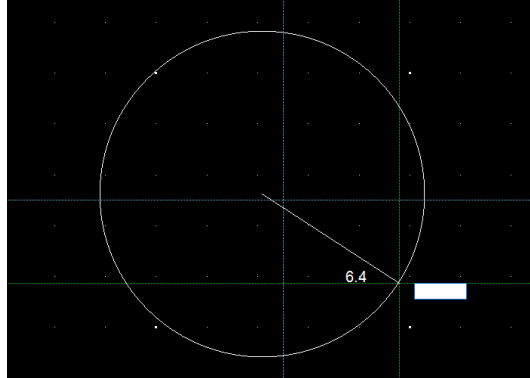


1. Select the first and second points to set the chord.
2. Specify the third point to determine the curvature and complete the arc.



■ 원 (Circle)

Creates a circle by defining the center and radius.

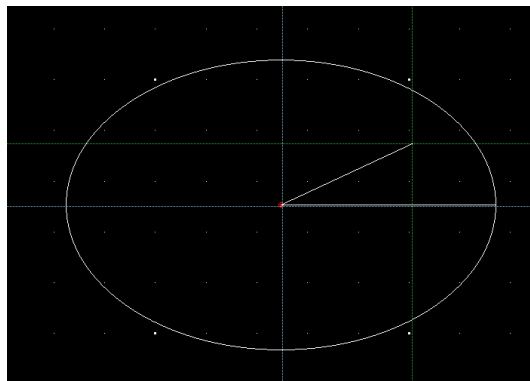


1. Select the position for the circle's center.
2. Move the mouse to adjust the radius, then click to create the circle.
Alternatively, enter the radius value and press Enter to generate the circle.



■ Ellipse

Creates an ellipse by defining its major and minor axes.

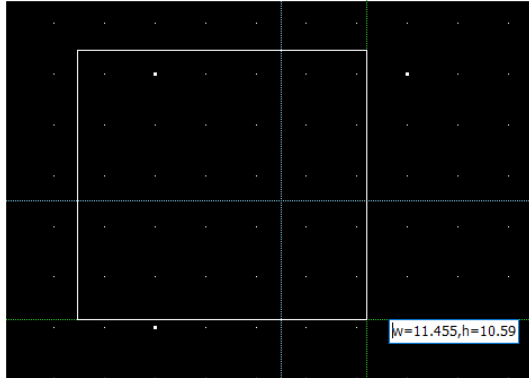


1. Click to set the center of the ellipse.
2. Select the second point to define the major axis (horizontal direction).
3. Select the third point to define the minor axis (vertical direction) and create the ellipse.



■ Rectangle

Creates a rectangle by specifying two opposite corners.

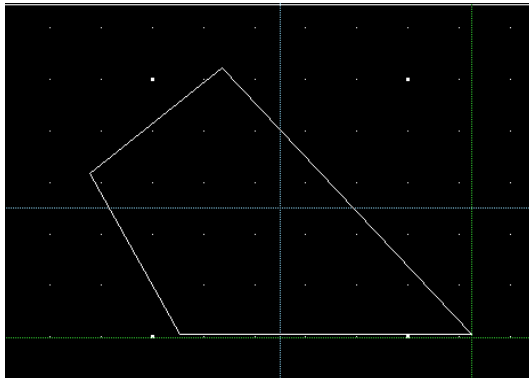


1. Click the first point to set one corner of the rectangle.
2. Click the second point to set the opposite corner and complete the rectangle.
Alternatively, enter the width and height and press Enter to generate the rectangle.



■ Polygon

Creates a polygon by defining its vertices.

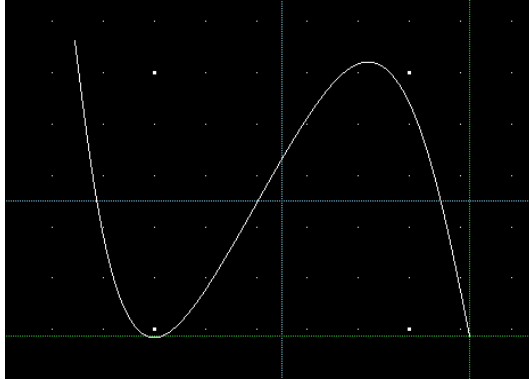


1. Click the first point to set the initial vertex.
2. Continue clicking to define additional vertices.
3. Press Enter to complete the polygon.



■ **Curve**

Creates a freeform curve.



1. Click the first point to set the starting position of the curve.
2. Continue clicking to define the path of the curve.
3. Press Enter to complete the curve.

Create Design Elements

Adds electrical elements such as Pins and Cavities, as well as visual elements such as Text and Images, to enhance understanding of the diagram.



■ **Pin**

Creates a connection pin that functions as an electrical contact point in a circuit, primarily used for designing devices. For more details, see [\[Symbol – Design Elements by Category – Device-Pin Design\]](#).



■ **Cavity**

Creates an internal contact point used in connector design. For more details, see [\[Symbol – Design Elements by Category – Connector-Cavity Design\]](#).



■ **Dimension Line**

Displays the size or distance of diagram elements.



1. Click to set the starting point of the dimension.
2. Click the second point to define the dimension range.
3. Click the third point to set where the dimension text will appear.

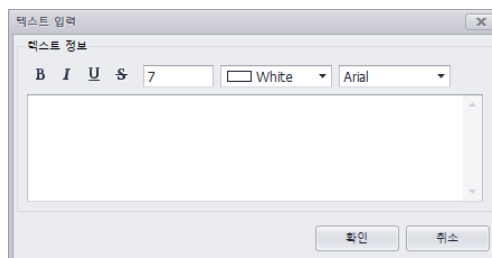


■ **Leader Line**

Adds descriptive annotations or notes to specific components or elements.



1. Click to set the arrow's target point.
2. Click again to define the bend point of the arrow.
3. Click once more to draw the line extending from the arrow.
4. Enter the desired text in the input box.

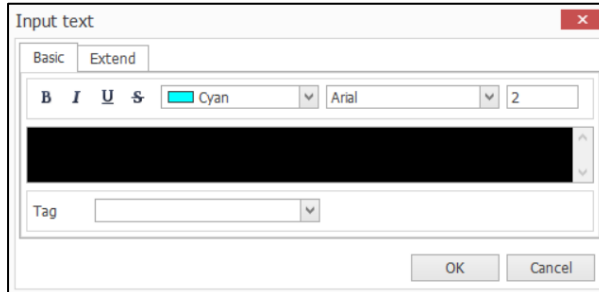


5. Click OK to display the text along the line.



■ **Text**

Adds descriptive text to the diagram.



1. Click the "Text" button at the top.
2. Enter the desired text in the input box.
3. Configure text style settings: bold, italic, underline, strikethrough, color, font, and size. Alignment can be adjusted in extend tab.
4. Click OK to apply and insert the text.



■ **Symbol Name**

Inserts the diagram name into the symbol diagram, mainly used in MFG when symbol diagram name needs to be visible.

Once added, the diagram name automatically moves along with the symbol when repositioned in the manufacturing drawing.

1. Select the "Symbol Name" button at the top.
2. Click on the desired position of the diagram to insert the name.



■ **Add Image**

Imports external image and inserts it into the diagram.

1. Click the "Add Image" button.
2. Navigate to the desired image file and open it.
3. Click once in the diagram to set the first corner of the image.
4. Click again to set the opposite corner, defining the image's size and position.

Edit Object

Modify existing objects in the diagram, including moving, resizing, rotating, and mirroring.



■ **Move Object**

Moves selected objects to a new position.

1. Select the object(s) to move. Multiple objects can be selected simultaneously.
2. Click the "Move" button to enter move mode.
3. Select a reference point as the base for movement.
4. Click the new location to place the object.



■ **Scale Object**

Changes the size of selected objects by scaling.

1. Select the object(s) to scale. Multiple objects can be selected simultaneously.
2. Click the "Scale" button to enter scale mode.
3. Drag the mouse to adjust the scale visually, or enter a scale factor using the keyboard and press Enter to apply it.



■ **Rotate Object**

Rotates selected objects by a specified angle.

1. Select the object(s) to rotate. Multiple objects can be selected simultaneously.
2. Click the "Rotate" button to enter rotation mode.
3. Click in the diagram to set the pivot point for rotation.
4. Enter the desired rotation angle and press Enter.



■ **Mirror Object**

Flips objects horizontally or vertically.

1. Select the object(s) to mirror. Multiple objects can be selected simultaneously.
2. Click Mirror to enter mirror mode.
3. Reference lines will appear on the screen. Hover over the line to preview the mirrored result.
4. Select the desired axis to complete the mirror.



■ **Group / Ungroup Objects**

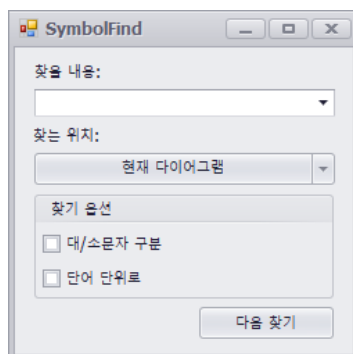
Combines multiple objects into a single group or separates grouped objects.

1. Select multiple objects to group.
2. Click Group to combine them into one.
3. Click Ungroup to separate the grouped objects.



■ **Find text**

Quickly finds specific text within the diagram.



1. Enter the target text.
2. Click Find Next to locate the text in the drawing.
3. Optional search settings include case sensitivity and whole-word matching.

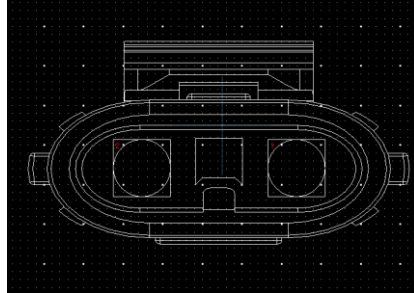
Import / Export File

Saves diagrams and imports external diagram files.



■ Import Dwg/Dxf

Imports DWG/DXF files into the program to be used in the diagram.

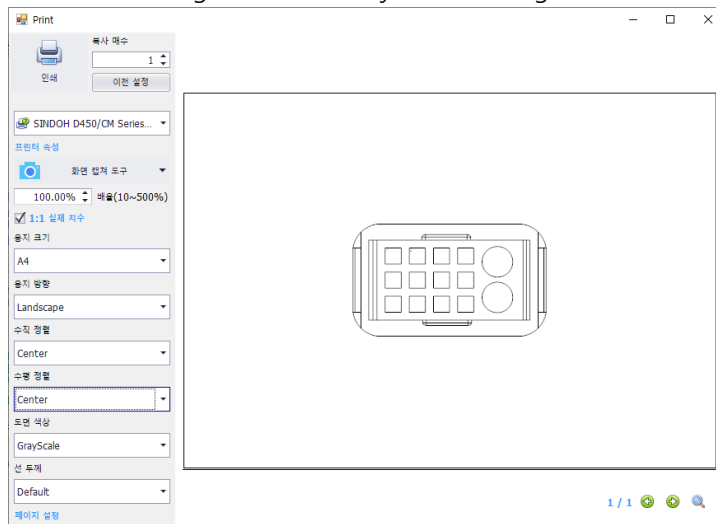


1. Click the "Dwg/Dxf" button at the top.
2. Click on the desired position in the diagram to insert it.
3. Navigate to the desired Dwg/Dxf file and open it.



■ Print

Prints the drawing with various adjustable settings



- Configure options such as number of copies, paper size, orientation, alignment, color, and line thickness.
- Adjust margins and scale to fit the desired output size
- Use the capture tool to print only a selected area, or print the entire drawing.
- Check the final output using page navigation and preview tools in the bottom right.

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