

progman

MagiCAD

RESOLVED ISSUES

VENTILATION AND PIPING AND ELECTRICAL

Performance issues with Change Properties

Opening Change Properties functionality in both MagiCAD Ventilation & Piping and MagiCAD Electrical is slower compared to old MagiCAD versions. Reason for the performance issue is the routine for checking the model drawings in the project. Therefore, the issue is noticeable especially in the larger projects which are located on the network drive. The performance is optimised in MagiCAD 2019 UR-1.1 version

VENTILATION AND PIPING

Geometry of connection node type "None" is incorrectly exported to the IFC model for the heating and cooling systems

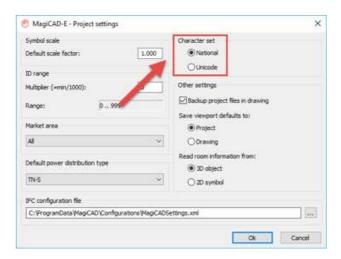
Starting from MagiCAD Ventilation & Piping 2019 UR-1 version, connection nodes of type "None" have been exported to the IFC models as visible objects. The connection node presentation is a pipe 200 mm long stub at the end of the duct or pipe. For heating and cooling systems, when the distance between the supply and return pipes vary in the drawing, the distance between pipe stubs in the IFC model is incorrect. In certain situations, the direction of the pipe stubs is not along the pipeline or the pipe stubs are not exported at all resulting errors in the IFC Export process.

With MagiCAD Ventilation & Piping 2019 UR-1.1 version, the connection node type "None" is exported as a plug object to the IFC model to avoid unnecessary collisions in the design coordination. For heating and cooling system connection nodes, the objects are exported correctly in all the situations. The issue is not affecting IFC Export of any other object types. Those are exported correctly.

ELECTRICAL

File path in the MagiCAD Electrical model drawing list is not correct if national character set is being used

Model drawings are not handled correctly in MagiCAD Electrical in cases where character set in the project settings is set to *National* and model drawing path or filename contain Scandinavian characters. Characters in the file path are changed in the model drawings list when project is opened with MagiCAD 2019 UR-1 version. Due to this, MagiCAD Electrical is not able to locate the drawings correctly in various MagiCAD functionalities. The file paths are changed only in MagiCAD drawing list, the actual file paths in the system are still correct. The issue only applies to *National* character set. The projects where character set is set to *Unicode* still work properly. MagiCAD 2019 UR-1.1 version will fix the issue.



SCHEMATICS

Schematic COM crashes

Fixed a bug which caused a crash when using MagiCAD Schematics COM and calling the IDwg-interface method findValues().

MagiCAD for AutoCAD 2019 UR-1

NEW FEATURES

COMMON

Changing the names of the revision arrows and clouds

The names of the revision arrows and clouds and clouds can now be done using the "Change properties"-function.

Bind an IFC type to native type

Now it is also possible to bind an IFC type to any native type in the Property Set Manager.

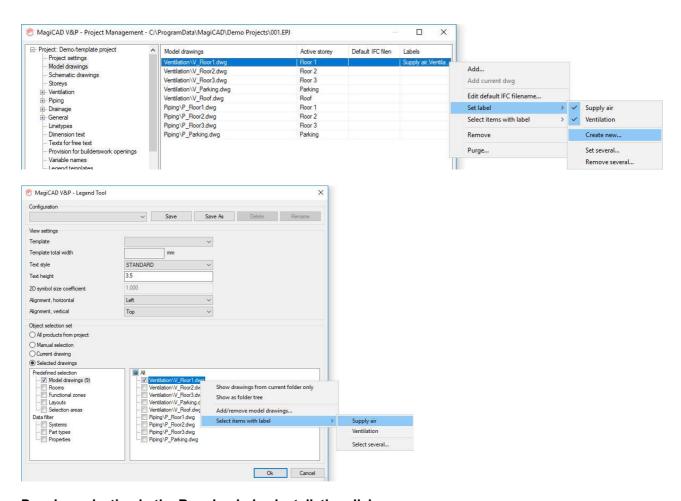
An "Uncheck all" - button has been added to the Change Property dialog

To make selection changes easier an "Uncheck all"-button has been added to the "Change Properties"-dialog.

VENTILATION AND PIPING

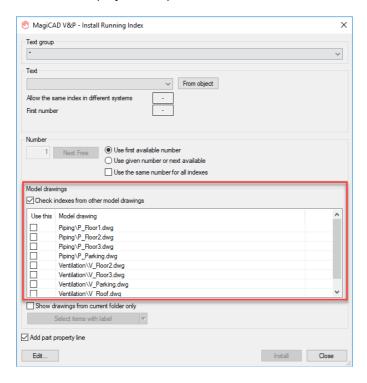
Label drawings

Now you can define labels to drawings. Each drawing can have as many different labels as you want. Once a label have been created then that label can be inserted to a drawing by selecting it from the list. Labels can be used to select groups of drawings with all functions that have drawing selection dialog.



Drawing selection in the Running index installation dialog

You can now use Running Index on selected drawings only, which significantly enhances the performance of the Running Index function. When the function checks only the relevant drawings and not all the models attached to a project, the performance boost is substantial.



IFC export, more accurate and flexible IFCType and PredifinedType support

The new version provides you with the option to define IFC type and subcategory for each device based on the IFC standard. This enables objects to be classified more accurately for export from MagiCAD to IFC. For example, it is possible to define a fan object as a centrifugal or an axial fan.

Connection node None information to the IFC

The information from a connection node set as "None" was not exported to the IFC and the end of the segment looked like an open end. Now the node is also exported with the information from the drawing. MagiCAD default property sets include the property set definition for the connection node None.

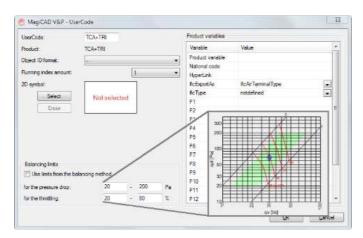
Improvements to changing the height level of devices

It is now possible to change the height level of multiple devices using the "Change Properties"-function. The new parameters that have been added to "Change Properties" are "Installation level", "Bottom of Part", "Top of Part" and "Center of Part".

Type specific throttling limits for control devices

The throttling limits can be set to all the adjustable devices like air terminals, flow dampers, radiator valves and zone valves.

Individual throttling limits cannot be set to multidiscipline devices like chilled beams and fan coils. More info.



Components inheriting the insulation from the duct or pipe that they are installed to

It is now possible to select whether the device that is installed to a duct or pipe should inherit the insulation from the duct or pipe segment. This is done in the product selection menu.

User defined Flow arrow distance from the device

The user can now define the distance of the flow arrow from the device when the user doesn't want to draw a line.

Diversity factors for the ventilation systems

Diversity factors can now be added to the ducts in ventilation systems. Diversity factors for ventilation system enable you to estimate what the practical real flow will be when the ventilation system is taken into use. This enables you to optimise cost, energy consumption and indoor air quality. If the diversity factor is given, the flow is multiplied with the diversity factor and duct sizing is done according to the diversified flow. More information on how the calculations work.

Assigning sizing methods individually in the domestic water systems

It is now possible to assign individual sizing methods for the cold, hot and circulation water in the domestic water systems.

The "time to reach hot water design temperature"-calculations have been improved

MagiCAD calculated the hot water waiting time based on the sizing flow which resulted in short waiting times for the hot water. It is now possible to select the Swedish and Finnish national calculation standards for domestic water systems in the project settings. The domestic water calculation standards are used for calculating the time to reach Hot Water Design Temperature in accordance with the local practices.

Operation area for sprinklers

MagiCAD Sprinkler Designer makes it easy to verify that the coverage of the sprinkler system is adequate in the selected room spaces. You can select the shape of the sprinkler-specific operation area in the project and then check the coverage of the designed system with the option to view and hide the sprinkler operation areas on the floorplan. More info.

Sprinklers connected to pipes from a different system using the "Connect Sprinklers to Pipe"-function

Connecting sprinklers to pipes from a different system or pipes from different systems to each other is no longer possible with the "Connect Sprinklers to Pipe"-function. Trying to connect sprinklers to a pipe from a different system gives the error "Not connected, because belongs to a different system" and trying to connect pipes from different systems to each other gives a system conflict warning.

Flexible pipes for sprinkler connections

MagiCAD Sprinkler Designer now supports the use of flexible pipes when establishing sprinkler connections. Flexible pipes are easy to install on site, which makes them a frequently-used solution for connecting individual sprinklers to rigid pipes. The flexible pipes are compatible with MagiCAD's sprinkler calculations and reports. More information on the use of this feature.

New name field in the sizing method

A new name field has been added to the sizing method which is also shown in the calculation report. The name is now shown in the "Sizing Report" instead of the ID.

Simultaneity factor

The simultaneity factor is now visible in the sizing report as well if a part in the system that is size has a Simultaneity factor set.

"Out of dp range" has been changed

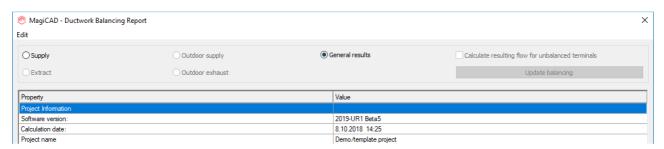
To better clarify the warning "Out of dp range" the warning has been changed to "Not in balance" in the reports.

A floating tooltip for the calculation reports

The headings' texts for the floating tooltips, in the calculation reports, have been improved to better explain the meaning of the headings.

Previewing the calculation preferences in the calculation report

Previously it was possible to view the calculation preferences in the sprinkler calculation reports before printing them to a PDF and this feature has now been added to the other systems as well.



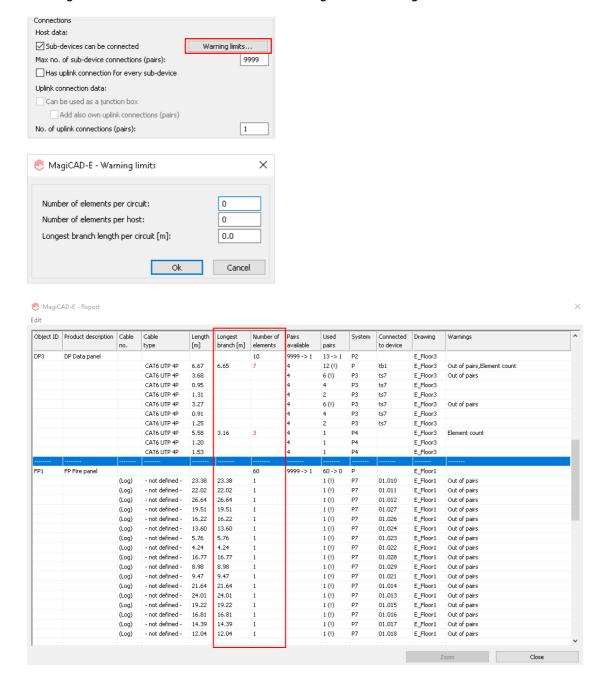
ELECTRICAL

Communication/data/BA connection report enhancements

Now "terminals" can also act as junction boxes in communication/data/ba systems which can summarise connections/pairs from the terminals "below" them. In addition, they can be set to require an own amount of connections/pairs that is also summarised to the total amount. This way the connection reports may also be used in other type of systems than just "star" systems.

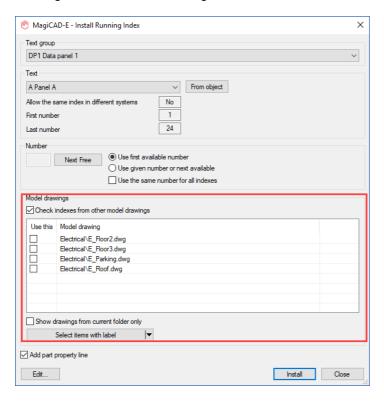


At the same time the connection reports have been enhanced to show also longest branch lengths and number of elements from circuits. In addition, by assigning warning limits for hosts, you can now see warnings if the allowed amount of elements or longest branch lengths of circuits are exceeded.



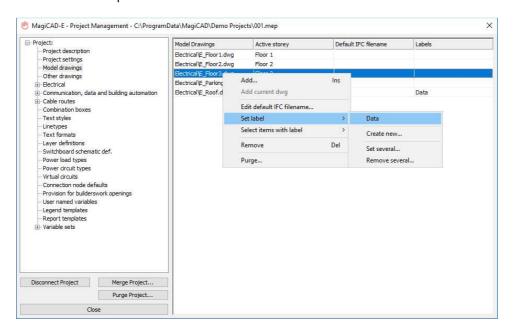
Running index performance update

Running index function have been made to work faster. Now you can select which drawings will be checked for running index instead of checking all drawings. Labels can be used to select predefined groups of drawings which to check running indexes.



Label drawings

Now you can define labels to drawings. Each drawing can have as many different labels as you want. Once a label has been created then that label can be inserted to a drawing by selecting it from the list. Labels can be used to select groups of drawings with all functions that have drawing selection dialog, f. ex. in Running index and IFC export functions.



Cable tray dimension limit

The maximum value for height and width is increased to 9999mm.

Conduit dimension limit

The maximum value for conduit diameter is increased to 9999mm.

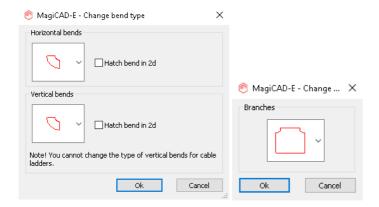
Bigger area to find connection nodes

Area to find connection nodes has been increased to 999 999mm into every direction from the storey origin. You can see the area on the garbage layer with the MESF command.

Change fitting type with Change Properties

Now it is possible to change fitting types of cable trays, lighting tracks and LED stripes with Change Properties. This applies to horizontal bends, vertical bends, T-branches and X-branches.

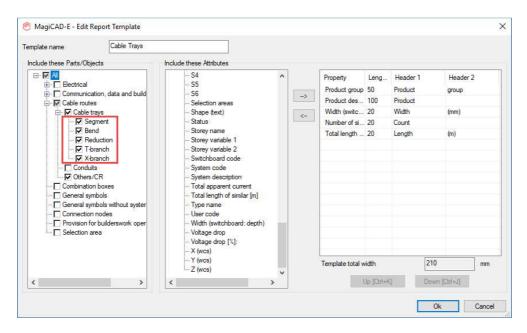
There are separate properties: "Bend type" and "Branch type" for bends and branches. In addition, inner bend radius can be changed separately but nowadays also at the same time as changing the bend type with the common enhancements made into Change Properties.



Possibility to exclude fittings (of LED-stripes, trays, lighting tracks etc.) from reports/legends etc.

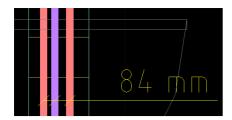
It is now possible to select which fittings are counted in reports and legends. This applies to cable trays, lighting tracks and LED-stripes.

New properties: "Fitting subtype" and "Fitting inner radius" added for separating different type of fittings from each other.



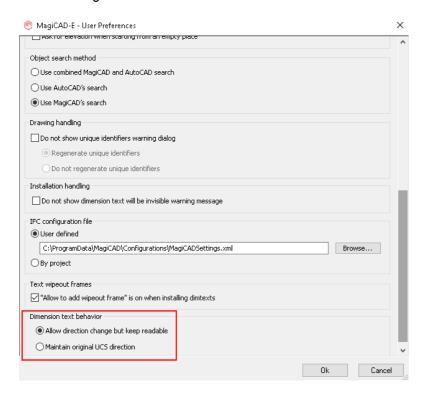
Cable tray filling ratio shortcomings

Cable diameter now works properly in part properties, dimension texts, BOM, legend and IFC property sets. New text variable has been added: "Cable diameter sum". It will calculate the diameter sum of a single or several cables and/or cable packets.

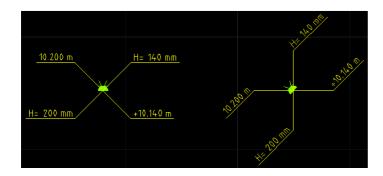


Dimension text behaviour when using AutoCAD commands

There are now two options in User Preferences for dimension texts' (directional) behaviour when using AutoCAD commands (such as MIRROR and ROTATE): "Allow direction change but keep readable" and "Maintain original UCS direction".



The first option ("Allow direction change but keep readable") lets dimension texts rotate according to the rotation/mirroring angle but is also keeping them readable in the current UCS. This means that when mirroring or rotating dimension texts, the texts are rotated according to the rotation/mirroring angle but they are still kept readable in the current UCS so that they will not end up upside down. This option has been the default behaviour since MagiCAD 2019, except for maintaining readability which has been added now in 2019 UR-1.



The second option ("Maintain original UCS direction") will maintain the actual original UCS directions of dimension texts. This means that when mirroring or rotating dimension texts, their directions will be kept pointing to the original directions they had before the operation.



IFC export, more accurate and flexible IFCType and PredifinedType support

The purpose of this functionality is to provide tools to override MagiCAD's own native IFC type definitions and also set definitions for non-MagiCAD objects and give a more precise IFC-definition to various objects.

SCHEMATICS

Enhanced sorting based on several columns in the report

The user can now select to sort the columns based on a several different properties and select in what order the various properties should be sorted.

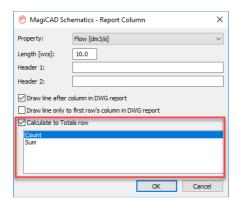
Quantity take-off reports can be attached to the drawing as the property "Count of similar" now works in reports placed in the drawing

Earlier it wasn't possible to place a report in the drawing if the "Count of similar" property was used in the template for the report. The destination "Free place in drawing" was greyed out if the property had been selected.

This has now been improved and reports containing this property can be placed in the drawings.

Calculating the count or sum of the properties in the report

It is now possible to calculate the total number of the properties in a column or row, or the sum of the properties in a column or row.



Extended support for groups with text objects now included in device groups

The text can be included in the device group and is inserted with the rest of the device group from the Tool Palette.

Increased number of characters in Label text definitions

The number of characters in the value of Label text definitions has been raised from 60 to 256.

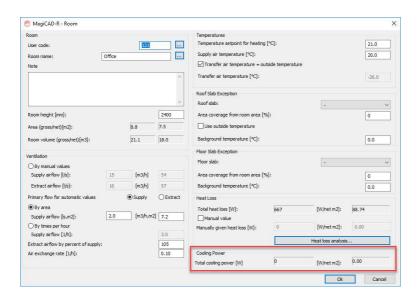
Revision cloud and arrow have been added to MagiCAD's Schematics

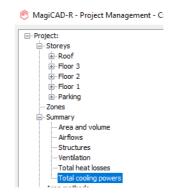
It is now possible to use revision clouds and arrows in MagiCAD's Schmatics to mark revisions in the drawings. More info.

ROOM

Cooling power updated via IFC Space Update

The cooling power needed for the rooms can now be viewed in the properties of a room, at the end of the dialog, and summary data.





CIRCUIT DESIGNER

Enhancements to the presentation of "jump wires"

Now "jump wires" are drawn also for other "mother parts", which means contactors, control switch panels and combined common parts in addition to terminal blocks which were working already before. At the same time the logic for reserving the connection reference text fields has been improved. In addition, the drawn "jump wires" will stretch all reference texts further so that they will not overlap with each other anymore.

RESOLVED ISSUES

COMMON

Dimension text "snap to center"

Dimension texts did not snap to the center of a provision for builderswork opening in a section view Now the dimension text snaps to the center.

Version conflict error

The project info variable was not reset which led to the error when the user attempted to make an IFC export. This was only noticed in some special cases.

The variable is now correctly reset.

Solid fills are erased from symbols in sections

In a section view the fill for the 2D symbols was not available.

Now the 2D symbols' fills are shown in the section view as well

The user preferences dialog is too high in a low Windows resolution (1366x768)

The entire dialog was not visible in a lower Windows resolution.

It is now vertically resizable and scrollable.

Weblinks in products are not written to the MagiCAD project's product's hyperlink

If the user selected a product, with a hyperlink, to the project using MagiCloud Connect, the hyperlink was not written to the project and the field was left blank.

Now the hyperlink is also written to the product's properties.

"Manufacturer"-property in the IFC export

The property "manufacturer", for real duct fittings, was not exported with the IFC-export when having added it to the IFC property set for ducts, but this has now been corrected.

IFC export using "Create separate files" does not work properly

When using the option to create separate IFC files in the IFC Export function the created files were missing the .ifc-file extension and the files did not work and manually editing the extension was not possible either. The IFC-files are now exported with the proper file extensions.

VENTILATION AND PIPING

Reconnecting a V&P-project causes AutoCAD to crash

Disconnecting a project that was missing the qpd-file and then trying to connect the drawing to a new project caused a crash.

This has been corrected and AutoCAD does not crash if the qpd-file is missing.

Arrows and dots are removed from dimtext pointers

After using the MAGIEXPLODE-command on dimension texts the arrows and fills from dots were removed. This has now been resolved.

An issue with editing the manual variables in the dimension texts

When trying to edit the manual variables using Part Properties (V&P) in dimension texts the editing defaulted to the wrong manual variable and the user was not able to edit the correct variable.

This has been corrected and the user can now edit the manual variables using Part Properties (V&P)

MagiCAD freezes when the user is hovering with the cursor over an access panel

Hovering with the cursor over some access panels caused the program to freeze if data was missing from the access panel's product code.

Missing product code data does no longer make MagiCAD freeze when the user hovers over the access panel.

Partial insulation gives an error

When adding partial insulation to a duct starting from an open end the program gave the error "There are system parts that cannot be updated in this DWG. Please unlock MagiCAD layers."

This has been corrected and the user can now add insulation starting from the open end without any errors.

Issues when drawing flow arrows

When drawing flow arrows, the arrows for the first device had the incorrect distance from the device itself. The arrows are now drawn at the correct distance for all the devices.

Generic manifolds in the report

The generic manifolds were not grouped together in the report like they were in the Bill of Materials. Now they are grouped in both the Report and the Bill of Materials.

Editing the size of a reducer

Trying to edit the size of a reducer was not possible if the circular diameter was larger than any of the rectangular widths (for example a reducer with the dimensions rectangular 300x300 vs round 315). The menu where the size can be edited did not open in this case, but this has now been corrected.

The insulation of an integrated reducer was not exported to the IFC

If the user drew, for example, a duct with a 45-degree-bend where the connected ducts were of different sizes, hence creating an integrated reducer connected to the bend, then the insulation of the integrated reducer wasn't exported.

Outlets in a report

The if an outlet was drawn while the option "Use outlets that break the duct as T-branches" was selected in the "Design Options" then the report listed the outlet as a piece of duct + an outlet, even if ducts weren't selected in the report.

Now this is reported as only an outlet if ducts aren't selected to be listed in the report.

Connecting a radiator with both the supply and return pipes fails in the top view

When trying to connect a radiator, while drawing both the supply and return pipes at the same time, to the pipes that are directly below the radiator, the functionality failed and no pipes were drawn. Connecting the pipes separately worked.

Now the user can connect the supply and return pipes at the same time from the top view.

ELECTRICAL

Circuit overload value was reset if the value was written manually

If a circuit's overload value had been manually defined with MagiCAD 2018 UR-3 (or older versions) in a drawing and the circuit's part properties was opened with MagiCAD 2019, the value was reset.

The problem has been fixed and manually written Overload and Fault current values are no longer reset.

Cables not showing "Switchboard" property

Previously, in some cases cables were not showing the switchboard property after running "Update drawing data". Changes have been made for its following options:

- Number of elements in circuits
- Circuit references based on power cable connection
- Circuit references based on data cable connections
- Connection data of all cables
- Longest branch length of circuits

When updating those items, information will be always read from all model drawings for making sure that everything will be updated.

Cable drawing in layout viewports

When drawing a cable in a layout's viewport and some device had been frozen in that viewport, the cable tried to connect to that device when drawing on top of it. Now cables are not connecting to frozen objects in viewports.

Problem in Change Properties and its "Show reference part" button

Dimension texts were not found with the "search circle" when using the "Show reference part" button of Change Properties at the same time you had the "MagiCAD search" on in User Preferences.

Default "Value from" in Change Properties

The default value for the "Value from" field has been set to * in Change Properties.

LED-stripes' 2D/3D option not disabled in viewport preferences when "follow main viewport" is on Previously, the LED-stripes' 2D/3D option was enabled in MagiCAD Electrical Viewport Preferences even though a viewport was set to follow the main viewport's settings. Changing it did not affect anything but having it enabled was misleading. This issue has now been fixed. In addition, the prompt texts in viewport scripts are now changed to be more understandable.

Error message "Cannot open block table record" when using Connect Devices and the first option ("zigzag wire")

When using "Connect Devices" and the "zigzag wire" option in a drawing that was created with an older version of MagiCAD than 2019 it gave an error "Cannot open blocktable record". Now also zigzag option works as it should and no unnecessary warnings should pop up when using this option.

Can't select dimension texts containing "memo text" or "prompt1-3" when using "Select Objects" When using Select Objects and filtering with the property "memo text", "prompt-1", "prompt-2" or "prompt-3" to find certain dimension texts, it did not find anything. Now the properties "memo text" and "prompt1-3" work properly.

Updating protective device information between plan drawings and a switchboard schematic not working in all cases

When updating data between plan drawings and a switchboard schematic drawing, the protective device information was not updated if overload was not one of the data columns used in the switchboard schematic drawing. This issues has been fixed and protective device data differences are checked even though some property is not shown in the schematics.

Move Branch and Copy Branch do not work properly with combination boxes and secondary connections

Previously, Move Branch and Copy Branch were not able to move / copy a cable network that was connected to / via combination boxes. The same thing happened also with secondary connections, which means data cable connections with electrical devices and power cable connections with data devices. Now they work in both cases.

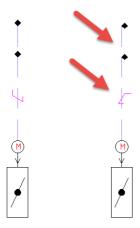
Splitting cable trays

The "search circle" in the Split function was not able to find overlapping cable trays. It always split the topmost tray. Now it asks you to select the tray you want to split.

SCHEMATICS

Device symbols in groups re-oriented themselves when the group was created, which was visible upon inserting the group into the drawing

As the image below shows the device symbols' orientation became wrong in some cases when the group was created. The re-oriented angle was then seen when the group was inserted into the drawing.



Upgrading MagiCAD version won't unfortunately solve the issue for the already created groups as the issue occurred when the group was created, not when it was placed into the drawing.

Any groups where this issue is visible must be corrected in a MagiCAD version above MagiCAD 2019 for AutoCAD. To correct the device group, first install the device group with issues to the drawing. Then correct the re-oriented symbols and create the device group again.

Symbol libraries not being found in MagiCAD 2019 and AutoCAD 2019

When MagiCAD 2019 was installed on top of AutoCAD 2019, the symbol libraries in MagiCAD Schematics were not found. This was due to faulty paths and this has now been corrected.

CIRCUIT DESIGNER

Editing connection points of a terminal block

Previously double-clicking a connection point inside a terminal block did not always pre-select the text inside the ID field so that you could instantly edit it. This issue has been fixed.