winguard

always retain control

WINGUARD AUTOCAD-SUPPORT

WinGuard manual for the usage of AutoCAD graphics

WinGuard

Manual for the usage of AutoCAD graphics - V3.1

Advancis Software & Services GmbH

Table of contents

1 Introduction

WinGuard cannot only process files in its own **.WGD** format, but also supports different bitmap and vector graphics formats. The AutoCAD vector graphic formats **.DWG** and **.DXF** are of particular importance.

To optimise data supply, WinGuard can detect and interpret specially defined objects in AutoCAD graphics. This enables the indicated objects such as e.g. data points, detectors, areas etc. to be recognised and automatically animated.

It is recommended to use the more compact **.DWG** format. The supported AutoCAD versions depend on the applied WinGuard version.

- as of WinGuard (X2 Build 21) Graphics up to and incl. AutoCAD version 2008

- as of WinGuard (X2 Build 25) Graphics up to and incl. AutoCAD version 2010

- as of WinGuard (X2 Build 49) Graphics up to and incl. AutoCAD version 2011

- as of WinGuard (X3 Build 3) Graphics up to and incl. AutoCAD version 2012

The graphics can be imported directly into WinGuard graphics or integrated as objects (as copy or with reference). When using the dynamic connection the most recent graphics are displayed in WinGuard upon their replacement in the corresponding folders. This is automatically executed without having to change the graphics definitions in WinGuard.

1.1 Display conventions

Several symbols and font types are used in this documentation to characterize certain information in order to facilitate working with it. These are shortly explained in the following.

This symbol indicates the listing of actions you need to follow to receive a certain result.

This symbol is the indication for further notes. We have added notes to points frequently leading to questions or just to give particular tips and tricks to simplify work processes. Even if deeper knowledge of other WinGuard functions are required to understand a work step we are providing a note by shortly explaining the overall context so that you do not need to search through the documentation.

This symbol is used if certain points require special attention. This might be the case if certain contexts are not self-explanatory or if faulty operations might lead to further problems.

This symbol indicates a question. We offer several possible answers you

can chose further possibilities to continue with the work process.

Window	User interface elements such as entry fields, commands etc. as well as other terms and indications are displayed in bold, menu commands are always displayed in the form **menu|submenu|command**.
<Key>	Bold text in angle brackets refers to a certain key on the keyboard.
Input	Italic text in quotation marks refers to text inputs or text options that you can enter in fields.
Button	The Button element is displayed in bold with grey background.

1.2   General information and requirements

The development of WinGuard is focusing on the integration of AutoCAD graphics so that existing maps of e.g. buildings or sites can be used directly. The corresponding function libraries are continuously updated to ensure that the most recent AutoCAD versions are supported.

For the use of AutoCAD graphics in WinGuard it is necessary that the corresponding license modules for the respective project have been activated. The activation is always project-related and provided by the project dongles. In case a license is missing the AutoCAD graphics can be selected in WinGuard but not be displayed. The respective display area or window will only display a big "**?**" instead of the graphics. This symbol is also displayed if a graphic has not been found.

> **Please make sure that the corresponding licenses have been activated and check which maximum AutoCAD version is supported by your WinGuard version.**

> **We strongly recommend to check/analyze important graphic files when starting a project to ensure their usability with WinGuard.**

However our experience has shown that the direct use of original, project-related AutoCAD graphics is not possible without a certain rework effort.

Sometimes there are also problems with the compatibility of graphics that were not created or modified with original AutoCAD programs.

The use of libraries of other manufacturers might contain functions resp. settings that can lead to a wrong display in WinGuard.

2   Definitions in AutoCAD

When using AutoCAD graphics in WinGuard there is the possibility to insert them as objects into WinGuard graphics (.WGD). The insertion can be executed in two different ways:

- As graphic object with / without reference to the AutoCAD graphic

- Splitting of the AutoCAD graphic into single objects

Upon selection of the file the AutoCAD layers to be later displayed in WinGuard can be selected via an additional dialogue. If no particular settings are made for the layers, the current settings from the AutoCAD file will be applied.

2.1 Graphics

If special objects (e.g. symbols) are defined as blocks in the AutoCAD graphics and tagged with corresponding attributes these can be directly linked with objects in WinGuard (data points, detectors, locations or areas). The names of the attributes are freely selectable and can be defined accordingly in WinGuard afterwards. However they must remain the same in all graphics of a project. The attribute values define the information for the processing in WinGuard. It does not matter whether the attribute values are visible or invisible.

2.1.1 Graphic features

Some principles should be noted with regard to the AutoCAD graphics intended to be displayed in WinGuard (please also see example):

Basic AutoCAD features:

- Different information are to be defined on corresponding layers so that they can be shown/hidden as and when required.

- Mostly only such file information is reasonable that is required for orientation, e.g. stairs, doors, windows, walls, etc.

- The number of layers and objects is to be kept as low as possible.

- One file per each floor should be generated.

- Legends, title blocks etc. should be deleted if necessary.

- The names of the layers should be plain.

- Only standard fonts should be used.

Notes with regard to block definition:

- The names of the attributes have to be the same in all used graphics.

- The drawing elements and visible attributes, e.g. the name, should be defined on different layers so that the name can be hidden later if necessary.

- If possible the element colors should be defined by the layer color.

- For the definition of objects to be used like symbols font elements are to be stored as polylines since texts are not animated when displayed in WinGuard.

2.1.2 Example

This example shows an AutoCAD file in DWG format only containing elements that are required for the display in WinGuard. If you have not received this example file (DWG_Example_1.DWG) together with the documentation please contact us so that

we can send it to you.
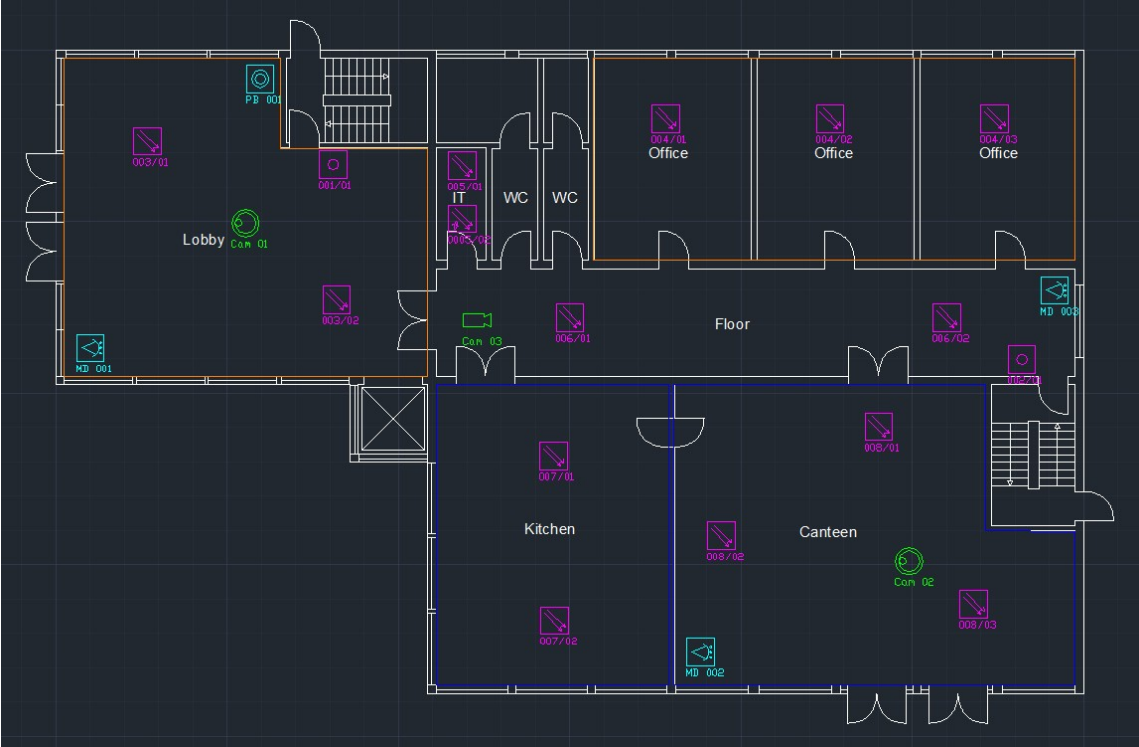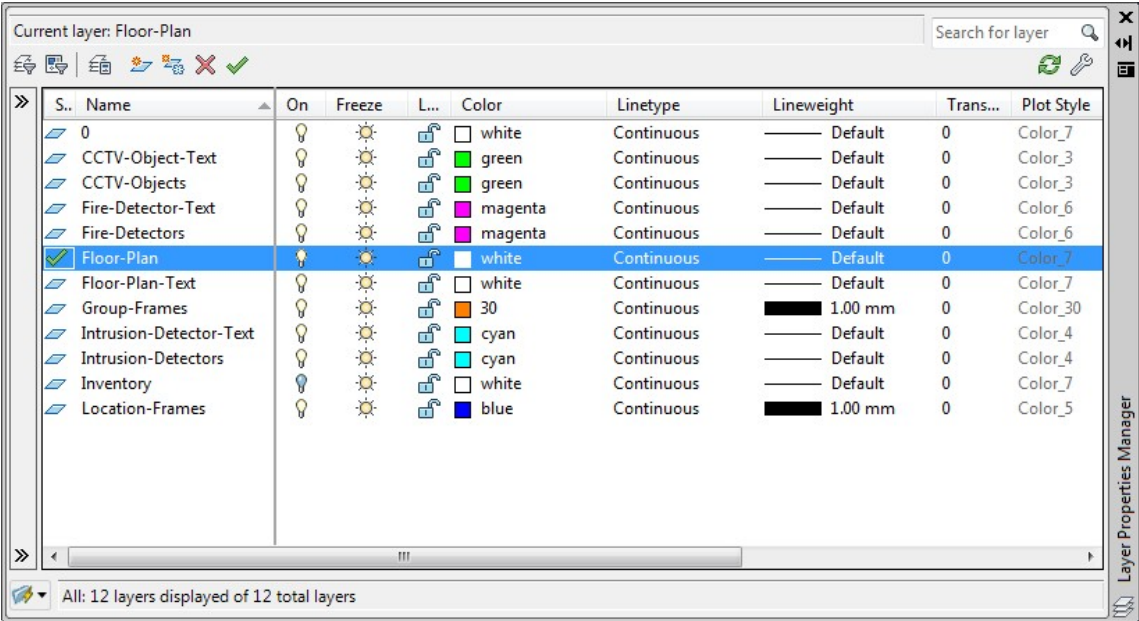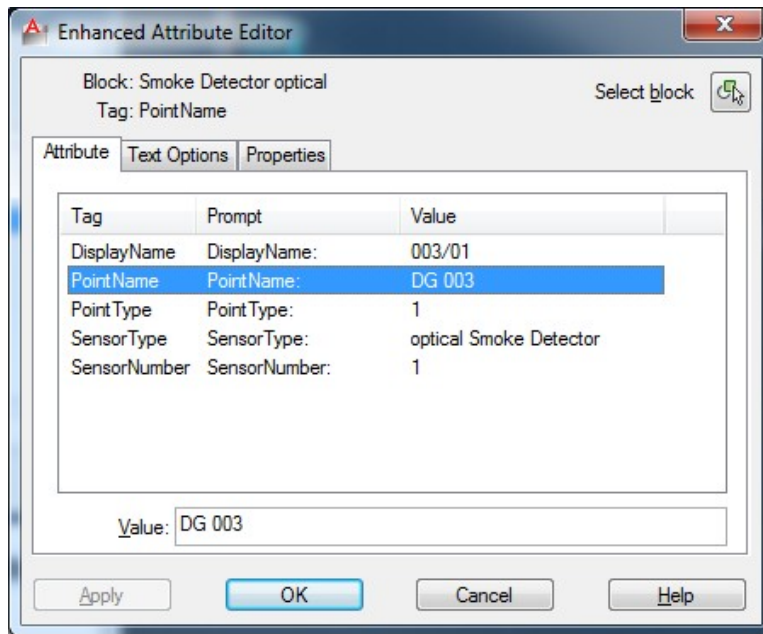
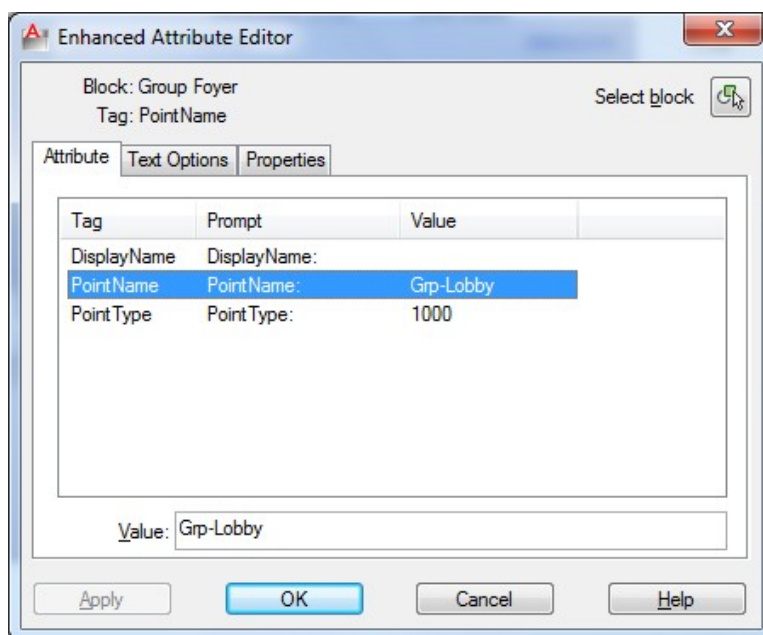## ▼ Example: Graphic for the use in WinGuard

Figure 1: Graphic for the use in WinGuard

▼ Example: Used layer

Figure 2: Used layers

▼ **Example: AutoCAD block attributes for data points**

Figure 3: AutoCAD block attributes for data points

▼ **Examples: AutoCAD block attributes for groups**

Figure 4: AutoCAD block attributes for groups

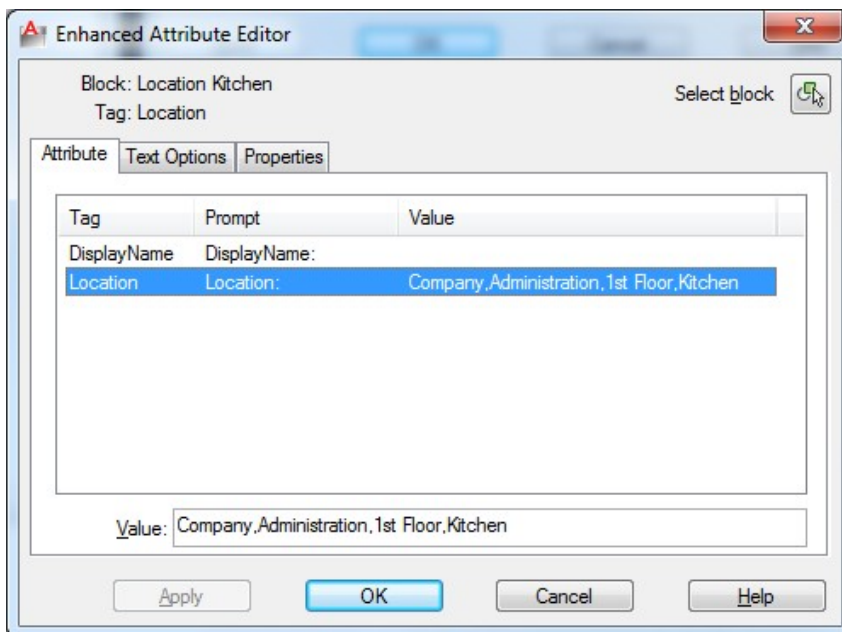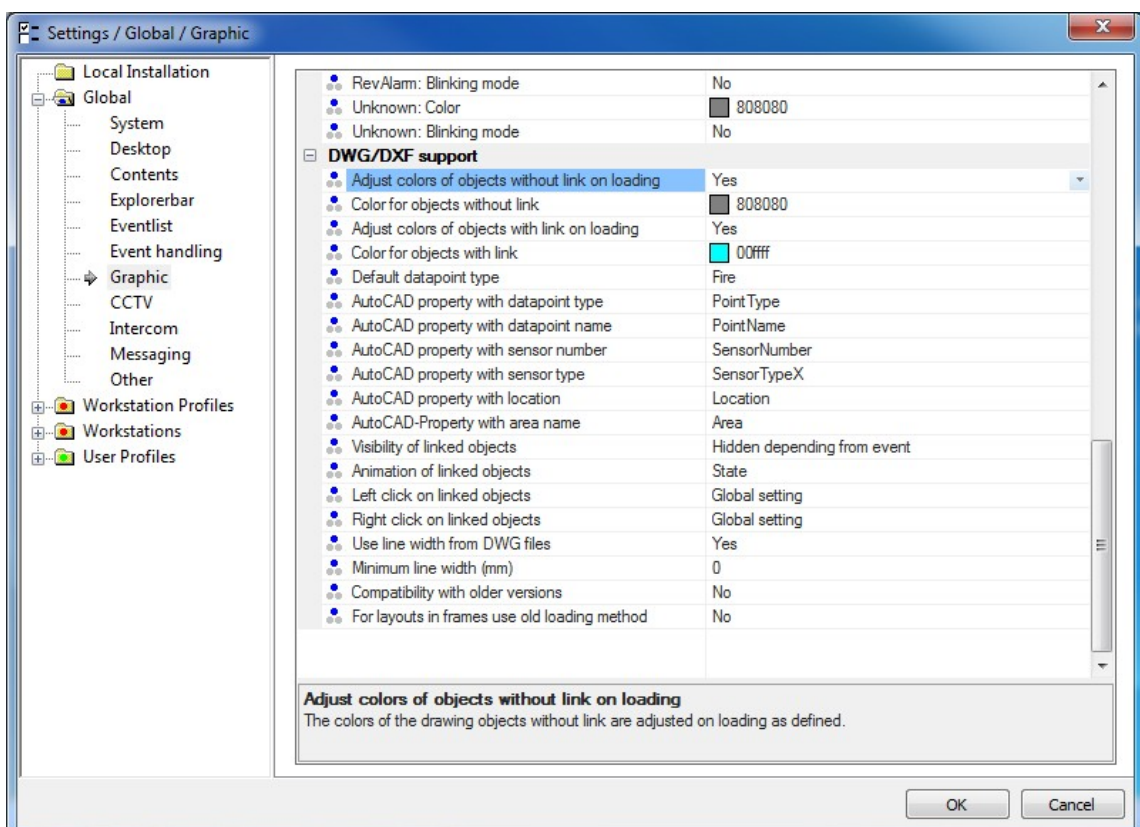▼ **Examples: AutoCAD block attributes for locations**

Figure 5: AutoCAD block attributes for locations

▼ **Examples: WinGuard settings for graphics**

Figure 6: WinGuard settings for graphics

▶ **Example: Data point attributes**

WinGuard setting	Attribute name
AutoCAD-Property with data point type	PointType
AutoCAD-Property with data point name	PointName
AutoCAD-Property with detector number	</>
AutoCAD-Property with detector type	SensorType

▼ **Example: Data point list - Fire**

WinGuard Data point name	Detector number	Detector type	Point type	Display name (Graphic)
DG 001	1	Manual Detector	1 (Fire)	001/01
DG 002	1	Manual Detector	1 (Fire)	002/01
DG 003	1	optical Smoke Detector	1 (Fire))	003/01
DG 003	2	optical Smoke Detector	1 (Fire)	003/02
DG 004	1	optical Smoke Detector	1 (Fire)	004/01
DG 004	2	optical Smoke Detector	1 (Fire)	004/02
DG 004	3	optical Smoke Detector	1 (Fire)	004/03
DG 005	1	optical Smoke Detector	1 (Fire)	005/01
DG 005	2	OT Multidetector	1 (Fire)	005/02
DG 006	1	optical Smoke Detector	1 (Fire)	006/01
DG 006	2	optical Smoke Detector	1 (Fire)	006/02
DG 007	1	optical Smoke Detector	1 (Fire)	007/01
DG 007	2	optical Smoke Detector	1 (Fire)	007/02
DG 008	1	optical Smoke Detector	1 (Fire)	008/01
DG 008	2	optical Smoke Detector	1 (Fire)	008/02
DG 008	3	optical Smoke Detector	1 (Fire)	008/03

▼ **Example: Data point list - Intrusion / Assault**

WinGuard Data point name	Detector number	Detector type	Point type	Display name (Graphic)

PB 001	0	Panic Button	6 (Panic)	UM 001
MD 001	0	Motion Detector	2 (Intrusion)	EM 001
MD 002	0	Motion Detector	2 (Intrusion)	EM 002
MD 003	0	Motion Detector	2 (Intrusion)	EM 003

▼ **Example: Data point list - Video**

WinGuard Data point name	Detector number	Detector type	Point type	Display name (Graphic)
Cam 01	0	Dome Camera	10 (Camera)	Cam 01
Cam 02	0	Dome Camera	10 (Camera)	Cam 02
Cam 03	0	Fix Camera	10 (Camera)	Cam 03

▼ **Example: Group attributes**

WinGuard Setting	Attribute name
AutoCAD-Property with data point type	PointType
AutoCAD-Property with data point name	PointName

▶ **Example: Group list**

WinGuard Group name	Point type	Display name (Graphic)
Grp-Foyer	1000 (Group)	(empty)
Grp-Office	1000 (Group)	(empty)

▼ **Example: Location attributes**

WinGuard Setting	Attribute name
AutoCAD-Property with location	Location

▶ **Example: Location list**

WinGuard Location name	Display name (Graphic)
Company,Administration,Floor01,Lobby	(empty)
Company,Administration,Floor01,Kitchen	(empty)

2.2 Data points and detectors

For each data point or detector that shall be displayed in WinGuard a corresponding object is to befined as block in the AutoCAD drawing and must be linked with the required block attributes for the linkage. It does not matter whether the attributes in the drawings are visible or invisible.

Attributes for data point and detector objects:

- **Display name**   optional
  (contains the name that is visible at the symbol.
  If the display name and the data point name are the same or if no name shall be displayed, the data point name will be sufficient)

- **Data point name**   required
  (contains the data point name, with detector number if necessary)

- **Detector number**   optional
  (required for detectors if the name does not already contain the detector number)

- **Data point type**   optional
  (required if different data point types are contained in the graphics.
  For undefined data point types the WinGuard default settings are applied)

- **Detector type**   optional
  (required if the graphic symbols shall be replaced by WinGuard symbols)

⚠ **If an attribute is defined for the data point name the attributes for location and area in WinGuard are ignored!**

2.2.1 Data point name

The attribute for the data point name must always be defined (except for locations and areas), as it serves as reference for the data point in WinGuard. If it is a detector its number is defined with the help of an additional attribute or, alternatively, together with the data point name.

The attribute value for the data point name has to be defined in such a way that it exactly corresponds to the data point name in WinGuard.

Example: Data point name without detector

▼ **Example: Data point name without detector number**

WinGuard-Data point name	Attribute values in the graphic
DG 001	DG 001
Door-Entry-Floor01	Door-Entry-Floor01

WinGuard-Data point name	Attribute values in the graphic
...	...

▼ **Example: Data point name with detector number**

WinGuard-Data point name	Detector	Attribute values in the graphics
DG 001	3	DG 001/03
Door-Entry-Floor01	2	Door-Entry-Floor01/02
...	...	...

ℹ **If detectors are defined for this data point, e.g. for a detector group, the attribute for the detector number must be defined as well, except if the detector number was attached to the name (see paragraphs detector number).**

2.2.2 Detector number

There are two different possibilities for the definition of detectors. On the one hand it is possible to define the name and detector number with the help of two different attributes. On the other hand the detector number can also be attached to the name.

Detector definition with two attributes:

The attribute value for the data point name has to be defined in such a way that it exactly corresponds to the data point name (name of the detector group) in WinGuard. A separate attribute has to be defined for each detector. Here the number of the respective detector is entered as value.

▼ **Example: Data point name without detector number**

WinGuard		Attribute value in the graphic	
DP name	Detector number	DP name	Detector number
DG 001	1	DG 001	1
DG 001	4	DG 001	4
DG-25	12	DG-25	12
...	...	...	...

Detector definition by data point name:

The attribute value for the data point name has to be defined in such a way that the first part corresponds exactly to the data point name (name of detector group) in WinGuard. Each detector has to be set up in such a way that the detector number is attached to the name with an appropriate separator, e.g. by a „/", such as „MG 025/3" (spellings like „MG 025/03" or „MG 025 / 3" etc. are admissible as well). This is how the detectors of a detector group can be automatically detected and

assigned.

When using other separators these can be defined as list in angle brackets, e.g. "</,:,#>" (separated by commas). However in this case these caracters may not be used for defining the data point names.

▼ **Example: Data point name with detector number**

WinGuard		Attribut-Werte in der Grafik	
DP name	**MeldDetector number**	**DP name**	**Detector number**
DG 001	1	DG 001/1	*
DG 001	4	DG 001 / 04	*
DG-25	12	DG-25#12	*
...	...	...	...

* The detector number attribute of the graphic is not evaluated!

2.2.3 Data point type

The attribute for the data point type must be defined if information for different data point types (fire, intrusion, etc.) shall be used in the graphics. If no attribute is set for the data type the default setting of WinGuard is used.

For the data point type attribute value the corresponding numbers of the following table are to be applied.

▼ **Data point types**

	Type #	WinGuard Data point type
	1	Fire
	2	Intrusion
	3	Technical
	4	Interface (only used internally)
	5	Control
	6	Panic
	7	Tamper
	8	Emergency
	9	Other
	10	Camera
	11	Monitor

	12	Intercom
	13	Light
	14	Door
	15	Lock
	16	Value
	17	Audio-In
	18	Audio-Out
	1000	Group

⚠ **Without defining this attribute the support of objects for different data point types (e.g. fire, intrusion, etc.) in graphics is impossible - thus this attribute should always be included in the definition!**

2.2.4 Detector type

The attribute for the detector type must only be set resp. defined if the symbol defined in the graphics shall be replaced by a WinGuard symbol for display (same size, same position). The attribute value has to be defined in such a way that it corresponds to the name of a detector type in WinGuard.

If the detector type is not defined in WinGuard the symbol will be displayed as set in the drawing. The required detector types can be set up subsequently in WinGuard anytime.

▶ **Example: Detector types**

WinGuard Detector type	Attribute value in the graphic
optical Smoke Detector	optical Smoke Detector
Manual Detector	Manual Detector
...	...

ℹ **If there are detector types in WinGuard having the same names as in the AutoCAD graphics, e.g. "automatic detector", all symbols with identical naming will be replaced upon display.**

2.3 Groups, locations and areas

In addition to the linkage with data points and their detectors there is also the possibility to link objects with data point groups and locations. Display areas can also be defined in AutoCAD graphics. However, in order to use them, these graphics have to be integrated in the WinGuard graphics in a special way. This type of integration should only be made if it is absolutely necessary as no referencing is possible here.

⚠️ **For location and area no attribute may be defined for the data point name, otherwise the attributes for location and area will be ignored!**

ℹ️ **Groups, locations and areas do not have their own status!**
Therefore these elements can only be animated in case of event messages resp. in the event message view and not in the status view!

2.3.1   Data point groups

Usually two attributes have to be defined for data point groups. The attribute for the group name must always be defined as it serves as reference for the data point in WinGuard. In addition the attribute for the data point type should be defined. This is required whenever different data point types are defined.

The attribute value for the data point name (data point group) is to be defined in such a way that it exactly corresponds to the name in WinGuard.

Attributes for data point groups:

- **Data point name**   required
  (contains the name of the data point group)

- **Data point type**   required
  (if different data point types are contained in the graphics
  (here *1000*)
  For undefined data point types the default setting of WinGuard will be applied)

▶ **Example: Data point groups**

WinGuard data point group	Attribute values in the graphic
Group 1	Gruppe 1
Deactivations	Deactivations
East-Ground floor	East-Ground floor
...	...

ℹ️ **If detectors are defined for this data point, e.g. in case of a detector group, the attribute for the detector number must also be defined except if the detector number was attached to the name (see paragraph detectors).**

2.3.2   Locations

To link objects in AutoCAD graphics to locations, these have to be defined as blocks and marked with the attribute for the locations. Thus the objects are no longer animated depending on a single data point resp. detector but through all data points linked with the corresponding location in WinGuard. Here only one attribute for the location name is required for definition.

The attribute value for the location is to be entered as text. The separation of locations according to their hierarchy is made by commas without a following space character. If both the data point and the location are indicated the linkage will only be established with the corresponding data point.

Attributes for location objects:

- **Location indication** required
  (contains the elements of the location name in WinGuard, separated by comma but without space character after the comma)

▶ **Example: Location objects**

WinGuard location	Attribute values in the graphic
Company, Administration , Floor01, Foyer	Company,Administration,Floor01,Foyer
Company, Administration, 1st Floor	Company,Administration,1st Floor
...	...

⚠ **For the location no attribute may be defined for the data point name, otherwise the attributes for the location will be ignored!**

2.3.3 Areas

Apart from data points, detectors and locations, display areas can be defined in AutoCAD graphics too. Just like the proceeding for locations, the definition must be made as block and the corresponding attributes have to be defined. These areas will then be available in WinGuard for display resp. selection. Here only an attribute for the area naming is required.

However the evaluation resp. availability of the display area requires the import of an AutoCAD graphic in a WinGuard graphic, i.e. it cannot be worked with references to the graphic but all objects are transformed in WinGuard objects upon the import.

This import is achieved by selecting the corresponding DWG file and the required layer via the menu command **Graphic|Open** in the selection dialog. The elements of the DWG file are then available as objects in the WinGuard graphic. The graphic must be saved as WGD graphic. A subsequent modification of the AutoCAD graphic is not possible.

Afterwards (additionally) these areas are available in the WinGuard area selection. The areas themselves are invisible and cannot be treated as objects.

Attributes for area objects:

- **Area indication** required
  (contains the name of the area)

▼ **Beispiel: Bereichesobjekte**

WinGuard Area	Attribute values in the graphic
Section 1	Section 1
Lobby	Lobby
...	...

⚠ **When importing an AutoCAD graphic (DWG/DXF) in a WinGuard drawing, this drawing will not be automatically updated after a modification of the AutoCAD drawing! It also does not have to be present in the subsequent display.**

⚠ **For the area no attribute may be defined for the data point name, otherwise the attributes for the area will be ignored!**

3 Settings in WinGuard

For the use of AutoCAD graphics (e.g. DWG) in WinGuard, different parameters can be defined for display. If objects for direct linking to WinGuard objects are defined in the drawings, the data point names in WinGuard have to be assigned according to the definition in the graphics and, if necessary, the corresponding detectors have to be set (see Definitions in AutoCAD).

3.1 AutoCAD definitions

For the evaluation resp. display of DWG/DXF drawings, additional settings must be made in WinGuard. These definitions can be found in the dialog "Settings" that can be opened via the task bar under **System|Settings**. The corresponding settings for AutoCAD can be found in the dialogue in the folder **Global** under **Graphic** at the very bottom in the section "DWG/DXF Support".

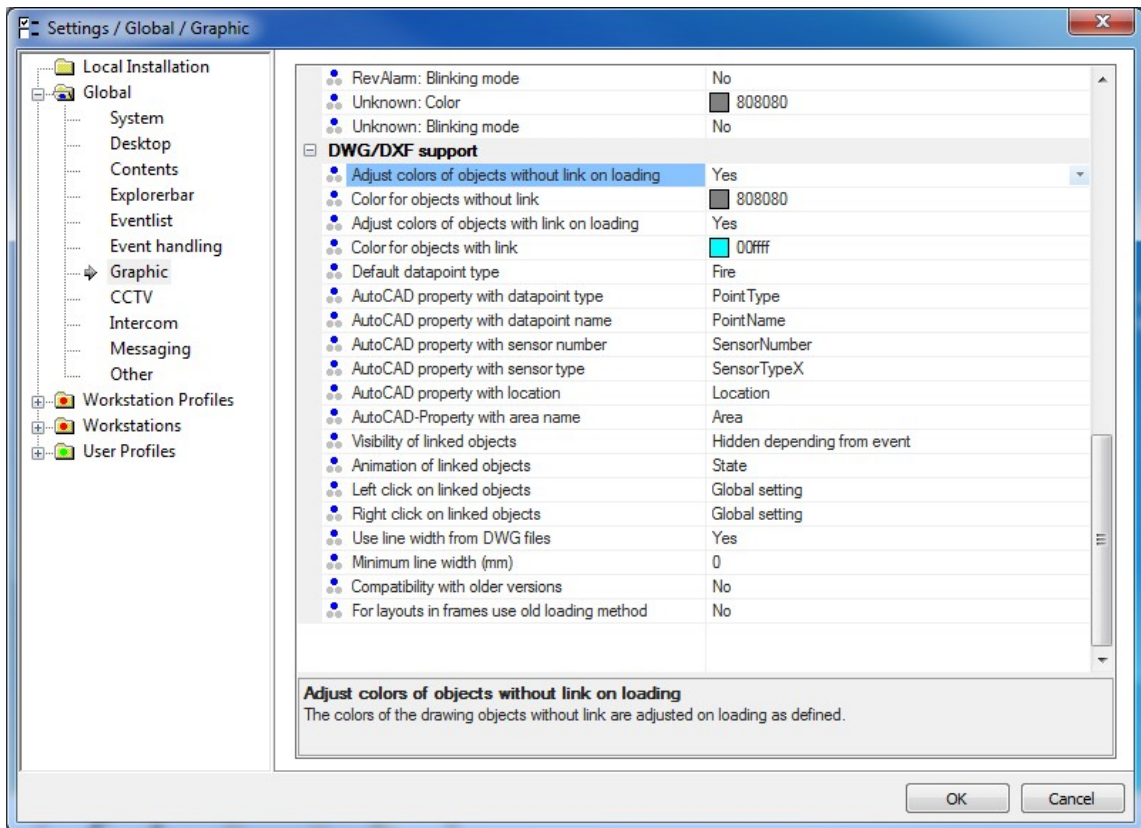▼ **Dialog: Settings / Global / Graphic - DWG/DXF Support**

Figure 7: Settings / Global / Graphic - DWG/DAX Support

ⓘ **Further information with regard to the AutoCAD definition can be found under at the WinGuard manual an help.**

3.2   Animation

The animation, i.e. the display of objects from AutoCAD graphics in WinGuard is executed with the help of corresponding settings. These definitions can be found in the dialog "Settings" that can be opened via the task bar under **System|Settings**. In the dialog the corresponding settings for AutoCAD can be found in the folder **Global** under **Graphic** in the section "**Default Animation**".

Here the default settings for the assignments of colors and states in WinGuard are defined.

▼ **Dialog: Settings / Global / Graphic - Default Animation**
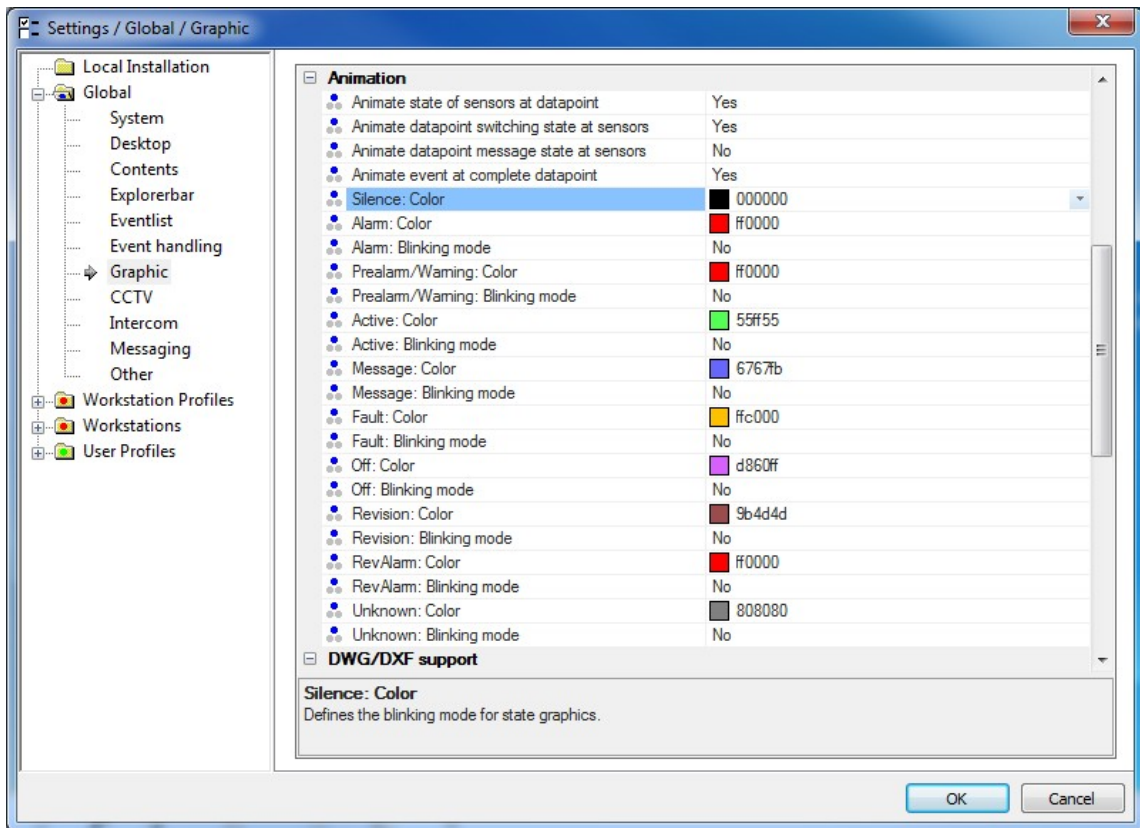
Figure 8: Settings / Global / Graphic - Default Animation

⚠ **The settings for the flash mode are only active for a status display. The flashing is always active for the event message display.**

ℹ **Flashing means a color switching between the alarm color and the silence color.**

3.3 Example-Display

The following example shows an AutoCAD graphic directly displayed in WinGuard. The graphic contains different detectors that are partly already linked to WinGuard data points, some links are still missing.

The options "Adapt colors when loading" has been set to "Yes" for this example (see AutoCAD definitions) so that all objects not disposing of valid attributes are displayed in the color that is defined for "objects without link" (here dark grey).

The objects that are displayed in black color here do dispose of valid attributes and are already defined as data points in WinGuard (e.g. 003/01 or EM 001, etc.). The symbols are displayed directly in the current status color (here black for idle mode - see default colors). The name is always displayed in the color that has been defined for "objects

with link" (here light blue).

Objects totally displayed in light blue (e.g. PB 001, Cam 01 - 03, etc.) also dispose of valid attributes but have not yet been defined as data points in WinGuard. They are displayed in the color defined for "objects with link". The light blue frames belong to the definitions of locations and data point groups.

▼ **Beispiel: DWG-Graphic display in WinGuard**
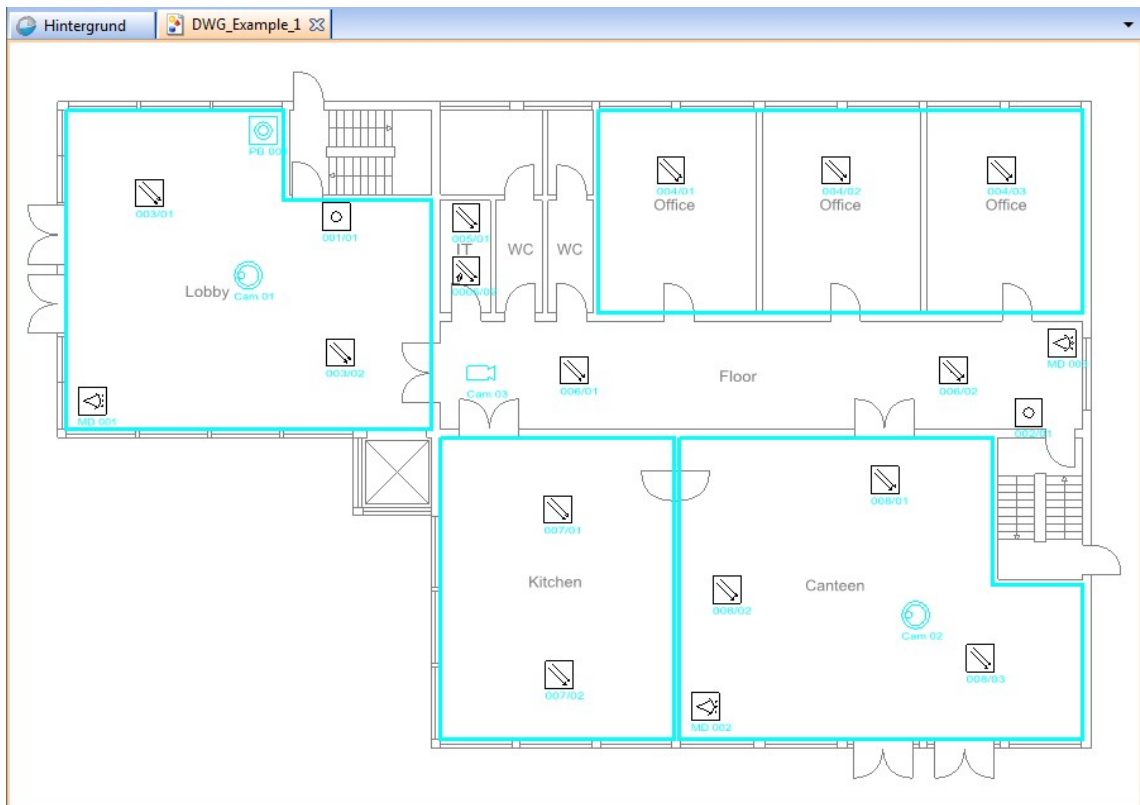
Figure 9: DWG graphic display in WinGuard

The following example shows the DWG-File in case of an event. You will see only the elements of the active detector group DG 003 and the frame with the a link to the specified group or assigned location. All other elements will be not visible (Setting "Hidden depending from event").

▼ Example: Event message display with DWG graphic in WinGuard
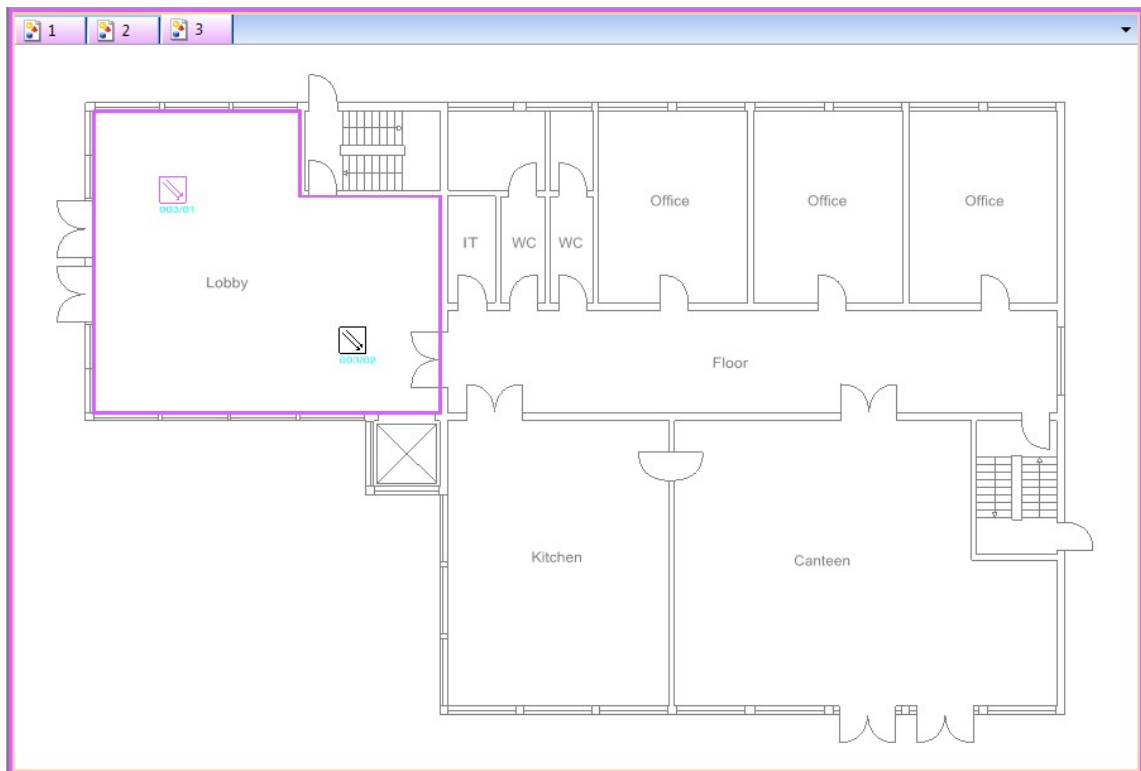
Figure 10: Event message display with DWG graphic in WinGuard

Index