Fire and Security Specification

revitworks
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Object Styles Used

Fire Alarm Devices — For all fire alarm devices including smoke and heat detectors

Detector Code Lines — For detectors symbolic code lines (showing the reach of them)

Security Devices — For all security devices, alarm controls and alarm panels

Specialty Equipment
Fire Protection — For fire protection elements including fire hose reels and fire extinguishers

Sprinklers — For all fire sprinklers

Sprinker Code Lines — For fire sprinklers symbolic code lines (showing the reach of the sprinkler)

Generic Annotations
Fire Symbols
Security Symbols
Symbol Leaders — Allows for amendments of the lineweights and colours to all the linework within the symbols and leaders.

Detail Items
Security Devices — Allows for amendments of the lineweights and colours of all the linework within the real-size alarm board symbols.

Detail Levels - all Fire and Security items

3d

Elevation

The fine detail within the smaller objects (as shown in example) are created with model lines and/or model text. They will show on 3ds and elevations when the views visual style is set to wireframe, hidden, shaded, consistent colours or realistic and the detail level is set to "Fine"

Plan

Coarse   **Medium**   **Fine**

All plan representation is as follows:
Coarse detail level: Symbol only
Medium detail level: Symbol and object
Fine detail level: Object only

Detail Levels - Alarm Boards

ELEVATIONS AND 3D DETAIL LEVELS
Model and clearance zones show in Medium and Fine modes
Symbol shows in Medium and Coarse modes
Outline shows in 3d Coarse mode
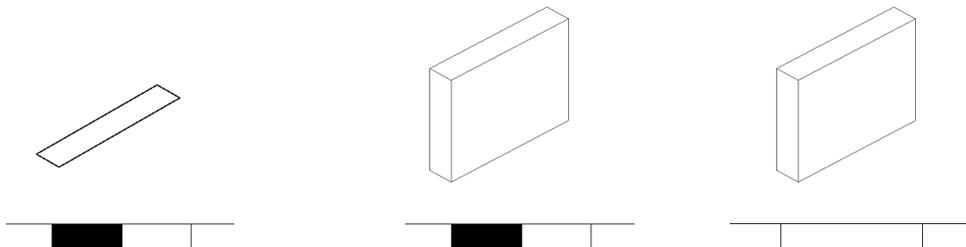
Coarse:
Plan real size symbol only shown

Medium:
Plan real size symbol and real size unit shown

Fine:
Plan real size unit shown

Use of Shared Symbol Families and Schedules

A lot of the symbols within the families require a certain set-up process to allow them to show on walls as well as on ceilings and also allows them to have automatic wall-ceiling symbol interchange.
This set-up process requires them to be "shared" families.
One of the implications of sharing these nested families is that these symbols and light sources will schedule with the real fittings (resulting in double counting).
To counter this, all the shared symbol families have as many of their parameter values as possible assigned to "Symbol Only" - allowing you to filter them out from within your schedule so they are disregarded.
All of these symbols also appear within your project browser: their names all begin with "Symbol_"

Symbol_Fire Detectors
Symbol_Fire Horn
Symbol_Fire Speaker
Symbol_Fire Strobe

Example of shared symbol family naming

| Type: | Symbol_Fire Detectors | Duplicate... |
| | | Rename... |

Type Parameters

Parameter	Value
Constraints	✕
Identity Data	✕
Type Comments	SYMBOL ONLY
Model	SYMBOL ONLY
Manufacturer	SYMBOL ONLY
Description	SYMBOL ONLY
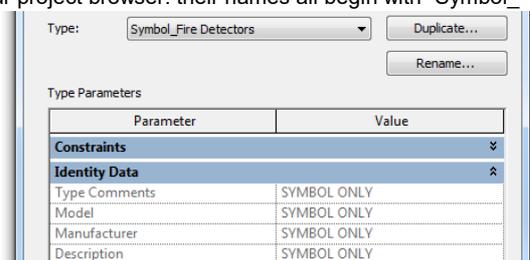
Example of shared symbol family parameter values

Content that works

Fire and Security Specification

Common Instance Parameters

Plan Symbol Offsets and Leaders allow you to correctly document fixtures that are aligned vertically.
These parameters are not avaliable for sprinklers and fire hose reels.

The Revit standard "Elevation" parameter cannot currently be used in labels, tags or schedules. To overcome this limitation use the "Reported Elevation" parameter.
The RevitWorks Elevation Reporter add-in (Premium version only) ensures that the "Elevation" and the "Reported Elevation" parameters are always syncronised. If the add-in is not loaded you will need to manually update it.

Cut Plane Extensions allow you to show low level components on your Reflected Ceiling Plans and high level components on your Floor Plans.

Common Type Parameters

All fixtures come with symbol fill options allowing for more graphical differentiation where required.

"Show Fixture Label" shows the"Fixture Label" text parameter as an annotation label within the family.
These labels are in a set position relative to the symbol and rotate with the family while staying readable.
Alternatively, you could turn this off and tag your family which gives greater flexibility in the positioning and orientation of the label.

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Fire Alarm Devices

3d   Wall Symbol   Ceiling Symbol

FIRE - Detectors

Heat Detector

Smoke Detector

Fire Alarm Devices (Premium only)

FIRE - Manual Call Point

FIRE - Manual Call Point

FIRE - Sounder Horn

FIRE - Sounder Horn

FIRE - Sounder Speaker

136mm Diameter

180mm Diameter

FIRE - Sounder Wall Plate

FIRE - Sounder Wall Plate

FIRE - Strobe

100 x90h

Fire Controllers

3d   Wall Symbol   Ceiling Symbol

FIRE - Extinguisher

FIRE - Extinguisher

Fire Controllers (Premium only)

FIRE - Sprinklers

With Escutcheon

Without Escutcheon

FIRE - FHR
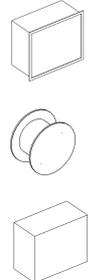
Recessed Cabinet

Reel Only

Surface Mounted cabinet

NOTES!
1. 3d images as shown are in detail level "Fine mode"
2. Wall and ceiling symbols as shown are in detail level "Coarse" mode
3. All symbols can have labels added.
4. Labels as shown in images are the out-of-the-box defaults and can be easily changed or turned on/off from within the fixtures type properties (refer previous page for screenshot)

Additional Feature for Fire Sprinklers

All sprinklers have the ability to show the extent of the sprinklers reach by setting code line type parameters within the family and ticking the "Show Design Code Lines" instance parameter.
These lines are on their own sub-category (as shown on page 1. "Object Styles Used") so can be turned off view-wide where required.
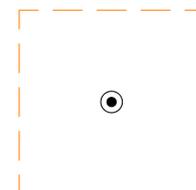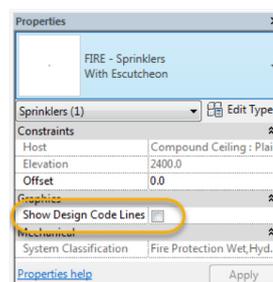
Content that works

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Security Devices
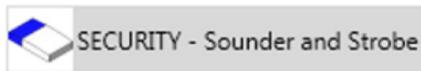
	3d	Wall Symbol	Ceiling Symbol
SECURITY - Sounder and Strobe			
SECURITY - Sounder and Strobe			
SECURITY - Strobe			
100 x90h			

Security Devices (Premium only)

SECURITY - Breakglass			
SECURITY - Breakglass		BG	
SECURITY - Camera			
Ceiling Mounted			
Wall Mounted			
SECURITY - Camera Enclosed			
130mm			
SECURITY - Credential Reader		R	
80 x80 x20d			
SECURITY - Door Release Push Button		REX	
SECURITY - Door Release Push Button			
SECURITY - Door Release Request to Exit		REX	
SECURITY - Door Release Request to Exit			
SECURITY - Keypad		K	
85x122hx28d			
190x135hx30d		K	
SECURITY - PIR Sensor		PIR	PIR
100mm			
SECURITY - PIR Sensor Directional		PIR	PIR
Ceiling 60w x100d			
Wall 60w x100d			
SECURITY - Sounder Horn			
SECURITY - Sounder Horn			
SECURITY - Sounder Speaker			S
136mm Diameter			S
180mm Diameter			
SECURITY - Sounder Wall Plate			
SECURITY - Sounder Wall Plate			
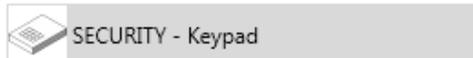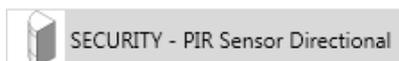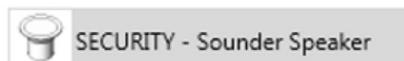
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Alarm Panels

Refer page 1 for explanation of how
symbols work at different detail levels.

SECURITY - Alarm Panel

400x300hx75d

3d

Wall Symbol
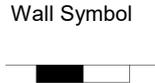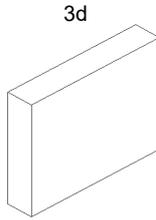
Fire Panels (Premium only)

FIRE - FAP

Recessed 450w x600h x130d

Surface 450w x600h x130d

FAP
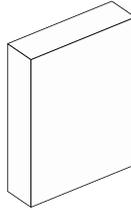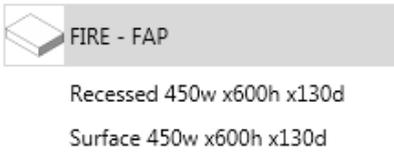
Alarm Controls (Premium only)

Alarm controls have no modelled elements but come with
the correct security connectors and can be scheduled.
To create more controls, duplicate existing type, change
the label and select a square or circlular border as per
image

SECURITY - Alarm Controls

Day Time Alarm

Electric Mortice

Interlock

Lock Position Switch

Reed Switch

Wall /Ceiling
Symbol

(A)
(L)
(I)
(L)
(R)

Type Properties

Family: SECURITY - Alarm Controls   Load...

Type: New Type   Duplicate...

                                              Rename...

Type Parameters

Parameter	Value
Constraints	
Graphics	
Box Square Rotated	
Box Square	
Box Circle	✓
Text	
Show Fixture Label	✓
Fixture Label	Z
Identity Data	
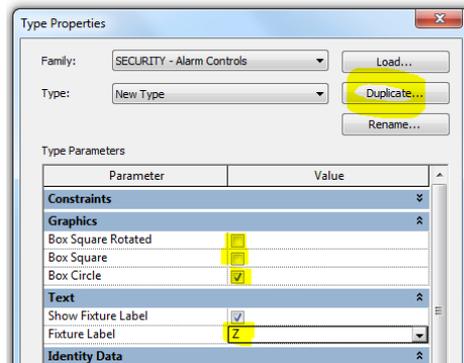
Magnetic Locks (Premium only)

Magnetic locks have modelled elements. They can be
placed on any surface. If placed on a vertical surface (I.e. a
wall), ensure "Wall Mounted" tickbox is ticked as per the
image to ensure that the modelled elements are in the
correct orientation:

SECURITY - Magnetic Lock

Double

Single

3d

Wall /Ceiling
Symbol

L

L

Properties

SECURITY - Magnetic Lock
Single

Security Devices (1)   Edit Type

| Constraints	
Host	Basic Wall : 90T_25Li...
Elevation	0.0
Offset	0.0
Construction	
Wall Mounted	✓
Not Wall Mounted	
Graphics	

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