

# TECH NOTES

## System-1000 Flow and Energy Measurement System



### HOW TO USE ONICON AUTODESK® REVIT® FAMILY

#### OVERVIEW

The ONICON Revit Family is easy to use and incorporate into any project using Revit 2018 or later. The meter(s) will automatically connect to the piping system at the same elevation, inherit system types and provide installation guidance.

Further explanation of properties are provided with Tool Tips. Tool Tips are accessible by hovering over each parameter in the properties window.

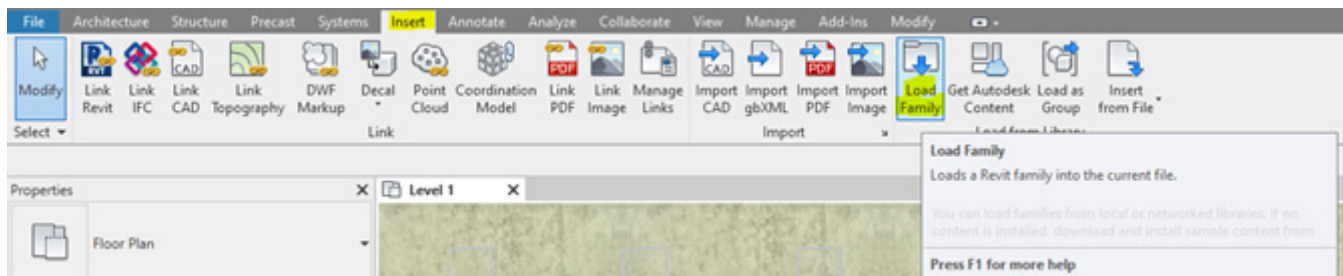


#### TOOLS REQUIRED

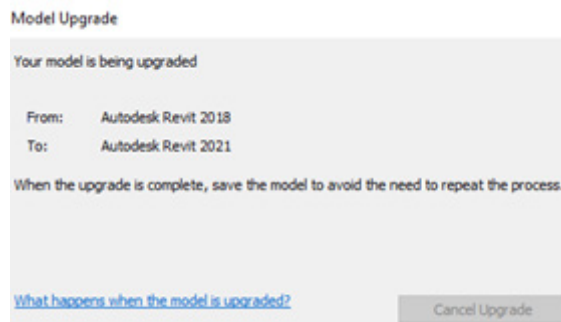
- Revit 2018 or later
- ONICON Revit zip file, located on the product page of the website.

#### INSERT THE FAMILY INTO A PROJECT

1. Unzip the downloaded file and place the folder in a desired location.
2. In a floor plan view (Revit 2018 or later), navigate to the Insert tab on the ribbon and select **Load Family**.



3. Locate the .RFA file in the saved location and select **Open**. The model will automatically upgrade if the current version of Revit is 2018 or later.

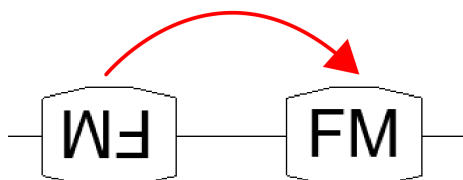


4. The family will be added to the Project Browser in the Families section, located under the Pipe Accessory category.
5. Drag the SYS-1000 into a floor plan view ensuring "Pipe Accessories" are visible in that view. Set the "offset" mounting elevation in the properties panel.
6. Repeat steps 1-5 for additional flow meter families to be inserted into a project.

### ADD FAMILY TO PIPE SYSTEM

#### 1.1 GRAPHICS

- **Symbol Flip** – In a medium or course detail level, if the text is not upright, select this toggle box to correct.



#### 1.2 IDENTITY DATA

- **Mark** - User input for name of individual meter.
- For the System-1000, up to 8 flow meters may be connected (4 flow rate inputs and 4 contact closure inputs). In order to show connectivity in Revit, it is recommended to name the "Mark" of the SYS-1000 "FM-1" and connecting flow meters FM-1a, FM-1b, etc.

#### 1.3 VISIBILITY

- Checking this box will turn on/off the visibility of the mounting brackets.



#### 1.4 ELECTRICAL

- Select 1 Channel or 2 Channel for system configuration. For dual thermal energy calculation, 2 Channel is needed. Hover over these parameters for more information.
- Check Comm. Module RS-485 & IP if BACnet communication is needed.
- Check the box for the power supply option. Hover over these parameters for more information.
- Select between ONICON temp sensor (default) or RTD.
- Select whether the temp sensor thermowell will be a Hot or Dry tap.

Electrical	
1 Channel	<input checked="" type="checkbox"/>
2 Channel	<input type="checkbox"/>
Comm. Module RS-485 & IP	<input checked="" type="checkbox"/>
Power Supply 120V/220V	<input checked="" type="checkbox"/>
Power Supply 24VAC/DC	<input type="checkbox"/>
CH1_ONICON Temp Sensor	<input type="checkbox"/>
CH1_RTU	<input checked="" type="checkbox"/>
CH1_Hot Tap	<input type="checkbox"/>
CH1_Dry Tap	<input checked="" type="checkbox"/>
CH2_ONICON Temp Sensor	<input type="checkbox"/>
CH2_RTU	<input checked="" type="checkbox"/>
CH2_Hot Tap	<input type="checkbox"/>
CH2_Dry Tap	<input checked="" type="checkbox"/>

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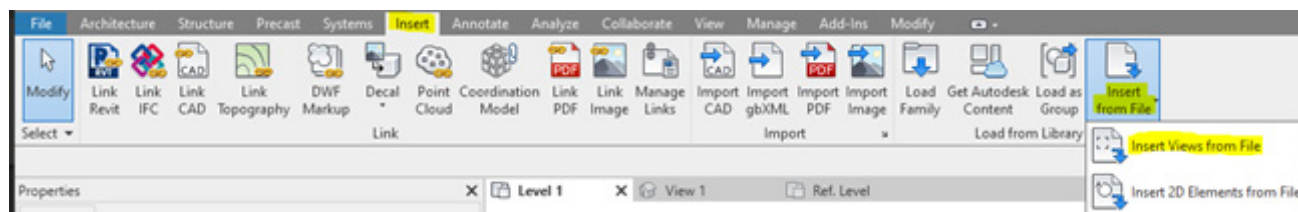
### 1.5 DATA

- Your selections from the electrical properties above will populate the Data section automatically. This is the information that will be published to the ONICON schedule.

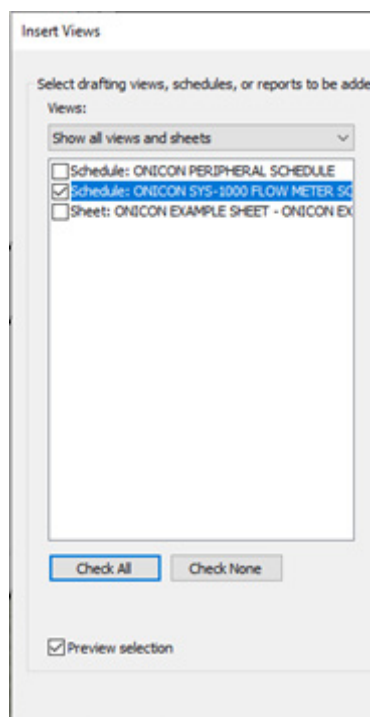
Data	
Channel(s)	1
Communication Module	YES
Power Supply	120V/220V
CH1 Sensor	RTD
CH_1 Tap	Dry Tap
CH2 Sensor	2 CHANNEL REQ'D
CH_2 Tap	2 CHANNEL REQ'D

## INSERT ONICON SCHEDULE INTO A PROJECT

- In a floor plan view (Revit 2018 or later), navigate to the Insert tab on the ribbon, select **Insert Views from File** and navigate to **FLOW METER SYS-1000 SCHEDULE ONICON.rvt**.



- Select the **Schedule: ONICON SYS-1000 FLOW METER SCHEDULE** and insert into project.



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- In the Project Browser under Schedules/ Quantities, the newly added schedule **ONICON SYS-1000 FLOW METER SCHEDULE** is listed. If there is a user input error, the cells will highlight orange to alert the user.

ONICON SYS-1000 FLOW METER SCHEDULE							
TAG #	MANUFACTURER	MODEL	CHANNEL(S)	CH1 SENSOR	CH_1 TAP	CH2 SENSOR	CH_2 TAP
FM-3	ONICON	SYS-1000	1	RTD	Dry Tap	2 CHANNEL REQ'D	2 CHANNEL REQ'D
FM-4	ONICON	SYS-1000	2	RTD	Dry Tap	RTD	Hot Tap
FM-5	ONICON	SYS-1000	2	ONICON TEMP SENSOR	Hot Tap	ONICON TEMP SENSOR	Dry Tap
FM-6	ONICON	SYS-1000	2	ONICON TEMP SENSOR	Hot Tap	RTD	Hot Tap
FM-7	ONICON	SYS-1000	1	ONICON TEMP SENSOR	Hot Tap	2 CHANNEL REQ'D	2 CHANNEL REQ'D
FM-8	ONICON	SYS-1000	1	ONICON TEMP SENSOR	Hot Tap	2 CHANNEL REQ'D	2 CHANNEL REQ'D

