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Easily manage and secure your BACnet communications with the official release of

RCRemoteAccess® 3.6

(Click title to jump directly to article)

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Reliable controls
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Easily manage and secure your BACnet communications with the official release of

RCRemoteAccess 3.6

RC-RemoteAccess® 3.6, the latest release of our flexible BACnet Secure Network solution for building automation systems, lets you create and manage your encrypted BACnet networks with ease.

"RC-RemoteAccess provides secure, encrypted BACnet communication," says Reliable Controls product owner Mark Farrow. "This simple, easy-to-use product removes the complexity of security and external access to a system. You don't have to worry about configuring BACnet Broadcast Management Device tables or forwarding the correct network ports to the correct controller. All you have to do is enter your BACnet Secure Network details into a controller and the connection is made."

HERE ARE THE NEW AND EXCITING FEATURES WE IMPLEMENTED IN VERSION 3.6.

BACnet Secure Network

RC-RemoteAccess introduces a new term: BACnet Secure Network (B/SN). B/SN is a blanket term that describes a secure network hosted by RC-RemoteAccess, including BACnet Virtual Private Network (B/VPN) and BACnet/IP network types.

Home screen

We have removed the Network Settings area from the RC-RemoteAccess home screen to allow for more space, which means you can now have more windows open at one time.

In addition, the home screen now includes two tabs, called B/SNs and Connections.

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THE Resource

CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT

SALES & MARKETING

B/SNs tab

In the B/SNs tab (Figure 1), to select a particular B/SN, hover over it. Once highlighted, Settings and Delete icons display in the row. Click the Settings icon to edit the B/SN settings, then click the Save icon to send the changes to connected clients. Click the Delete icon to delete a B/SN.
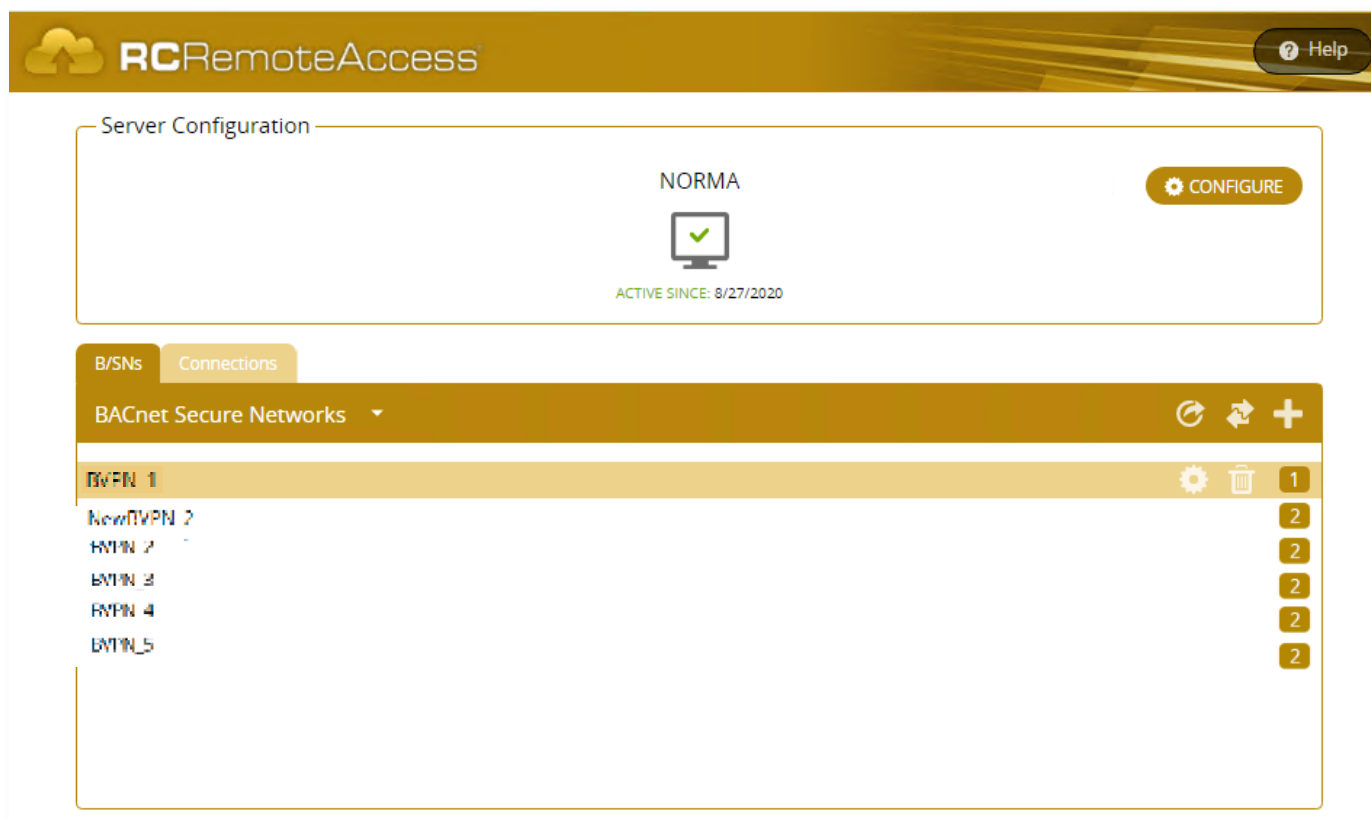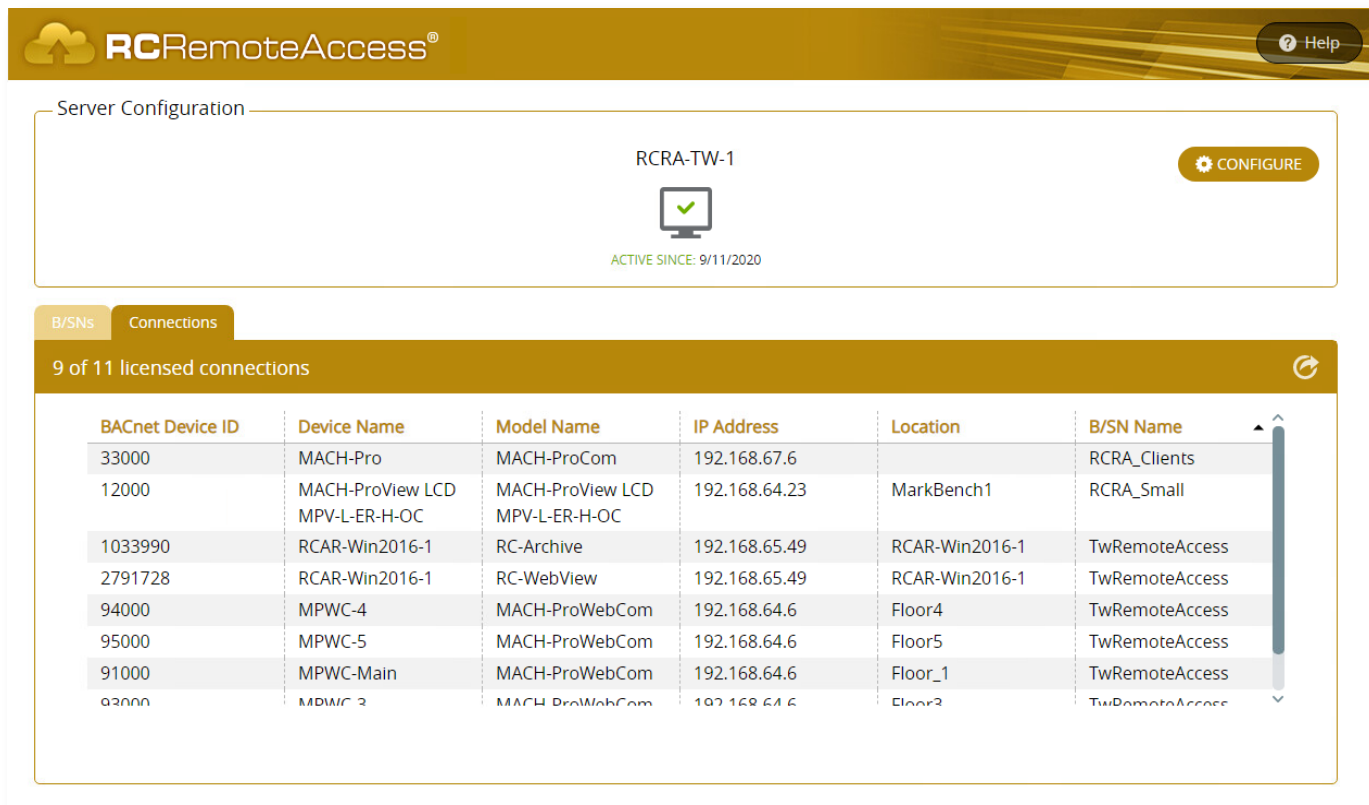

Figure 1: B/SNs tab in the RC-RemoteAccess home screen.

In the B/SNs area, you can now:

- Click the Export icon to export a list of all clients from the selected B/SN in .csv format, which can be opened and sorted using Microsoft Excel.
- Click the Migrate icon to move one or more B/SNs to a different server.
- Click the Add icon to add a new B/SN.
- Click the small arrow beside the heading to sort the list of B/SNs in ascending or descending alphabetical order.

THE Resource

CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT

SALES & MARKETING

Connections tab

Click the Connections tab to display a sortable list of all licensed connections across all B/SNs (Figure 2).

Figure 2: Connections tab in the RC-RemoteAccess home screen.

To sort connections, click any heading to sort by that criteria—for example, by device name or IP address.

Performance improvements

RC-RemoteAccess 3.6 installs as a 64-bit service, which allows the software to use additional memory and improves performance for enterprise customers whose systems previously approached memory limitations.

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"Moving to a 64-bit solution means large customers can be confident the software will grow with their system," says Greg Bates, Reliable Controls application engineer. *"This means that as they continue to grow their deployments, they won't see any reduction in performance along the way."*

This new version of the software also includes improved logging, making it easier for you to troubleshoot and interact with our Tech Support team when you need to. And to improve security, the version of .NET Core distributed with RC-RemoteAccess is now 2.1.19.

.NET Core
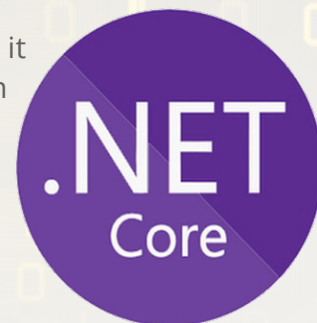
Looking to implement affordable, stress-free data security in your facility?

Purchase or renew your software subscription to **RC-RemoteAccess** today.

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synergy
SESSIONS

Virtual meetings for the Reliable Controls
Authorized Dealer network

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Americas/EuroAfrica Synergy Session:
NOV 10 | 8–11 AM PST

RSVP NOW

Asia Pacific Synergy Session:
NOV 10 | 7–10 PM PST

RSVP NOW

On November 10, 2021, Reliable Controls will begin hosting twice yearly virtual dealer meetings. The purpose of these meetings is to provide a regular opportunity for Reliable Controls Authorized Dealers to meet with Reliable Controls managers and product owners in an online environment to discuss topics and share ideas that are of value to all stakeholders. The meetings will be 3 hours in length and hosted during separate times of the day to accommodate the different time zones between the Americas/EuroAfrica and Asia Pacific super-regions.

Agenda for the November 2021 Synergy Session:

Corporate session – presented by Tom Zaban
Sales session – presented by Levi Tully
R+D hardware/firmware session – presented by James Puritch
R+D software session – presented by Richard Mosher
Operations session – presented by Vince Palmer
Marketing session – presented by Cameron Lutz

THE Resource

CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT

SALES & MARKETING

WELCOME DENNIS KING, OUR NEW REGIONAL SALES MANAGER FOR CALIFORNIA

We're excited to announce Dennis King as our new regional sales manager for California. Dennis will be responsible for strategic sales management and developing Authorized Dealer and customer relationships across the state, which is a newly created sales region for Reliable Controls.

"Together with our friends and partners in the Reliable Controls Authorized Dealer network around the world, we strive every day to be people and technology you can rely on," says Levi Tully, EVP of Sales. "People come first. We are very excited to welcome another experienced built-environment professional to our team who shares both this philosophy and a drive to help our dealers and customers. Dennis will be an excellent addition to our team and support for our dealer network throughout California. We are eager for what we will achieve together."

Dennis brings over 25 years of controls-industry experience as an energy and regional sales manager for American Auto-Matrix, Siemens, and Honeywell. His specialized expertise in energy efficiency and sustainability for the built environment as a certified energy manager and LEED AP, together with his passion for providing unparalleled customer service, will be a tremendous benefit to the Authorized Dealer network and allow us to grow our presence in California.

Dennis is also a recreational pilot. He lives with his family in Upland, California.

Welcome, Dennis! We're thrilled to have you on board.

THE Resource

CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT

SALES & MARKETING

insight

STORING DATA USING ARRAYS

Moving day. These two words elicit plenty of emotions: excitement about living somewhere new, stress over making sure everything is packed, dread about unpacking countless boxes. No doubt you've anticipated moving day for quite some time. You've labeled your boxes, wrapped delicate objects, bribed friends with strong backs or called a moving company—all in an effort to ensure your belongings arrive undamaged and in their proper place. Likely throughout this process, you discarded some items and deemed them unworthy of a spot in your new home. "Is this needed?" "Where does this go?" "How is it going to fit?" These are questions you've likely asked.

The same can be said for data in a building automation system. Facility operators increasingly add countless sensors and data points to a system, and all are in a constant state of movement around a building automation system. Programmers need to ask similar questions: "Is this data needed?" "Where should the information be placed?" To stay organized, programmers may choose a digital storage box called an array to hold data for use in a program.

Arrays are special software objects in Reliable Controls controllers that contain up to 128 unique values called elements. Array elements can be read from and written to in Control-BASIC. Like any object, arrays are referenced using the array name or the array instance. Unlike an analog value, an array object can contain up to 128 distinct values. As such, it is not sufficient to simply reference the array object; you must also specify the array element when you read or write values. The element is indexed within brackets:

```
10 A = AY1[ 1 ] : REM ** Read-from Array 1 element 1

20 AY1[ 1 ] = A : REM ** Write-to Array 1 element 1
```

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Arrays are particularly powerful in data-sorting applications because the element reference does not have to be a hard-coded value; it can be a dynamic reference like a local variable. Since the array element reference can be a local variable, you can harness significant power for the purpose of data analysis and structure by dynamically defining the local variable with a programming technique like a looping construct. For example, let's consider a simple construct used to sort data, such as zone temperatures, using a looping construct and array elements.

This construct evaluates minimum, maximum, and average array values. The first step is to feed an array element with the present zone temperatures.

```
30 RTU01-RMT-AY[ 1 ] = ZN01-RMT

40 RTU01-RMT-AY[ 2 ] = ZN02-RMT

50 RTU01-RMT-AY[ 3 ] = ZN03-RMT

60 RTU01-RMT-AY[ 4 ] = ZN04-RMT

70 RTU01-RMT-AY[ 5 ] = ZN05-RMT
```

To ensure these values are dynamic and update in real-time, create local variables (A, B) to store the intermediate minimum and maximum values. Next, create and store a total value of valid zone temperatures in local variable C. The total number of valid zone temperatures is stored in local variable D. From there, divide local variables C and D to determine the average zone temperature value.

Once you know these values, it is critical that you continually update them using a FOR loop. For more information about FOR loops, refer to the *Control-BASIC Manual* in the Dealer Support Center.

Since this example needs to evaluate the temperatures between five zones, the looping construct will cycle five times. This code begins as follows:

```
90 A = 999 : B = 0 : C = 0 : D = 0

100 FOR E = 1 TO 5
```

We need the default value of 999 for local variable A to ensure the minimum temperature value is evaluated and populated in the proper array element. The line below evaluates if the zone temperature stored in the array element called by the present iteration (1–5) is less than the intermediate minimum value (A). If so, the intermediate minimum value is indexed to the array element value.

```
110 IF RTU01-RMT-AY[ E ] < A THEN A = RTU01- RMT-AY[ E ]
```

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This iteration can simply continue and find if the zone temperature stored in the array element called by the present iteration (1-5) is greater than the intermediate maximum value (B). If so, the intermediate maximum value is indexed to the array element value.

```
120 IF RTU01-RMT-AY[ E ] > B THEN B = RTU01- RMT-AY[ E ]
```

To solve for local variables C and D, the looping construct can now determine if the zone temperature stored in the array element called by the present iteration (1–5) is valid (>0). If this is true, the intermediate total zone temperature value (C) accumulates the value from the array element, and the valid entry counter (D) is indexed by one.

```
130 IF RTU01-RMT-AY[ E ] > 0 THEN C = C + RTU01-RMT-AY[ E ] , D = D + 1
```

Since the looping construct has completed the work of populating all local variables, the looping construct can end.

```
140 NEXT E
```

Finally, the local variables can simply set the minimum and maximum zone information in a controller's value worksheet. To calculate the average zone temperature, divide the intermediate total zone temperature value (C) by the valid entry counter (D).

```
150 RTU01-RMT-MIN = A
```

```
160 RTU01-RMT-MAX = B
```

```
170 RTU01-RMT-AVG = C / D
```

This example is one of many that harness the power of an array to collect, store, and move data around a building automation system. As with moving day, having a proper plan in place to collect, store, and unpack your data will help to alleviate stress. The appropriate use of an array provides an effective and efficient control solution that helps you keep track of your moving parts.

CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT

SALES & MARKETING

THE Resource

Reliable controls
Authorized Dealer

CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT

SALES & MARKETING

To ensure the highest level of support, please contact us at...

helpdesk@reliablecontrols.com

helpdesk is the best way to email the Technical Support team when you are experiencing technical difficulties with Reliable Controls system hardware or software.

aengineering@reliablecontrols.com

aengineering is the ideal way to contact the Application Engineering team for support with system design, specification compliance, solution development, Control-BASIC, and third-party integration.

If you need help, remember...

we've got your back.

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37 | 162 | 52,331

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THE Resource

CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT

SALES & MARKETING

UNDERSTANDING SOFTWARE INCREMENTS

Reliable Controls regularly releases software features and improvements. The descriptions of release types below should help you decide whether to download improvements and increments as they come or wait for official releases.

Product version—Indexed only after a wholesale change to a product function or graphical user interface.

Official release—Indexed at least once per year; includes all increment and improvement releases since the last official release. Reliable Controls puts out official releases no more than once a year.

Increment release—Indexed whenever new features are completed; includes all previous increment and improvement releases since the last official release. Reliable Controls puts out increment releases multiple times a year.

Improvement release—Indexed whenever specific bug fixes and minor improvements are made. Reliable Controls puts out improvement releases as needed.

RC-Software 3.6.1.1

- Product version
- Official release
- Improvement release
- Increment release

Which release should you download?
If your need is greater stability, download official releases.
If your need is cutting-edge new features, download increment releases.
If your need is to address reported issues, download improvement releases.

THE Resource

CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT
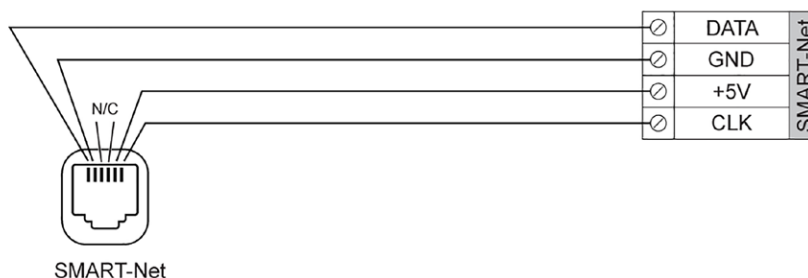
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Did you know?

You can configure older generation SMART-Sensor™ LCD devices to connect to newer generation SMART-Net™ devices on a SMART-Net network.

Suppose you have a number of older generation SMART-Sensor LCD devices installed in your facility, and you want to use the six-pin RJ11 port on one of them to connect additional newer generation SMART-Net devices on the host controller's SMART-Net communications network.

Make sure you have room for additional SMART-Net devices on the controller's SMART-Net—in other words, you have not reached the maximum number of SMART-Net devices supported by the controller. Then follow these steps to connect your SMART-Sensor LCD to a newer SMART-Net device such as a SMART-Sensor or SMART-Net Relay.

1. Check that the first device on your SMART-Net network is a new device.
2. Make an adapter cable with an RJ11 plug on one end and bare wires on the other end.
3. Use the following RJ11 and SMART-Sensor LCD pinout diagram to connect the SMART-Net RJ11 port pins on the SMART-Sensor LCD to the SMART-Net terminal block on the SMART-Net device.

SMART-Sensor LCD SMART-Net RJ11 jack	SMART-Sensor/SMART-Net screw terminals

1 2 3 4 5 6

Pin	SMART-Net
1	Data
2	Ground
3	No connection
4	No connection
5	+5 V
6	CLK

⊘ DATA
⊘ GND
⊘ +5V
⊘ CLK

SMART-Net

DATA
GND
+5V
CLK
SMART-Net

N/C

SMART-Net

THE Resource

Build engaging dashboards with alarm animations from RC-GrafxSet®

During the last release train of RC-WebView®, we implemented many new features to support live data on Navigation Groups. As part of this work, the team created a new internal alarms API to share alarms between connected systems in RC-WebView and RC-Studio®. If you use RC-Studio 3.7.2.1 or later and RC-WebView 3.13.3 or later, you have access to this exciting new functionality—and it's all just waiting to be unlocked with the new alarm animations in RC-GrafxSet.

How does this new technology work?

The new alarm animations make a REST call to an RC-WebView endpoint that returns alarm .json file data, using parameters specified in the Attributes tab of each animation. The .json file data is then parsed by those animations and presented in the user interface, allowing you to display alarm information from any or all connected systems in System, Workstation, and Navigation Groups. Now you can create a dashboard-like user interface that includes live alarm feeds from every school in the school district, for instance, or you could change the color of pins on a Google Map animation to show the alarm status of buildings for a municipal district. This technology opens a lot of new doors for Groups.

Where are the new animations?

Currently, five animations support this new feature. The first four are in the **Isometric > FlexTiles > Dashboard** library. Note that all animations discussed in this article support common attribute styling, which we detailed in the August 2021 issue of the Resource.

The FlexTile-Alarms-Feed-V01.rca animation (Figure 1) creates a dynamic alarms feed for dashboard animations. As with many of the new .rca animations, you have many options to configure the look and feel of the alarms feed: customize icons, text, color, background, borders and corners, scrollbar, and more. You can also filter the alarm types to show only the ones important to you or your customer.

THE Resource

Figure 1: FlexTile-Alarms-Feed-V01.rca animation.

The FlexTile-Summary-Portrait-Alarm-V01.rca animation (Figure 2) displays a list of systems in alarm state, organized in two levels of severity with a static image and status icon. Much like its non-alarm counterpart, FlexTile-Summary-Portrait-V02.rca, this new animation supports click destinations or hyperlinks and has numerous options for customization.

Figure 2: FlexTile-Summary-Portrait-Alarm-V01.rca animation.

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CORPORATE UPDATE

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH & DEVELOPMENT

SALES & MARKETING

THE Resource

The FlexTile-Tab-Alarms-3-V01.rca animation displays current alarms in two states along with a set total number. The Total Number input box is optional and displays a third value that equals the entered number of sources minus the active priority 1 and priority 2 alarms. Figure 3 shows this animation with one active priority 1 alarm, three active priority 2 alarms, and 21 more possible alarms from this system (25 total sources, minus four active). Consider using these tiled horizontally across the top or bottom of the screen. Configure the look and feel using common attribute styling.
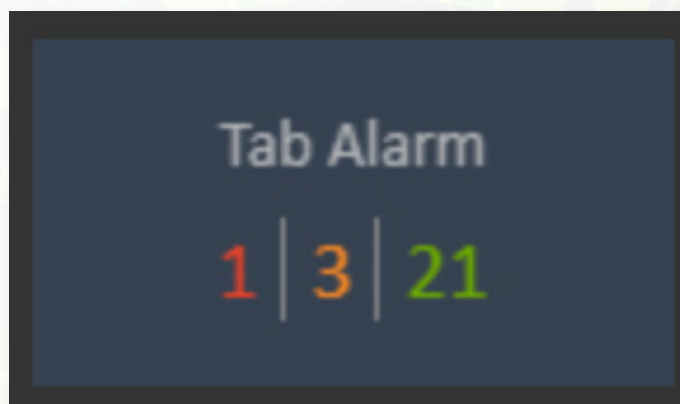

Figure 3: FlexTile-Tab-Alarms-3-VO1.rca animation.

The FlexTile-Tab-Alarms-Extended-V01.rca animation (Figure 4) displays the current number of active alarms in two customizable alarm states, with a background color to indicate severity. For situations that require severe alarms to attract the most attention, you might use this animation to ensure operators are always apprised of a situation that requires their attention.
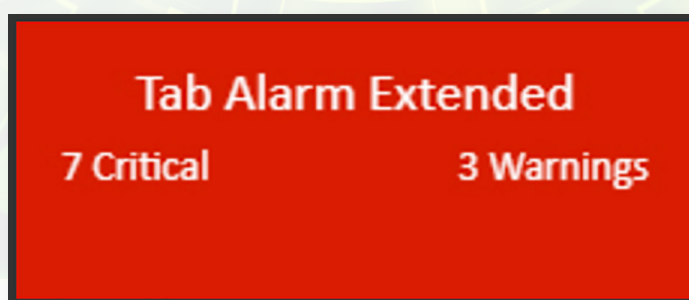

Figure 4: FlexTile-Tab-Alarms-Extended-VO1.rca animation.

THE Resource

The last animation, Maps-Alarms-V01.rca (Figure 5), is in the **Isometric > Misc** library. This animation displays alarm status on an interactive map with different colors for the dropped pins. Additionally, you can display static text, values from linked objects, and a click destination or URL. This additional information is displayed when you click one of the visible pins. Many other customizations exist for this animation—be sure to check the help files for details on all the options.
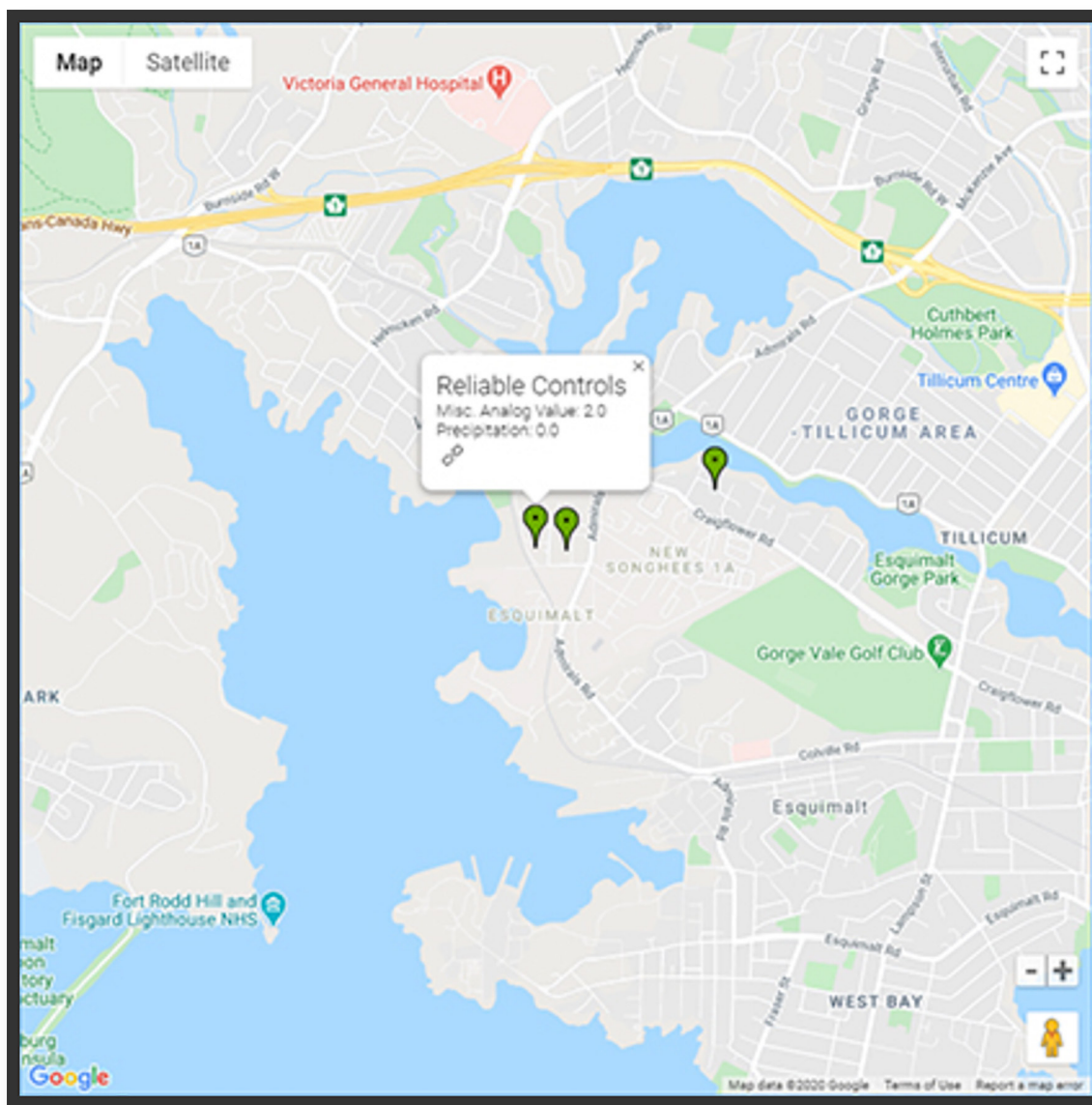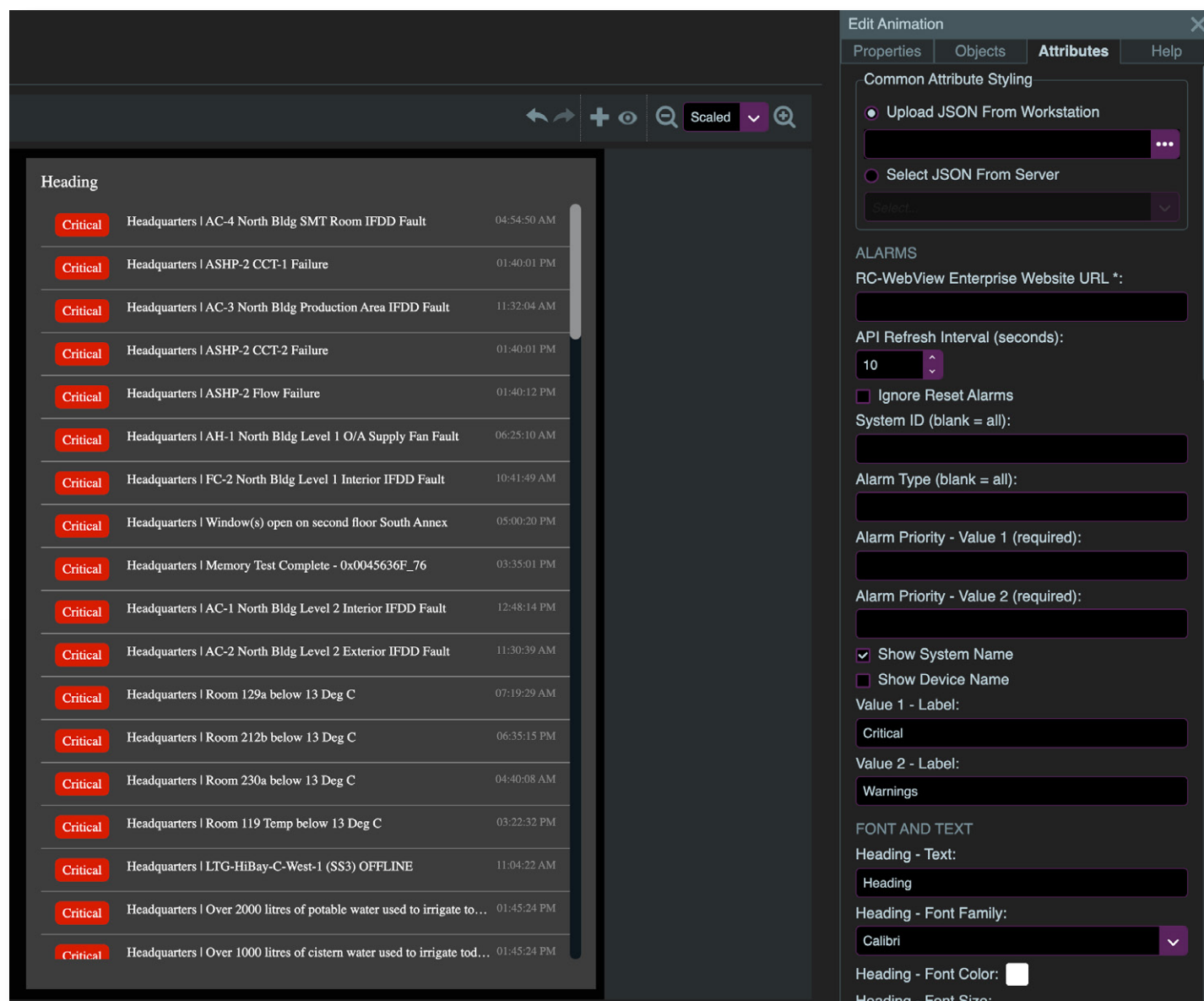

Figure 5: Map-Alarms-V01.rca animation.

THE Resource

How do you configure an alarm animation in RC-WebView?

Let's set up one of the alarm animations to receive alarm information in RC-WebView in a Navigation Group. We'll set up FlexTile-Alarms-Feed-V01.rca and go over the basics to get you up and running. Feel free to explore the vast customization options and make these animations truly your own!

To start, upload the file from your workstation and drag it to the Navigation Group canvas. Resize your animation as suits your layout, then click the Attributes tab in the Edit Animation dialog box (Figure 6).

Figure 6: FlexTile-Alarms-Feed-V01.rca animation resized before any attribute configuration.

Since we are using this animation in a Navigation Group in RC-WebView, we can leave the RC-WebView Enterprise Website URL input box blank. We will also leave the API refresh interval at the default of 10 seconds.

Next, enter the system ID. To find the system ID of an RC-WebView system, go to the Settings page and view the URL bar in your browser. Look for "&system=X," and record the value for X (Figure 7). You can enter comma-separated values for multiple systems, leave the input box blank for all systems, or enter the specific system from which you want to receive alarms. We'll use 1 for our system ID.
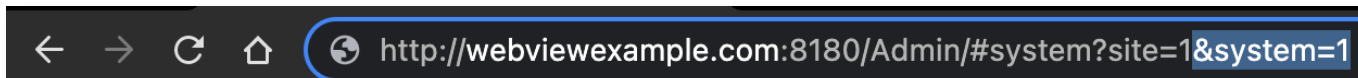
Figure 7: System ID in the URL bar of Google Chrome.

The following three input boxes are all to do with your configured alarms. If you want to filter your list to specific alarm types, enter comma-separated values or a particular value in the Alarm Types input box. Leave this blank to allow all alarm types. A valid value for alarm type is any number between 0 and 63. Alarm Priority – Value 1 and Alarm Priority – Value 2 are coupled with the input boxes Value 1 – Label and Value 2 – Label; since this animation can display two states of alarms, this is where you specify the priority for each category and then label them.

Note that these two input boxes do not accept comma-separated values. A valid value for alarm priority is any number between 0 and 255. For this example, we will filter our Alarm Types to 1 and 5; Value 1 will be priority 4, Value 2 will be priority 6 (Figure 8).

Figure 8: Alarms configuration in the Attributes tab of the FlexTile-Alarms-Feed-V01.rca animation.

R Resource

This section also has two check boxes: Show System Name and Show Device Name. Select the first to add the system name to the front of the alarm text. Check the second to add the name of the device generating the alarm.

Finally, let's give our animation a heading and change the font. We'll call this one "HQ Alarms" and set the font to Arial. Contrast the alarm feed shown in Figure 9 with Figure 6; you can see how the filtering has narrowed the list.

HQ Alarms

Fault	AC-4 North Bldg SMT Room IFDD Fault	04:54:50 AM
Fault	AC-3 North Bldg Production Area IFDD Fault	05:11:37 PM
Fault	AH-1 North Bldg Level 1 O/A Supply Fan Fault	06:25:10 AM
Fault	FC-2 North Bldg Level 1 Interior IFDD Fault	04:38:43 PM
Fault	AC-1 North Bldg Level 2 Interior IFDD Fault	12:48:14 PM
Fault	AC-2 North Bldg Level 2 Exterior IFDD Fault	04:07:49 PM
Fault	FC-1 North Bldg Level Exterior IFDD Fault	12:39:39 PM
Information	Flow sensor/damper calibration recommended	07:55:05 AM

Figure 9: Configured alarms feed animation.

THE Resource

As previously mentioned, these animations include many customization options once the alarm information is correct. Figure 10 shows the remaining options.

Edit Animation ✕
Properties | Objects | **Attributes** | Help

FONT AND TEXT

Heading - Text:
`HQ Alarms`

Heading - Font Family:
`Arial` ⌄

Heading - Font Color: ⬜

Heading - Font Size:
`18`

Heading - Alignment:
`left` ⌄

Heading - Padding Below:
`15`

Values - No Warnings Text:
`No Warnings`

Values - Font Family:
`Calibri` ⌄

Values - Font Color: ⬜

Values - Font Size:
`14`

☑ Values - Show Line Below

Values - Line Below Color: ⬜

Values - Padding (Top/Bottom):
`10`

Values - Padding (Left/Right):
`15`

Time - Font Color: ⬜

Time - Font Size:
`12`

WARNINGS

Value 1 Warning Color: 🟥

Value 2 Warning Color: 🟧

Edit Animation ✕
Properties | Objects | **Attributes** | Help

WARNINGS

Value 1 Warning Color: 🟥

Value 2 Warning Color: 🟧

Warnings - Padding (Top/Bottom):
`4`

Warnings - Padding (Left/Right):
`8`

Warnings - Space on Right:
`14`

Warnings - Width (Non-equal if blank):

Warnings - Corner Radius:
`6`

BACKGROUNDS - GENERAL SETTINGS

Background Color: ⬜

PADDING/SPACING

Padding - Top/Bottom:
`16`

Padding - Left/Right:
`16`

BORDERS AND CORNERS

Tile Border Width:
`0`

Tile Border Color: ⬜

☑ Corner Radius - Same For All

Corner Radius Top Left (Master Value)
`0`

Corner Radius Top Right:
`0`

Corner Radius Bottom Left:
`0`

Corner Radius Bottom Left:
`0`

Corner Radius Bottom Right:
`0`

CUSTOM SCROLLBAR (Chrome Only)

Scrollbar - Width:
`12`

Scrollbar - Radius:
`10`

Scrollbar - Track Color: ⬛

Scrollbar - Thumb Color: ⬜

Scrollbar - Thumb Hover Color: ⬜

Figure 10: Customization options for FlexTile-Alarms-Feed-V01.rca.

THE Resource

We are incredibly excited to release this new functionality to our Authorized Dealers, and this is only the beginning. If you have ideas for further improvements, make sure to submit an eRequest for RC-WebView or RC-Studio. You can also request new animations that take advantage of the alarms information using the RC-GrafxSet Request Graphic service. Enjoy!

Subscribe to
RC-GrafxSet today.

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DEALER CERTIFICATION PROGRAM
Reliable Controls® Corporation

UPCOMING TRAINING CLASSES

As part of our commitment to having the most satisfied customers in the industry, we offer a range of training options and formats to help you derive maximum potential from your Reliable Controls system. All in-class training is paused until it is safe to travel and hold group training sessions. In the meantime, our distance-learning classes are broadcast live to students worldwide. We regularly add new courses, so please visit the Reliable Controls Learning Center to see the current schedule in your local time zone.

Training for technicians

Reliable Controls Authorized Dealer certification must be completed by at least one individual in every Authorized Dealer office. Students work with the latest Reliable Controls hardware, firmware, and software to learn installation techniques and program a typical air-handling unit. Register now for distance Dealer Certification training.

Advanced training for level 3 technicians

In our advanced classes, students with level 3 technical certification learn to leverage the Reliable Controls system to improve building performance, reduce energy consumption, and simplify maintenance. Please check the Learning Center for current course offerings.

We add classes to the schedule regularly. Please check the Learning Center for upcoming dates and times.

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Five advantages of the Desktop Device Stand

In January we launched a new device—one that not only enhances the Authorized Dealer Certification program but will continue to serve dealers as they work toward becoming top-tier controls experts. Here's what we love about the Desktop Device Stand.

1. **Flexibility:** Different scenarios call for different controllers. The adaptability of the Desktop Device Stand allows you to swap out devices depending on your needs and the arrival of new controllers. Try replacing the MACH-ProPoint™ Input/Output Universal expansion module with a MACH-ProSys™ or with a MACH-ProZone™ to add other peripherals. You could also easily swap the MACH-ProView™ with a MACH-ProCom™. The Desktop Device Stand truly is a versatile tool.

2. **Training:** Learning doesn't stop once you leave the classroom. Experiment with Control-BASIC programming, build System Groups, and configure controllers with your professional sandbox. You can also lend the Desktop Device Stand to building operators to provide a safe and fun environment to progress their skills.

3. **Aesthetics:** We may be biased, but don't you think the Desktop Device Stand is a thing of beauty? It's rugged yet clean, without any unsightly wires. In the world of building automation, this sleek design is practically a piece of art.

4. **Convenience:** Compact and lightweight, the Desktop Device Stand is easy to take with you into the field. It weighs 2.06 kg (4.5 lb) and is smaller than carry-on luggage. No more hauling bulky cases around.

5. **Value:** Interested in a $1,000 discount on dealer certification classes? Each time you reuse the kit, the discount applies. Now that's value for money!

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Why integrate physical security?

The Reliable Controls security suite offers our partners a platform to leverage new and existing building automation projects into increased revenue. With forward-looking technology, including RC-Passport® software and the MACH-CheckPoint™ controller, you can quickly build your clients' security footprint from single-door access control applications to comprehensive, facility-wide solutions.

Expand your portfolio ▷

BACnet-based integration between physical security and building automation is the next logical step to both maximize the operating efficiency of building systems and complete your product portfolio. By incorporating security devices, such as IP cameras, card readers, and motion sensors, into a building automation framework, security can be added to create actionable intelligence.

Enter a growing market ▷

The global physical security market is forecast to grow steadily over the next decade and beyond, with annual growth approaching 10 percent. By offering Reliable Controls security products, you can meet emerging demands for flexible, scalable solutions and enable your customers to strictly protect personnel, assets, networks, and data, all while enhancing traditional BAS functions.

Offer leading-edge solutions ▷

With built-in BACnet compliance, the RC-Passport platform offers a level of device interoperability previously unavailable in the commercial security market. The system allows users to utilize real-time access control and intrusion detection data, down to the level of each individual enrolled in the system, to implement designs for both security and reduced energy consumption.

In support of our security product line, Reliable Controls has greatly expanded training and technical services to ensure your projects run smoothly, whether it be your first installation or one of many. To learn more and get your team security-certified, contact your Reliable Controls regional sales manager.

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QCC QUAD CHANNEL CONTROLLER
END OF SALE NOTIFICATION

We are pleased to introduce a 4-channel model of our high performing FCS Flexible Control System. This model replaces the QCC.

Introduced in 2017, the FCS is a proven system controller that offers a more robust user experience with a large, full color LCD resistive touch screen, data logging and an additional relay and horn/strobe connection. The FCS also has a real time clock and offers data logging, enhanced logic control, zoning and extra priority structure capabilities.

The FCS-4 comes standard with 4 Modbus® RTU RS-485 connections for 4 digital transmitters. If analog transmitters are required it can be ordered with 4 analog inputs (option -AI). With the AI option, the FCS-4 can accommodate digital and/or analog transmitters up to a maximum of 4 gas channels.

The FCS-4 offers Modbus® RTU RS-485 (model: FCS-4-M) or BACnet® MS/TP RS-485 (model: FCS-4-B) output for communicating with a BAS or DCC. Other familiar features like the size of the enclosure, audible alarm, ability to connect to the same peripheral devices and option to add a top mounted strobe, manual shutoff switch and internal heater remain the same.

QCC to FCS-4 Equivalency

OLD PART NUMBER	NEW PART NUMBER
QCC-M	FCS-4-M-AI (Option -AI adds 4 analog inputs)
QCC-B	FCS-4-B-AI (Option -AI adds 4 analog inputs)

Should a QCC system in the field need replacing, the FCS-4 can make all the same connections as the QCC, plus it offers more features. If the QCC system has analog transmitters, the FCS-4 will need to be ordered with the -AI option.

Comparison Chart   FCS Features, Options & Remote Devices   QCC End of Sale Notification

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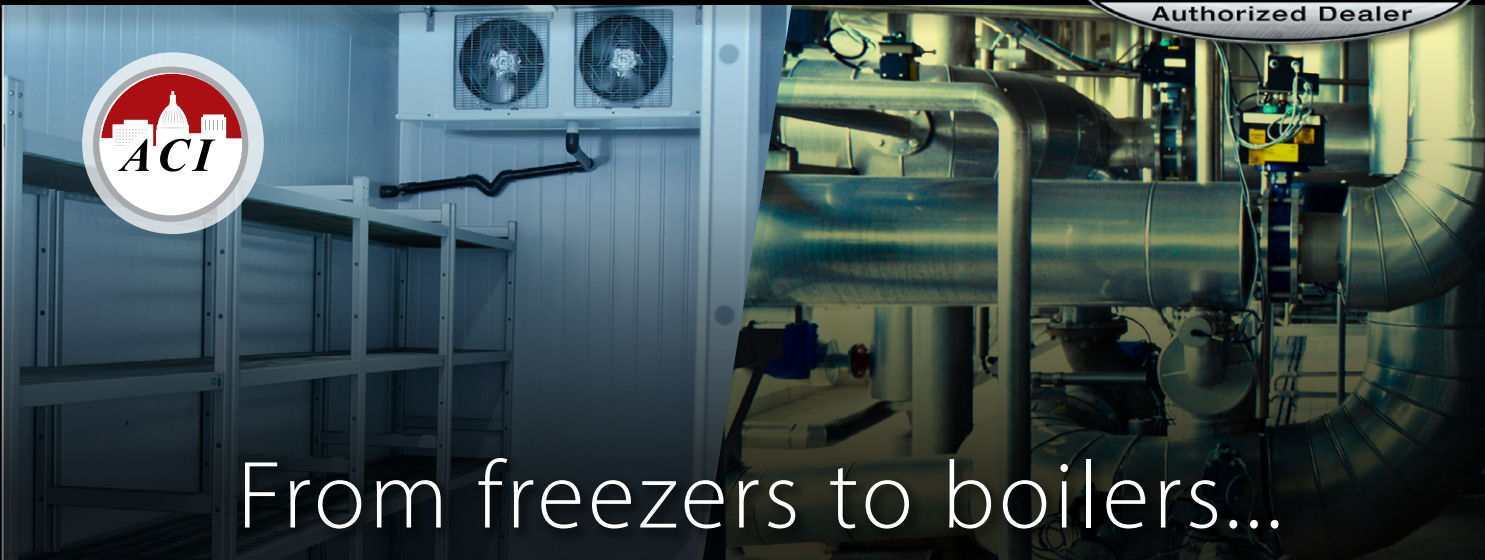## Belimo Energy Valve™ and Thermal Energy Meter

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