

# THE Resource



## COMING SOON!

### RCFLEXair™

ADVANCED VAV CONTROLLER



The first in an exciting next generation of freely programmable controllers.

SIGN UP TO BE A BETA TESTER

- Sign up to beta-test the RC-FLEXair
- Introducing eCycle
- Insight: Are your buildings ready and set to go?
- Contact support
- Did you know? You can use Enterprise Schedules in RC-WebView® to easily manage schedules
- We've grown—and learned how to move huge test walls
- Recognizing Earth Day 2021
- Training
- RC-GrafxSet®: A better way to insert animations into RC-Studio
- 2020 Education Award
- 2020 Reliable Controls award winners
- Promotional products

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Responsible  
Recycling

NEW!

@Cycle™ SERVICE

# THE Resource



Introducing the new RC-FLEXair advanced VAV controller, the first in an exciting next generation of freely programmable controllers from Reliable Controls!

Better by design™

## RCFLEXair™

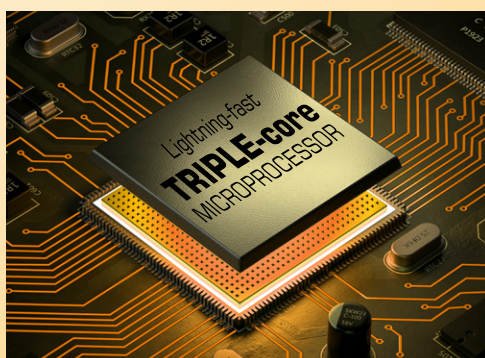
Advanced VAV Controller

[BETA TEST PROGRAM]



**Be one of the very first people to get your hands on this awesome new device as a beta tester.**

With a lightning-fast triple-core processor and dual 10/100 Ethernet ports, the RC-FLEXair is capable of complex sequencing and performance tracking previously unavailable at the terminal level, with networking speeds so quick they feel like real time. This next generation BACnet Building Controller is loaded with nearly unlimited data processing power and is designed to evolve with your building, accommodating a wide range of VAV and room-control applications. With its multiple input/output options, including all those available on the MACH-ProAir™, and ability to sink or source current on any universal output, the RC-FLEXair is a truly dynamic controller that will inspire confidence in your built environment for years to come.



1,000x  
the MEMORY



RC-FLEXair with  
conduit cover



# THE Resource



CORPORATE UPDATE

## Actuator

Brushless DC motor produces 5 Nm (45 in-lbs) of torque. Fits 10–13 mm (3/8"–1/2") damper shafts. The RC-FLEXair uses the same tried-and-true Belimo actuator and flow sensor as the MACH-ProAir.

## 24 VAC/VDC supply voltages

## FLEX output (RC-FLEXair 12-F and 12-A-F models only)

Use software to select the FLEX output as a universal output or solid-state relay.

## Solid-state relay

Switch 24 VAC/VDC.

## Versatile inputs

Add one or three additional universal inputs.

## Versatile outputs

Add one or three additional universal outputs. Choose 0–12 VDC analog or binary outputs that can run sinking or sourcing field devices.

## Velocity sensor

Optional high-accuracy velocity sensor with die-cast aluminum ports.

## USB port

Power the device for initial setup, or easily access the network at any time without disconnecting the Ethernet ports. Upgrade firmware, change programs, and more with ease.

## Dual 10/100BASE-T Ethernet ports

Connect up to 75 devices on each BACnet/IP network.



## SMART-Net

Network SMART-Net devices together to pick up temperature, occupancy, VOC, and other values without using physical inputs or outputs.

100x  
FASTER  
PROCESSOR

# RCFLEXair™

Better by design™

massive  
SCALABILITY

Participants who satisfactorily complete the beta test survey will receive credit for one RC-FLEXair. Additionally, we'll send you a coveted Reliable Controls beta tester T-shirt!

Register now

## What's required of beta testers?

The RC-FLEXair has been extensively tested by our Quality Assurance team. Now we need **you** to use the product in real-world applications to help us finalize its features and to provide user experience feedback. For the duration of the testing period, please send any product performance observations directly to the Quality Assurance team as soon as possible. The team is eager to hear your feedback!

*Please note that dealer offices, personal home installations, and bench tests are not acceptable testing environments.*

# THE Resource



## INTRODUCING eCycle™

The simple, flexible, sustainable controls Reliable Controls has manufactured since 1986 balance comfort and efficiency while helping building owners all over the world reduce their greenhouse gas emissions. One of the hallmarks of our commitment to true building sustainability is our work to minimize waste in the manufacturing process. We're pleased to announce a new initiative that will help you minimize waste in the field, too: eCycle. The eCycle service allows you to send non-repairable Reliable Controls and peripheral-partner devices to be disposed of in an environmentally responsible manner—worldwide.

Electronic waste is a global ecological problem that increases air pollution, water pollution, soil pollution, and even human exploitation—and decreases information security, according to *The Atlantic*.<sup>1</sup> Air pollution occurs when scavengers burn e-waste to get the copper. Soil and water are contaminated when toxins from e-waste are not disposed of properly. And many electronic devices contain data ready to be exploited after they're discarded. Only 17.4 percent of e-waste generated in 2019 was properly collected and recycled—a shocking statistic given the 53.6 million tons of e-waste the world generated that year.<sup>2</sup>

### What is EEE and e-waste?

Electrical and electronic equipment (EEE) includes a wide range of products with circuitry or electrical components with a power supply—including building controllers. EEE becomes e-waste once it is discarded as waste without the intent of reuse. Every product has different material content, can be disposed of and recycled in different ways, and is unequally harmful to the environment if not responsibly disposed of.<sup>3</sup>

When disposed of properly, electronic materials are recovered and can be used in new products, but programs for proper collection and disposal of e-waste vary widely around the world. With our new eCycle service, it doesn't matter where in the world your customers are; we will arrange and pay for a responsible recycling partner to dispose of their non-repairable controllers.

### How to use eCycle

Our new eCycle service is quick and easy to use. To access the service, log on to the Dealer Support Center and click **Requests > eCycle** (Figure 1).

Requests

eCycle

eRequest

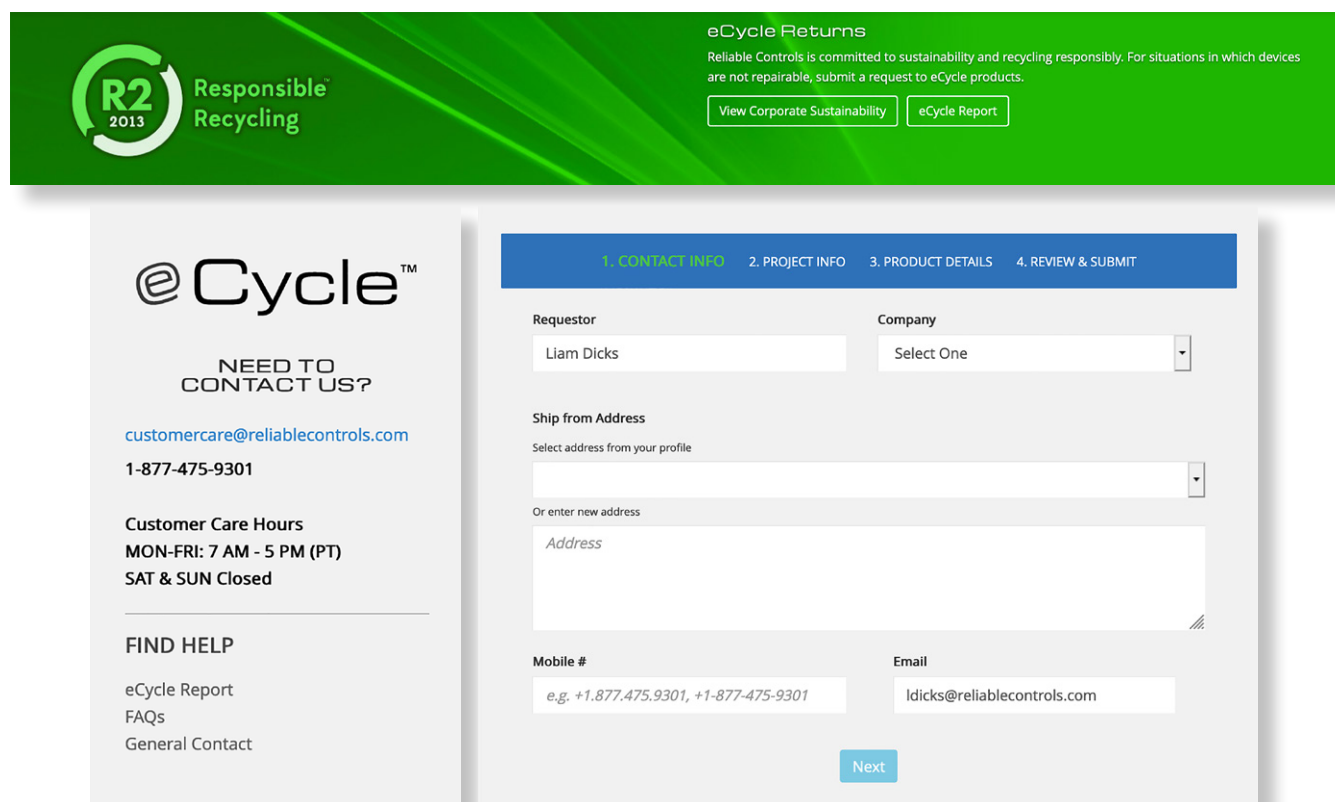
Returns

Figure 1: **Requests > eCycle** in the Dealer Support Center.



Follow these steps to submit an eCycle return request.

1. Your contact information is automatically populated in the form (Figure 2). If you need to enter different information from your office address or dealer profile, simply overwrite the auto-generated entries. Click **Next**.



**eCycle Returns**  
Reliable Controls is committed to sustainability and recycling responsibly. For situations in which devices are not repairable, submit a request to eCycle products.

[View Corporate Sustainability](#) [eCycle Report](#)

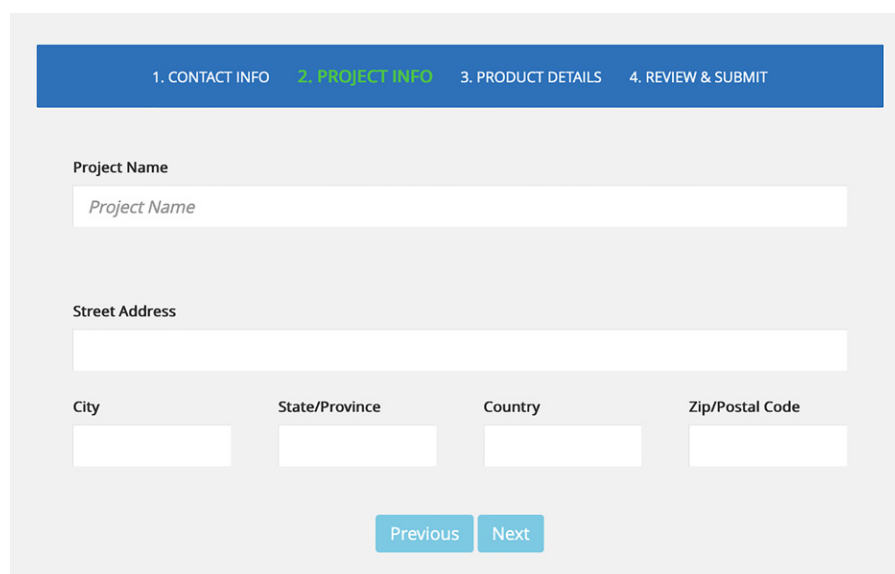
**@Cycle™**  
NEED TO CONTACT US?  
[customercare@reliablecontrols.com](mailto:customercare@reliablecontrols.com)  
1-877-475-9301  
Customer Care Hours  
MON-FRI: 7 AM - 5 PM (PT)  
SAT & SUN Closed  
FIND HELP  
eCycle Report  
FAQs  
General Contact

**1. CONTACT INFO** 2. PROJECT INFO 3. PRODUCT DETAILS 4. REVIEW & SUBMIT

Requestor: Liam Dicks  
Company: Select One  
Ship from Address: Select address from your profile  
Or enter new address: Address  
Mobile #: e.g. +1.877.475.9301, +1-877-475-9301  
Email: ldicks@reliablecontrols.com  
Next

Figure 2: Verify your contact information.

2. Enter the project name and address (Figure 3). Click **Next**.

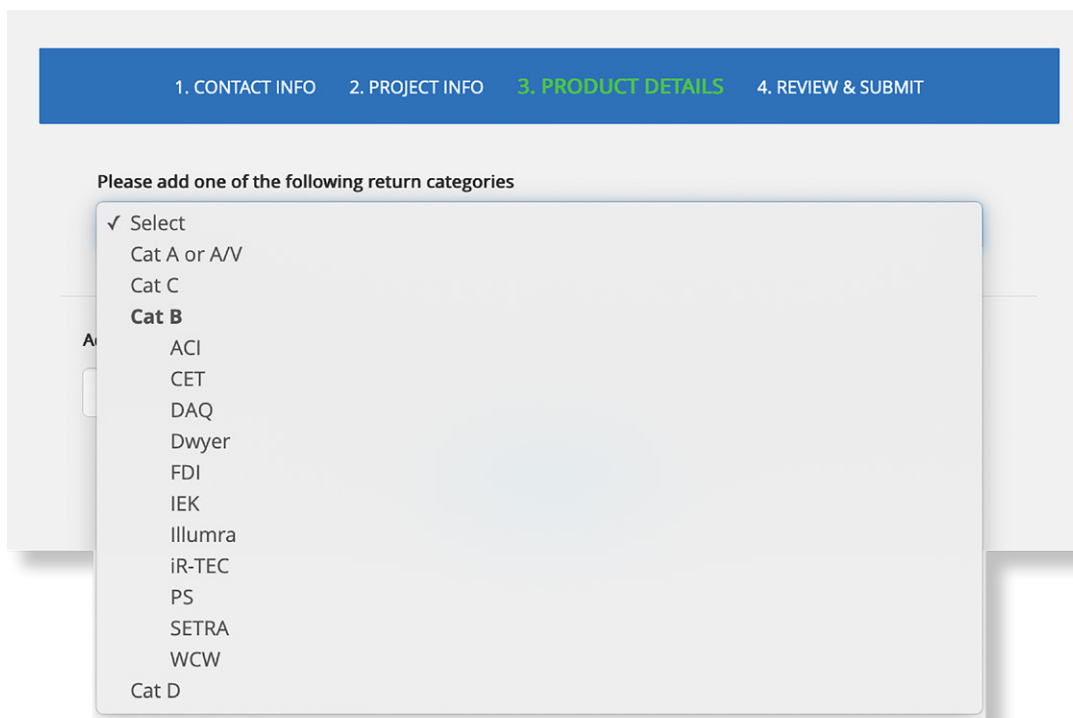


**1. CONTACT INFO** **2. PROJECT INFO** 3. PRODUCT DETAILS 4. REVIEW & SUBMIT

Project Name: Project Name  
Street Address:   
City: State/Province: Country: Zip/Postal Code:   
Previous Next

Figure 3: Enter the project information.

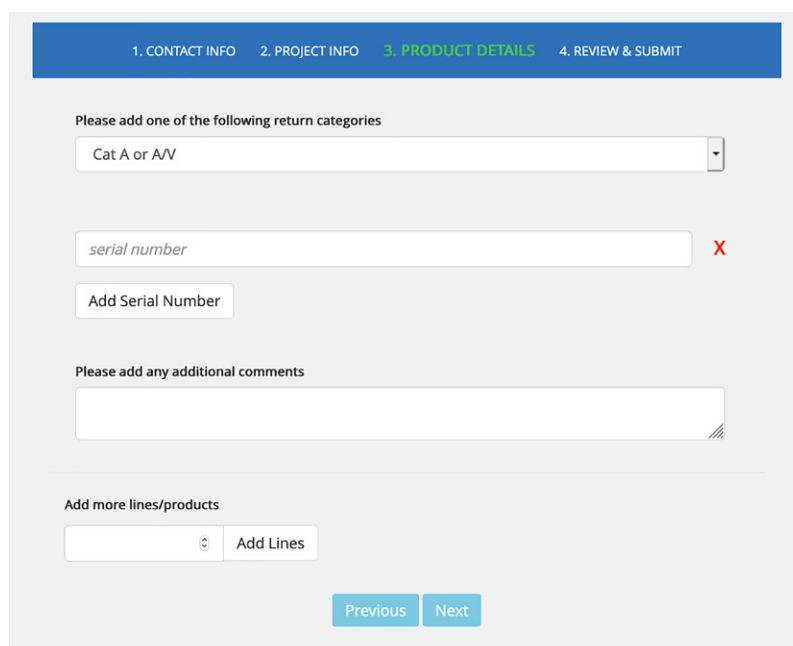
3. On the Product Details page, select a return category from the drop-down list (Figure 4).



The screenshot shows a web interface with a blue header bar containing four tabs: "1. CONTACT INFO", "2. PROJECT INFO", "3. PRODUCT DETAILS" (which is highlighted in green), and "4. REVIEW & SUBMIT". Below the header, there is a section titled "Please add one of the following return categories". A drop-down menu is open, displaying a list of categories. The categories are: "Select" (with a checkmark), "Cat A or A/V", "Cat C", "Cat B" (bolded), "ACI", "CET", "DAQ", "Dwyer", "FDI", "IEK", "Illumra", "iR-TEC", "PS", "SETRA", "WCW", and "Cat D".

Figure 4: Return category drop-down list.

4. Once you have selected a product category, enter the product serial number (Figure 5). To return multiple Reliable Controls products, click **Add Serial Number** to enter information for each one (Figure 6). For peripheral partner products, just pick the product names from the drop-down list; you don't need to enter serial numbers. Enter any additional information as needed, then click **Next**.



The screenshot shows the same web interface as Figure 4, but now the drop-down menu is closed. The "Please add one of the following return categories" section has a text input field containing "Cat A or A/V". Below this is a text input field for the "serial number" with a red "X" icon to its right. Underneath the serial number field is a button labeled "Add Serial Number". Below that is a section titled "Please add any additional comments" with a text area. At the bottom of the form, there is a section titled "Add more lines/products" with a text input field and a button labeled "Add Lines". At the very bottom, there are two buttons: "Previous" and "Next".

Figure 5: Enter the product serial number.



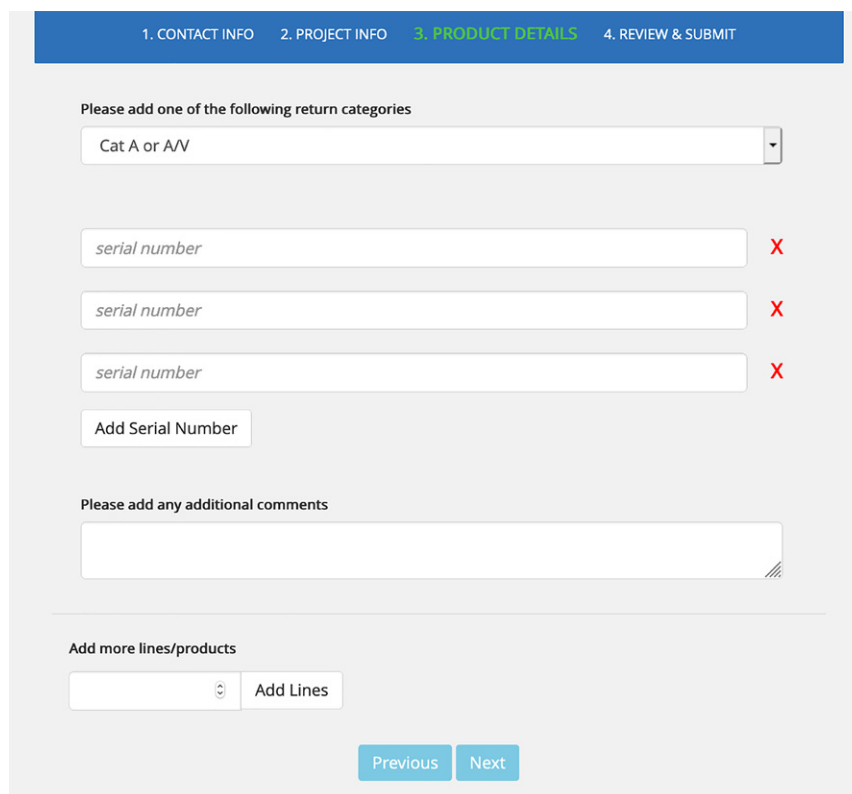


Figure 6: Add serial numbers for multiple products.

- Carefully review your request on the Review and Submit page before you click **Submit eCycle Return**. You can add comments or products or make edits directly on this page without navigating backward to earlier steps. Submit your request when ready.

Once you have submitted a request, you'll receive an email confirmation. A representative from our Customer Care team will contact you within 5 days with an eCycle number to include in your shipping paperwork. Our Customer Care team will then arrange your return with one of our eCycle partners and provide you with shipping instructions. To follow the status of your return request, click **eCycle Report** in the banner of the eCycle Returns page. You can view your pending and archived requests at any time.

eCycle disposal is free! Please note that any freight cost you incur to send your return to our eCycle partner is not included and is your responsibility.

### How can eCycle help you?

In addition to the high level of integration between HVAC, lighting, and security systems, building sustainability demands other technological and supporting elements that will endure over the long term. At Reliable Controls, one element to our Art of Building Sustainability demands the use of technology that minimizes waste over its life cycle.

# THE Resource



CORPORATE UPDATE

The products we manufacture at our facility in Victoria, BC, follow the WEEE, RoHS 2, and R2 directives, which set collection, recycling, and recovery targets for electrical goods and restrict the use of certain hazardous materials in electrical and electronics products. Our robust in-house composting and recycling program diverts waste and e-waste from landfills and incinerators and helps reduce our environmental impact. With the introduction of eCycle, you can assure your customers that our long-term, better by design approach not only provides them with excellent ROI but also mitigates the negative impact of waste management; our products are recycled responsibly and built to last. That's a sustainable return on investment.



**THANK YOU**  
for recycling  
**responsibly**



Better by design™

<sup>1</sup> <https://www.theatlantic.com/technology/archive/2016/09/the-global-cost-of-electronic-waste/502019/>

<sup>2</sup> [https://collections.unu.edu/eserv/UNU:7737/GEM\\_2020\\_def\\_july1.pdf](https://collections.unu.edu/eserv/UNU:7737/GEM_2020_def_july1.pdf)

<sup>3</sup> [https://collections.unu.edu/eserv/UNU:7737/GEM\\_2020\\_def\\_july1.pdf](https://collections.unu.edu/eserv/UNU:7737/GEM_2020_def_july1.pdf)

APPLICATION ENGINEERING

TECHNICAL SUPPORT

RESEARCH &amp; DEVELOPMENT

SALES &amp; MARKETING





## insight

### ARE YOUR BUILDINGS READY AND SET TO GO?

Recent headlines indicate that 2021 will be the year of “makeup” travel. All the canceled plans of 2020 created a growing population eager to spend money on replacement vacations and leisure travel. No travel or replacement vacation would be complete without a classic packing checklist: clothes, toiletries, electronic chargers, medications, passports, sunglasses, and countless other items to shove into an ever-expanding suitcase. But even the greatest travel checklist cannot prevent the traveler from having that sinking feeling and asking: What did I forget? Am I sure I have everything?

The goal of any checklist is to ensure that nothing is forgotten or overlooked, and everything is...ready. Over the past year, built-environment professionals have dealt with no shortage of checklists. Physical-distancing checklists required building owners to install plexiglass dividers between staff and customers. Cleaning checklists had to be revamped to include increased sanitization practices. Employees had to add a mask to their everyday-carry checklist before they left home for the office. The building automation system checklist included many practices to improve ventilation and filtration in efforts to combat airborne particulates.



In early February, the ASHRAE Epidemic Task Force released a revised [Building Readiness Guide](#). The importance of providing a safe building is at the forefront of the building operator's mindset. As a Reliable Controls Authorized Dealer, you play a vital role on the building readiness team. The ASHRAE *Building Readiness Guide* provides updated reopening guidance for HVAC systems to help mitigate the spread of COVID-19.



#### Building readiness intent

ASHRAE's building readiness information provides guidance and checklists for how a building should be operating. According to ASHRAE, building readiness modes of operation should include the following:

- Epidemic operating conditions in place
  - o Occupied at pre-epidemic capacity
  - o Occupied at reduced capacity
  - o Unoccupied temporarily
  - o Operation during building closure for indefinite periods
- Post-epidemic conditions in place
  - o Prior to occupying
  - o Operational considerations once occupied

The ASHRAE Epidemic Task Force created a single-page document of *Core Recommendations for Reducing Airborne Infectious Aerosol Exposure*, available here: [ashrae.org/file%20library/technical%20resources/covid-19/core-recommendations-for-reducing-airborne-infectious-aerosol-exposure.pdf](https://www.ashrae.org/file%20library/technical%20resources/covid-19/core-recommendations-for-reducing-airborne-infectious-aerosol-exposure.pdf)

## Building readiness team

The *Building Readiness Guide* references the importance of a building readiness team; Authorized Dealers like you are a vital part of any such team to perform the analysis, testing, design, construction, control programming, balancing, commissioning, maintenance, and operation services necessary to help prevent transmission of COVID-19 in the built environment.







## Building readiness plan

ASHRAE recommends that building readiness team document the HVAC and non-HVAC mitigation strategies it plans to use, whether for temporary or permanent modifications. Ideally, all facility operators and occupants should be aware of and understand the plan.

Non-HVAC strategies pertain to tactics like face mask requirements, physical distancing, directional flow for office spaces, cleaning requirements, building occupancy limits, and physical barriers between workstations.

HVAC strategies include increased ventilation, improved air filtration, and air-cleaning devices that use ultraviolet germicidal irradiation and other technologies.

Each HVAC system should be analyzed to determine the appropriate engineering controls that will help reduce virus transmission in a building. According to the *Building Readiness Guide*, HVAC system evaluation should include the following steps:

1. Gather and review building and system documentation, including:
  - Most recent design documents, specifically HVAC and plumbing system construction documents
  - Original, approved equipment and system submittal documents
  - System manuals
  - Controls and building automation system (BAS) drawings, sequences of operation, and system parameters
  - Equipment wiring diagrams and troubleshooting guidelines
  - Service contracts and maintenance logs
  - BAS trend reports and alert and notification reports
  - Most recent testing, adjusting, and balancing reports
2. Inspect equipment, systems, and controls to find any existing issues. Start with components like boilers, chillers, air-handling units, fan-coil units, and control sensors; then look at systems, such as the chilled water, hot water, air-handling, and refrigerant systems; and finally examine the BAS and integrated building operations, including graphical user interfaces, temperature and humidity setpoints, schedules, alarms, access control, and remote access capabilities.
3. Consider the HVAC strategies that could reduce the bio-burden on the building.
4. Follow the guidance in ASHRAE Guideline 11-2018 when you check HVAC control component calibration.
5. Prepare a work log and purchase orders for building operators and service providers to correct any critical issues you identified in steps 1 and 2 that prevent the BAS from functioning optimally.
6. Prepare a building readiness plan that identifies virus transmission mitigation strategies.



One of the most vital parts of evaluating the BAS is the need for remote access. The *Building Readiness Guide* states that if the building is equipped with a BAS, it should have an existing method for remote access. If the BAS does not incorporate a tool like RC-RemoteAccess®, the building owner should endeavor to provide one. Cybersecurity is critical to preventing the BAS and other building networks from unauthorized access.

## Increasing ventilation

The *Building Readiness Guide* provides extensive guidance about increasing building ventilation above the design intent or local code requirements as one mitigation strategy. Consider adjusting the space-comfort setpoints to use more outside air, keeping in mind a relative humidity level between 40 and 60 percent has been shown to reduce the risk of infection from transmissible diseases like COVID-19.<sup>1</sup> When relative humidity drops below 40 percent, viruses survive longer, and infectious aerosol droplets shrink to miniscule diameters and persist in the air longer, transmitted over substantial distances. Additionally, the smaller the droplet, the deeper the penetration into lungs and the more severe the illness.

The ASHRAE Epidemic Task Force examined increasing ventilation using several methods. Consult the *Building Readiness Guide* for detailed strategies, including increasing outdoor air based on the cooling coil and on space conditions.



## Building and space pressure

Another important consideration is building and space pressure. Be cautious when increasing outside air without adjusting exhaust and relief-air systems to prevent problems like doors that won't close, excessive noise, and issues in areas intended to be negatively pressurized, like commercial kitchens and bathrooms.

## Pre- and post-occupancy flushing

Consider flushing spaces before and after occupancy to reduce the concentration of airborne infectious particles (by up to 95 percent, according to ASHRAE).<sup>2</sup> Adequate flushing requires three changes of space volume using outdoor air. Consult the *Building Readiness Guide* for a calculation methodology.

## Improving filtration

ASHRAE encourages building owners to improve HVAC filters following the guidance on its [COVID-19 Preparedness Resources](#) webpage. It recommends that mechanical filter



efficiency be at least MERV 13, preferably MERV 14 to better mitigate the spread of infectious diseases. Consult the *Building Readiness Guide* for practical approaches to increasing MERV in an air-handling unit.

The Guide further details UVGI technology, energy considerations, domestic water and plumbing systems, and checklists for HVAC system maintenance. It is a comprehensive, up-to-date document with a wealth of information to help you guide building owners to operate their buildings safely and efficiently now and in the future.



## The new normal

The ASHRAE *Building Readiness Guide* is meant to help you return buildings to the new normal mode of operation, but what is the new normal? Facility owners need to address certain issues as they modify building systems. [ASHRAE's website](https://www.ashrae.org) is regularly updated with new guidance for reopening buildings. In addition, continue to follow your local, regional, and federal governments' advice for workspaces and gathering places.

Peace of mind and vacation relaxation is realized when your travel checklist is comprehensive and complete. Despite a difficult year, COVID-19 provides a good opportunity for you to provide valuable insight on what the new normal sequences of operation look like for the built environment. Can you provide your customers with building readiness checklists to guide them to safely reopen and operate? Are the buildings you care for ready to set and go? ASHRAE's *Building Readiness Guide* can help.

- 1 <https://www.esmagazine.com/articles/100246-using-the-indoor-environment-to-contain-the-coronavirus>
- 2 <https://www.ashrae.org/file%20library/technical%20resources/covid-19/ashrae-building-readiness.pdf>





# THE Resource



TO ENSURE THE HIGHEST LEVEL OF SUPPORT,  
PLEASE CONTACT US AT...

[helpdesk@reliablecontrols.com](mailto: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](mailto: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.**

RELIABLE CONTROLS eFORUM

**37 | 148 | 50,120**

BRANDS | POSTS | VIEWS and DOWNLOADS

A moment in the eForum could save you hours of troubleshooting.

[reliablecontrols.com/support/forum](http://reliablecontrols.com/support/forum)



*People and technology  
you can rely on™*

## Did you know?

You can use Enterprise Schedules in RC-WebView to easily manage schedules.

A small control network can operate with only a few schedules, but for large systems, managing scheduling can become time consuming and therefore costly.

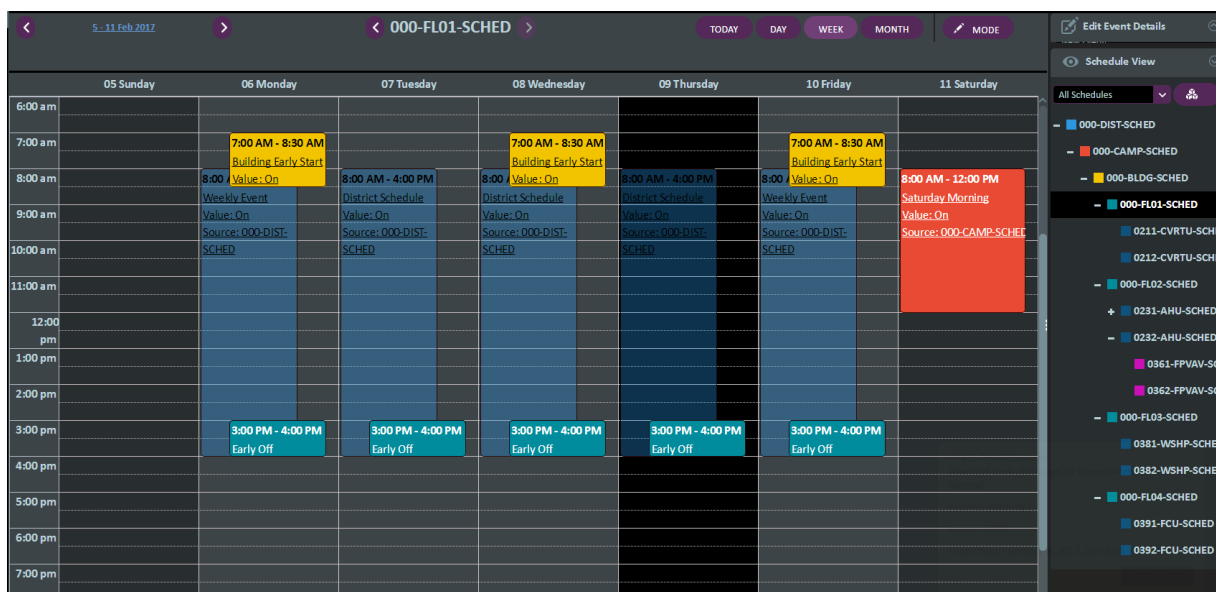
When you configure a special event, do you find yourself adjusting multiple schedules on your network? Perhaps you even log on and log off multiple systems to do so. Repetitive data entry is not only a time waster but also an invitation for human error. Consider implementing Enterprise Schedules in RC-WebView to save time and make your building automation system easier to manage.

Enterprise Schedules replace the traditional method of manually modifying schedules in a controller. You can improve your operational performance by creating a hierarchy of schedules on your BACnet internetwork and manage scheduling and special events in any compatible controller.

Enterprise Schedules consist of individual schedule objects organized in a tree structure of parent and child relationships. Events you create at a parent level are pushed to their children in the hierarchy. You can configure user permissions for Enterprise Schedules so that authorized users can access and modify schedules at specific levels of the schedule hierarchy.

For example, a school district energy manager can create a district occupancy schedule (or parent schedule) for each day of the week. The parent schedule is automatically written to the individual school schedules (or child schedules) within the Enterprise Schedule. School administrators with appropriate user permissions can create or update schedules for their individual school in the hierarchy.

Enterprise Schedules are flexible, scalable, and easily maintained. For more information, check out the Enterprise Schedules topic in the [RC-WebView Software Manual](#).



*Enterprise Schedule interface.*



## WE'VE GROWN— AND LEARNED HOW TO MOVE HUGE TEST WALLS

In the third quarter of 2018, we outgrew our head office building in Victoria, BC, and leased some additional space nearby. Our software developers have been based in this second office for well over a year now (although many are currently working from home due to COVID-19). We're thrilled to announce that renovations of a new floor in the building are finally complete.

"The second floor is an extension of the third and will be used primarily by our Research and Development team. The Technical Communications, Firmware Development, Firmware QA, and System QA teams will also work here," says Chris Howard, our system architect. "By treating the space as an extension of the third floor, we were able to do things like provide additional meeting spaces, a home for IT, an enlarged lunchroom, and a gym."

One of the last pieces of the puzzle for this new space was to move our system QA test lab to the new location, which gave us a great opportunity to expand the lab and make room for new devices—including a section to test the new RC-FLEXair.

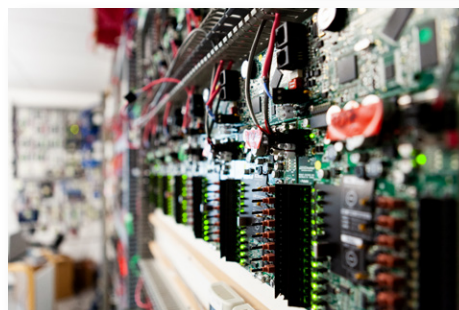
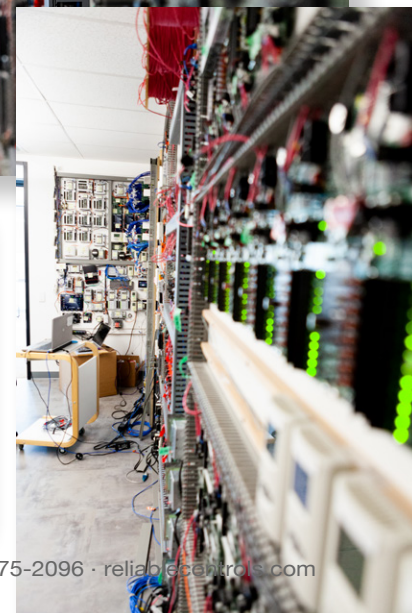
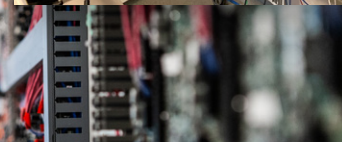
Between May and August 2020, while the network infrastructure for the new office was being planned, the R&D team discussed how to efficiently mount and secure 80 RC-FLEXair motherboards to a section of one of the test walls using the same jigs that will hold them for production programming. The System QA team worked on a rough physical design during September and October, then began inserting the motherboards into the jigs and adding cabling. Once complete, the new RC-FLEXair section of test lab was operational.

The team planned the physical move of the existing lab to the new space using photos of the layout and dimensions in the new lab to guide them. They identified early on that there would be no way to move the new RC-FLEXair section with cabling attached, and the units themselves were fragile without protective enclosures.



*Deconstruction of the test lab in Reliable Controls HQ (left and below).*

*Operational test lab (below).*





# THE Resource



So after just a few months with a operational RC-FLEXair test bank, the team set about dismantling all the cables and devices they'd so carefully set up.

The team moved the first test wall in early December, allowing them to iron out the process. On December 19, in a monumental effort with help from R&D, Chris Howard, and the Production and Shipping departments, they rented a truck and moved the remaining five test walls and numerous smaller test boards, dismantling them at our Hallowell Road office, packing all devices and cabling into boxes, and hefting them into the truck for transport. At the new space, 2' x 6' boards were mounted horizontally along the walls to allow the guys to easily mount the test banks. Our mechanical designer, Jim Ward, created a wood stand to support the heavier sections while we moved and reattached them. Harley Sims and his System QA team did a lot of work to reconnect all 495 Reliable Controls controllers and 55 additional devices, the majority of which are SMART-Sensors and about 10 of which were third-party components, to get the new lab operational as soon as possible. The brunt of their efforts was dedicated to reconnecting the RC-FLEXair section.

Our test lab is vital to quality assurance at Reliable Controls—we test every new controller and firmware version with every old controller to ensure backward compatibility. We're proud of the hardworking folks who dedicated several months to the challenging task of moving the test lab to our new space. Thank you, team!

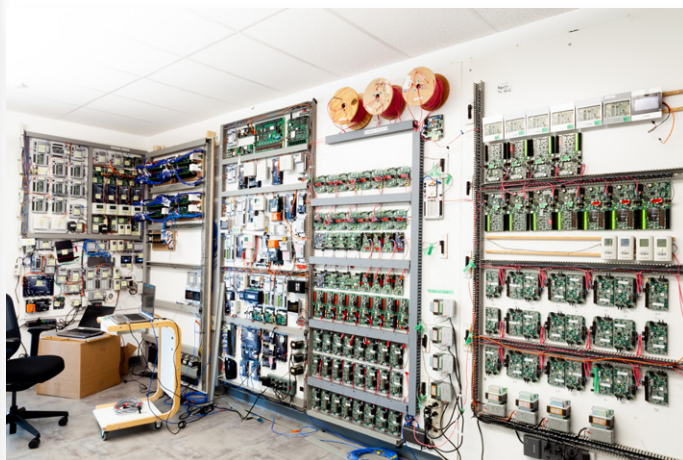
## Testing the RC-FLEXair

The new RC-FLEXair section of the lab means we can test the networking and functionality of the RC-FLEXair controller on a single large BACnet/IP network. Eighty RC-FLEXair motherboards are arranged in groups of 10 and mounted on special jigs. The units are connected in a daisy chain, and the network is hosted by a MACH-ProView LCD router model. A 16-port managed-network switch and an enterprise-level IP router add additional functionality.

The first 70 RC-FLEXair units are each connected by 7.6 meter (25 feet) Category 5e cables, a common approximate length likely to be used in the field, and the remaining 10 are each connected using 100 meter (328 feet) of custom-made Category 5e cables. This allows us to verify the RC-FLEXair works as expected with the maximum run length of Ethernet cable—and it also means we have 1.5 kilometers of cable hanging on the back of the RC-FLEXair test bank. To accommodate the cabling, the test bank is hinged on one side, letting it swing open like a door to provide access. The design of this section of the lab was inspired by the test bank for the SMART-Space Controller.



*Harley Sims monitors controllers in the new test lab.*





# THE Resource



## EARTH DAY 2021



Reliable Controls will join thousands of organizations to call the world together for climate action on Earth Day, April 22. Change starts with action. Better yet, an action that affects the world around you. We're thrilled to launch our new eCycle service this month, taking our commitment to sustainability one step further. We hope you, too, will contribute to the billion acts of green that are happening across the planet in celebration of Earth Day. Start small or go big—or start big and stay big. Visit [earthday.org](https://earthday.org) for inspiration and to learn about popular acts of green, like advocating for climate action in your workplace, acting on plastic pollution, or helping your customers manage their buildings to be more energy and resource efficient.

# THE Resource



## TRAINING

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 (RCAD)** 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 RCAD certification training.

- April 12-16 and April 19-23, 13:00-17:00 UTC **\*\*FULL\*\***
- May 2-6 and May 9-14, 00:00-04:00 UTC
- June 7-11 and June 14-18, 14:00-18:00 UTC
- July 12-16 and July 19-23, 15:00-07:00 UTC
- August 8-12 and August 15-19, 22:00-02:00 UTC
- September 13-17 and September 20-24, 13:00-17:00 UTC
- October 18-22 and October 25-29, 15:00-19:00 UTC
- November 7-11 and November 14-18, 00:00-05:00 UTC
- December 6-10 and November 13-17, 14:00-18:00 UTC

### 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.



## RC-GRAFSET

### A BETTER WAY TO INSERT ANIMATIONS INTO RC-STUDIO

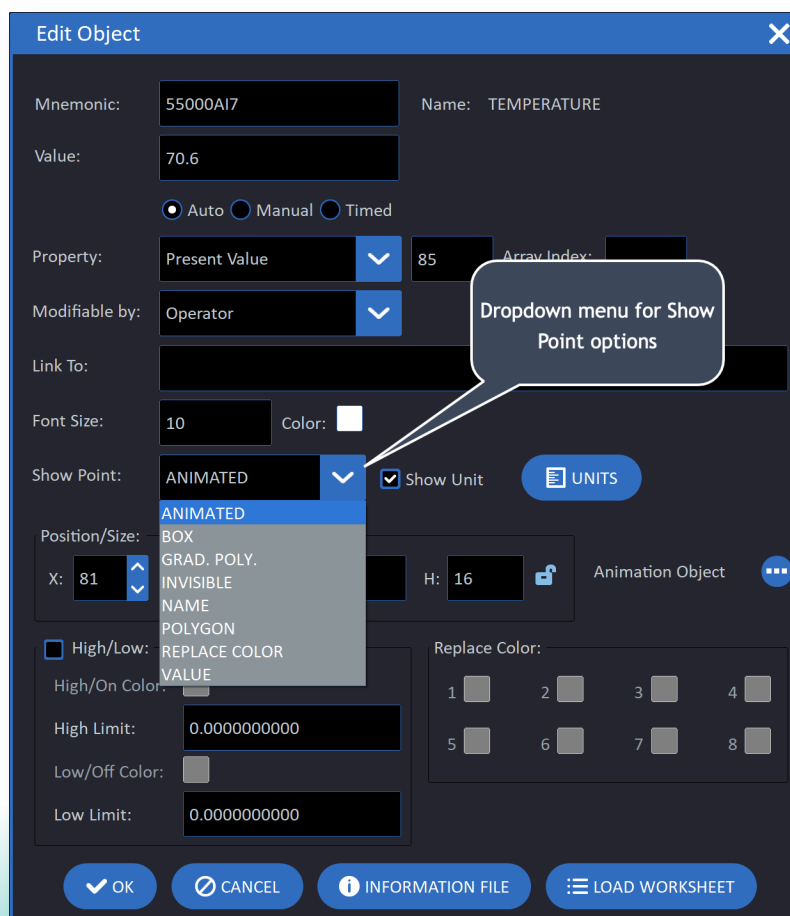
**RCGrafSet®**  
Graphical Images & Services  
Software

You can use two methods in RC-Studio® to insert and edit animations: one provides clear control of the animation, and the other is very limited. Although the latter is used for animations automatically converted from Flash (.swf) to HTML5 (.rca) files using the RC-GrafSet Flash Utility, it lacks clarity and is best avoided when it comes to inserting new animations.

#### Legacy method: Use the Edit Object dialog box

Previous versions of RC-Studio provided a method for inserting Flash animations into a System Group that was somewhat limited. This method is still used to insert .rca animations in RC-Studio 3.6.5 or later and follows these steps:

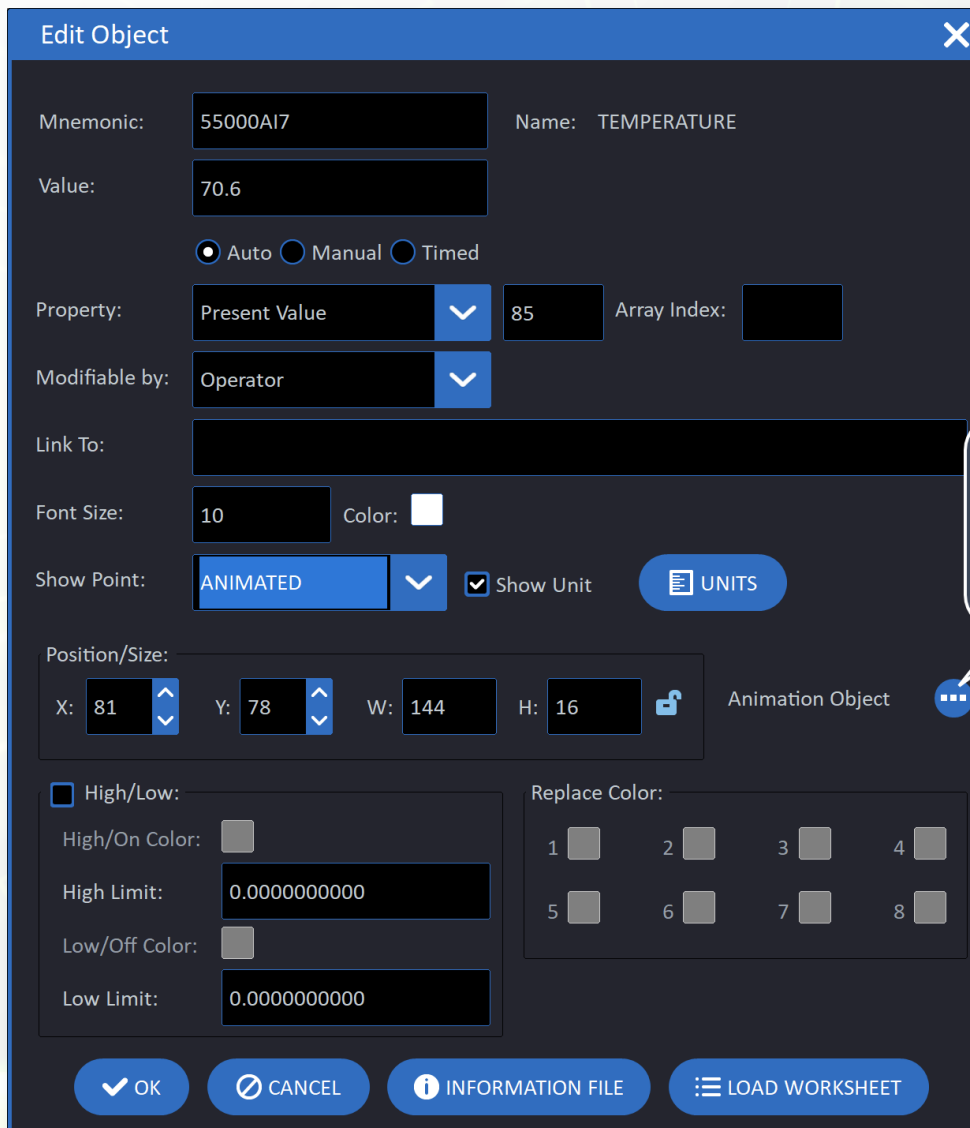
1. Drag an analog or binary object from a worksheet to a System Group.
2. Right-click the object to open the Edit Object dialog box, and use the Show Point drop-down list to set the object type as Animated (Figure 1).



*Figure 1: Drop-down list for Show Point options in the Edit Object dialog box.*

## RC-GrafXSet®

- Click the ellipses next to Animation Object to open the Animated Objects dialog box (Figure 2). Select the animation object type (Figure 3), then browse for and upload the animation file.



**Edit Object**

Mnemonic: 55000AI7 Name: TEMPERATURE

Value: 70.6

☒ Auto ☐ Manual ☐ Timed

Property: Present Value  85 Array Index:

Modifiable by: Operator

Link To:

Font Size: 10 Color:

Show Point: ANIMATED  ☒ Show Unit

Position/Size: X: 81  Y: 78  W: 144 H: 16

Animation Object

☐ High/Low:

High/On Color:

High Limit: 0.0000000000

Low/Off Color:

Low Limit: 0.0000000000

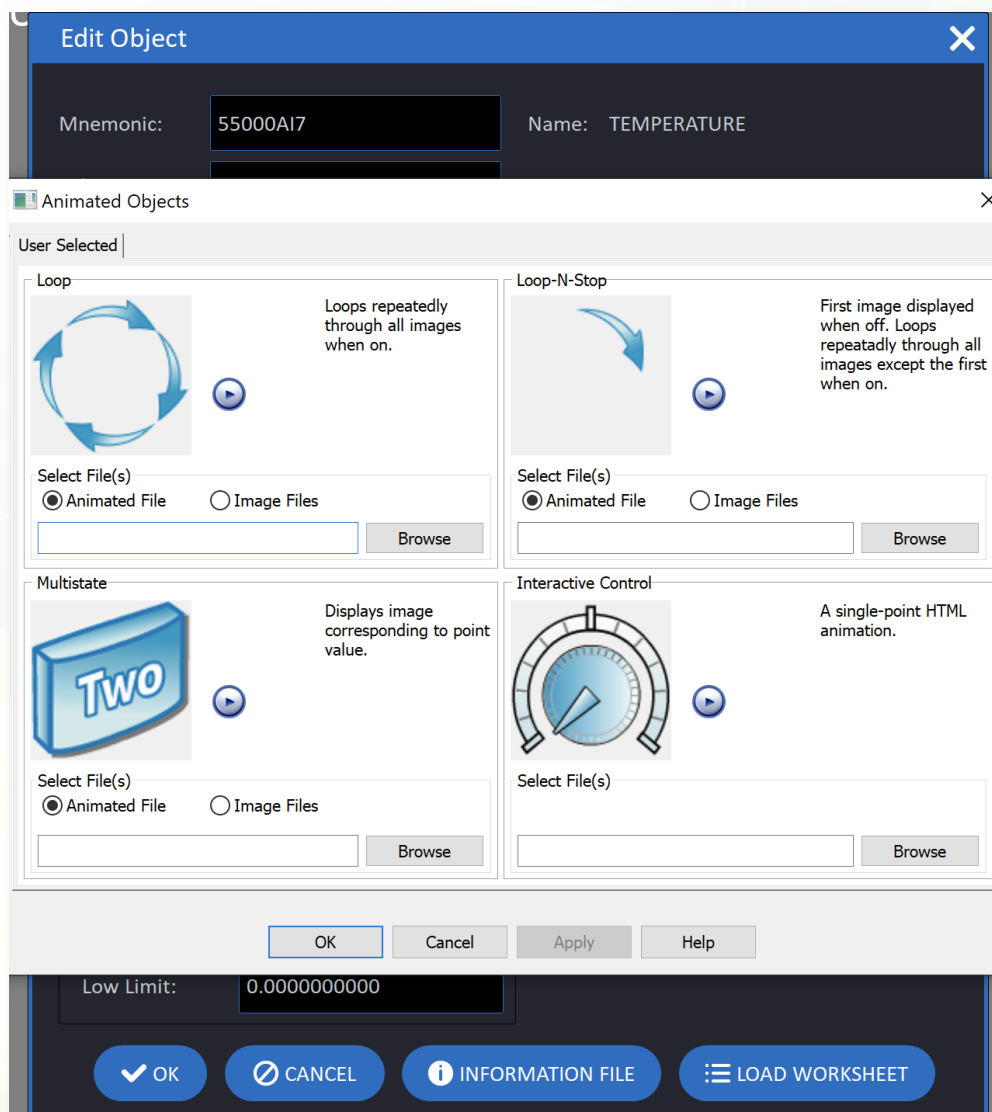
Replace Color:

1 <input type="text" value=""/>	2 <input type="text" value=""/>	3 <input type="text" value=""/>	4 <input type="text" value=""/>
5 <input type="text" value=""/>	6 <input type="text" value=""/>	7 <input type="text" value=""/>	8 <input type="text" value=""/>

INFORMATION FILE  LOAD WORKSHEET

Click here to access  
Animation Object window

*Figure 2: Click the ellipses next to Animation Object to open the Animated Objects dialog box.*



*Figure 3: Animated Objects dialog box.*

For some Flash animations, you can set the high-limit/on and low-limit/off colors, font, and font size to control obviously associated elements within the animation. The limited options provided in the older interface were creatively used to support unrelated elements and thus could become very unintuitive. For example, in Flash animations, the color attribute, usually used for font, was sometimes used to set a background color, or the high- and low-limit colors were used to set the ranges in a color gradient.

The old interface did not provide a way to include custom options, such as hiding or showing specific elements in the animation, uploading images, or specifying heading text. Additionally, only one object could be used by an animation in this interface, making what we now call multipoint animations (using multiple linked objects) impossible.



When you edit HTML5 animation files automatically converted by the Flash Utility from existing .swf files, you will still use this approach. If you need to update an animation to a newer version, we recommend you replace it manually using the approach described below, as functionality could be limited and certain features will not work.

## Preferred method: Use the Insert Animation keyword

This method of inserting .rca animations supports multiple linked objects, click destinations, display names, numerous attributes to control the look and functionality of the animation, and exporting the attribute configuration. Follow these steps to insert an .rca animation using the Insert Animation keyword.

1. Right-click the System Group to open the Insert Point or Keyword dialog box.
2. In the Insert Point or Keyword dialog box, select Animation in the Point/Keyword drop-down list (Figure 4). The Edit Animation dialog box displays.
3. In the Edit Animation dialog box (Figure 5), click the ellipses beside the file input box, and browse to the .rca animation you would like to use.

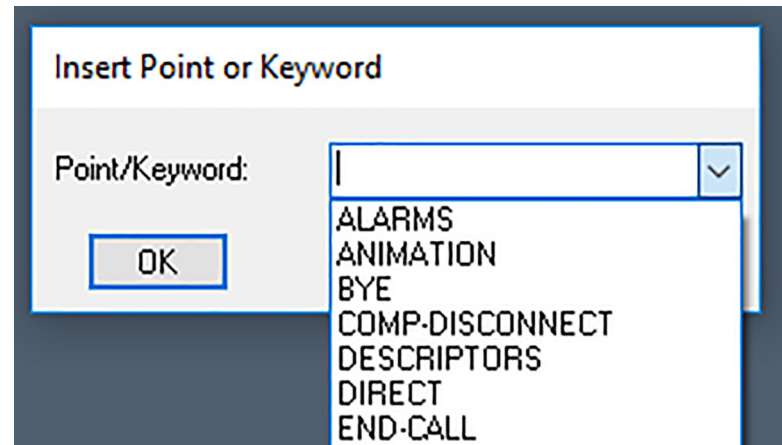


Figure 4: Insert Point or Keyword dialog box.

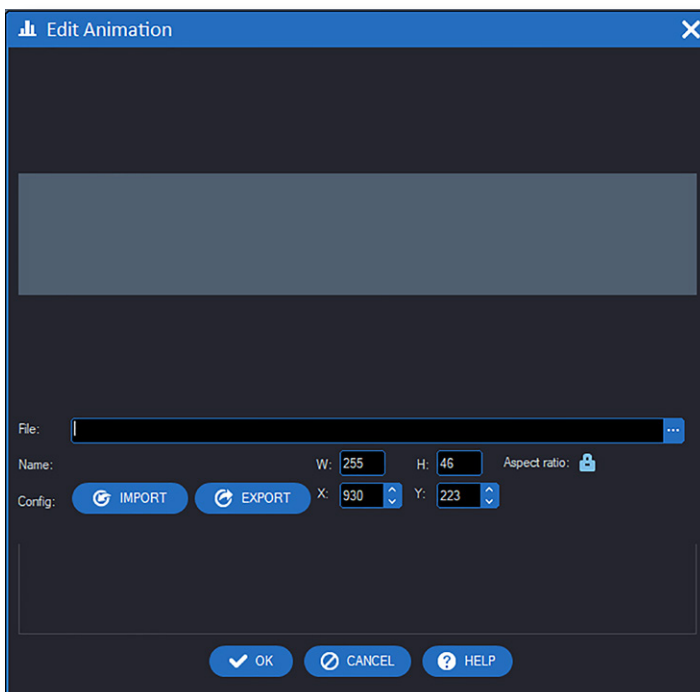


Figure 5: Edit Animation dialog box.



4. In the Objects pane (Figure 6), populate the list of linked objects.

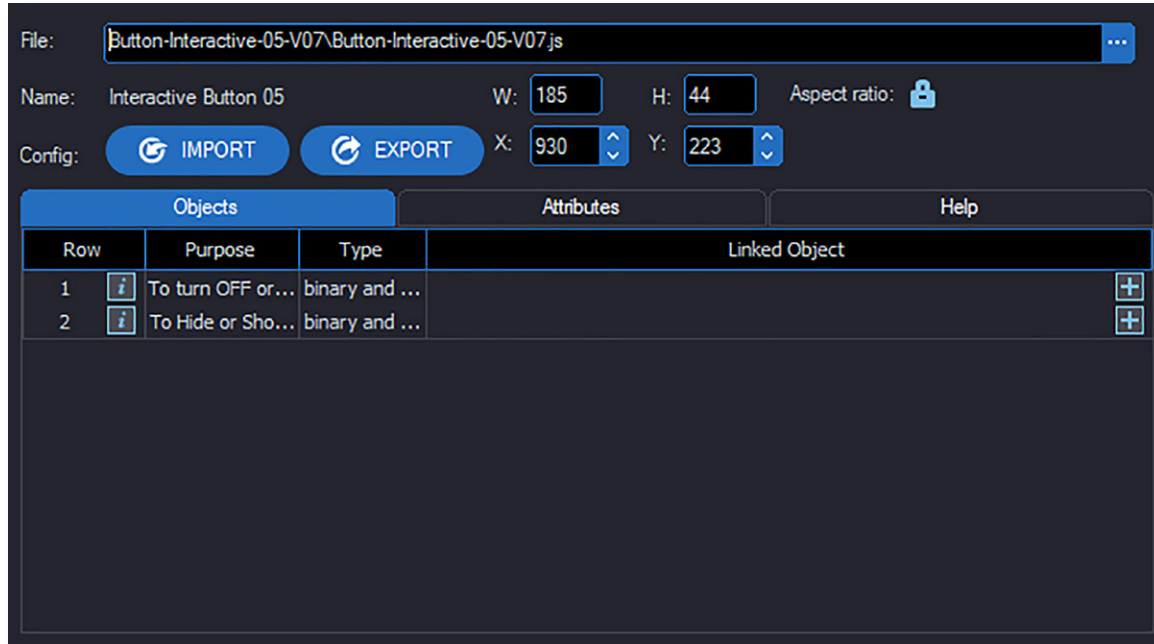


Figure 6: Objects pane in the Edit Animation dialog box.

5. Click the Attributes pane (Figure 7), and set the colors, fonts, and other options as listed specific to the animation. Some animations have no options.

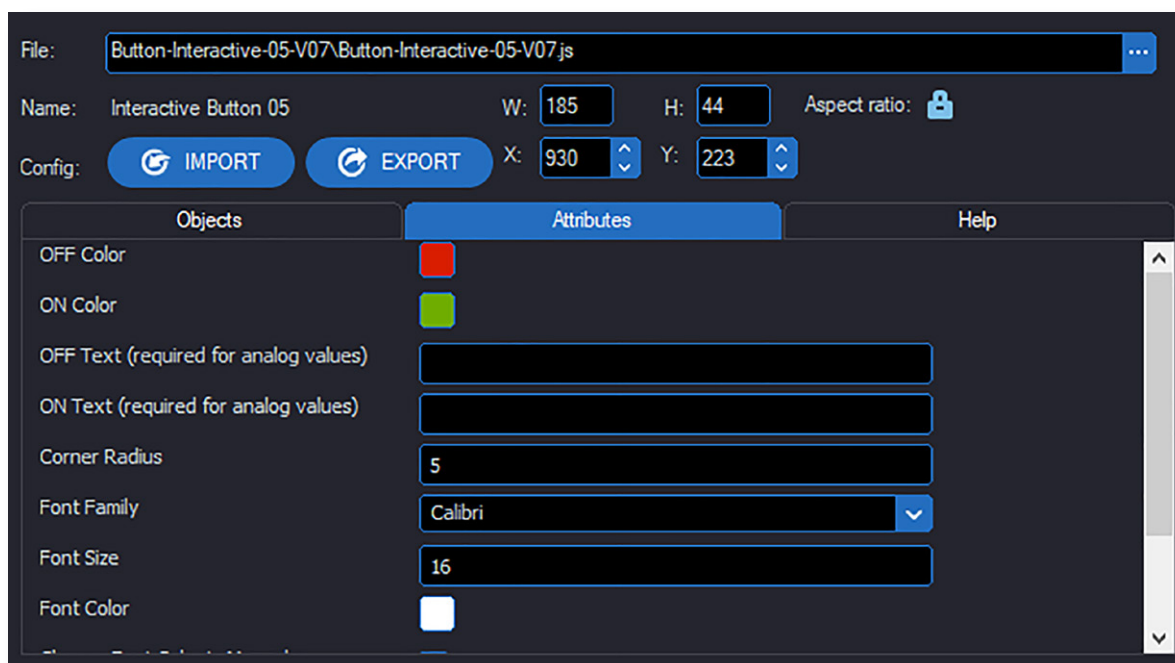


Figure 7: Attributes pane in the Edit Animation dialog box.

Using this approach gives you the ability to intuitively specify attributes, fully supports the animation's functionality, and provides access to animation-specific help information (Figure 8). This method is the same as what you will use to insert animations directly into RC-WebView Navigation Groups in RC-WebView 3.13.3, released this past March.

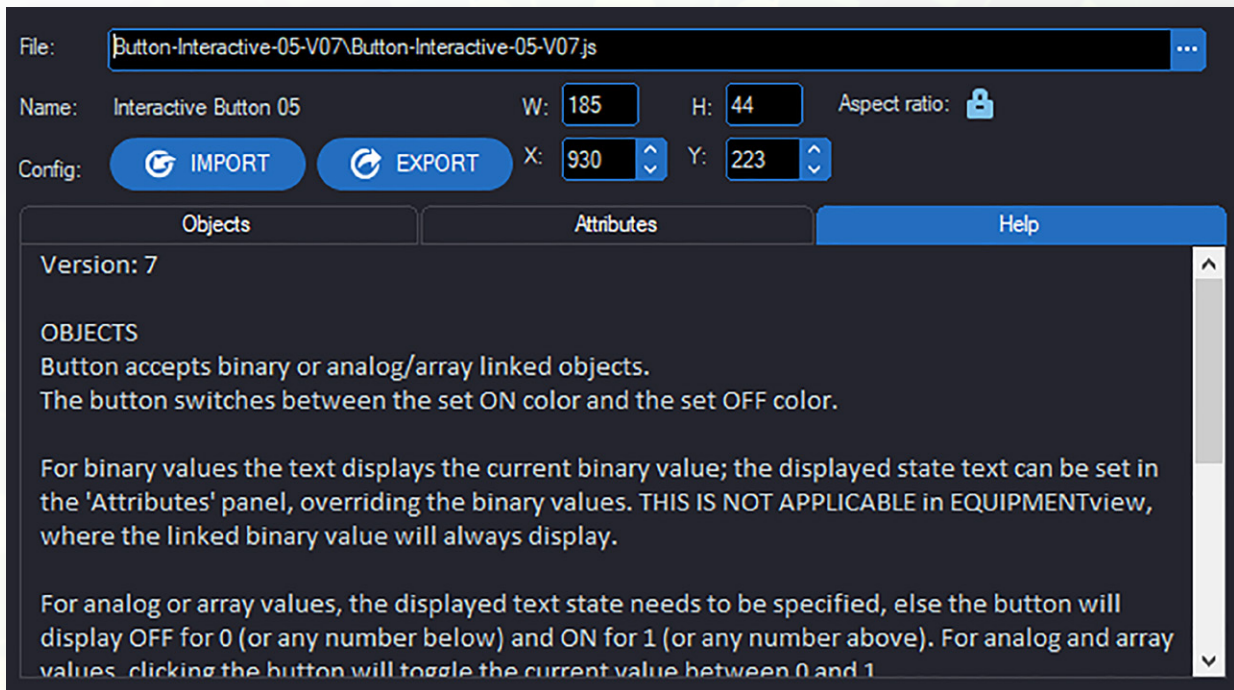


Figure 8: Help pane in the Edit Animation dialog box.

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We are pleased to present Plug Smart Florida with the 2020 Reliable Controls Education Award.

## 2020 Reliable Controls Education Award

We present the Education Award annually in recognition of exceptional corporate dedication to training. The evaluation criteria includes a secret algorithm that levels the playing field for all dealers, small and large.

The criteria are as follows:

- Number of students sent to RCAD training
- Number of students who have achieved level 3 certification
- Number of eLearning exams passed
- Number of students who have attended other classes (e.g., Advanced BACnet, sales training)
- Number of users sent to customer training



Using the above criteria,  
the 2020 Education Award goes to  
... Plug Smart Florida.

Plug Smart Florida showed outstanding commitment and dedication to training its engineering and installation staff as a new Reliable Controls Authorized Dealer.

Honorable mentions go to:

Pritchett Controls  
*(a leader in operator training)*

Unify Energy Solutions  
*(our largest user of eLearning and operator videos)*







# THE Resource



Each year we honor phenomenal Authorized Dealers with Million Dollar, 10 Million Dollar, and Dealer of the Year awards.



## MILLION-DOLLAR MILESTONE

Congratulations to Synergy Automation, Sunbelt Controls, Specialized Control Solutions Australia, RGM Control Systems, Paradise Climate Controls, Nexgen Automation, Kerr Controls, ControlPro Distributors, and Control Concepts of Ohio for reaching over \$1,000,000 in historical purchases with Reliable Controls. This milestone signifies a strong commitment to Reliable Controls and denotes a dealer of distinction.

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AUTOMATION INC.

**SUNBELT**  
CONTROLS

**SC/SA**  
SPECIALIZED CONTROL SOLUTIONS AUSTRALIA

**CCO**  
CONTROL CONCEPTS OHIO

**RGM**  
CONTROL SYSTEMS

**PARADISE SYSTEMS**

**ControlPro**  
DISTRIBUTORS INC

**KERR CONTROLS INC.**  
Building Automation Specialists

**Nexgen**  
COMFORT. EFFICIENCY. INNOVATION

**PRITCHETT**  
CONTROLS

## 10 MILLION DOLLAR MILESTONE

Congratulations to Pritchett Controls for achieving over \$10,000,000 in historical purchases with Reliable Controls. This very significant milestone substantiates a strong and long-lasting commitment to Reliable Controls and provides a testimony of satisfaction from customers with great trust in this dealer of excellence.

**2020**  
**DEALER OF THE**  
**YEAR**

**enviromatic**  
SYSTEMS

Congratulations to Enviromatic Systems, the 2020 Reliable Controls Dealer of the Year. This award recognizes a single dealer with the highest sales for the year in all regions of the Reliable Controls Authorized Dealer network. Reliable Controls is fortunate and honored to earn the continued business of this perennial performer. Congratulations, Enviromatic Systems, on another outstanding year of business, and all the best for 2021.





## PROMOTIONAL PRODUCTS

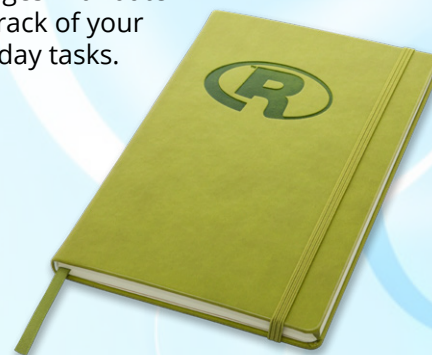
We offer a variety of promotional products to help you look professional.

Reliable Controls is pleased to feature a line of promotional products that are available for order through eBusiness as Category C promotional items.

View promotional products under the Marketing tab in the Dealer Support Center:  
[reliablecontrols.com/support/marketing/promos.php](http://reliablecontrols.com/support/marketing/promos.php)



The Reliable Controls padded cover notebook has lined pages with date fields ideal for keeping track of your day-to-day tasks.



Our 15-ounce branded ceramic mugs are matte white on the outside and glossy green or blue inside.

The water-resistant bike light uses white LED bulbs that function in two modes: continuous and strobe. Use the silicone strap to attach the light to your handlebars, seat post, frame, backpack, or wherever else you want to illuminate yourself while cycling, hiking, and walking. The two mercury-free button-cell batteries are protected by a pull tab. Buy two bike lights, and use one for a headlight and one for a taillight!

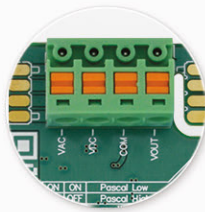


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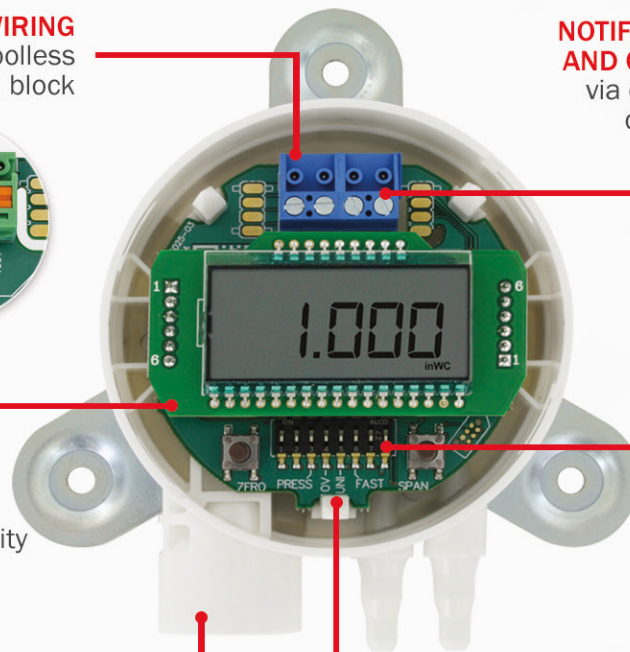
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The Energy Valve also has a patented Power Control and Belimo Delta T Manager™ logic built in to monitor coil performance and optimize the available energy of the coil by maintaining Delta T. In addition to the standard analog signal and feedback wiring, it communicates its data to the Building Management System (BMS) via BACnet MS/TP or BACnet IP as well as Modbus RTU and Modbus TCP/IP. The built-in web server enables clear visualization of the valves' operation in real-time. Cloud data provides lifetime data access.

Belimo Energy Valve - Energy Savings You Can See.



### FEATURES

#### – Delta T Optimization and Flow Setpoints

Cloud analytics provide recommended Delta T and flow setpoints which can be updated remotely or automatically to save time and improve efficiency.

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Charts the load transparency of Energy Valves to quickly visualize where the energy is going with the ability to improve system optimization.

#### – Lifetime Data Access

Secure, single consolidated repository that stores and provides system data access for future optimization. – Online Tech Support Belimo's industry leading technical support team available to assist you remotely.

#### – Software Updates

Latest software and security updates automatically provided for maximum productivity and reliability.

#### – Extended Warranty

5-year warranty is increased to 7-year with Belimo cloud connection.





# THE Resource



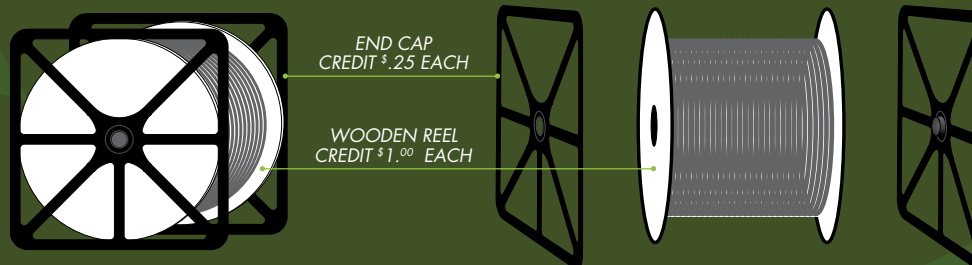
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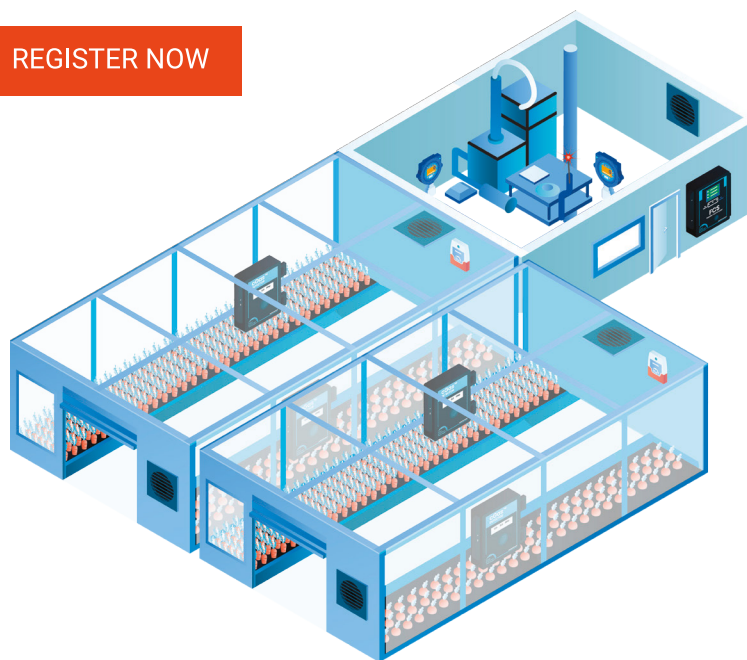
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# THE Resource



Since 1986 Reliable Controls has developed a global network of highly skilled independent controls contractors: our Authorized Dealer network. *The Resource* newsletter supports our collective efforts to earn and sustain the most satisfied customers in the building automation industry. In each issue of the *Resource* you will find information on the latest Reliable Controls products and services and insight into industry news and trends.

We're here to support you to achieve your goals. Together, we are better by design.



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