



PHILIP J. CURRIE PROJECT:
Dinosaur Museum Profile

RC-WEBVIEW 3.8 RELEASE:
Web Access for the Masses



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RUNtime

The Official Quarterly Newsletter of Reliable Controls® Corporation

Q4 - 2017

Introducing
SMART-Sensor™ EPD



Monitor Your
Space *in Style*



SMART-SENSOR™ EPD

Programmable Sensor

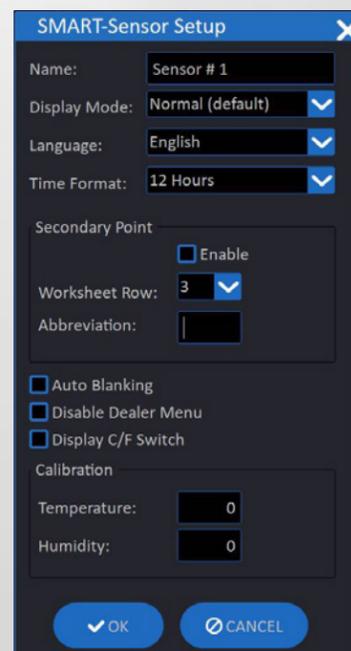
Monitor Your Space *in Style*

A complement to any room, the Reliable Controls SMART-Sensor™ Electronic Paper Display (SS3-E) delivers a stylish, modern, networked sensor solution that displays up to ten configurable parameters related to a space. The updated SMART-Sensor design is centered around a new electronic paper display (EPD) and a low-profile, plastic and glass enclosure, with capacitive touch buttons.

The SMART-Sensor is a powerful and dynamic microprocessor-based sensor that monitors room environmental conditions, and communicates the information back to MACH-System™ controllers via SMART-Net™. The interface clearly indicates object name, value, and equipment status. Even third party BACnet® objects connected to the Reliable Controls MACH-System can be accessed directly from the EPD screen. All SS3-E models include touch buttons and an onboard thermistor for space temperature sensing. Options include CO₂ sensor, front light, humidity sensor, I/O, and enclosure colors in warm gray or white.

The SS3-E is backward compatible with existing SMART-Net networks. New features include a degrees C/F switch accessible from the SMART-Sensor user interface, multiple language support, and an expanded set of status icons.

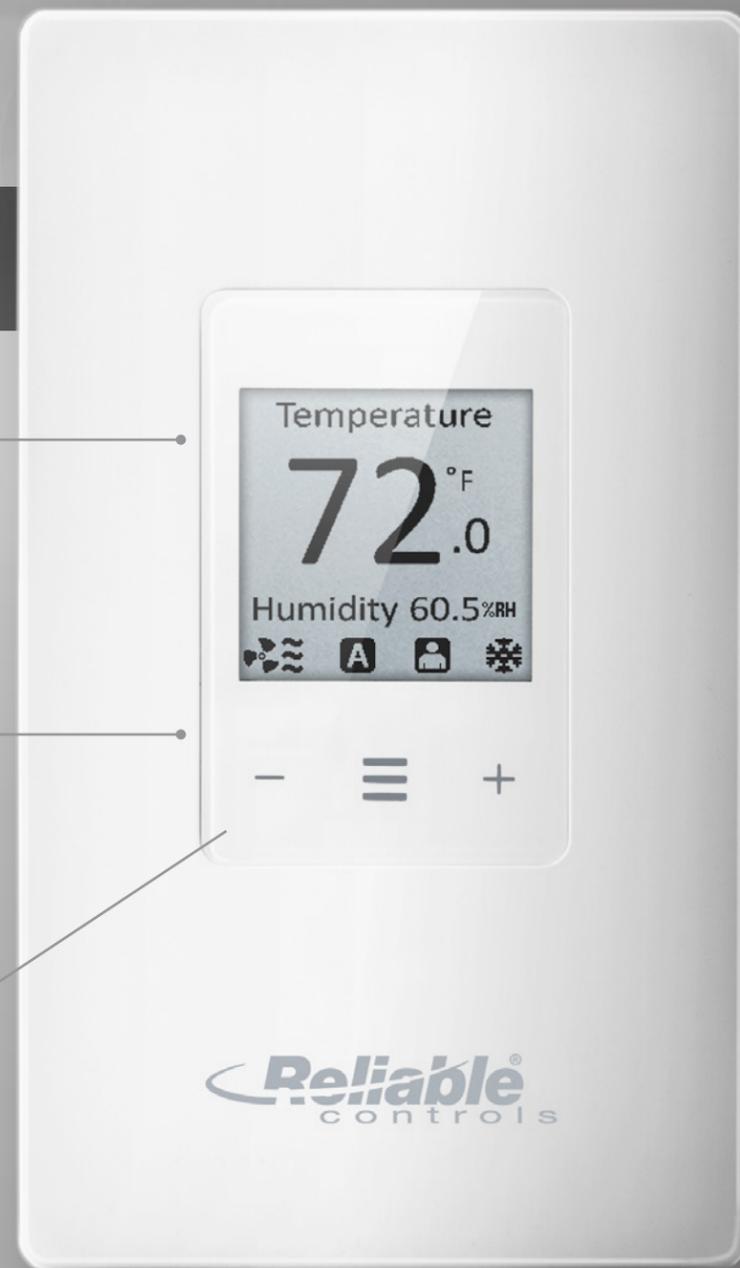
The SS3-E hosts an onboard language library containing over 90 common industry words and phrases in seven different languages. Users can select from English, French, Spanish, Portuguese, German, Italian, or Simplified Chinese.



Multi-Language Support

Electronic Paper Display (EPD) Screen

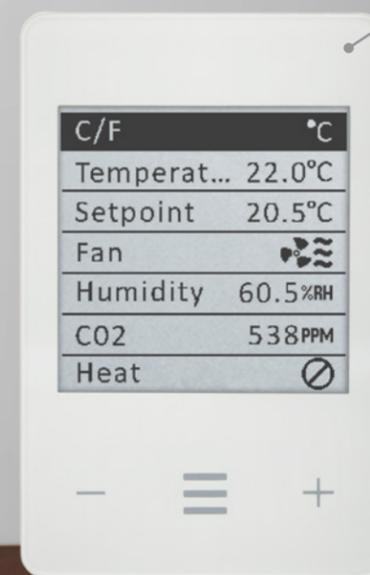
Capacitive Touch Buttons



Low-Profile Plastic and Glass Enclosure



Accessibility Display Mode



List Display Mode

Better by design™

RC-WebVIEW 3.8

Web Access for the Masses



RC-WebVIEW® is a browser-based, enterprise solution that meets or exceeds the BACnet® Operator Workstation profile (B-OWS), allowing operators and administrators to manage any BACnet, Internet-connected building configured with RC-Studio® properties. RC-WebVIEW's strength lies in its ability to connect multiple, independent control systems into a single Enterprise Website, accessed by a Single-Sign-On (SSO).

Schedule-1 - After Hours Report

Service Period: 9/1/17 - 9/28/17 Show future events

| Service | Event | Source | Mnemonic | Start | End | Requested | User | Hours | Reason |
|---------|-----------------|------------|------------|----------|----------|-----------|-------|-------|--------|
| 9/27/17 | Event Request 1 | Schedule-1 | 1000SCHED3 | 8:00 AM | 12:00 PM | 9/25/17 | Admin | 4.00 | - |
| 9/26/17 | New Event | Schedule-1 | 1000SCHED3 | 10:30 AM | 4:15 PM | 9/25/17 | Admin | 5.75 | - |

After Hours Report:
Summarizes all past and future after hours events.

RC-WebVIEW New Features and Improvements

New After Hours Operations allows tenants to request and building managers to approve equipment operation outside of regularly scheduled periods

Improved object selection interface

Enhanced Permissions service for Enterprise Schedules, which allows administrators to restrict access to selected schedules

Improved and optimized overall performance

Enterprise Schedules

Tenant

- Create/Modify After Hours Events
- Approve After Hours Events
- Pop-up After Hours Notifications

Facility Manager

- Create/Modify Default Schedule
- View After Hours Report Summary
- Configure Event Priority
- Configure After Hours Event Repor...

Enhanced Permissions:
Configure access to specific schedules within an Enterprise Schedule.



Improved Object Selection:

Allows more effective use of screen space while providing powerful search and filtering capabilities. When adding objects to a group, worksheet, or tree, click the magnifying glass icon next to a node on the System Tree to search and filter objects within that node.

After Hours Requests

Period: 9/1/17 - 9/28/17

| Requested | User | Special Event | Enterprise Schedule | Event Source | Service | Start | End | Rate | Hours | Cost | Status | Reason |
|-----------|-------|-----------------|-------------------------------|--------------|---------|----------|----------|-----------|-------|--------|---------|--------|
| 9/25/17 | Admin | New Event | User-Test-Enterprise-Schedule | Schedule-1 | 9/25/17 | 10:30 AM | 4:15 PM | \$0.00/hr | 5.75 | \$0.00 | Pending | - |
| 9/25/17 | Admin | New Event | User-Test-Enterprise-Schedule | Schedule-1 | 9/26/17 | 10:30 AM | 4:15 PM | \$0.00/hr | 5.75 | \$0.00 | Pending | - |
| 9/25/17 | Admin | Event Request 1 | User-Test-Enterprise-Schedule | Schedule-1 | 9/27/17 | 8:00 AM | 12:00 PM | \$0.00/hr | 4 | \$0.00 | Pending | - |
| 9/25/17 | Admin | Event Request 2 | User-Test-Enterprise-Schedule | Schedule-1 | 9/28/17 | 8:30 AM | 2:30 PM | \$0.00/hr | 6 | \$0.00 | Pending | - |

After Hours Requests:

The new After Hours Operation uses the events in Enterprise Schedules to function as 'requests', and administrators can choose to approve or reject these requests. If rejected, the event is removed from the service and will not run. RC-WebVIEW's notification service is used to communicate the After Hours Requests, and configure popup notifications. Optional email notifications also allow tenants and administrators to receive their requests by email.

My Tree Settings

Search...

Search Results

- /MACH-ProView/MPTL1 (1124MTL1)
- /MACH-ProView/new (1001GRP1)
- /MACH-ProWeb/TREND_LOG_SINGLE_1 (1000STL1)
- /MACH-ProWeb/AC1-GRP (1000GRP1)
- /MACH-ProWeb/BLDG-TEMPS (1000GRP2)
- /MACH-ProWeb/BLDG-TANK-GRP (1000GRP3)
- /MACH-ProWeb/BLDG-ENERGY-GRP (1000GRP4)

Navigation Tree

- After Hours Report Summary
- After Hours Requests
- AC1-GRP
- Alarm
- 1000RT-REPORT

Search Results:

The Search Results list and the related search and filter features when working with the Enterprise Schedule builder are shown in this example.

WELCOME TO NEW DEALERS

New Reliable Controls Authorized Dealers



A to Z Engineering Solutions
Cairo, Egypt



AHI-Carrier FZC
Sharjah, United Arab Emirates
www.ahi-carrier.com



Automated Environmental Technologies
Dammam, Saudi Arabia
www.aetenviro.com



Energon Energy Efficiency Consultancy Ltd.
Istanbul, Turkey
<http://www.energon.com.tr>



Refrigeration Electrical Engineering
Bach Khoa Co, Ltd.
Ho Chi Minh, Vietnam
www.hvac.vn

TRADE SHOWS

Visit Reliable Controls at these Upcoming Trade Shows

Vancouver Island Economic Summit
October 25-26, 2017
Vancouver Island Conference Centre
Nanaimo, BC, Canada



Columbus Lighting and HVAC Expo
November 1, 2017
Hollywood Casino
Columbus, OH, USA



NFMT Orlando
November 14-15, 2017
Orange County Convention Center
Orlando, FL, USA
Booth #1020

BUILDING OPERATING MANAGEMENT'S
NFMT ORLANDO

PM Expo
November 29 - December 1, 2017
Metro Toronto Convention Centre
Toronto, ON, Canada

pm TORONTO expo

PHILIP J. CURRIE DINOSAUR MUSEUM



Serv-All Highlights the Past with Technology of the Future



Reliable Controls Authorized Dealer, Serv-All Mechanical Services Ltd., completed this new construction project in 2015. The Philip J. Currie Dinosaur Museum rests on the ancient Pipestone Creek, the world's richest dinosaur bone bed, near Grande Prairie, Alberta, Canada. It is a world-class facility in the heart of Peace Country and honors Canada's leading palaeontologist, Philip J. Currie. The project has attracted the attention of multiple celebrities, including Dan Aykroyd, Matthew Gray Gubler, Robert F. Kennedy Jr., and mystery writer Patricia Cornwell.

Designed as a metaphorical reference to the dinosaur bones that reside within, the museum features a geometrically complex roof supported by exposed timber beams. With a total area of 2,713 m² (29,200 ft²), the museum's mechanical equipment includes a boiler, chiller, HVAC, and VAV. The networked MACH-System™ hardware consists of one

MACH-ProWebSys™ controller, one MACH-ProSys™ controller, 26 MACH-ProAir™ controllers, and one MACH-ProZone™ controller. The network topologies are EIA-485 and Ethernet, and the protocol integration is BACnet®.

There are 344 system points and the project is LEED® Silver certified. Strict air quality, temperature, and humidity control were achieved with the Reliable Controls MACH-System.



SERV-ALL
HVAC Solutions

Serv-All Mechanical Services Ltd. has been serving Edmonton, Central and Northern Alberta since 1978. Serv-All opened additional offices in Grande Prairie in 2007 and Calgary in 2016, recognizing the needs of the customers in the North and South by

committing to providing a high level of service to those regions. The company provides HVAC installation, maintenance, and service, as well as building automation system expertise.





Employee Profile

industry professionals that work with the MACH-System™.

Reliable Controls recognizes that for an owner to end up with an optimally functioning control system, it must be installed, programmed and commissioned properly. For this reason, Reliable Controls requires all dealer technical personnel to be certified according to an extensive program of online and classroom training. David is a key part of the Reliable Controls Certification Program, which allows dealers to continuously upgrade and update their proficiency in working with Reliable Controls products. As an instructor, David leads a variety of classroom training sessions, including the core five-day course that must be completed by all dealer technical personnel. David provides training that allows students to work with the latest hardware, firmware, and software while they learn installation and programming techniques and create the database for a typical air-handling unit from start to finish.

David includes a collaborative exploration of how an advanced operator can use a MACH-System to reduce energy, improve occupant comfort, and minimize maintenance costs.

David describes his days as being spent entirely in service to Reliable Controls staff, dealers, and end users... in between sips of coffee. The MACH-System is constantly growing, and David seeks out what Reliable Controls users need to know, and determines the best way to present the information. His knowledge and confidence surrounding the MACH-System is surpassed by few, and David's ability to explain concepts calmly, in plain language, is appreciated by many of his students.

students with technical information when they're asleep... and 'Davey B.' keeps them awake!"

In David's own words... "I'm at my best in front of the class, where my passion for the topics, combined with my terrible jokes, form a spectacle that one cannot look away from. It's a special treat for me to visit far-off places when I take my training show on the road. Traveling to Melbourne and our new Singapore office have been the highlights of the year for me. I love getting to visit the amazing projects that have selected Reliable Controls as their controls vendor, and learn about the brilliant work our dealers do."

Outside of work? I'm a family guy!

My life consists of debating superhero powers with my four-year-old, and eating the baskets of vegetables my wife keeps bringing into the house. We just bought a 109-year-old house, and right now I'm working with one of our dealers to install a control system powered by a MACH-ProView™. We



PEOPLE YOU CAN RELY ON

David Brunson: Training Instructor & Transceiver Host

For almost a decade, David Brunson has inhabited roles that have allowed him to interact directly with the Reliable Controls Authorized Dealer (RCAD) network. Starting in 2008 in the Technical Support department, David provided telephone support to dealers and end users for seven years. In this role, he was exposed to every aspect of the Reliable Controls product line. David's technical expertise,

and his understanding of the challenges faced by technicians on projects, led to his current role in Training.

David's current position is dual-purpose: he is the host of the Transceiver Webcasts, and is also a classroom instructor for courses in Canada, Australia, and Singapore.

The Transceiver Webcasts that David hosts are dealer-exclusive events, providing a place for the RCAD network to learn about the

features and benefits of Reliable Controls products. Each webcast is condensed into an hour, and David delves into topics related to Reliable Controls products, and to the HVAC Controls industry. Guests are regularly featured in order to share insights into product development and design, directly from the creators. David's extensive experience in Technical Support positions him as an ideal host; he knows the product line well and has awareness around challenges and features that would be of utmost interest to the

David also leads a two-day advanced operator course, ideal for building managers and operators who wish to derive maximum benefit from their MACH-System installations. In this course,

Robin Smith, Manager of Training, says, "David's years of experience in Technical Support along with his quirky sense of humor have proven to be an excellent combination in the classroom. You can't fill

weren't looking to take on a big home renovation project, but the Victoria housing market is very competitive, so it's time for me to learn. I've lived in Victoria my entire life, and I have no plans on leaving. I love it here."

AKRON ART MUSEUM

AKRON, OH, USA

MUSEUM

UPDATING A LANDMARK BUILDING

The Akron Art Museum is a metropolitan art and cultural center, as well as an educational facility. Spanning three centuries, the Akron Art Museum combines a late nineteenth-century brick and limestone building with the twenty-first century John S. and James L. Knight Building, a soaring glass and steel structure by the celebrated Viennese architectural firm Coop Himmelb(l)au.

PROJECT DETAILS

Reliable Controls Authorized Dealer, Best Commercial Energy Services, Inc., completed this retrofit project for the Akron Art Museum. This community facility encompasses several usage types, including exhibits, training, an auditorium, and corporate gatherings. Maintaining critical temperature and humidity control while bringing the new system online presented challenges, as did working with restrictive sensor and device locations and converting old pneumatic actuators to direct digital control actuators.

Networked hardware includes a MACH-ProWebSys as a front-end device with MACH-Pro1 and MACH-Pro2 controllers serving the air handling units (AHUs). SMART-Sensor LCD devices are installed for all zone temperature/humidity sensors. MACH-ProAir controllers serve critical art storage zones and MACH-ProZone controllers serve all radiant floor loops and snow melt zones.

Mechanical equipment includes two chillers, two boilers, 12 AHUs with chilled water, hot water, reheat, outside air flow monitoring, and variable frequency drives (VFDs) on all fans. Two of the AHUs are VAV style with VAV boxes downstream. These units serve critical art storage areas.

The facility is currently a 24/7 operation. Critical environment control is of utmost importance for this community facility, and the MACH-System™ has done an excellent job achieving this goal.

To learn more about projects using Reliable Controls® visit
www.reliablecontrols.com/projects/overview



PROJECT TYPE:

Retrofit

TOTAL AREA:

7,832 m² (84,300 ft²)

INSTALLATION TYPE:

Boiler, Chiller, Fan Coil Unit, HVAC, VAV, Radiant Floor Heating, Radiant Cooling, Snow Melt System

EQUIPMENT INSTALLED:

2 MACH-ProWebSys™
 2 MACH-ProCom™
 4 MACH-Pro1™
 9 MACH-Pro2™
 10 MACH-ProPoint™
 23 MACH-ProAir™
 4 MACH-ProZone™
 5 SMART-Space Controller™
 26 SMART-Sensor™ LCD

NETWORK:

EIA-485, WAN

INTEGRATION:

BACnet®, SMTP

RELIABLE CONTROLS® DEALER:

Best Commercial Energy Services, Inc.

