

Brading pushes the envelope in motorized window coverings—and now the art world—with a little help from Omron's ZEN controllers

Innovative motorized window coverings developed by Brading Fabrication Ltd have solved complex residential and commercial installations for nearly 35 years. In 2011, they accepted a challenge from kinetic artists for a large scale sculpture that pushed the artistic and mechanical boundaries for interacting combinations of window treatments. With a little help from Omron's ZEN controllers, the sculpture presents viewers continually changing colors and patterns.

Using a versatile combination of programmable controls, motion sensors, motors and window treatment products, Brading Fabrication delivered an easy-to-install sculpture with simple programming that allowed the artists to fine-tune and change the motion sequence of the sculpture. As with most companies that excel in delivering innovative solutions, Brading Fabrication relies on strong internal talent and reliable suppliers up for a challenge. The engineering skills of company president Ed Bonisch and programming skills of Roman Gawlas are the creative force behind solutions for complex window shapes such as fully retractable trapezoidal shades, gently curving shades and skylight shades. They have partnered with suppliers whose products offer the flexibility to achieve their designs, including Omron Automation and Safety for controls and AC-to-DC power supplies, and high quality, premium priced motors and window treatment products from Silent Gliss. "We use nothing, nothing but Omron's ZEN10 and ZEN20 controllers in our jobs," said Bonisch. "They only cost about \$120, but there's nothing else like them in the industry. They're extremely reliable, extremely versatile and extremely easy to work with. They're an amazing product from an amazing company."

Pushing artistic and mechanical boundaries

In early 2011, Bonisch was contacted by Jennifer Marman and Daniel Borins, the kinetic artists who had a vision for a large scale sculpture that combined brightly colored, moving vertical blinds, rollers and shades to create a constantly changing abstract composition.

"Roman and I were technical guys, not artists, but mechanically, we could figure out what needed to be done in order to help them achieve their vision," said Bonisch.

Their ultimate solution consisted of a series of ZEN20 controllers and expansion units in a master/slave configuration, with an Omron S8VK-G series Power Supply Unit. But, unlike most of

Brading's installations, this was not a "one and done" situation. Fine-tuning the intricate and complex movements of the sculpture took nearly two years of collaboration.

"This was where Roman's programming genius—and the versatility of the ZEN—were really tested. The artists needed to continually adjust the movements. 'Make this sequence three seconds instead of five seconds,' and so on. And these programming changes needed to be done without impacting or delaying other sequences," explained Bonisch. "Fortunately, both Roman—and the ZENs—were more than up to the challenge."

Museum quality—literally

The resulting sculpture—"Pavilion of the Blind" has been a great success, with its two editions showing all over North America, including the Tierney Gardarin Gallery in Manhattan's Chelsea art district and the Art Gallery of Hamilton in Ontario. It was also selected to be at the entrance to the Toronto Art Fair in October, with both editions placed side by side for maximum impact. And, the piece was recently honored by Silent Gliss as one of the "Best Projects of 2013" utilizing its world-renowned products.

"We always work to make sure that our window installations are as beautiful and as functional as possible. But now we can undeniably say that we've helped create a true work of art—literally on display in museums and galleries," said Bonisch.

Omron ZEN keeps right on working

Bonisch notes that Marman and Borins are part of a new breed of kinetic artists who delight in showing off the electronic "guts" of their works rather than attempting to hide them.

"I'm glad, because the Omron system is kind of an unsung hero here," he said. "We calculated that over nine months, the ZEN controllers on the piece have been triggered the equivalent of 37 years-worth of typical window installation use—with a single glitch. As always, they are just unbelievably resilient and have been working flawlessly for us."

The ZEN10 and ZEN20 are often thought of as being at the lower end of the powerful Omron PLC line, with the revolutionary Sysmac NJ controller at the top. But, notes Omron industrial components account manager Wayne Foster, these products continue to be incredibly useful in a wide range of applications.

"Often we see the ZEN used very effectively in simple building automation and at controlling lights, timing sprinklers and in similar applications," noted Foster. "Innovative customers like Brading have really demonstrated how versatile and powerful this product can be, and how many different and new applications can still be found that can benefit from its flexibility, durability and low cost."

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