



Case Study

EAO opens windows.

Quality in design with EAO Series 04.

The benefits of a design engineering partnership: How EAO's design expertise helps improve passenger experience.

eao ■

EAO reputation as an expert partner for passenger transportation – Custom illumination and attractive design for passenger operated windows.

EAO's consultative-engineering partnership helped in the selection of proper passenger-operated window controls that met specific design criteria and public use.

Company Profile

Customer Profile
Sotetsu Holdings, Inc.

Market
Transportation

Application
Window openers

EAO Series
Series 04



High-use applications require user-friendliness and highly reliable HMI components.



The EAO Series 04 pushbutton provided an easy, intuitive control and reliability for passengers in the newly redesigned railcars.

Business Challenge

To celebrate the 100-year anniversary, Sotetsu Holdings has remodeled its train cars. As a part of this new design initiative, and to accommodate the rigorous demands of public use, Sotetsu installed passenger operated windows in the new Yokohama Navy Blue 9000 series of rail cars, named after a famous Japanese port, which is a growing concept in the industry.

The challenge Sotetsu experienced was that the new windows had to be reliable and safe for passenger use. This critical user interface required proven components that will maintain dependability for the typically long-life cycles of railcar operability.

Specifically, customer requirements included an attractive design, custom illumination, user-friendliness and highly reliable components with a sustainable track record of meeting the customer demands of the new train car remodeling project.

Moreover, the windows had to meet the sleek, modern aesthetics of the new railcar design which resulted in limited space for its associated controls. Additionally, the bigger illuminated design of the product provided a user-friendly experience and overall better function for the passenger.

Solution

The lead designer on the project, Wakao-san, recommended EAO for the provider of controls because of EAO's reputation as an expert partner for Human Machine Interfaces (HMI) within the passenger transportation market. In past projects, Sotetsu was thoroughly impressed with EAO's industry knowledge of application requirements along with the appropriate standards and certifications.

Sotetsu confirmed EAO's ability to supply high quality designs to meet the rigorous demands and performance reliability requirements with their industry leading interface components and systems.

Based on its strong reputation in the rail industry, EAO provided a good range of function, as well as an intuitive product that provided brilliant illumination, intuitive touch for the passenger and an overall innovative, intuitive and reliable products for harsh use in the railway industry.

To ensure the specifications were met for the project, the EAO Series 04 pushbutton was selected because it met the specific

EAO products provide durability in high-use environments and maintain a contemporary aesthetic to fit customer's specific design requirements.

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Wakao-san, the lead designer of the new train, selected EAO for the project.

requirements of the customer. The colors red and green were too strong for the customer, however, amber and green were a perfect fit and resonated well with the customer's ideas, providing an easy understanding to push.

EAO's proactive, consultative-engineering partnership helped Sotetsu in the selection process of proper passenger-operated window controls that met the end-user's specific design criteria, the demands of both the market and public use, and challenging redesign of the new railcars. EAO added significant value for Sotetsu by providing a passenger-operated control that was reliable, safe, and uniquely illuminated for easy recognition in both night and day use.

Most important, the design of the new switch was aesthetically pleasing and capable of withstanding high passenger use. In the end, Sotetsu was impressed with EAO's contribution, thus reinforcing their value as an HMI expert partner and their ability to understand the vision to develop an effective result.

Results

EAO added significant value by

- Installing a HMI solution that was aesthetically pleasing and capable of withstanding high passenger use
- Adding significant value for Sotetsu by providing a passenger-operated control that was reliable and uniquely illuminated for easy recognition in both night and day use
- Reinforcing value as an HMI expert partner and their ability to understand the vision to develop an effective result
- Providing marking and assembly of panel

EAO won this project through our

- Proactive, consultative-engineering partnership
- Innovative approach, exceeding the end-user's specific design criteria
- Integration with the sleek, modern aesthetics of the new railcar design which resulted in limited space for its associated controls

It's important to work with an HMI expert partner who can address all the human factors, technical and commercial considerations of a complex HMI development project.

Furthermore, EAO's HMI Components and Systems undergo rigorous testing to assure required reliability, repeatability, and long service life. EAO is ISO 9001, ISO 14001, IRIS, and ISO / TS 16949 certified for automotive and other industry requirements.

Innovation by Design: Sotetsu was impressed with EAO's contribution, thus reinforcing their value as an expert HMI partner and their ability to understand the vision to develop an effective result.

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Your centre of excellence.

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