

Unique Electrical Enclosures Help Automatic Car Wash Give Driver Instructions

An Allied Moulded Success Story



Application: Mister Car Wash was in need of an audible system that could help convey driving instructions to vehicle operators in the car wash. In order for the electronics to function safely, they needed a corrosion-resistant enclosure that could fully protect vulnerable components from the water and detergents present in the car wash.

Scope: Automated car washes present design challenges. The primary function of the car wash exposes electrical systems to water and powerful chemical cleaners. Enclosures have to be completely water-tight and provide resistance to corrosion from chemical agents in the wash. Mister Car Wash is a prolific business with more than 300 locations across multiple states. Any enclosure solution had to be scalable to that level of operation while meeting all of the challenging criteria.

Challenges: The car wash environment is highly corrosive due to the use of water and chemical detergents. The electrical components must be protected from these elements to ensure reliable operation. Additionally, the enclosure must be able to withstand high-pressure water jets and maintain a tight seal to prevent moisture ingress. The solution needed to be cost-effective and easy to install across a large number of locations.

Competition: Hammond Manufacturing, Delvalle, Polycase

Solution: The solution to Mister Car Wash's unique set of challenges came in the form of three products. Together, they were able to provide a low-cost, functional enclosure that allowed the audible system to function in safety, despite the wet environment.

The first product is AMP 1426CCCLF. This is the primary enclosure that was modified to house the audible systems. The mix of polycarbonate and stainless steel allows this enclosure to withstand high-pressure water as well as potentially corrosive components used in the car wash mechanisms.

The second piece of the puzzle is the PL142. This is the back panel for the enclosure that allows the electrical components to safely mount to the audible system. This panel is constructed from carbon steel and mounts with four precision screws.

The final component of this solution is the AMVENT4XLG. This is the enclosure ventilation kit that allows safe airflow for cooling and ventilation. It prevents the audible systems from overheating without compromising their protection. It is made from polycarbonate thermoplastic to provide a durable, corrosion-resistant airflow mechanism.

Control Series Features

- Non-corrosive
- Non-conductive
- Easy to modify
- Light weight with lower installation cost
- Longer life cycle
- Rigid design
- Non-metallic mounting brackets