

Delivering Superior Protection and Performance for HVAC

HVAC companies face many challenges today, including system inefficiencies, productivity inconsistencies and safety issues. The Mini-Fit Sigma Sealed Connector offers exceptional features to meet the performance and protection demands of an efficient heating/cooling system.

Business Challenge

In consumer and commercial markets, power end applications such as heating, ventilation and air conditioning (HVAC) systems require protection from their harsh surroundings. HVAC design engineers are often challenged with protecting their equipment from dust, debris and condensation ingress, especially when a connector is required in moist environments. In these situations, physical shielding around the connector is imperative to ensure excellent performance.

Solution

When customers want to safeguard their equipment, and operate with maximum efficiency, Molex offers reliable products that stand up to the test. The Molex Mini-Fit Sigma Sealed Cap and terminal position assurance (TPA) provides exceptional protection from water, dust and debris ingress, while also inhibiting terminal back-out.



For example, a global HVAC company required ingress protection for its equipment, in order to avoid complications. The company specifically had problems with keeping its AC equipment clean from debris and free from moisture due to condensation. It was clear that some type of sealing was necessary to buffer the connector.



connector sealing, some competitors use O-rings, which may not provide the optimum seal protection; however, Molex's Mini-Fit Sigma Sealed cap offered an exceptional shield against water ingress. These sealed connectors successfully reduced the condensation and debris inside the units by using a rubber material sealed cap on the end of the connector. Also, the TPA and seal cap helped to avoid terminal back-out and environmental terminal damage, respectively.



Mini-Fit Sigma Sealed Connectors' uniquely designed rubber cap protected the connectors and could be easily opened for quality inspections. Overall, our customer saved time and money not only in operational costs, but also in labor when employees performed physical inspections on the individual connector systems.

Mini-Fit Sigma Sealed Connectors

This solution for manufacturers of HVAC systems is also cost-effective in the market with our IP51-tested and approved connector system. Mini-Fit Sigma Sealed Connectors offer a 4.20mm pitch and a current rating up to 11.5A, and the plug has a plastic peg that will keep the sealed cap in place and help with assembly. Our design engineers have also included a robust panel-mount latch design for easier locking into the panel and better compression.



The Mini-Fit Sigma Sealed Connector also meets global distribution needs such as European Glow Wire requirements and mates to standard Mini-Fit receptacles.

As a result, the Mini-Fit Sigma Sealed Connector system offers an excellent solution for ingress challenges of HVAC operations by providing superior protection and performance for efficiency and reliability.

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