

Case Study

Scientific Protein Laboratories

Switch-Rated Plug and Connector Simplifies Rooftop Exhaust Fan Service

Many facilities have rooftop exhaust fans that require service, sometimes at the most inconvenient time. Before service work is initiated the NFPA 70E Standard for Electrical Safety in the Workplace requires the establishment of an electrically safe work condition at the fan, this includes properly interrupting the load current, visually verifying that all blades of the disconnecting device are open, and correctly applying lockout/tagout devices.

Establishing an electrically safe work condition at an exhaust fan often requires that an arc flash trained electrician perform the electrical de-energization work. Additionally, voltage testing is usually required to verify that the equipment is de-energized. Since voltage testing potentially exposes workers to live parts NFPA 70E requires workers to wear appropriate PPE.

A better alternative to hardwired disconnect switches is MELTRIC Switch-Rated plugs and receptacles which can be used to connect power to the exhaust fan. With MELTRIC Switch-Rated devices installed, a technician can safely disconnect, repair or replace, and then reconnect exhaust fan motors with plug and play simplicity. There is no need to climb up and down ladders to turn off remote disconnect switches nor is there a need to wear cumbersome PPE when verifying de-energization with a voltmeter because the disconnected plug and receptacle gives visual proof.



“With the MELTRIC connector installed there is no need to physically mount a disconnect within sight for smaller motors on the roof so this is a good solution for us” said Monique Newell, a maintenance specialist at Scientific Protein Laboratories (SPL), a leading global supplier of high quality active pharmaceutical ingredients. SPL recently installed MELTRIC Switch-Rated plugs and receptacles on rooftop exhaust fans. Switch-rated devices eliminate the need for costly, hard to locate disconnect switches. They also simplify NFPA 70E code compliance for the laboratory because they help maintain a NFPA 70E defined hazard risk category of zero during the equipment changeout process.

MELTRIC Switch-Rated devices are a combination plug, receptacle and UL approved disconnect switch in the same device. They feature an integral switching mechanism that ensures the safe make or break of live connections and makes certain that the contacts are dead before the plug can be removed. Once the plug is withdrawn users are protected from unintentional access to live parts by the receptacle’s safety shutter. Safety is also maintained when re-inserting the plug into the receptacle because the male contacts do not engage the live female contacts until after they are fully enclosed inside the device’s arc chambers, thus preventing outside exposure to arc flash – even in overload conditions.