

CASE STUDY

Keeping the Lights On

Keeping Streets Bright

There are many street light controllers that sense when the sun goes down to switch on the light. However, these street lights require continual maintenance as they need to be visually inspected for outages and pole damage.

Lab 65l designed a street light controller that alleviates this burden. What makes the device unique is that it has sensors to detect when the light is out, if the light pole is down, or if a vehicle strikes the pole. It contains a cell-phone modem and GPS to connect it and can call to a center to report when repairs are needed. This saves time by removing the need for visual inspection and reduces the time that lights are out.

Less Downtime, Easier Maintenance

Lab 65l designed the entire device including: the case, the radio frequency (RF) antenna, electrical components, and software elements. The case has an O-ring seal to protect the electronics from severe storms and other environmental challenges. Lab 65l sourced a special foam silicone gasket that was used to create a seal between the face of a National Electrical Manufacturers Association (NEMA) three-blade socket and the base of the device.

Lab 65l also researched the most suitable injection-molded resin to use that was UV-resistant and could withstand the full range of environmental temperatures required. The plastic resin also needed to pass Underwriters Laboratory (UL) flame rating requirements. Using finite element analysis (FEA), all snap-lock joints were stress-analyzed to ensure a proper fit and assembly force.

Lab 65l designed all the plastic injection-molded parts and brass contact blades for the NEMA socket. Once the databases and documentation were created, everything was transferred to the client. The client had tooling built and handled manufacturing logistics issues; Lab 65l provided the support necessary to transition the device into manufacturing. The street light controllers helped decrease downtime by automatically alerting inspectors of problems.

Developing connected devices is our specialty at Lab 65l. Contact us for your next project at www.Lab65l.com.



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