



Southwire®
WE DELIVER POWER... RESPONSIBLY

CONNECTING THE NATION: ADVANCING EV INFRASTRUCTURE FOR A SUSTAINABLE AND RELIABLE FUTURE

AGILITY//EXPERTISE//ACCELERATE//INNOVATE

CUSTOMER

A cutting-edge electric vehicle manufacturer

LOCATION

Austin, TX

INDUSTRY

Electric Vehicles

PROJECT

Nationwide EV charging infrastructure expansion

When a leading player in the electric vehicle game was on the hunt for liquid-cooled charging (LCC) cables for a massive infrastructure project, they turned to Southwire. They needed a reliable American manufacturer that could create these specialized cables for ultra-fast DC charging with the ability to scale up production for EV charging stations nationwide.

Enter Southwire. Our engineering team teamed up with the EV manufacturer to create LCC cables tailored to their exact needs. Plus, we put them through rigorous testing in our in-house UL-approved laboratory to ensure they meet all power and performance requirements. As the largest US-owned manufacturer of electrical wire and cable, Southwire was uniquely positioned to mass produce these cables efficiently and handle increased demand seamlessly given our extensive experience with this technology.

Since 2017, Southwire has been the go-to supplier of liquid-cooled cables for this ongoing project, powering up the future of electric vehicle charging across the country.

CHALLENGES

- Prevent EV charging cables from overheating
- Provide cables compatible with quick charging technology
- Scale production to meet the growing nationwide demand
- Ensure compatibility with existing charging station technologies

SOLUTION

Customized design for liquid-cooled, DC charging cables

CUSTOMER BENEFITS



Specialized design of LCC cables



Customized solution based on customer specifications



In-house UL-approved laboratory for product testing



Sole supplier of LCC for over 7 years



10+ years of LCC innovation

WHY USE LIQUID COOLED CABLE?



HIGH CURRENT & FAST CHARGING

Air-cooled charging cables typically yield less than 200 amps of charging current. Southwire's patented technology can supply currents from 400 amps to 1,000–3,000 amps, which is 2-5 times greater than conventional air-cooled EV cables.



COOLING DEVICE & CONFIGURATIONS

Southwire's closed-loop cooling design strategically connects the load station with energy storing battery packs with the power supply source and the coolant pump station. This innovative configuration using the supply vs. return coolant hoses with a long coolant pathway with bifurcation points allows the heat to be exchanged optimally using the largest surface area.



UNPARALLELED ENGINEERING SUPPORT

Southwire's CableTechSupport™ Services team provides Re³™ engineering consultation services through the custom design of reinforced cables and the support of critical infrastructure projects where resilience and reliability are non-negotiable.