

SOLACE | MOTHERSON

# Wireless Power Sensor Heating for Thermoplastic Exterior Car Parts

Motherson and Solace Power showcase a wireless power module that delivers surface heat that de-ices or de-fogs radar covers.

## THE CHALLENGE

In this application, Motherson and Solace Power explored the potential of wirelessly heating and defrosting thermoplastic exterior car parts. For this project, the specific scope was limited to wirelessly delivering heat to a heating coil that is embedded in an exterior radar cover. Due to the location of the heating coil and Class A part requirements, it is undesirable to use a physical power connector as it is difficult and requires manual labor to assemble, can be visually unappealing, and presents a potential point of failure. Motherson and Solace Power teamed up to combine their respective strengths in wire harnesses, plastic components, and wireless power.

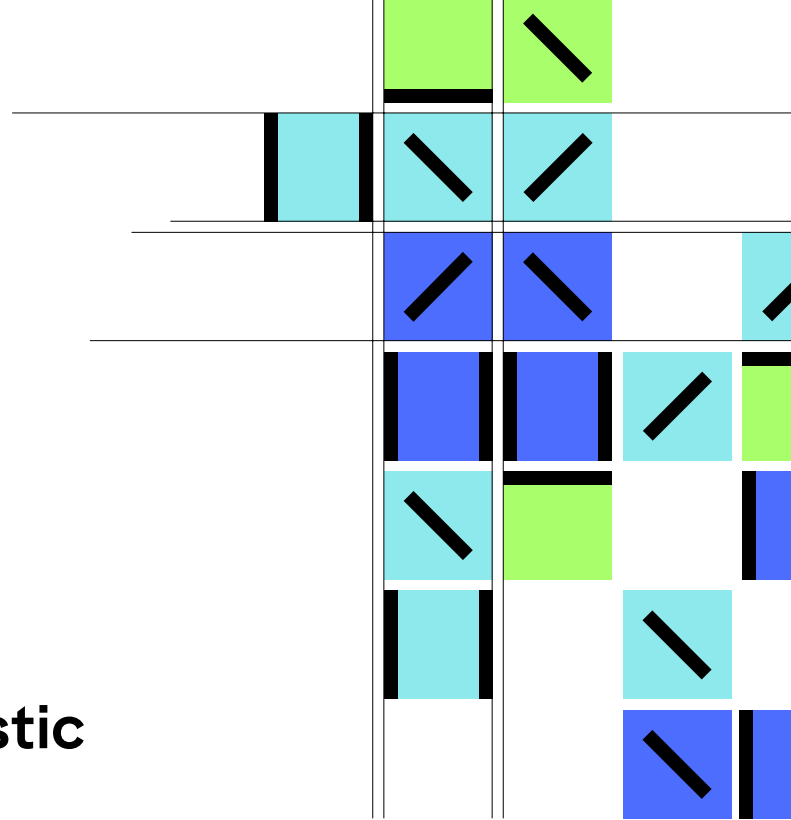
## THE SOLUTION

The teams developed a custom wireless power design, a new heating coil, and novel embedded molding manufacturing techniques to make this solution possible. Solace Power led the development of the wireless power design while Motherson led the development of the embedded coil manufacturing techniques. The teams worked together to understand the requirements of each design and how they interact. Subsequently, they optimized each technological development to allow it to work as a system.

## THE OUTCOME

Motherson and Solace Power were successful in creating a Proof of Concept that met all their initial system requirements. Specifically, they were able to demonstrate the ability to deliver heat to the thermoplastic surface without impacting radar attenuation. Both parties developed novel solutions and technology to meet the requirements. This solution can be used as a proof of concept for several other applications requiring the heating of thermoplastic exterior car parts.

NEXT PAGE →



## SOLACE

WEBSITE  
[solace.ca](https://solace.ca)

FOUNDED  
2007

HEADQUARTERS  
Mount Pearl, Canada

NO. OF EMPLOYEES  
10–50



## Solace Power improves the vehicle assembly and unlocks value-added features.

Solace Power's technology replaces or complements problematic wire harnesses by leveraging wireless power and data-based connectors.

### ABOUT STARTUP AUTOBAHN

STARTUP AUTOBAHN powered by Plug and Play is an open innovation platform that provides an interface between innovative tech companies and industry-leading corporations. The basis of the program is the partnership that develops between startups and the corporate business units. The two entities hold an equal footing from the get-go: together they evaluate the potential for a joint venture, move forward to pilot the technology, and work to achieve the ultimate goal – a successful production-ready implementation. Designed with the intention to exceed startup acceleration, STARTUP AUTOBAHN powered by Plug and Play moderates a community for collaboration with a focus on implementable results. Over the years, the platform has successfully cultivated over 400 projects with more than 300 startups since its founding in 2016.

### ACKNOWLEDGEMENTS

We would like to express our sincere thanks to Arne Oesterheld (Motherson), Jochen Walz (Motherson), Daan Goossens (Solace Power), and Noah Hansen (Solace Power).

### CONTACT FOR THIS PROJECT

#### Urszula Kosidlo

Open Innovation Manager  
Motherson  
[urszula.kosidlo@motherson.com](mailto:urszula.kosidlo@motherson.com)

#### Kerstin Gerdes

Innovation Management and Program Management  
Motherson  
[kerstin.gerdes@motherson.com](mailto:kerstin.gerdes@motherson.com)

#### Alexander Schwerdt

Ventures Mobility  
STARTUP AUTOBAHN powered by Plug and Play  
[a.schwerdt@pnptc.com](mailto:a.schwerdt@pnptc.com)