SSPC: Labinal Power Systems is developing next-generation protection and electronic switching components

Constantly seeking to optimize the aircraft electrical chain, Labinal Power Systems embarked on updating its range of protection and electronic switching components. The company now has a Solid State Power Controller (SSPC) prototype, a next-generation device that combines switching capability and wiring protection functions. Designed to meet the needs of major aircraft manufacturers in terms of modularity, reliability and cost effectiveness, it will soon be integrated into a dedicated test vehicle to demonstrate its capabilities. Meet Vincent Chaperon, Product Line Leader:

> Why update your SSPC product line at Labinal Power Systems?

For many years, Labinal Power Systems has developed SSPC, with the first generations mounted on the Falcon 7X. After a thorough analysis, anticipating the future requirements of the secondary distribution systems of many players in the aerospace market, LPS identified the need and the opportunity to update this range of components. An expert in electrical systems, Labinal Power Systems is able to offer a whole new range of SSPCs for future rounds of bidding, keeping us at the cutting edge of innovation.

> What are the advantages of SSPCs in comparison with traditional components?

SSPCs present a real technological advantage over the traditional components they replace (relays, circuit breakers, etc.). Actually, a SSPC (also called an SSPC "channel") provides an equivalent function to the combination of a circuit breaker (protection) and a relay (control). The protection function is performed by an algorithm using measurements of physical parameters (current, voltage, etc.). The load control function takes its cue from a logic equation based on the independently analysed inputs or data busses. The SSPC solution excels in terms of mass and volume. It also brings significant savings during maintenance phases.
What are our products' competitive strengths?

We designed our SSPCs so that they are competitive in terms of technical performance and price, reliability, weight saving, and integration. Beyond the component itself, our goal is to support our customers in defining optimized solutions based on our knowledge of the complete electrical chain: from generation, primary then secondary distribution through loads connected to the SSPC, including all associated wiring. We can offer solutions to eliminate functional and component redundancies, drastically improving power efficiency, integration solution and global weight saving.

And does this product match the market needs?

First of all, LPS supplies primary and secondary distribution systems of several aircrafts, either civil or military. We therefore have very good knowledge of the electrical architecture and the constraints of the aircraft environment as well as of the possible changes in the number of electrical loads.

Moreover LPS is working closely with different airframers who showed strong interest in this technology. Our new range of SSPC products has been designed accordingly.

Thus, this new range of SSPC products, whose on-going validations confirm the company's innovative and competitive nature, will undoubtedly be a key contributor to the development of distribution activity at Labinal Power Systems.