

# **Svolt's Dragon Armor 3.0 battery achieves fire and electricity separation to control thermal runaway**

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## The new Dragon Armor 3.0 battery promises improved thermal management and increased capacity for EVs

Svolt Energy has introduced its Dragon Armor 3.0 battery, designed to achieve fire and electricity separation, which physically separates the terminals from the pressure relief channels. This design ensures that in the event of thermal runaway, flames are expelled directionally away from the vehicle's passenger area.



Source: Getty Images/vefimov

The separation is achieved by placing the positive terminal on one side and the pressure relief channel on the opposite, each with distinct paths to prevent fire from reaching the passenger compartment.

The Dragon Armor 3.0 is noted for its compatibility between square battery cells and cell-to-chassis/cell-to-body integration, coupled with thermal management separation. It enhances the battery capacity by 7% to 10% within the same package size, with an increase in cell height by 5 mm.

Moreover, the design allows the top of the battery cell to endure force, while the bottom provides pressure relief and space for collision protection.

Incorporating liquid-solid-state technology, the Dragon Armor 3.0 increases the self-heating temperature by 8°C, enhances the safety buffer time by 10%, raises the thermal runaway initiation temperature by 5°C, and reduces the probability of thermal runaway by 25%.

The company plans to begin mass production soon, offering two battery pack options: an 86-kWh pack for plug-in hybrid vehicles and a 115-kWh pack for all-electric vehicles.

Notably, the 86-kWh pack extends battery life by over 10%, enabling a pure-electric driving range of more than 400 km.

The Dragon Armor Battery system, initially launched by Svolt in December 2022, is capable of delivering a pure electric range up to 800 km in lithium iron phosphate (LFP) applications and supports 4C fast charging in nickel cobalt manganese (NCM) applications.

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