Amphenol®

Application Note

IAN-109





UPC 14mm

BACKGROUND

Amphenol Industrial Operations' (AIO) endeavor to further high current HV connector solutions in the Heavy Equipment and Electric Vehicle markets has led to an expansion of the UPC product family. AIO has developed the next generation UPC with a focus on implementation of the connection between the OBC and Battery packs in electric vehicles.

PROBLEM

Within the existing EV, HEV, E-bus and E-truck Markets, most connectors utilize metal housings and have a high cost for connecting battery pack output. Any innovative solution will need to have a lightweight plastic shell and high amperage capabilities that will provide customers with a reduction in production costs on their end product.

AIO SOLUTION

The UPC 14mm is ideal for use in power converters, hybrid vehicles, battery management systems, as well as in heavy equipment electrification and starter generators. This two-pole plastic connector includes EMI shielding, HVIL (high voltage interlock loop) and a second lock function for high voltage and high current connections.

The UPC 14mm also offers a quick lock and release function and a keyway design to prevent incorrect mating. It meets an IP67 rating when mated and can withstand a minimum of 100 mating cycles.