



### UPC for Hybrid and EV

#### BACKGROUND

Electrical systems on conventional automobiles, buses and trucks are typically powered by a 12 volt battery with a 30A current rating. The switch to “electrification” in hybrid and electric vehicles requires much higher voltage and amperage levels for operation. These demanding electrical requirements of 1,000VDC with up to a 400A current rating require special contacts and connectors. Unique packaging solutions for the power distribution system, AC/DC converters, multi-phase motors, battery packs and starter generators needed to be developed. Amphenol Industrial Operations is leading the industry with our new Universal Power Connector series, UPC.

#### PROBLEM

OEM’s are looking for robust plastic connectors to be lightweight, compact, and economical while being reliable and durable to deal with the automotive and heavy equipment environments. These requirements include shielding, HVIL (high voltage interlock loop), touch-proof and waterproof features all in one connection system, while handling mating cycles into the thousands.

Furthermore, OEM’s are looking for reliable suppliers that can design and manufacture HEV systems globally. They need value added suppliers who can support them in all regions with proven technology and manufacturing to provide them solutions in “one stop shopping”.

#### AIPG SOLUTION

AIPG introduces the UPC connector series which incorporates our patented RADSOK® technology used globally around the world for many years. The product features higher amperage, lower T-rise, less resistance, lower mating force and higher mating cycles. Because RADSOK® allows 50% more amperage through the same size pin, the UPC is compact; and because it is plastic, it is also lightweight. This solution has shielding, HVIL, touch-proof and waterproof features. For your HEV systems, it can be used along with our Surlok Plus, ePower, and other Amphe-Power solutions as connectors or cable assemblies. For more UPC product detail, please refer to Data Sheet IDS-85, UPC.

