

# HVLock® High Voltage Platform

## MODULAR, RELIABLE, AND COMPACT SOLUTION

The BMS consistently tracks the charge/discharge activities of the battery pack and monitors cell voltages. This data is useful for determining if the battery is drained, for sustaining passive cells balancing, and for ensuring that the high-voltage area is responsible for the voltage and total voltage detection of a single battery, insulation detection, relay adhesion detection, high-voltage power-on pre-charging, and other functions.

The HVLock High Voltage Platform is a wire-to-board connector designed specifically to optimize performance and size, fitting OEM application needs with a 4.50 mm pitch and a nominal current-carrying capacity of 3 A.

Some of the key features of this wire-to-board connector platform include:

- HVLock® is USCAR-2 /LV-214 compatible
- Multiple plating options (Tin/Gold/Silver)
- Working voltage rate: 1200 VAC
- Connector Position Assurance (CPA)
- Primary Lock Reinforcement (PLR)

### FEATURES

- Multiple plating options for terminal
- Current rating of 3 A with each contact
- Connector Position Assurance (CPA)
- Two different coding options
- Primary Lock Reinforcement (PLR)
- Wire gauge up to 20 AWG



### TARGET MARKETS



### BENEFITS

- Meets different mating cycles and spec requirements
- Meet higher power Amps performance
- Second lock to ensure the connection
- Mechanical mismatching prevention system
- Ensures the receptacle terminal primary lock
- Meet wide gauge application requirement

## TECHNICAL INFORMATION

### GENERAL

- Modular high-voltage connector system
- 6–10 position (Custom for 2–5 position)
- Pitch: 4.5 mm
- Configuration: Right-angle & Vertical
- PCB Thickness: 1.60 mm

### MATERIAL

- Housing: High temperature UL 94V-0; Halogen-free
- Crimping Terminal: Copper Alloy (Tin, Gold, Ag plating options)
- Resin Material: CTI>600

### MECHANICAL PERFORMANCE

- Durability: 10 cycles (Tin plated), 30 cycles (Gold plated)
- Mating /Un-mating Force: <75 N
- Terminal Retention into Housing: >50 N

### ELECTRICAL PERFORMANCE

- Clearance: Impulse voltage 4000 V
- Low Level Contact Resistance:< 25 mΩ
- Insulation Resistance: > 100 MΩ
- Voltage Rating: 1200 VDC\*
- Current Rating: 3 A max./per pin
  - Wire Gauge: 0.50 mm<sup>2</sup> (20 AWG), 0.22–0.35 mm<sup>2</sup> (22 AWG)

### ENVIRONMENTAL

- Working Temperature: –40 °C / +105 °C(Tin plated)
- Working Temperature: –40 °C / +130 °C(Gold plated)
- Material: UL 94V-0
- Halogen-free

### SPECIFICATIONS

- Product Specification: GS-12-1831
- Application Specification: GS-20-0802
- Hand Tool P/N: 10172953-001HT

### APPROVALS & CERTIFICATIONS

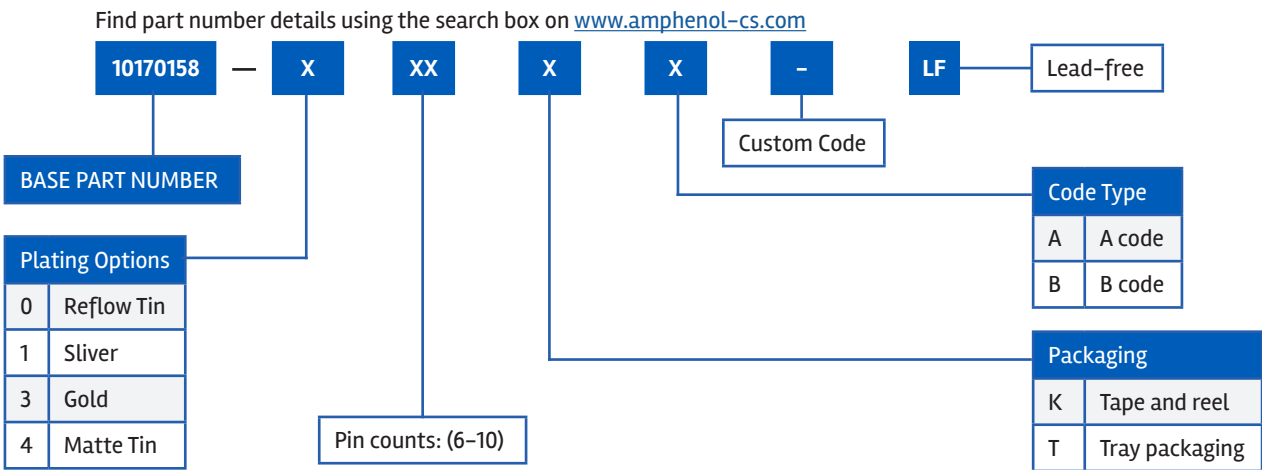
- USCAR-2 V2
- USCAR-37 (HV testing parts)
- LV-214 S2

### TARGET MARKETS/APPLICATIONS

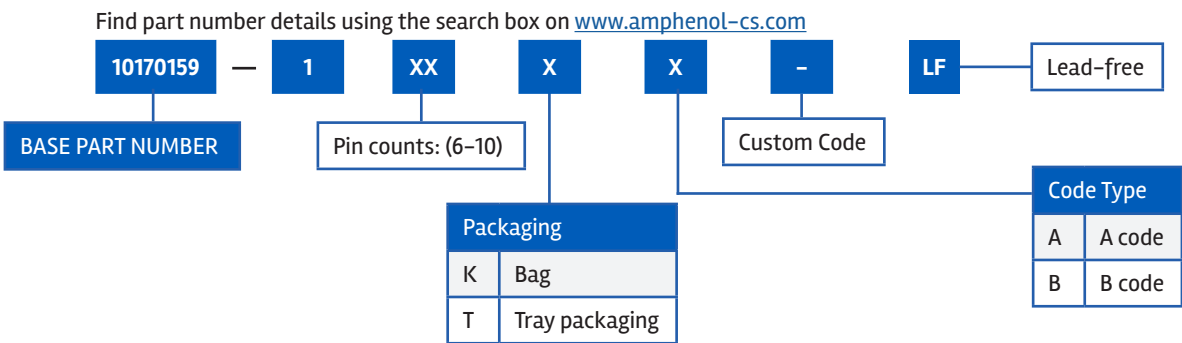


BMS (Battery Management System)  
OBC (On board Charge)  
MCU (Micro Control system)

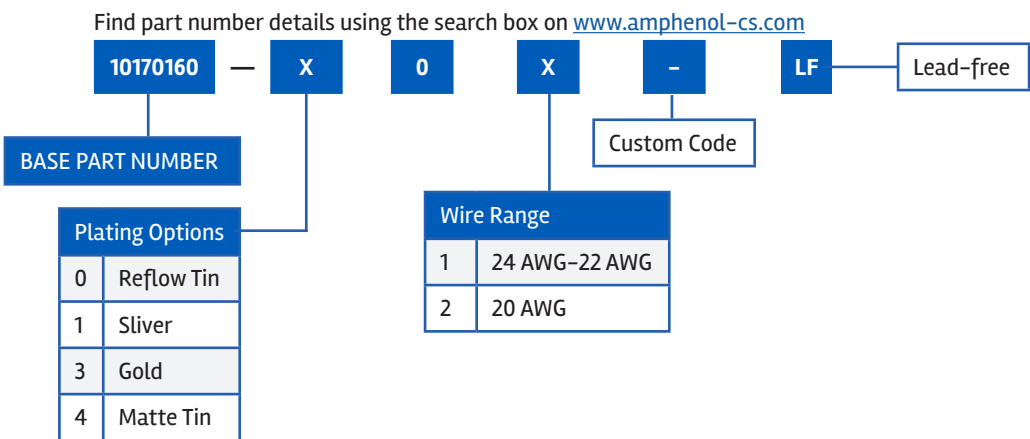
PART NUMBER SELECTOR – HEADER



PART NUMBER SELECTOR – RECEPTACLE



PART NUMBER SELECTOR – CTW



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