HVPDU-B
POWER DISTRIBUTION UNIT
FOR HYBRID/ELECTRIC VEHICLE APPLICATIONS

Product Description
ASELSAN’s HVPDU is a tailored product dedicated to solve custom power distribution needs for medium to heavy duty hybrid/electric vehicles, as like electric buses, electric garbage truck etc.

The HVPDU is a safe, intelligent and versatile power distribution unit in a compact form with configurable multiple power inputs and outputs. Smart control unit provides easy integration for high voltage/high current system applications.

Typical Applications
- Power distribution and energy control from medium to heavy duty HEVs and EVs

Product Features
- Separate HV power inputs for fast and standard DC charging
- Isolated HV reading for power inputs and outputs with redundant checks
- High Voltage Interlock (HVIL)
- HVIL supervised HV battery contactor control outputs
- Always on ground fault detector
- Redundant passive discharge functionality
- Active DC link discharge via PTC
- Pre-charge circuit for 600A and 225A power outputs
- Fuse protection for HV interfaces
- Overvoltage, undervoltage, overcurrent and overtemperature protection
- Low power mode
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Rating
- Operating Voltage Range: 12-800 VDC
- Control Voltage Range: 9-36 VDC
- Power Input (High Voltage):
  - 1 x 100-800 VDC / 720 A (For Fast DC Charging)
  - 1 x 100-800 VDC / 225 A (For Std. DC Charging)
  - 1 x 100-800 VDC / 720 A (Battery Connection)
- Power Output (High Voltage):
  - 1 x 100-800 VDC / 600 A (For Inverter)
  - 1 x 100-800 VDC / 225 A (For Aux. Units)
    • 2 X 50 A (Configurable, Fuse Prt.)
    • 7 x 10/20/30 A (Configurable, Fuse Prt.)
- Power Output (Low Voltage):
  - 3 x 9-36 VDC / 50 A (Configurable, Fuse Protected)
  - 1 x 9-36 VDC / 10 A [OV, OC Pro., Current Meas.]
  - 1 x 9-36 VDC / 5 A [OV, OC Pro., Current Meas.]
- Signal Input / Output:
  - 2 x Discrete Input
  - 2 x Discrete Output
- Interlock Current: Configurable (Default: 35 mA)
- Interlock Generator Voltage: 36 VDC
- Max Allowed Voltage Drop over Interlock Loop: Configurable (Default: 12 VDC)
- Communication: CANBus – RS422/485

Standards
- Automotive Components: AEC-Q100 / Q101 / Q200
- Functional Safety: Based on ISO26262 standard

Thermal & Mechanical Data
- Operational Temperature: -40 °C / +85 °C
- Storage Temperature: -40 °C / +125 °C
- Sealing: IP65
- Weight: 41 kg
- Cooling Type: Natural Cooling

Dimensions

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ASELSAN A.Ş. is a Turkish Armed Forces Foundation company.