05IG8–01

SYSTEM DESCRIPTION

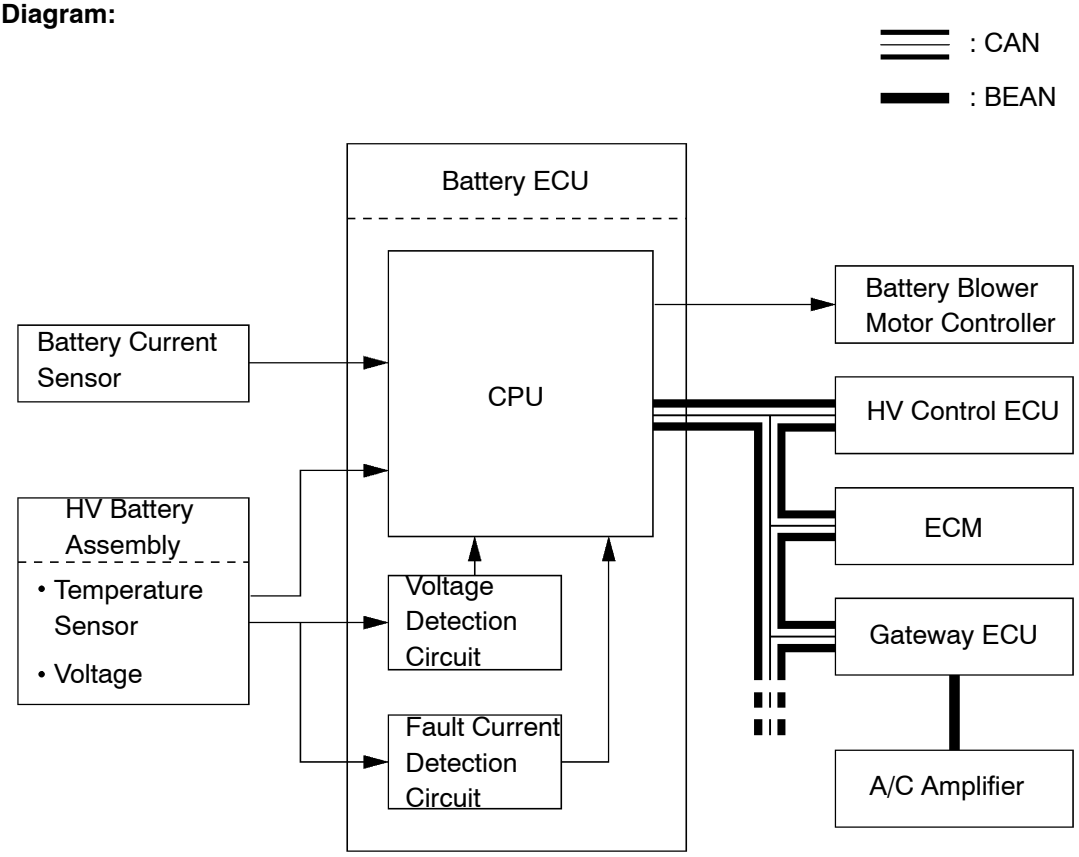
1. OUTLINE

The principal role of the hybrid battery system is to monitor the condition of the HV battery assembly through the use of the battery ECU and transmit this information to the HV control ECU. Furthermore, this system controls the battery blower motor controller in order to maintain a proper temperature at the HV battery assembly.

The battery ECU uses CAN (Controller Area Network) to maintain communication with the following devices: the HV control ECU, ECM, and A/C amplifier.*

*: Because it is connected to BEAN (Body Electronics Area Network), data is transmitted via the gateway ECU.

System Diagram:



2. CONTROL DESCRIPTION

(a) HV battery assembly management and fail–safe function.

(1) The battery assembly is repeatedly discharged at acceleration and charged by regenerating brakes at deceleration while driving. The battery ECU calculates SOC (state of charge) of the HV battery based on voltage, current, and temperature, and then sends the results to the HV control ECU. As a result, charge and discharge control is performed in the HV control ECU depending on the SOC.

(2) If malfunction occurs, the battery ECU performs a fail–safe function and protects the HV battery assembly in accordance with the extent of the malfunction.

(b) Battery blower motor control.

(1) To control an increase in the temperature of the HV battery assembly while the vehicle is being driven, the battery ECU determines and controls the operating mode of the battery blower assembly in accordance with the temperature of the HV battery assembly.

(c) CHK ENG illumination control.

(1) If the battery ECU detects malfunction that affects the exhaust gas emissions, it will transmit an CHK ENG (check engine warning lamp) illumination request to the HV control ECU. (The battery ECU does not directly illuminate the CHK ENG.)