

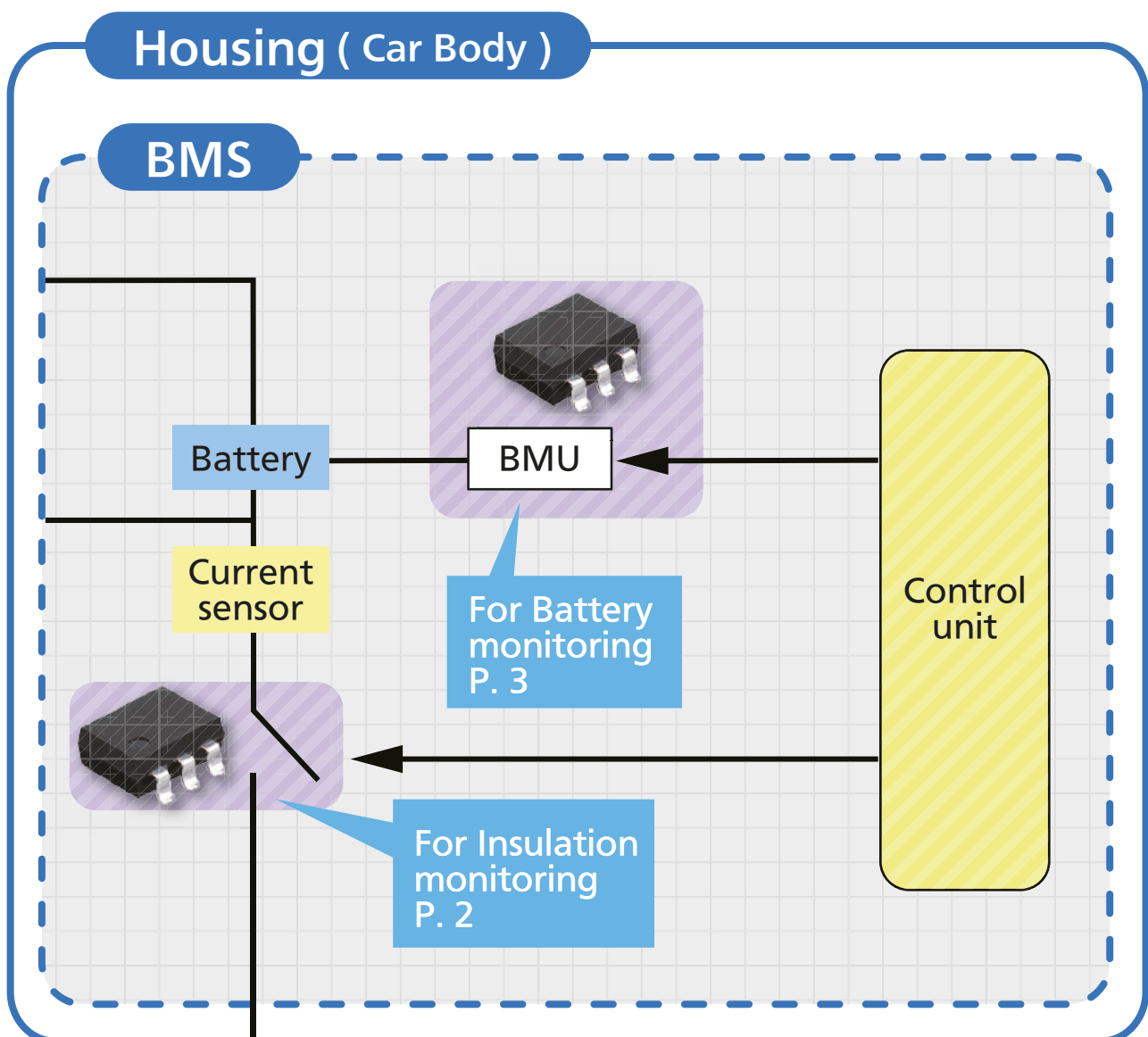
PhotoMOS for In-vehicle BMS



Recently, the spread of battery-equipped vehicles is progressing, and our PhotoMOS are also widely used in electric vehicles. In this document, we will introduce how it is actually used together with circuit examples.

For BMS (Battery Management System)

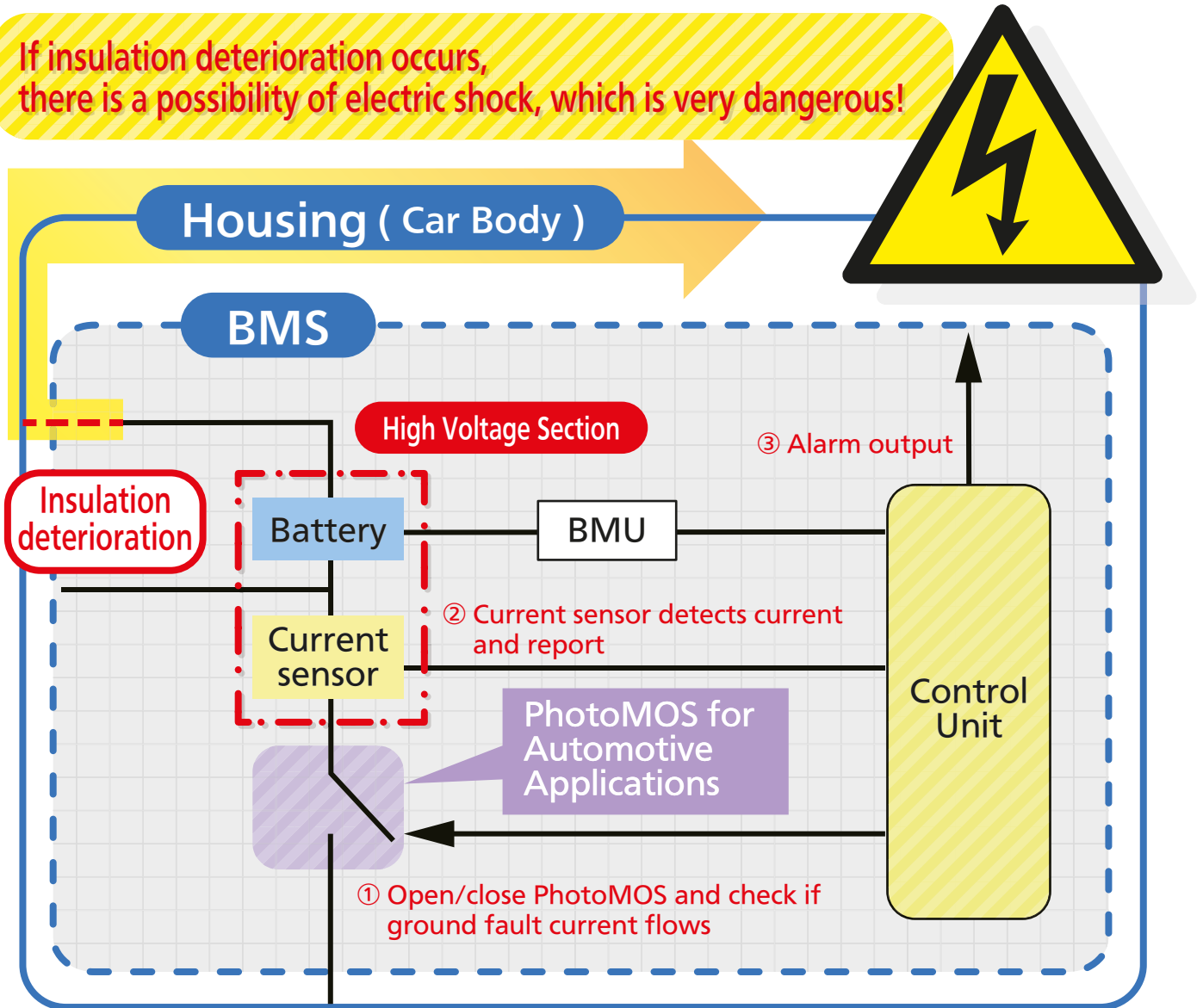
BMS is the system for safety control of secondary batteries such as lithium-ion batteries.



PhotoMOS for Insulation monitoring

PhotoMOS is used to monitor insulation deterioration in storage battery unit. If there is insulation deterioration in the unit, ground fault current will flow when the unit is turned on and the sensor detects it. Since the battery has a high voltage, the PhotoMOS must also have a high voltage. PhotoMOS are available up to 1,500 V.

If insulation deterioration occurs, there is a possibility of electric shock, which is very dangerous!



PhotoMOS for Automotive Applications

Part number	Package	Contact configuration	Load voltage* ¹ (absolute maximum ratings)	Recommended load voltage* ²	Ambient temperature	
					Operating	Storage
AQW216HAX C*8	DIP 8-pin (SMD)	2 Form A	600 V	360 V	-40 to +85 °C* ³	-40 to +100 °C* ³
AQV219HAX C*9	DIP 6-pin (SMD)	1 Form A	900 V	540 V		
AQV258HAX C*9	DIP 6-pin (SMD)	1 Form A	1,500 V	900 V		

*1: Load voltage: Peak value for AC

*2: A load voltage of 60% of the absolute maximum rating is recommended.

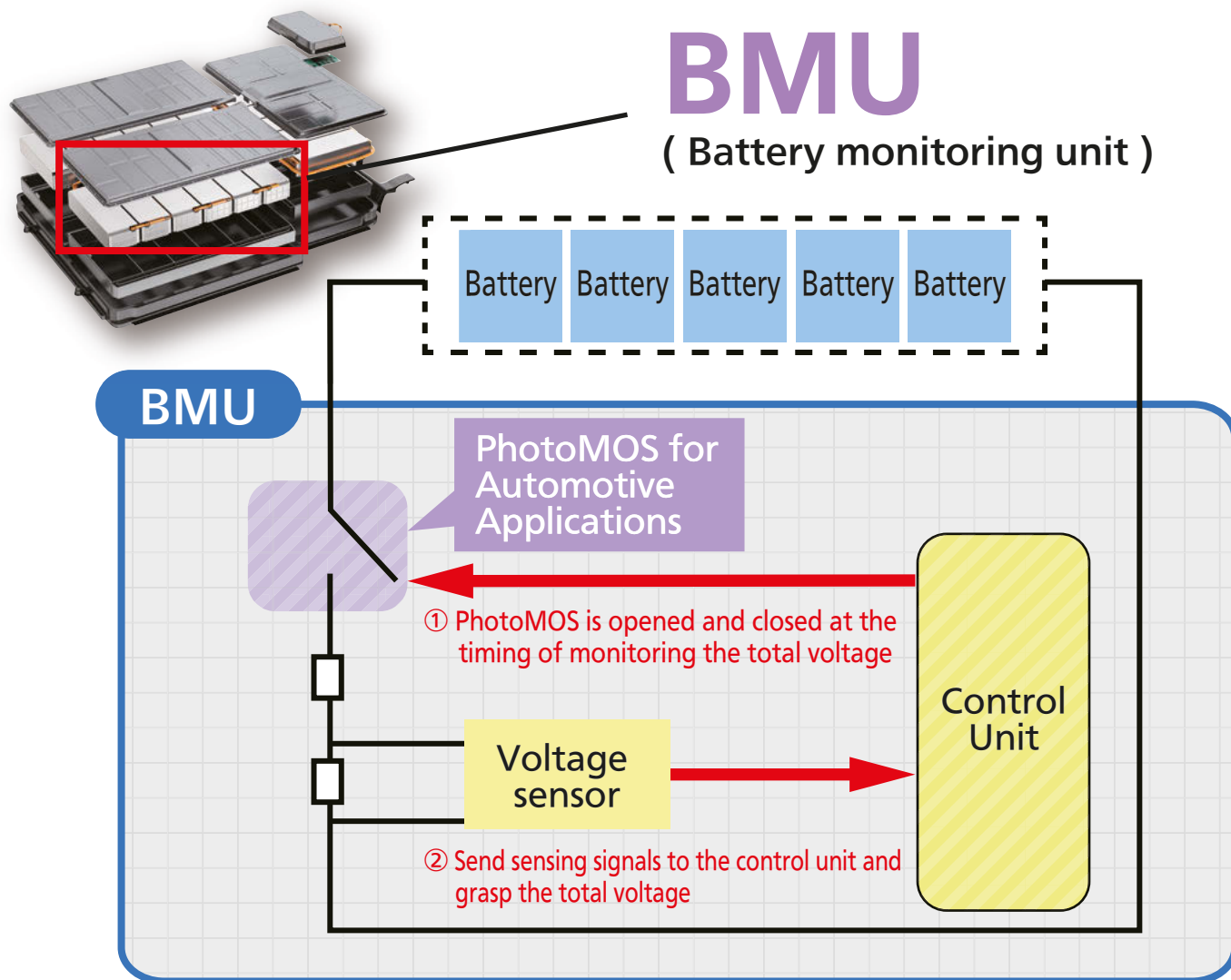
Please take sufficient derating from the absolute maximum ratings and conduct safety tests with the actual equipment.

*3: Please contact our sales representative for support from -40 to +105 °C.

For inquiries about this product, please contact our sales representative.

PhotoMOS for Battery monitoring

PhotoMOS is used for total battery voltage monitoring. Periodically open and close PhotoMOS to check the total battery voltage. Since multiple PhotoMOS are installed and the number of operations is large, small size and long life are required. PhotoMOS also have a small package (DIP6) lineup.



PhotoMOS for Automotive Applications

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