DTC P0ACA - Charge Interlock Fault

Product Family	Fault Supported
Orion BMS [Original] (24 - 180 Cell)	**YES**
Orion BMS 2 (24 - 180 Cell)	**YES**
Orion JR [Original] (16 Cell)	**YES* - (Requires F/W V3.3.0)**
Orion JR 2 (16 Cell)	**YES**

FAULT DESCRIPTION

The Orion BMS has 2 separate power input sources, Ready Power (pin 2) and Charge Power (pin 3). Charge Power (pin 3) is used to indicate to the BMS that it is in Charge Mode and allows the BMS to be powered off the AC grid rather than potentially relying on an onboard DC/DC converter and draining the high voltage battery pack. Ready Power (pin 2) is used to power the BMS during normal operation (eg: in a vehicle this would be used while driving).

If both Charge Power (pin 3) and Ready Power (pin 2) are energized at the same time, the BMS will identify this as a potentially dangerous situation and set this fault. The BMS can optionally be configured to inhibit discharge in this circumstance.
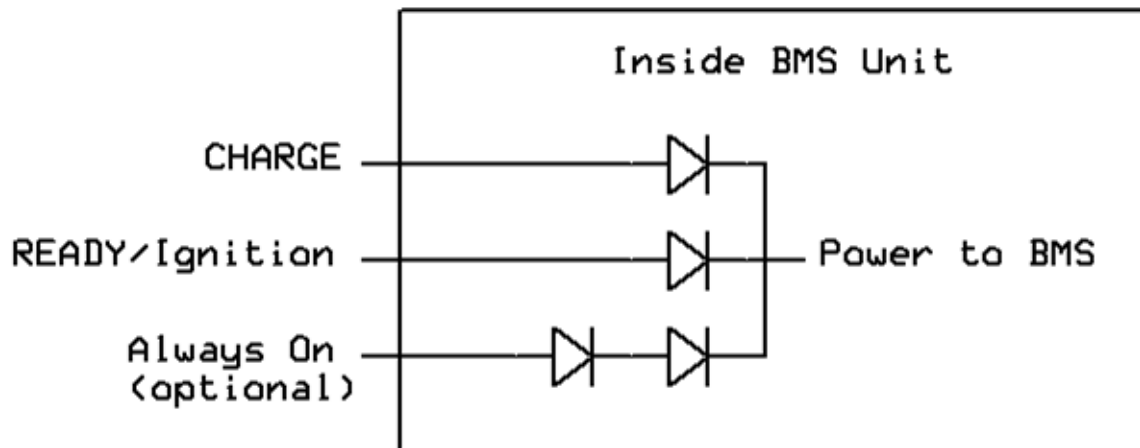
IMPORTANT NOTE: This fault can be turned off or disabled on the Fault Settings tab in the BMS utility profile settings.

Fault Code	Fault Description	Possible Trouble Area
P0ACA	The BMS has determined that both Charge Power and Ready Power are energized at the same time (vehicle attempting to drive away while plugged in).	● Charge Power ● Ready Power

FAULT BEHAVIOR

This fault will trigger **Interlock Failsafe Mode** which **CAN** inhibit the BMS from allowing discharge, depending on how the BMS is configured.

WIRING DIAGRAM

Schematic showing the three possible power sources for the BMS.

DIAGNOSTIC STEPS

1.	**Determine whether both power sources are intended to be energized.** If the Charge Power (pin 3) input source or the Ready Power (pin 2) input source is not supposed to be energized at that moment then that could be causing the fault.
2.	**Determine whether Charge Interlock Fault should be enabled.** If this fault is not desired or needed (eg: for applications where both power inputs might regularly be energized under normal circumstances), it can be disabled on the Fault Settings tab under the BMS profile settings.

3.	**Verify the power input signals with a multi-meter.** Before proceeding, measure both <u>Charge Power (pin 3)</u> and <u>Ready Power (pin 2)</u> with an external multi-meter to make sure that the BMS is correctly identifying these inputs as energized.
4.	**If the problem persists, contact technical support.** If all above steps fail to determine the cause of the fault then additional support is needed. **Please contact the company or reseller that the BMS was originally purchased from for additional questions, warranty claims, repair requests and technical support.**