# **M-Series Battery Switches (Mini)**

# 300 Amperes Continuous Rating for outboards and small inboard gasoline engines



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Switch Set to "ON"

### APPLICATIONS

- 1. Switches a single battery to a single load group.
- 2. Can be used in multiples to manage several isolated circuits including cross connecting for emergency paralleling.
- Note: 6005 replaces 9005 6006 replaces 9006





Switch Set to "1"





#### APPLICATION

Switches battery bank 1, battery bank 2, or battery banks 1 and 2 to all loads using one switch.



6011

6010

Switch Set to "ON'

Switch Set to "COMBINE BATTERIES"



#### APPLICATIONS

- 1. Switches two battery banks simultaneously with one simple ON/OFF switch while maintaining battery bank isolation, minimizing the risk of a dead start battery.
- 2. The COMBINE BATTERIES function offers the ability to combine the two battery banks in the event of a low start battery.



Image: Dual Circuit™

Pual Circuit Plus™



Switch Set to "ON" Switch Set to "ON"

**Isolated Battery Banks One Battery Bank** 

#### **APPLICATIONS**

- 1. Switches both positive and negative lines simultaneously with one simple ON/OFF switch meeting European and metal boat requirements for a double pole switch.
- 2. Switches circuits of different voltages, such as 12 Volt and 24 Volt, simultaneously with one simple ON/OFF switch.

## **Battery Switch Ratings**

The UL standard for marine battery switches is UL Standard 1107. This standard rates switches only for 5 minute and 1 hour time periods. Clearly, these ratings are not useful for the boater using a switch in the engine starting circuit where current durations may be 10 seconds or less. For this reason, Blue Sea Systems has created an additional standard called the Engine Starting Standard. The Engine Starting Standard is 10 cycles, each consisting of an Inrush Current spike of 1/4 second duration, a Cranking period of 9-3/4 seconds duration, and a 2 second rest period for a total of 120 seconds. This is representative of the load imposed on a battery switch in the starting circuit under very difficult starting conditions. Blue Sea Systems battery switches, in addition to being tested to UL 1107, are also tested to the Engine Starting Standard by a United States Coast Guard certified Nationally Recognized Testing Laboratory.

