BLUE SEA SYSTEMS
Marine Electrical Products

ML–Series
Remote Battery Switch (RBS)
PN 7712 / PN 7712B / PN 7714 / PN 7714B

- Magnetic Latch (ML)—draws very low current (<13 mA in the ON state and <8 mA in the OFF state) and draws moderate current for very short time when changing state
- Silver alloy contacts provide high reliability for switching live loads
- Manual control override knob provides an added level of safety allowing control with or without power, and offering LOCKED OFF capability for servicing
- LED output to remotely indicate switch state
- Tin-plated copper studs for maximum conductivity and corrosion resistance
- Label recesses for circuit identification
- PNs 7712 and 7714 include a Remote Control Switch PN 2155

RBS Specifications

	7712, 7712B	7714, 7714B
Cranking Rating	See Table Below	See Table Below
Intermittent Rating	See Table Below	See Table Below
Continuous Rating	See Table Below	See Table Below
Amperage Operating Current	When changing state <7A from Main contacts returns to negative (blk) wire In “ON” state 13mA, In “OFF” state 8mA	When changing state <4A from Main contacts returns to negative (blk) wire When “ON” 13mA, When “OFF” 8mA
Voltage Maximum Operating	16.5V DC Max.	32V DC Max.
Live Current Switching	300A @ 12V DC—10,000 Cycles	150A @ 24V DC—10,000 Cycles‡
Mechanical Endurance	100,000 Cycles	100,000 Cycles
Control Circuit Voltage	9-16.5V DC	8-32V DC
Terminal Stud Size	3/8"-16 (M10)	3/8"-16 (M10)
Maximum Terminal Stud Torque	140 in-lb (15.5 N•m)	140 in-lb (15.5 N•m)
Ring Terminal Size	3/8", M10	3/8", M10
Terminal Ring Diameter Clearance	1.18" (30.0mm)	1.18" (30.0mm)

Regulatory Meets ISO 8846 and SAE J1171 external ignition protection requirements, Rated IP66

Remote Control Switch 2155 Specifications

Action	SPDT, ON-ON
Maximum Operating Amperage	20A @ 12V DC | 15A @ 24V DC
Seals	Internal & External Gasket Panel Seal
Operating Temperature Range	-40°C to 85°C
Mounting Hole	1.450"x 0.830" (36.00mm x 21.08mm)
LED Rating	100,000 hours 1/2 life, 20 mA @ 14V

Regulatory Meets ISO 8846 and SAE J1171 external ignition protection requirements, Rated IP67

Wire Size (AWG)	Cranking 10 sec.	Cranking 1 min.	Intermittent 5 min.	Continuous (UL 1107)
2/0	2,000A	750A	400A	225A
4/0	2,000A	750A	400A	300A
2x (4/0)	2,500A	1,100A	700A	500A

PN	Termination	Manual Control	Control Circuit	Remote Control Switch Included
7712	Tinned Wires	Yes	12V DC	SPDT, ON-ON
7712B	Tinned Wires	Yes	12V DC	-
7714	Tinned Wires	Yes	24V DC	SPDT, ON-ON
7714B	Tinned Wires	Yes	24V DC	-

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Overview of Application

The ML-Series Remote Battery Switch provides high-current carrying and switching under load. The Remote Battery Switch should be installed close to the battery banks to avoid voltage drop.

Install a single pole double throw (SPDT) or single pole single throw (SPST) control switch in a convenient location near other electrical controls or companionway to allow quick access in the event of an emergency (see Illustration on reverse).*

The Manual Control Override Knob provides:
- an added level of safety that allows manual ON-OFF control with or without power
- LOCK OFF for servicing the electrical system

The remote LED embedded in PN 2155 indicates a closed connection between battery bank and load, or between two battery banks when used as an emergency cross-connect.

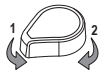
Remote Operation. PN 2155 (SPDT, ON-ON) Remote Control Contura Switch in the ON position can either connect the battery bank to the load or combine two battery banks. In the OFF position it can either disconnect a battery bank from a load or isolate two batteries from each other.

To connect battery bank to load, or combine battery banks	Set remote switch 2155 to position marked “ON”. Remote LED indicates closed connection.
To disconnect battery bank from load, or isolate battery banks that are connected	Set remote switch 2155 to position marked “OFF”.

Remote LED Indicator embedded in PN 2155 SPDT ON-ON Contura Switch
indicates Remote Battery Switch state or condition as follows:

LED INDICATION	REMOTE BATTERY SWITCH STATE OR CONDITION
LED is OFF	Remote Battery Switch is OFF
LED is ON	Remote Battery Switch is ON
LED double blinking ON-OFF	Manual override--*check Remote Battery Switch for switch states.* **OR** Remote Battery Switch mechanical failure

Emergency Manual Control Override Operations

To connect battery bank to load, or combine battery banks	With Override Knob in (REMOTE position), push button until latched (Push to Latch On).	
To disconnect battery bank from load, or isolate battery banks that are connected	Rotate Override Knob to right to release button from Latch On mode (button pops up). Rotate Override Knob to left (REMOTE position).	
To prevent remote operation	Rotate Override Knob to right (LOCK OFF position).	
To secure for servicing	With Override Knob in (LOCK OFF position), pass cable tie through hole.	

‡ Predicted performance

* Although a SPST switch may be used if desired, use of a SPDT switch improves immunity to inadvertent switching if the controls become damp.

⚠ CAUTION ⚠

- ☑ These instructions are intended to provide assistance with the installation of this product, and are not a substitute for a more comprehensive understanding of electrical systems. We strongly recommend that a competent electrical professional perform the installation of this product.
- ☑ The illustrated wiring diagram represents a common installation and is not meant to be a guide for wiring a specific vessel. The wiring diagram shows a single battery bank installation.
- ☑ Disconnect all negative battery connections before beginning the installation.
- ☑ All unused control wires should be carefully insulated from each other and from accidental contact using heat shrink tubing or electrical tape. External contact or shorting between control wires can lead to malfunction.

Installation Instructions

Mounting

Install as close as possible to battery bank. To avoid corrosion to connecting wires and terminals, mount in a dry and protected location. Avoid mounting directly above vented lead acid batteries so that the Remote Battery Switch is not exposed to corrosive gasses expelled from the batteries.

High Current Primary Circuit Connections (stud terminals A and B)

For help selecting the appropriate wire size and circuit protection rating, go to www.bluesea.com and click the *Circuit Wizard* quick link.

NOTE: Stud terminals A and B are interchangeable. A battery connection is required on one terminal for device operation

To connect high current circuit wires:

1. Connect the battery bank to one of the stud terminals marked A or B.
2. Connect the load to the other stud terminal marked B or A.
3. Torque the high current terminal stud nuts to 140 in-lbs (15.5 N•m) maximum.

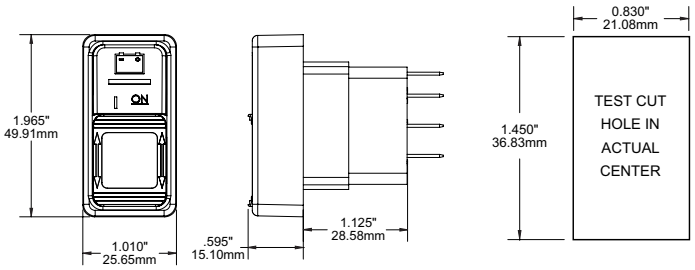
NOTE: If switching an inverter, windlass, bow thruster, etc., the circuit wires must have circuit protection to comply with ABYC guidelines. Wires used for engine starting do not require circuit protection.

Control Circuit Connections (wires contained in the wire harness)

NOTE: The Remote Battery Switch is designed to be controlled by a SPDT or SPST switch.
Use minimum 16 AWG wire for the Control Circuits. For help selecting the appropriate wire size for the load cables, go to www.bluesea.com and click the *Circuit Wizard* quick link.

To connect the SPDT Remote Control Switch 2155:

1. Connect pin 3 and pin 8 to +12V or +24V Power available when Remote Battery Switch is OFF. (fused)
2. Connect the red control wire to switch pin 2.
3. Connect pin 7 to yellow wire.
4. Connect pin 1 to ground or negative.



Guarantee

Blue Sea Systems stands behind its products for as long as you own them.
Find detailed information at www.bluesea.com/about.
For customer service, call 800-222-7617.

Installation Instructions

NOTE: For optional SPST switch connections
Wire connections are the same as the SPDT, ON-ON except the Ground is omitted.