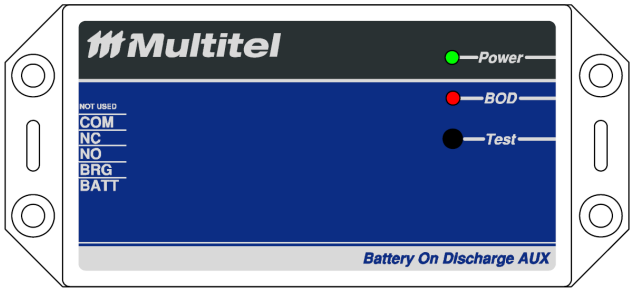
USER MANUAL
Reference: BOD User Manual – Issue 1.7.doc

BOD "Battery On Discharge AUX"



Description

The **BOD** is a simple, reliable and non-intrusive device used to provide an auxiliary "**B**attery **O**n **D**ischarge" alarm when telecoms standby battery system is in a discharge mode. The **BOD** has been design to provide a supplementary alarm if ever the DC power system controller was to fail at generating the strategic "battery on discharge" alarm.

Specifically, the battery discharge is initiated when the utility power fails or when performing a manual or automated shutdown of charging systems (rectifiers) for a battery rundown test. Normally the DC power system is configured to provide a battery on discharge alarm, however if the DC power plant controller is failed or not programmed accordingly, the alarm will not be forwarded to the NOC (Network Operating Center) and end up in loss of service to the end users.

Operation

Whether electric power utility is up and running, if the "Battery Voltage" monitored by the **BOD** goes under the pre-determined voltage threshold set to 49.00VDC, the relay contact will operate and generate a signal for the local telemetry system to pick up and transfer the alarm condition to the NOC. The LED labeled "BOD" will lite RED on the front of the unit. This indicates the standby battery system is in a discharge mode. The relay contact and "BOD" led will remain latched until the battery voltage returns over pre-determined value of 49.50VDC.

The "Power" LED ligths GREEN to indicate the **BOD** is operating properly. If the polarity is inverted, the **BOD** will not operate and "Power" LED will not light up. Reverse polarity will not damage the **BOD**.

A limited access "Test" button can be triggered using a small screwdriver or pen. When depress, the "BOD" led will light-up RED and the relay contact will operate until the "Test" button is released.

Features

- Design based on passive electronic components; no use of microprocessors or firmware, thus highly reliable design;
- The enclosure footprint provides flexible mounting possibilities with modular plugin screw type connectors;
- Designed specifically for 48VDC standby telecom applications, can be used with Flooded and Sealed battery types;
- Threshold and hysteresis level are factory set, no field calbration required;
- Simple installation, no field settings required; pre-wired harness available;
- "Power" and "BOD" leds for easy identification of operational and alarm statuses;
- Limited access "Test" button;
- 2 year limited warranty

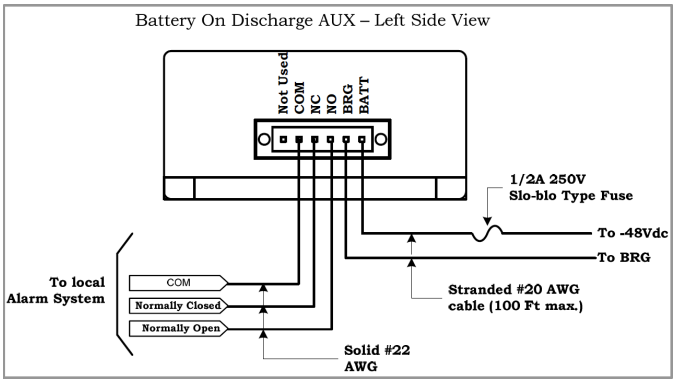
Specifications

General Specifications	
Operating Voltage Range	10 to 65VDC (Reverse polarity protected)
Typical Power Consumption	0.3 Watt
Environmental	
Operating temperature range (SI) Operating temperature range (US)	-40 °C to 65 °C -40 °F to 150 °F
Communications	
Relay contacts ("BOD" Alarm)	1 x Form "C" relay
Contact rating Switching Voltage	1A 150VAC or 125VDC max
Front Panel LEDs	2 LEDs located on the front panel "Power" led = Green "BOD" led = Red
Periodic "TEST" ready	Limited access "Test" push button
Mechanical	
Dimension **Height x Depth x Width** (SI) Dimension **Height x Depth x Width** (US)	31,5mm x 63,5 mm x 138 mm 1.25 in x 2.5 in x 5.44 in
Weight (SI) Weight (US)	0.095kg 0.21lb
Certifications	CE

Installation

A step by step installation procedure is provided below. There may be corporate practices written on how to install and wire to the local telemetry. Basic tools are required to install the **BOD** such as: Small flat screwdriver, cutters, pliers, BIX or punch down tools, etc.. (Tools are not provided by Multitel). A wiring harness from Multitel can be provisionned to simplify and expedite the installation process.

1. Unpack the **BOD** and make certain you have all the necessary material before starting the installation of the **BOD**.
2. Using the mounting screw or others, mount the **BOD** at the desired location; Not exceeding 100ft from battery voltage reference and close to reaching the alarm punch down block.
3. Wiring instructions: Use the wiring harness provided if suits well. (**BOD** Wiring Harness Kit ***Part No. = M-4371***). Do not make wiring connection while the **BOD** screw type connector is in place. For wiring details, refer to diagram below.
4. Power connections:
   a. Through a 1/2Amp fuse, connect the "BATT" pin to the –48Vdc side.
   b. Connect the "BRG" pin to the "Battery Return Ground" side.
5. Alarm Connections:
   a. Connect the "COM" pin to a "ground" or closed loop signal coming from the RTU alarm system.
   b. Connect "NO" or "NC" pin to the RTU alarm system input channel.
6. With fuse in place, now plug-in the screw type connector in place. The "Power" led will turn Green.
7. To test the **BOD** operation "Alarm simulation", depress the limited access button labeled "Test" located on the front panel and watch for the "BOD" led to light up red and alarm relay contact to operate.
8. Confirm with the surveillance personnel that the NOC's Fault Management System has received the "BOD alarm" and that the alarm has cleared.



You now have completed the installation of your **BOD** unit. If you have questions, need technical assistance on our products; please do not hesitate to contact us at Multitel.

Multitel
175-2500 Jean-Perrin Street
Quebec (Quebec)
G2C 1X1 Canada
Tel: 418.847.2255
Fax: 418.847.1966
info@multitel.com
www.multitel.com