How to install the BTRM into a UPS Enclosure

Part Number: BTRM-200

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Software version: BTRM2_2013-05-06_2316_DNPV2V130D

The Ventev® Battery Test Remote Monitoring system (hence forth refer to as BTRM) is designed to evaluate battery capacity transparently to system operation and provide network based notification should the test show that a battery could fail in the future or its capacity drop below a specified level. This has the advantage of allowing batteries that exceed their nominal lifetime to remain in service, provided they meet capacity requirements, and to ensure system operation occurs when primary power fails. The BTRM can be integrated into existing UPS enclosures systems in order to add this capability. There are two types of UPS power systems used in outdoor enclosures:

1. A system with independent power supply and battery charger.
2. A system with combined power supply and battery charger.

Independent Power Supply and Battery Charger

The first system type is with an independent power supply and battery charger. In systems of these types, the battery charger handles the battery management for the system while the power supply manages the load during AC operation. When AC is removed from the enclosure system, the battery powers the load. The BTRM now controls the load management of your system. The electronics in the BTRM operate from the power provided by the battery bank. Using an automatic bypass relays (ABR), the BTRM switches the load between power supply and battery bank without effecting the load operation.

The BTRM is wired directly to the power components in the UPS system as shown in figure 1. The BTRM is in series between the power supply and load and the battery charger and battery bank. As a result, the operational load current of your system can not exceed 10 Amps. If the battery charger has a low voltage disconnect (hence forth refer to as LVD), it is recommended that the LVD in the BTRM is not activated. The negative contacts of the BTRM are common to one another, since the negative contacts of the BTRM are tied together internally. Figure 1 also shows potential I/O input that can be used in the system. If you have existing I/O inputs (example: door alarm), please refer to the manual for guidance for electrical connections and BTRM firmware setup. Figure 2 shows a BTRM integrated into a UPS power system.

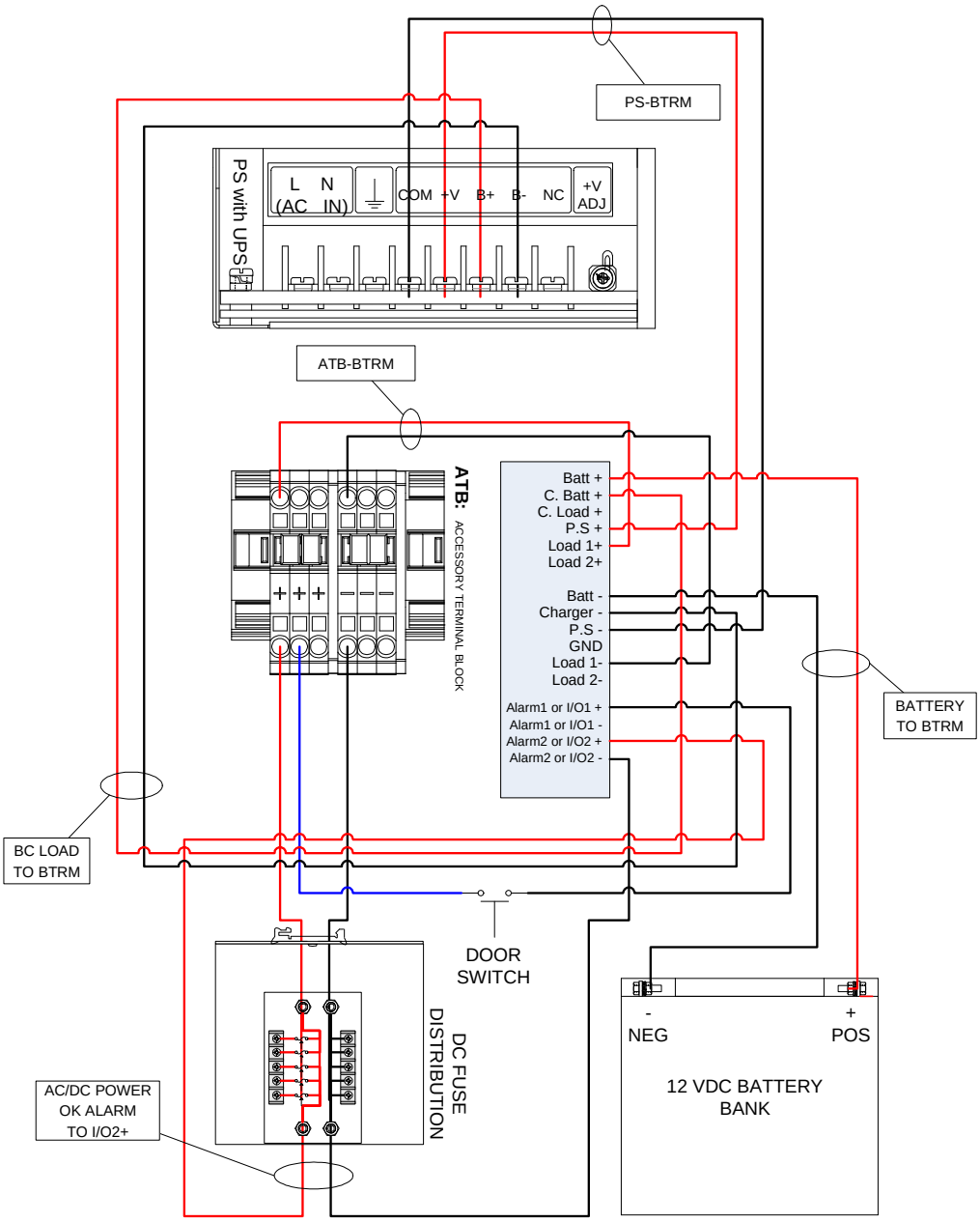

Figure 1: UPS Enclosure System with BTRM.

Combined Power Supply with UPS

The second system type is with combined power supply with battery charger. The BTRM is wired directly to the power supply with UPS system as shown in figure 3. In systems of these types, the one component manages the power supply and battery bank during all modes of operation. The BTRM can still be used in these systems (refer to figure 3 of BTRM labels). The battery terminals of the UPS are connected to the battery charger positive terminal (C. Batt +) and battery charger negative terminal (Charger –) of the BTRM. The load of the charger (C. Load +) of the BTRM remains open. If power supply with UPS has a low voltage disconnect (LVD), it is recommended that the LVD in the BTRM is not activated.

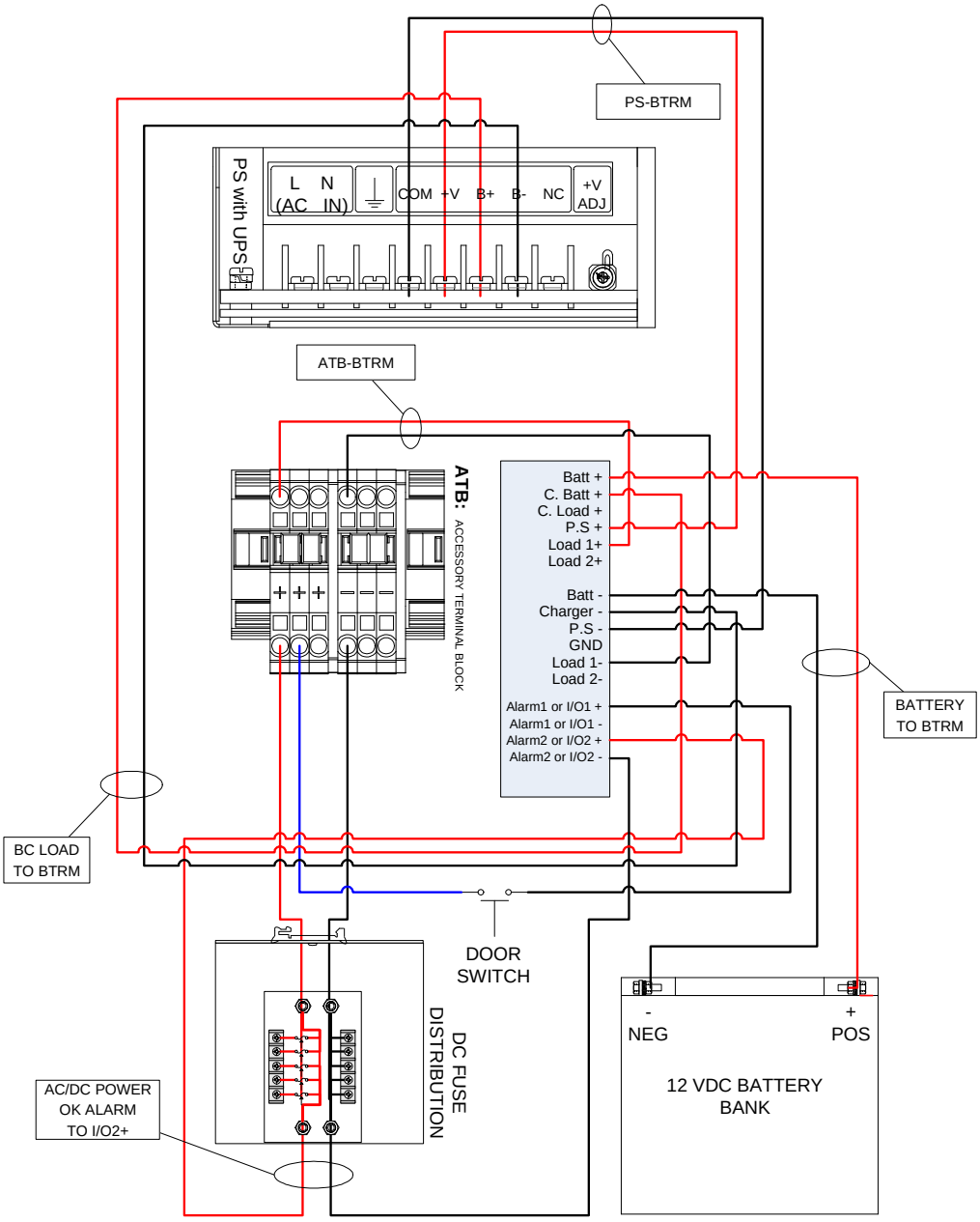

Figure 3: Power Supply with UPS Enclosure System with BTRM.