



# RDC Charger

## User manual



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# Table of Contents

**BTMS - Battery Monitoring System** ..... 5  
*Dictionary of terms and abbreviations* ..... 5  
*System diagram* ..... 6  
*Wiring diagram* ..... 6



# BTMS - Battery Monitoring System

BTMS is a battery monitoring system for larger UPS systems. Enables:

- cell status monitoring
- equalization of cell load within the string
- switching off strings where an error is detected on at least one cell

## Dictionary of terms and abbreviations

<b>BTMS</b>	Battery Monitoring System	Battery monitoring system for larger UPS systems.
<b>battery</b>	-	Lead-acid rechargeable battery stores electricity to operate the UPS during a power outage.
<b>cell</b>	-	Basic battery building. A battery usually consists of several cells connected in series.
<b>string</b>	-	Multiple batteries connected in series.
<b>UPS</b>	Uninterruptible Power Supply	A device that provides battery backup when the electrical power fails or drops to an unacceptable voltage level.
<b>BM-AG</b>	BTMS Aggregator	When several BM-GW's are needed at the Datacenter, aggregate all BM-GW and provide site functionality + Cloud connectivity and alarming.'
<b>BM-GW</b>	BTMS Gateway	Visualization (browser) of batteries and installed systems connected to the GW logically grouped into strings and UPS's in real time and their historical data. Alarming, Cloud connectivity
<b>SCADA</b>	3rd party SCADA	Any SCADA that accesses battery, stringing and/or UPS data via Modbus TCP/IP protocol.
<b>PC web</b>	PC with WEB Browser	Viewing the user interface from BM-AG or BM-GW via any web browser.
<b>BM-MC</b>	BTMS Master Controller	It allows the connection of BM-TH sensors and configurable digital inputs for monitoring additional alarm signals and outputs for alarming or switching off strings where an error occurs.
<b>BM-HMI</b>	BTMS Human-Machine Interface	Local display of the state of the batteries inside the UPS, string and by battery.
<b>CAD</b>	BTMS HMI interface	Communication interface for connecting BM-HMI to BM-CS
<b>BM-LC</b>	BTMS IO Module	Expansion for MC with additional digital inputs and outputs.
<b>BM-TH</b>	BTMS Temperature and Humidity sensor	Ambient temperature and relative humidity sensor.
<b>BM-GS</b>	BTMS Insulation monitoring sensor	String insulation resistance monitoring
<b>BM-SS</b>	BTMS String Master	It monitors the string (string current), aggregates battery data (total string voltage, average SOC, Balance) and enables monitoring of data from BM-CSs.
<b>BM-HS</b>	BTMS Hall Sensor	It measures the string current

