



## Datasheet: **B**attery **A**nalyse **S**ystem



### **B**attery **A**nalyse **S**ystem is more than just a monitoring tool

BAS is an all-in-one monitoring concept that will show nearly every aspect of a battery driven UPS solution including ambient sensors, available main power and realtime information about battery charge states of each single battery in case of a power fail

### **B**attery **A**nalyse **S**ystem will help to understand battery failures

BAS can do more than some voltage measurements – it can show you all relevant battery data like voltage, charge/discharge cycles, temperature of each single battery, ambient temperature, etc. With this information, it is possible to make a qualified error prediction and plan maintenance windows.

### **B**attery **A**nalyse **S**ystem will show battery charge in real-time

BAS is a holistic system that will show you in case of a main power fail each second on battery. You can plan your system shut down nearly in real time depending on the measuring data. Prepare your shut down scripts and save power for the most critical systems. BAS will show the results of your shutdown action in real time.

**GENEREX Battery Analyse System –  
the next generation of holistic battery monitoring concepts**



**BAS is designed to monitor for following battery types:**

- VLA
- VRLA
- NiCad

**Note:**

Since this is a battery MONITORING concept, **BAS** cannot be used with lithium-based battery chemistry. Lithium based batteries need an active battery management.

**BAS IMCS – The Intelligent Master Control System**

The central data unit for collecting, storing and providing data:

Individual voltage (DC and ripple)

- Impedance of each single battery
- Temperature data



Network Front	1000Base T Ethernet Service Port
Network Back	1000Base T Ethernet Uplink
USB	External Flash Drive Extension
LCD	Optional LCD display available
RS232	Optional, available on request
RS485	Optional, available on request
Access method	Modern and intuitive web-based interface
Operating temperature	0°C – 50°C
Housing:	1U Rack mountable enclosure
Width	430mm / 16,9 inches
Depth	270mm/10.6 inches
Height	45mm / 1,8 inches (1U)

**BAS ANC – The Active Network Communicator**



Separates larger battery installations into individual battery strings for a well-structured wiring. The Active Network Communicator also provides internal sensors for current flow and ripple detection as well as ambient temperature data.

Battery inputs	Up to 64 (via 32 Sensors)
Sensor type	Sensor
Maximum installation range (distance)	25m /80ft from Hub
Current inputs	1 (for string DC current and ripple current)
Inputs	2
Current range	0A t +/- 2000A
Contact type	Dry contact
Maximum installation range (distance)	15m / 45ft
Temperature inputs	2
Maximum installation range (distance)	15m / 45ft



**BAS SeMo 2- Sensor Module 2**



Each SeMo 2 Sensor module will be connected to a battery. After initialization, SeMo 2 starts collecting vital battery data like impedance, temperature and voltage in real time. The modules are compatible to VRA, VLRA and NiCad battery types.

*SeMo Battery list for NiCad, VRA and VLRA*

Nominal voltage	Ni-Cad	2V	6v	12V
Operating range	0.8V-1.9V	1.6V-2.6V	4.8V - 7.8V	9.6V - 15.6V
Max. input voltage	+/- 5V	+/- 6V	+/-25V	+/- 65V
DC resolution / accuracy	0.001V / 0.3%	0.001V / 0.3%	0.005V / 0.2%	0.005V / 0.2%
AC resolution	1mV	1mV	1mV	1mV
Ohmic measurement range	0.10 - 5mΩ	0.10 - 5mΩ	0.50 - 20mΩ	1.00 - 40.00mΩ
Resolution / accuracy	1uΩ / ± 2.5% + ± 15uΩ	1uΩ / ± 2.5% + ± 15uΩ	1uΩ / ± 2.5% + ± 25uΩ	1uΩ / ± 2.5% + ± 25uΩ
Power supply current	50mA	30mA	18mA	18mA

*SeMo 2 Sensor module technical data*

<b>Battery data inputs</b>	
Battery Inputs	2
Battery type	1.2V Nicad, 2V, 4V, 6V, 8V, 12V, 16V Lead Acid
Maximum installation range (distance)	25m / 80ft from Hub
<b>Temperature data inputs</b>	
Probe location	Negative terminal of battery
Measurement range	-10°C to 70°C / 14°F to 158°
<b>Hardware</b>	
Isolation	750Vdc1 optical isolation barrier
Protocol	Modbus
Interface	Proprietary differential bus

**BAS ANMS – The Advanced Network Monitoring Software**

Holistic monitoring concepts start (and end) with a single easy-to-use monitoring tool that will show all vital aspects of a **BAS** - monitored UPS solution. This software combines a comfortable all-in-one – software kit with minimized system requirements.

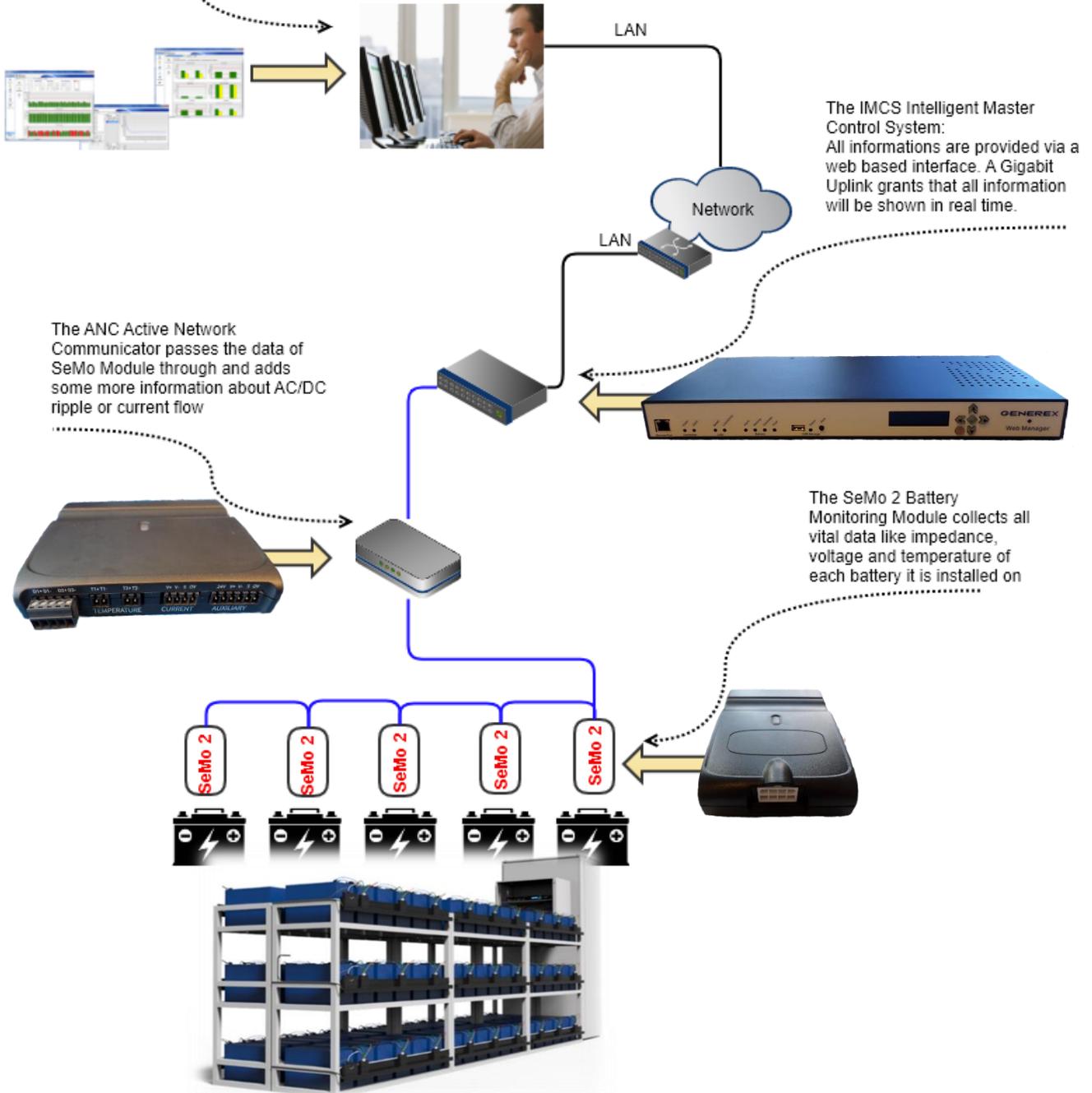


<b>System requirements</b>	
CPU	1 GHz X86 CPU min. 2 GHz X86/X64 rec.
Operation System	Windows 7 Professional
RAM	4 GB min. 8 GB rec.
Storage	20 GB hard disk space required 40 GB hard disk space rec.
Monitor	1024 x 768 min. 1366 x 768 or better rec.



### Battery Analyse System Quick Wiring Diagram – How it works

ANMS – The Advanced Network Monitoring Software will show all informations in real time and provides many tools for failure prediction and helps to plan maintenance windows.



The IMCS Intelligent Master Control System: All informations are provided via a web based interface. A Gigabit Uplink grants that all information will be shown in real time.

The ANC Active Network Communicator passes the data of SeMo Module through and adds some more information about AC/DC ripple or current flow

The SeMo 2 Battery Monitoring Module collects all vital data like impedance, voltage and temperature of each battery it is installed on