BATTERY SYMMETRY MONITORING RELAY

BVSA

Features

- Detecs early failure in battery cells within a battery system
- Provides real-time alarms and notifications when battery not performing at optimal level
- Adjustable symmetry level and timeoff delay
- Test and reset button on the relay
- Terminals for remote test and reset

Benefits

- Facilitates locating faulty batteries in battery power packs
- Reduces downtime
- Early detection of faulty batteries in battery packs reducing overcharging of healthy batteries
- Provides continuous overview on battery pack health condition
- Ensures reliable power supply from packs of multiple batteries

Applications

- DC Power distribution
- UPS systems
- Battery banks and charger systems

BATTERY SYMMETRY MONITORING RELAY

BVSA

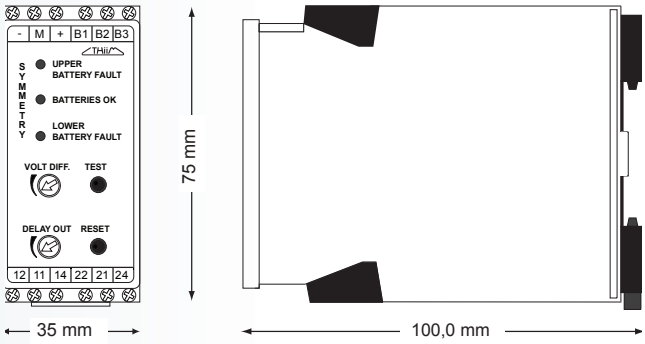
DESCRIPTION

The BVSA is designed for monitoring battery cells or batteries in multiple battery supply systems or chargers, that are performing different from other cells/batteries. The battery system being monitored must consist of two equal blocks coupled in series with an accessible centerpoint.

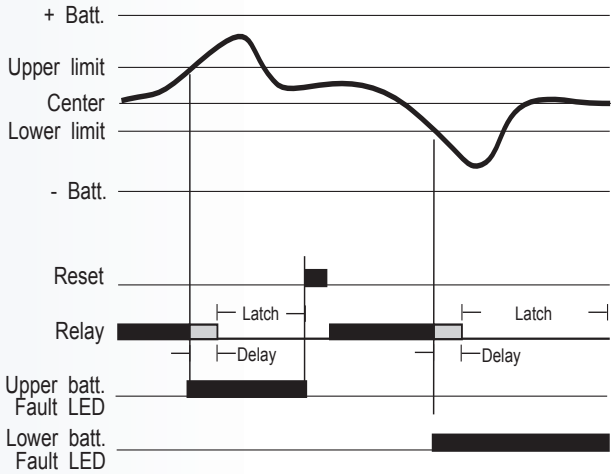
APPLICATION

Detection of an early failure in battery cells within a battery system. For a complete monitoring system the BVSA can be used together with a standard battery voltage monitoring relay – type BMCD (HI/LOW).

DIMENSIONS



FUNCTIONS

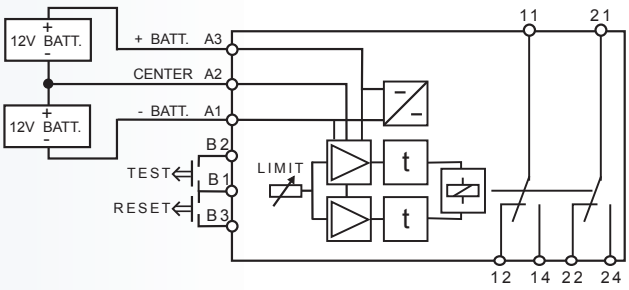


INSTALLATION AND SETUP

The measuring system is based on a comparison of the voltage from the two blocks. Over the lifetime the blocks are charged and discharged equally. Within close limits the voltage will then be the same, as long as all cells in both blocks are healthy.

At the end of the lifetime, or if a cell is shorted, the two blocks will perform different. The BVSA will sense the difference in performance and the internal relay will give an early warning by dropping out. Information about which battery block that is defect is indicated by the LEDs on the front. In order to prevent false alarm the BVSA includes a timing function.

CONNECTIONS



BATTERY SYMMETRY MONITORING RELAY

BVSA

SPECIFICATIONS

INPUT

Type 12 V: Adjustable from	0.05 V-0.5 V
Type 24 V: Adjustable from	0.1 V-1.0 V
Type 48 V: Adjustable from	0.2 V-2.0 V

OUTPUT

Under voltage	Relay, 2 C/O, AgCdO
Contact rating	6 A, 250 VAC, 1500 W
Mechanical life	30 million operations

PERFORMANCE PARAMETERS

TIMING

Time range off delay	
standard	0-10 s adjustable
Time range accuracy	-20 % to +50 %

ELECTRICAL

Repeat accuracy	<1 %
Temp. dependence	Typ. ±0.02 %/°C

SUPPLY

DC voltage, supply and input internal connected	12 V (8-16 V) 24 V (16-32 V) 48 V (32-64 V)
Power consumption	3 W

GENERAL

Temperature range	-25 °C to +55 °C	
Humidity	Up to 90 % RH non-condensing	
Dielectric test voltage	Coil to relay contacts	4000 VAC
	Pole to pole	2500 VAC

TERMINALS

Tightening torque	0,32 Nm to 0,39 Nm
Screw type	PH1
Cable size	Accepts up to 3,3 mm² or 12 AW

Weight 0.12 kg

CE

International standards

EMC directives 89/336:

EN 50081	Emission
EN 50082	Immunity

EU directive: Low voltage directive 73/23:

EN 60255	Electrical Relays

ORDERING INFORMATION

EXAMPLE BVSA D024 A A 3 C

TYPE
Battery voltage symmetry monitoring relay — BVSA

VOLTAGE RANGE
12 V — D012
24 V — D024
48 V — D048

ADJUSTMENT
Trimpot adj. — A

HOUSING
Rail mounting — A

SIZE
35 mm — 3

CODE END
Extend code — E
Code end — C

Company info

Datablad_BVSA_S24_v1

www.thiim.com thiim@thiim.com +45 4485 8000