Thunderstruck Motors JLD404 Manual

Thank you for purchasing a JLD404 battery meter. You have made a wise choice to monitor the status of your batteries. Before installing your meter, please read this entirely and see the included wiring diagram.

It should be apparent from the drawing that your high-current load does not go through the meter. Instead it is sensed via the shunt at 9 and 10 (notice that 10 is closest to battery). If you have any question about the legitimacy of your wiring, feel free to take a photo of it and shoot us an email; we'll gladly look it over for you.

To get your meter to function to it's fullest, you may need to establish a few parameters. Your meter should already be set up for your battery pack, in that it is programmed to accept either a voltage range from 0-100V or from 0-500V. Be sure to use the appropriate terminal (5 or 6) for your application. If you want to change this setting, you'll have to swap terminals, and change settings for both the v-Sn (voltage input) and vPvH (full scale voltage) to match your choice.

To make programming changes like those mentioned above, see the included manufacturers manual for details. Simply put, you hit SET and choose 0036, and scroll through the choices. To make changes to the output relay settings, you hit SET and choose 0001.

To reset Ah or Timer, scroll until that variable is displayed, then hold the Down arrow for 3 seconds (until you hear a beep) and it will reset to zero. If you want the meter to cycle through all of the display variables, hold the Right arrow for 3 seconds, until you hear the beep.

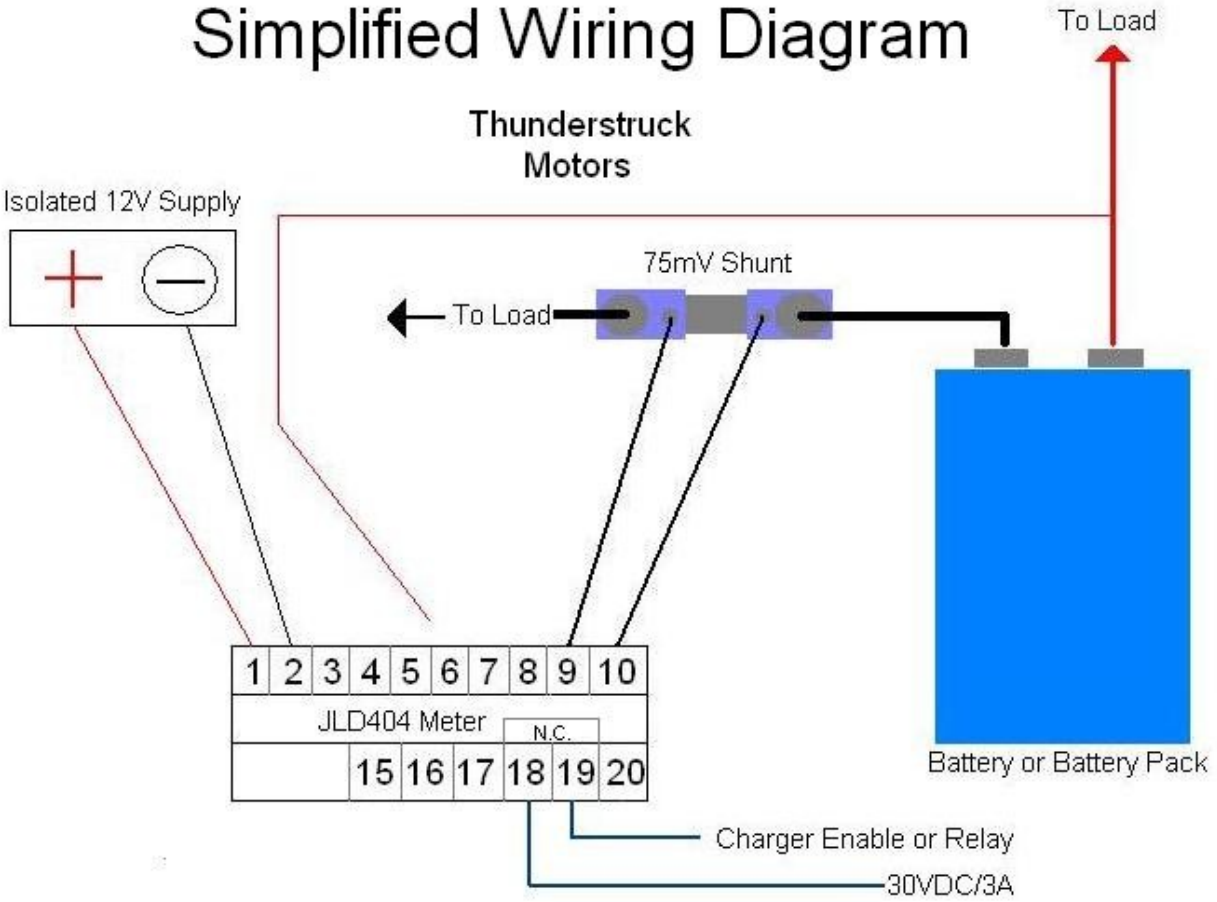
In regards to the relays, consider both terminal sets 15-16 and 18-19 two normally closed circuits, or 16-17 and 19-20 normally opened circuits. To change the level that these relays switch on and off (at a certain voltage, amp, or Ah) please see the included manufacturers manual.

Please let us know if you have any questions or concerns with your application and we'll do our best to help you out!

-Thunderstruck Motors

rev. 12/2013

Simplified Wiring Diagram



HB 404 DC AH Meter

by Annex Depot Inc Copy Right® 2012

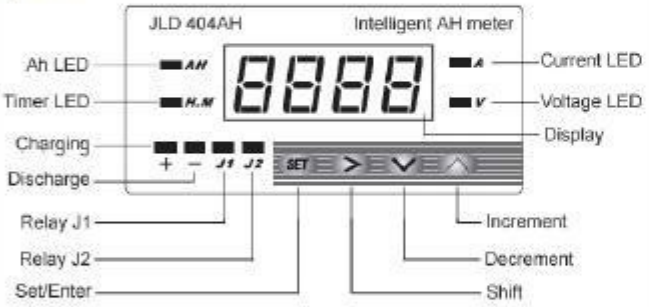
Features

- Support DC input: 5A, 1A, 75mV, 100V, 500V
- Wide range measurement can be achieved by using a proper DC shunt
- Range: 0.001 ~ 9999AH
- Two alarm output; Alarm or Control for I,V,AH protection
- Cycling display AH, I, V, and time

1) Specification

- Input range: Current: 0~9999A(need a DC shunt) : +/- 0.5%FS+3d; 0~500VDC (0.5% FS+3d)
- Input mode: Common ground
- Sampling: 3times/sec
- Overload: "EEEE" or "-EEE"
- Expandable(need a proper DC shunt, programmable)
- AH: 0.001 ~ 9999AH
- DC Accuracy: +/- 1%
- LED Display: Power (Blue/0.56")
- Operating Power: DC8-30V/2W
- Temperature: 0~ +50'C
- Humidity: <<85% RH
- Relay: AC220V/3A or DC30V/3A
- Relay Life Span: 10^5
- Dimension: 96*48*82(mm), Mounting hole: 92*44(mm)

2) Panel



3) Key setting

a) During the stage of measurement, Press ⊙ to select reading from current (A), V, and AH.

b) By pressing ⊙ for over 3 sec, it "beep" for 1 sec and system enter 'diagnostic mode".

c) By pressing ⊙ for over 3 sec, it beep for 1 sec, it clear AH and timer

d) By pressing ⊙ for over 3 sec, it beep for 1 sec, it clear timer

Parameter setup: Press ⊙, enter pass code: 0036

Fig 1

Full scale value	Decimal point	Display	Resolution
0500	2	5.00	10mA
5000	3	5.000	1mA

Fig2

0	1	2	3
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Setting

- Press ⊙ to enter programming mode
- Input Password using ⊙, ⊙, ⊙
- Press ⊙, ⊙ to set parameters
- Press ⊙ to save change

Measurement setup

Symbol	Name	Definition	Selection/Range	Default	Remark
A-Sn	A-Sn	Input Current Sets	5A/1A/75mV	5A	1
APvL	APvL	"Zero A Input" display	-1999~9999	0.000	2
APvH	APvH	Full scale display (A)	-1999~9999	5.000	3
Adot	Adot	Decimal point pos. (A)	0-3	3	4
U-Sn	U-Sn	Input Voltage Sets	500V/100V	500V	5
UPvL	UPvL	"Zero V Input" display	-1999~9999	000.0	
UPvH	UPvH	Full scale display (V)	-1999~9999	500.0	
Udot	Udot	Decimal point pos. (V)	0-3	1	
FILt	FILt	Digital filtering index	0-3	0	6
End	End	End of setup			

*1. Current Input (A-Sn): Input range 5A (-1A~5A), 1A(-0.2~1A), 75mV(shunt value: -15~75mV). Default: 5A

*2. Zero current input(APvL): Tell the meter what to display when the input current is "0.0A". It serves as offset adjustment. Default: "0000"

*3. Full scale current display: (APvH): Tell the meter what to display when input current is at max. Resolution varies with this setting.

*4. Decimal point position: Can be set arbitrary

*5. Voltage Input(V-Sn): Voltage input range
500V (-100~500V); 100V(-20~100V)

*6. Digital filtering Index: Range: 0,1,2,3 where 0 means no filtering. 1=weak, 2=medium, 3=strong. The higher the index, the more stable of the display but w/ slower refresh rate

(B) Power Alarm Parameters(Press ⊙, enter password "0001")

Symbol	Name	Description	Range/Default	Default
J1	J1	Relay J1	A/V/AH	A
AH1	AH1	Relay J1 engaged	-19999~9999	10
AL1	AL1	Relay J1 disengaged	-19999~9999	20
J2	J2	Relay J2	A/V/AH	A
AH2	AH2	Relay J2 engaged	-19999~9999	30
AL2	AL2	Relay J2 disengaged	-19999~9999	40
End	End	End		

The setting of alarm is similar to the setting of measurement

*7 Alarm/relay(J1,J2) operation

AH1 & AH2 are the latched value, where AL1 & AL2 unlatched value

1. Set AH1=AL1(AH2=AL2), relay disable
2. Set AH1>AL1(AH2>AL2), when measured value ≥ AH1, the relay will latch; when AL1 ≥ measured value, relay unlatched. This is for 'upper limited' configuration. See Fig 1.
3. Set AH1<AL1(AH2<AL2), when AH1 ≥ measured value, the relay will latch; when measured value ≥ AH1, the relay unlatched. This is for the "lower limited" configuration. See Fig 2
4.

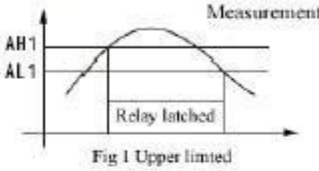


Fig 1 Upper limted

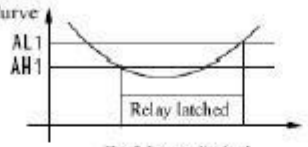


Fig 2 Lower limited

Setup Procedures:

1) Press SET to enter the programming stage
2) Use ▷ △ ▽ to enter password
3) Use △ ▽ to set value
4) Press SET to confirm and save

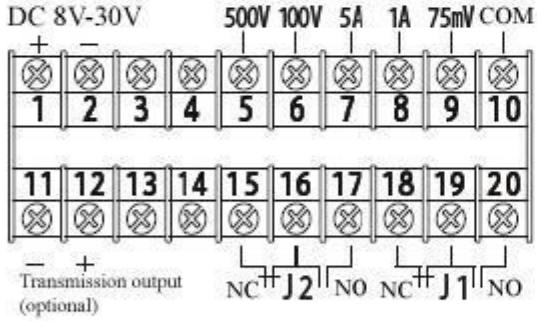
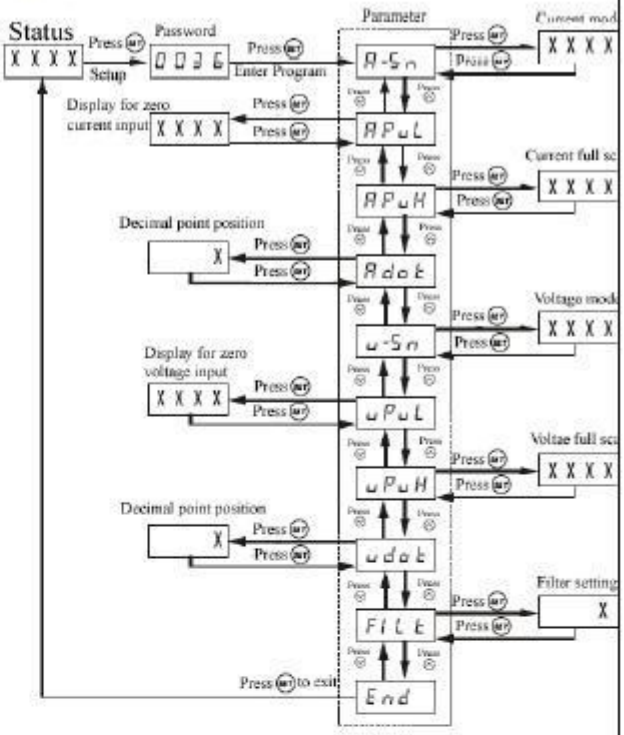


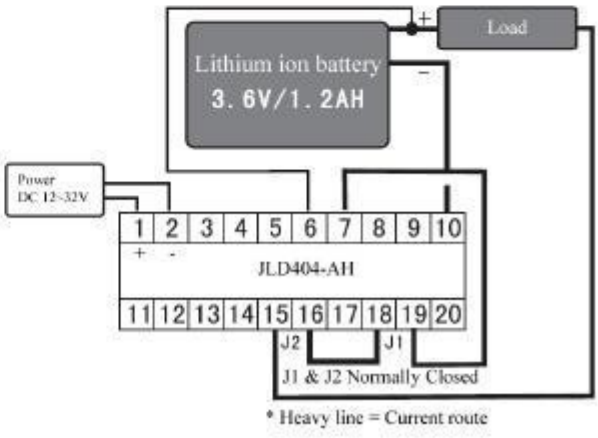
Fig 3



Example: Monitoring a Li-ion battery (3.6V/1.2AH) discharging.

Condition & requirement:

1) When current is over 1.20A or voltage is lower than 2.8V, cut off the current route.
2) Power is DC 12~32V.
3) Type of control: Cut off



* Heavy line = Current route