

LY7系列 液晶电量显示器

使用说明



电容触摸



生活防水



多种模式

高清LCD显示
(绿底黑字)



LY7S

黑晶LCD显示
(黑底绿字)



LY7B

功能和应用范围

●本产品是一款电容触摸式、电压型电量显示器，具有多种模式，满足不同场景使用，能够实时检测电池组的电压及容量信息，并以直观的电池符号和百分比显示，帮助使用者了解电池的工作状态。

●适用于移动便携设备、平衡车、电动车、吸尘器、测量设备、医疗设备、各种仪器仪表等。

●LY7S为绿底黑字显示，适用于室内外场合（在日光下清晰可见）。

●LY7B为黑底绿字显示，适用于室内场合（强烈日光下不清晰）。

适用电池规格

●LY7系列分常规款(LY7S与LY7B)/高压款(LY7S-HV与LY7B-HV)，在电机/马达（感性负载）或有冲击电压的场合尽量选用高压款。

●常规款LY7S/LY7B适用于：

铅酸电池：12V，24V，36V，48V；

锂电池：2~16串（8~69V）；

磷酸铁锂：3~19串（9~69V）。

●高压款LY7S-HV/LY7B-HV 适用于：

铅酸电池：60V，72V，84V，96V；

锂电池：4~20串（12~84V）；

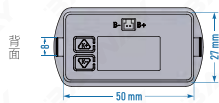
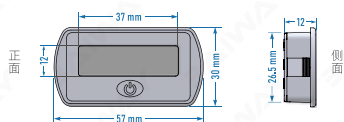
磷酸铁锂：6~30串（12~105V）。

注：1~2串特殊规格或特殊电压曲线需批量定制

技术参数

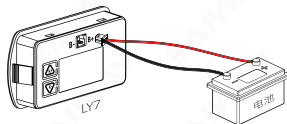
参数	最小值	常规值	最大值	单位
常规款工作电压	6.0		69.0	V
HV高压款工作电压	12.0		120.0	V
工作功耗		4.0	6.0	mA
待机功耗（F1）		150	200	μA
休眠功耗（F2）		30	60	μA
电压采集精度		±3.0		%
使用环境温度	-10	20	60	°C
重量		23		g
尺寸		57×30×12		mm

产品尺寸图



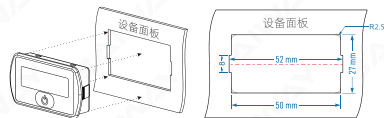
接线方法

●取本产品所附的两芯插头线（线长20cm,如长度不够可自行延长），红线连接电池正极，黑线连接电池负极。再将白色插头插入显示器插口（注意插口方向），打开开关或通电即可正常使用。如下图所示：



安装方式

●本产品通过卡扣固定，安装方便。按照尺寸在设备面板上开一个矩形孔，将显示器放入矩形孔中用力按压使卡扣卡紧即可。如下图所示：



注：“设备面板”并非产品配件，不包含在产品中。

规格选择

●在断电状态下，长按显示器背面 ∇ 键不放然后给显示器上电，显示当前所选电池规格，再点按背面 Δ 和 ∇ 键可调节电池规格，长按可连续调整，选择到所需规格后触摸 \odot 键即可。



1P: 铅酸12V



3C: 锂电3串



4F: 磷酸铁锂4串

规格对应代码表：

锂电池	代码	铅酸电池	代码	磷酸铁锂	代码	磷酸铁锂	代码
2串	2C	12VPb	1P	2串	2F	21串	21F
3串	3C	24VPb	2P	3串	3F	22串	22F
4串	4C	36VPb	3P	4串	4F	23串	23F
5串	5C	48VPb	4P	5串	5F	24串	24F
6串	6C	60VPb	5P	6串	6F	25串	25F
7串	7C	72VPb	6P	7串	7F	26串	26F
8串	8C	84VPb	7P	8串	8F	27串	27F
9串	9C	96VPb	8P	9串	9F	28串	28F
10串	10C			10串	10F	29串	29F
11串	11C			11串	11F	30串	30F
12串	12C			12串	12F		
13串	13C			13串	13F		
14串	14C			14串	14F		
15串	15C			15串	15F		
16串	16C			16串	16F		
17串	17C			17串	17F		
18串	18C			18串	18F		
19串	19C			19串	19F		
20串	20C			20串	20F		

显示设置

●本产品有3种显示模式，通电时按背面 ∇ 键可循环切换，选定后触摸 \odot 键即可。

$V\%$ 电压显示和容量百分比显示：显示器可显示当前电压和当前容量百分比，通过触摸 \odot 键切换。



V 电压显示：显示器只显示当前电压值。



$\%$ 容量百分比显示：显示器只显示当前容量百分比。



功能设置

●本产品有4种功能，通电后按背面 Δ 键切换F0~F3功能，选定后触摸 \odot 键即可。推荐使用F1或F2功能（出厂默认为F2功能）。

功能	背光状态	数字显示	功耗	触摸 \odot 按键功能
F0	常亮	始终显示	较高	无
F1	亮10秒后灭*	始终显示	中等	开启背光
F2	亮10秒后灭	10秒后不显示	较低	开启显示
F3	可切换亮与灭	可切换显示与关闭	较低	开启/关闭显示

*注：LY7B在F1模式背光关闭后数字几乎不可见，建议使用F2功能。

F0：背光常亮，显示器一直工作，背光和液晶不关闭。



F1：待机功能，显示器显示10S后进入待机状态（<200μA），此时液晶显示，背光关闭。触摸 \odot 键，背光开启10S后再次关闭。



F2：休眠功能，显示器显示10S后进入休眠状态（<60μA），液晶和背光均关闭。触摸 \odot 键，液晶和背光开启10S后再次关闭。



F3：开关控制功能，显示器通电后进入常亮状态，触摸 \odot 键，可以控制显示屏开启和关闭。

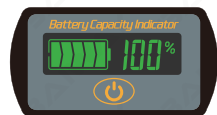


注意事项及质保

●显示器不能在阳光下长期暴晒，不能长时间暴露在低于-10°C和高于60°C的极端条件下，否则将缩短显示器液晶屏的使用寿命。

●本产品自购买日起一年内为质保期，在此期间内产品若出现非人为质量问题，均可免费维修。

本产品可能会技术改进或更新，如果您购买的产品与《产品使用说明书》中所描述的产品外观、技术参数等有出入，请以实物或网站介绍为准。



LY7 Series Battery Capacity Tester

Instruction



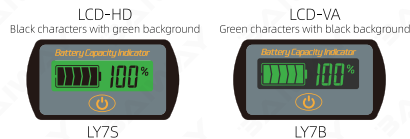
Capacitive Touch



Life Waterproof



Multiple Modes



Function and Application Range

●LY7 is a capacitive touch, voltage-type battery capacity indicator, which has multiple modes and meets different scenarios. It can detect the voltage and capacity of the battery in time and display them with intuitive battery symbol and percentage to help users know the state of the battery.

●It is suitable for mobile and portable equipment, balancing cars, electric cars, cleaning machines, measuring equipment, medical equipment and other instruments.

●LY7S is displayed black characters on green background, and used for the indoor and outdoor (visible in sunlight).

LY7B is displayed green characters on black background, and used for the indoor (unclear in strong sunlight)

Applicable Battery Specification

●There are two types of LY7 series, conventional types (LY7S and LY7B)/high voltage types (LY7S-HV and LY7B-HV). Use high voltage types for motors (inductive loads) or impulse voltages.

●Conventional types LY7S/LY7B is applicable for:

Lead-acid battery: 12V, 24V, 36V, 48V;

Lithium battery: 2-16 cells (8-69V);

Lithium iron phosphate: 3-19 cells (9-69V).

●The high voltage types LY7S-HV/LY7B-HV is applicable for:

Lead-acid battery: 60V, 72V, 84V, 96V;

Lithium battery: 4-20 cells (12-84V);

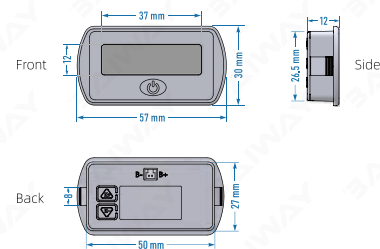
Lithium iron phosphate: 6-30 cells (12-105V)

Notes: Other specifications (1-2 cells) or special voltage curves should be customized in batch.

Technical Parameter

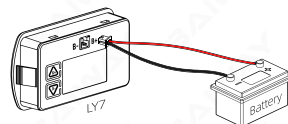
Parameter	Min.	Regular	Max.	Unit
Conventional Working Voltage	6.0		69.0	V
HV High Voltage Working Voltage	12.0		120.0	V
Working dissipation		4.0	6.0	mA
Sleep dissipation			15.0	uA
Voltage accuracy		±3.0		%
Temperature range	-10	20	60	°C
Weight		23		g
Size		57×30×12		mm

Diagram of Product



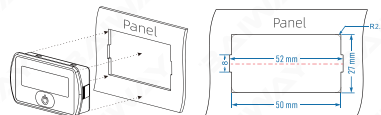
Connection Method

●The indicator provides a connector consists of plug, black line and red line (20 cm in length. If it is short, please lengthen it by yourself) . Connect the black line to negative, the red line to the positive. Connect the plug into the socket of indicator and pay attention to the direction of the socket. Then turn on or power on the switch, it will be work. As shown below:



Installation Method

●This product is fixed by buckles and it allows easy installation. Open a rectangular orifice on the panel according to the size. Then put the indicator into the rectangular orifice, and make sure the buckles are locked. As shown below:



Note: The equipment panel doesn't belong to product.

Uses Setting

●Under power off state, press and hold key on the back and power it on. The indicator displays the present battery specification. Use the and keys on the back to adjust. Press and hold to continuously adjust, and touch key to select the specification you need.

1P

1P: Lead-acid 12V

3C

3C: 3 cells lithium battery

4F

4F: 4 cells lithium iron phosphate

Lithiu	Code	Lead	Code	LiFePO4	Code	LiFePO4	Code
2cells	2C	12VPb	1P	2cells	2F	21cells	21F
3cells	3C	24VPb	2P	3cells	3F	22cells	22F
4cells	4C	36VPb	3P	4cells	4F	23cells	23F
5cells	5C	48VPb	4P	5cells	5F	24cells	24F
6cells	6C	60VPb	5P	6cells	6F	25cells	25F
7cells	7C	72VPb	6P	7cells	7F	26cells	26F
8cells	8C	84VPb	7P	8cells	8F	27cells	27F
9cells	9C	96VPb	8P	9cells	9F	28cells	28F
10cells	10C			10cells	10F	29cells	29F
11cells	11C			11cells	11F	30cells	30F
12cells	12C			12cells	12F		
13cells	13C			13cells	13F		
14cells	14C			14cells	14F		
15cells	15C			15cells	15F		
16cells	16C			16cells	16F		
17cells	17C			17cells	17F		
18cells	18C			18cells	18F		
19cells	19C			19cells	19F		
20cells	20C			20cells	20F		

Display Setting

●There are 3 display mode of the indicator. Press key on the back to switch cyclically when powering on. Touch key to select the mode you need.

Voltage and Percent of Capacity:

The indicator displays the present voltage and the percentage of capacity. Touch key on the front to switch.

Voltage: The indicator only displays the present voltage value.

Percent of Capacity: The indicator only displays the present percentage of capacity.

100.0F %

100.0F V

100.0F %

Function Setting

●There are 4 functions of the indicator. Press key on the back to switch different functions F0 - F3 when powering on. Press key to select correct functions you need. Function F1 or F2 is recommended (default function is F2).

Function	Backlight State	Digital Display	Power Consumption	Function of touching key
F0	Constantly on	Constantly display	High	None
F1	Turn off after 10 s*	Constantly display	Medium	Turn on the backlight
F2	Turn off after 10 s	Close after 10 seconds	Low	Turn on the display
F3	Switch on or off	Switch display or close	Low	Turn the display on or off

*Notes: Numbers on LY7B are almost invisible when the backlight in function F1 powers off. Function F2 is recommended.

F0: Backlight constantly on. The indicator always open. The backlight and LCD always on.
F1: In standby function, the indicator enters the standby state (<200 μ A) after displaying for 10s, while LCD displays but backlight turns off. Touch key, the backlight turns on for 10s and then off again.

F2: In sleep function, the indicator enters the sleep state (<60 μ A) after displaying for 10s, while LCD and backlight turn off. Touch key, and the backlight and LCD turn on for 10s and then off again.

F3: In on-off control function, the indicator enters normal bright state when powering on, and it is available to touch key to switch on or off state.

Attention and Warranty

●The indicator cannot be exposed in the sun for a long time or in the environment with large amounts of ultraviolet radiation when using or storing, particular in winter (<10°C) and summer (>60°C), otherwise it will shorten the life of LCD.

●Within one year, any fault caused by non-artificial reason can be maintained freely.

Our products will keep upgrading, if the product you bought is different with this instruction, please take the material object or website as the standard.