

# C

## 时间继电器、累时仪系列 TIME RELAY, TIME ACCUMULATOR SERIES



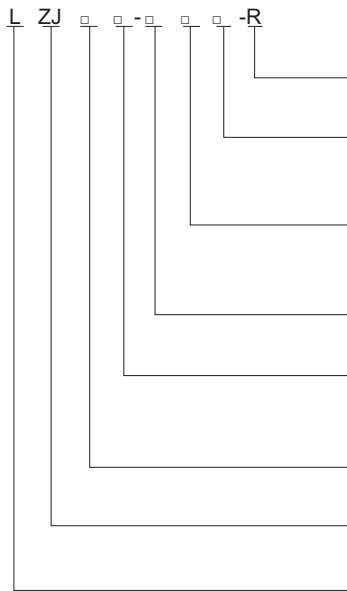
## 智能时间继电器系列 INTELLIGENCE TIME RELAY SERIES



### 特点 Features

- 高亮度双色LED显示, 0.36英寸或0.56英寸
  - 多倍数时间范围……(4档范围)
  - 定时精度高
  - 按键设定, 多样化输出方式
  - 蜂鸣器操作提醒
- High bright double LED display, 0.36 inch or 0.56 inch
  - Multiple time Ranges……(4 ranges)
  - High accuracy timing
  - Press key setting, multi-output mode
  - Buzzer operate warning

### 型号及含义 Ordering code



R: 双设定往复延时(Double setting delay repeat)

A: 0.01-99.99秒(S)

B: 1-9999秒(S)

C: 1-99分(M)59秒(S)

D: 1分(M)-99小时(H)59分(M)

3: 触点电流 (Contact Current) 3A

5: 触点电流 (Contact Current) 5A

10: 触点电流 (Contact Current) 10A

22: 220VAC 11: 110VAC 01: 12VDC 02: 24VDC 03: 85-265VAC/DC

1: 一组继电器输出外接暂停, 复位 One group of relay output pause, reset

2: 二组继电器输出 Two groups of relay output

C: 长方形(Rectangle)96×48×110mm

Z: 正方形(Square)48×48×96mm

ZJ: 智能时间继电器(Intelligent Time Relays)

利尔德(LIERD)

### 技术参数 Specifications

|                             |  |
|-----------------------------|--|
| 电源 Power supply             | 50Hz/60Hz AC 220V/110V±10%或85-265VAC/DC, DC12V, DC24V  |
| 功耗 Power consumption        | ≤4.5VA   |
| 误差 Accuracy                 | ±0.01%   |
| 复位时间 Reset time             | < 0.1S   |
| 触点负载 Contact load           | AC250V 10A 电阻性负载 AC 250V 10A Resistive load  |
| 环境温度 Enviroment temperature | 0℃~+50℃  |
| 工作寿命 Working life           | <p>电器寿命: 额定情况下10万次 Electrical life:105times,under rated situation</p> <p>机械寿命: 1千万次以上(在工作频率1.8千次/小时, 无负载情况下)<br/>Mechanical life: Over ten million (AT 1.8kcp/H working frequency and NO load)</p> |

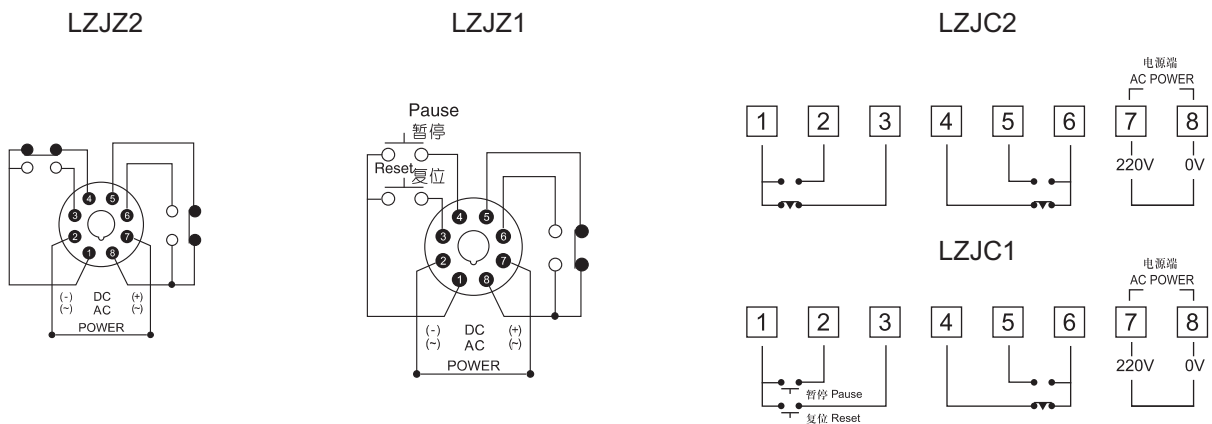
继电器工作方式介绍 Relays working mode introduce

| 方式代码 Mode code | 继电器工作方式 Relays operate mode  |
|----------------|--|
| H-. on; d-.OF  | 通电表工作, 达到设定值时继电器吸合<br>When meter working, relays operate while reaching setting value  |
| H-. oF; d-.OF  | 通电表不工作 (可通过复位键或复位端子使仪表工作), 达到设定值时继电器吸合<br>When meter not working (Through "reset" or "reset terminal" make the meter working), relays operate while reaching setting number                    |
| H-. on; d-.on  | 通电表工作, 继电器吸合, 到达设定值时继电器释放<br>Turn-on meter working, relays operate, when reaching setting Value relays release   |
| H-. oF; d-. on | 通电表不工作, 继电器吸合 (可通过复位键或复位端子使仪表工作), 到达设定值时继电器释放<br>Turn-on meter not working, relays operate (Through "reset" or "reset terminal" make the meter working), relays release reaching setting value |

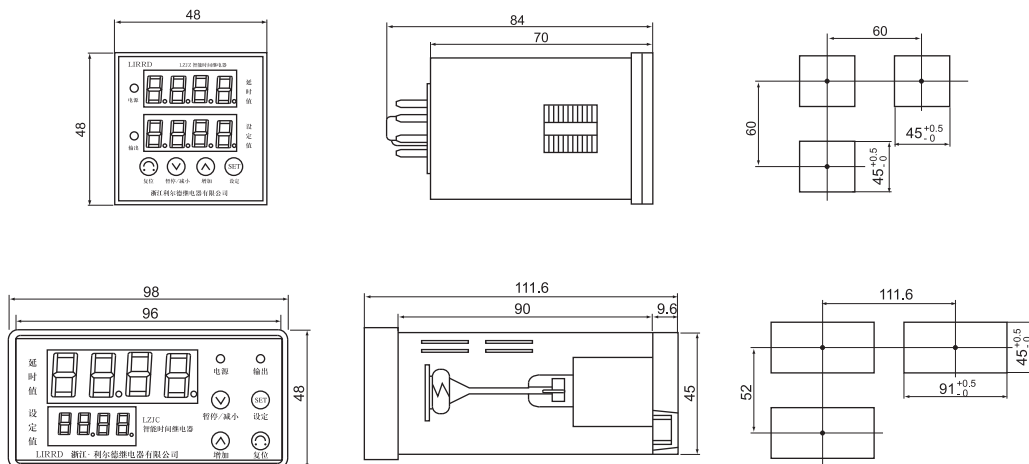
以上四种继电器工作方式设定操作如下: 仪表上电前先按住复位键不放, 上电后, LED显示以上四种代码中的任意一种, 通过“√”“∧”键设定所需的一种, 再按“set”键确认, 切断电源, 重新上电就可达到要求。

Above four modes setting operated as follows: before turn-on, press the "reset", not relaxing, when turn-on, LED shows any of above four modes, then through "√" "∧" key select one, then press "set", and cut off the power, then turn-on again, you can reach your demand.

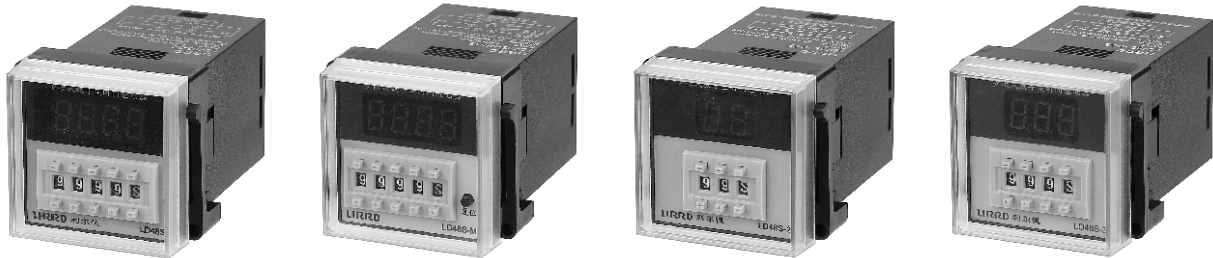
端子连接 Connection diagram



外形及表盘加工尺寸 The outside dimensions and mounting



## LD48S 系列Series



- (1) 4位拨码预置时间, 高亮LED显示, 字高0.36英寸。
- (2) 1位拨码设定延时倍率, 倍率达八种。
- (3) 内置高性能微芯片, 高精度晶体为时钟源, 延时精度高达0.05%。
- (4) 输入信号采用光耦隔离, 提高了抗干扰能力。
- (5) 工作电源适用范围宽, 85~265VAC/DC自由输入。
- (6) DIN (48mm x 48mm)标准面板尺寸, 标准8针接口, 可方便地与底座配套使用。

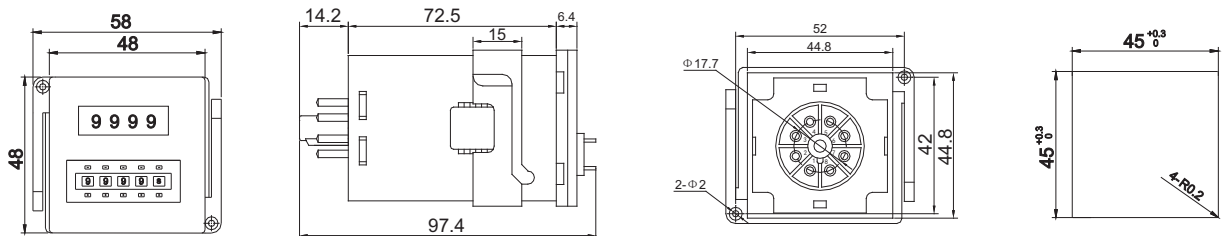
- (1) 4 bits dial code preset time ,with LED display of high bright ,digit height is 0.36 inch.
- (2) 1 bit dial code set and delay multiplying factor ,multiplying factors up to 8 varieties.
- (3) With high performance built-in microchip,taking high accvuracy crystal as clock source,the delay accuracy highly up to 0.05%.
- (4) Inpus signal adopts photoelectric coupling isolation to increase the anti-interference capability.
- (5) Wide applicable range for working power,85~265VAC/DC free input.
- (6) DIN (48mm x 48mm) standard panel dimension,with standard 8-pin interface,and is converient to use with matchable base.

## 技术参数 Technical parameters

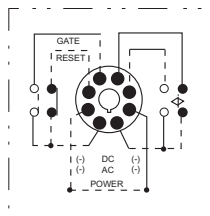
| 类别 Class                        | 多段式预置式限时继电器Multiplex type preset time limit relay  |  |  |  |
|---------------------------------|--|--|--|--|
| 型号 Type                         | LD48S  | LD48S-MR   | LD48S-2  | LD48S-3  |
| 延时基数 Delay base                 | 1mS、0.01Sec、0.1Sec、1Sec、1Min、1HR、1Min/Sec、1HR/Min  |  |  |  |
| 延时范围 Delay range                | 1-9999倍基数times base  | 1-9999倍基数times base  | 1-99倍基数times base  | 1-999倍基数times base   |
| 延时特性<br>Function characteristic | 4位拨码预置, 无面板<br>复位功能<br>4 bits dial code preset,<br>without panel reset<br>function   | 4位拨码预置, 有面板<br>复位功能<br>4 bits dial code preset,<br>without panel reset<br>function | 2位拨码预置, 无面板<br>复位功能<br>2 bits dial code preset,<br>without panel reset<br>function | 3位拨码预置, 无面板<br>复位功能<br>3 bits dial code preset,<br>without panel reset<br>function |
| 触点容量<br>Contact capacity        | 型号后带1Z为1组继电器输出, 1+3为复位, 1+4为暂停; 型号后带2Z为2组继电器输出, 触点容量均为阻性负载5A/250VAC或5/28VDC最大<br>1Z after the type denotes 1 group of relay output ,1+3,denotes reset ,1+4 denotes pause;2Z after the type denotes 2 groups of relays output, contact capacity is impedance load,max 5A/250VAC or 5A/28VDC |  |  |  |
| 显示方式<br>Display mode            | 2、3或4位字高0.36的高亮LED显示, 小数点根据设定延时基数自动移位, 同时小数点还作为秒闪工作指示灯用<br>2, 3 or 4 bits of 0.36 character height LED display with high bright ,decimal point automatically shifts according to the set delay base, at the same time, it is used as sec.flash working indicator light                     |  |  |  |
| 额定工作电压<br>Rated working voltage | 85~265VAC/DC自由输入, 其他工作电压可定制<br>85~265VAC/DC input free,other voltage upon request  |  |  |  |
| 精确度<br>Accuracy                 | 电压影响误差、重复误差小于±1%, 预置误差为0<br>Voltage affects error,repitive error less than±50PPM and preset error is 0   |  |  |  |

|                                 |   |                             |
|---------------------------------|---|-----------------------------|
| 信号输入<br>Signal input            | 复位和暂停信号输入为触点或NPN(发射极对公共端1)采用光耦隔离, 信号宽度不少于0.02Sec<br>Reset and pause signal input is contact or NPN (emitter to common terminal 1),adopting photoelectric coupling isolation,signal width should not less than 0.02Sec   |                             |
| 特别功能<br>Special function        | 均为通电延时型, 可选择停电记忆型(型号带E, 如LD48SE)、倒延时模式(型号带Y, 如LD48SY)、瞬动式(型号带C, 如LD48SC), 或可选其中两种功能(型号后附加, 如LD48SEY为停电记忆倒延时模式)<br>All types are power on delay mode,power cut memory type (type with E, as LD48SE),delay down mode(type with Y, as LD48SY) and instantaneous release type (type with C, as LD48SC) can be selected,or choose two types of functions in it (type with attach,as LD48SEY is power cut memory delay down mode) |                             |
| 安装及其底座<br>Installation and base | 露出型 Exposed type  | P2CF-08                     |
|                                 | 埋入型 Embedded type   | Y-50 & US-08 or Y-50&P3G-08 |
| 消耗功率Power consumption           | ≤4.5VA  |                             |
| 使用环境<br>Operating environment   | 环境温度: -10~+55℃ (不结冰), 湿度35~85%RH<br>Ambient temperature:-10~+55℃ (nonfreezing) Ambient humidity:35~85%RH  |                             |
| 抗干扰能力<br>Noisy immunity         | AC2kV(操作电端子间)或DC±500V, 脉冲宽度1uS扰动下继电器正常工作<br>AC2kV(between operating power terminals )or DC±500V,time accumulator works normally under disturbance of 1uS impulse width  |                             |
| 使用寿命<br>Service life            | 机械寿命: 5百万次, 电气寿命: 1百万次<br>Mechanical life:5x10 <sup>6</sup> times,electric life:1x10 <sup>6</sup> times   |                             |
| 重量 Weight                       | 约103克About 103g   |                             |

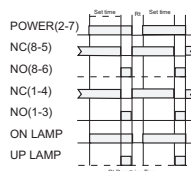
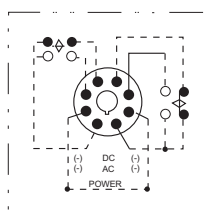
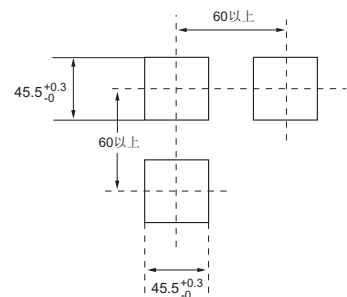
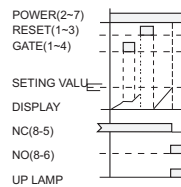
外形、接线图、时序图及开孔尺寸 Outline,connecting diagram,sequence chart and tapping size



LD48S-1Z



LD48S-2Z



## LD48S-S 系列 Series



### 主要功能概述 General

- (1) 通电限时继电器，双设定Tno、Tnc（Tno为限时吸合时间，Tnc为限时时间），一只继电器能替代两只继电器用，高两位BCD拨码为限时释放预置时间，低两位BCD拨码为限时预置吸合时间，LED相应显示当前限时时间段，可选做倒计时模式。
- (2) 既可往复循环限时工作，也可单次限时工作。
- (3) 智能提示功能：用户限时值为全0时LED显示“Erro”，提示预置值出错；在复位或单次限时时间结束后LED显示“no（当前转换继电器是吸合状态）或“nc”（当前转换继电器是释放状态）。
- (4) 采用高性能专用微控芯片，底部暂停、复位信号采用光电耦合隔离输入，提高抗干扰能力。
- (5) 高精度晶体振荡器作为系统时钟源，时间精度高达0.05%。
- (6) 八种限时倍率，任意设置继电器限时吸合、释放时间，时间范围宽（0.01Sec~990Hr）。
- (7) DIN(48mm x 48mm)标准面板尺寸，标准8针接口，可方便地与底座配套使用。
- (8) 工作电源适用范围宽，85~265/DC自由输入。

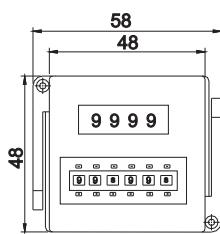
- (1)Power on time limit relay,with double setting Tno,Tnc(Tno is time limit release time)time limit,one relay can be used by replacing tow relays.High two bits BCD dial code is the time limit release preset time and low two bits BCD dial code is the time limit preset close time. LED correspondingly displays the current time limit time section and it also can be selected down mode.
- (2)It reciprocally and circularly limits the working time,and also limits for one time.
- (3)Intellectual cue function:When user' s time limit value is total 0,LED displays “Erro” and prompts preset value is in error, after reset or single limit time finished, LED displays “no” (current switching relay is under close state) or “nc” (current seitching relay is under release state).
- (4)Adopting high performance special microcontrol chip,bottom pause and reset signal adopr h\photoelectric coupling isolation input, which increases the anti-interference capability.
- (5)High accuracy crystal oscillator is taken as clock source for system,the time accuracy highly up to 0.05%.
- (6)With eight kinds of time limit multiplying factor,to set the time limit close,release time and width of time range(0.01Sec~990Hr)for relay at will.
- (7)DIN (48mm x 48mm) standard panel dimension,with standard 8-pin interface,and is convenient to use with machable base.
- (8)With wide applicable range for working power,85~265VAC/DC free input.

### 技术参数 Technical parameters

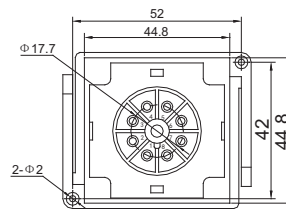
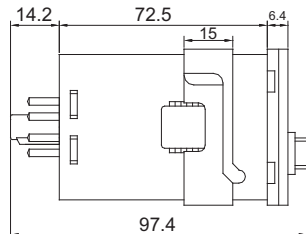
|                                       |   |                        |
|---------------------------------------|---|------------------------|
| 类别 Class                              | 双设定多段式预置型限时继电器 Double setting multiplex type preset time limit relay  |                        |
| 型号 Type                               | LD48S-S-1Z  | LD48S-S-2Z             |
| 限时倍率<br>Time limit multiplying factor | 0.01Sec、0.1Sec、1Sec、0.1Min、1Min、0.1Hr、1Hr、10Hr（任意设定两种）<br>0.01Sec、0.1Sec、1Sec、0.1Min、1Min、0.1Hr、1Hr、10Hr（Set two types at will） |                        |
| 限时范围 Time limit range                 | 1-99倍限时倍率 1-99 times time limit multiplying factor  |                        |
| 额定工作电压<br>Rated working voltage       | 85~265VAC/DC 自由输入，其他工作电压可定制<br>85~265VAC/DC input free,other working voltage upon request                                       |                        |
| 消耗功率 Power consumption                | 小于4.5W Less than 4.5W   |                        |
| 触点数量<br>Contact quantity              | 1组继电器，1+3为复位，1+4为暂停<br>1 group relay,1+3 denotes reset,1+4 denotes pause  | 2组继电器<br>2 group relay |

|                               |   |   |
|-------------------------------|---|---|
| 触点容量 Contact capacity         | 阻形负载: 5A/250VAC或5A/28VDC最大 Impedance load:Max 5A/250VAC or 5A/28VDC   |   |
| 显示方式<br>Display mode          | 固定秒闪指示灯, 相应的两位LED显示前吸合或释放时间<br>Fixed secretary flash indicator light ,the corresponing two bits LED displays the current close or release time  |   |
| 精确度<br>Accuracy               | 电压影响误差、重复误差小于±1%, 预置误差为0<br>Voltage affects error,repertive error less than ±1% and preset error is 0   |   |
| 信号输入<br>Signal input          | 复位和暂停信号输入为触点或NPN(发射极对公共端1)<br>采用光耦隔离, 信号宽度不少于0.02Sec<br>Reset and pause signal input is contact or NPN (emitter to common terminal 1),adopting photoelectric coupling isolation,signal width should not less than 0.02Sec | 底部无复位、暂停信号引入<br>No reset and pause signal input at botton |
| 使用环境<br>Operating environment | 环境温度: -10~+55℃ (不结冰), 湿度35~85%RH<br>Ambient temperature:-10~+55℃ (nonfreezing) Ambient humidity:35~85%RH  |   |
| 抗干扰能力<br>Noisy immunity       | AC2kV(操作电端子间)或DC±500V, 脉冲宽度1uS扰动下继电器正常工作<br>AC2kV(between operating power terminals )or DC±500V,time accumulator works normally under sisturbance of 1uS impulse width  |   |
| 使用寿命<br>Srvicve life          | 机械寿命: 5百万次, 电气寿命: 1百万次<br>Mechanical life:5x10 <sup>6</sup> times,electric life:1x10 <sup>6</sup> times   |   |
| 重量 Weight                     | 约103克 About 103g  | 约112克About 112g   |

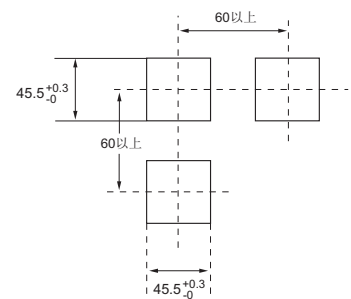
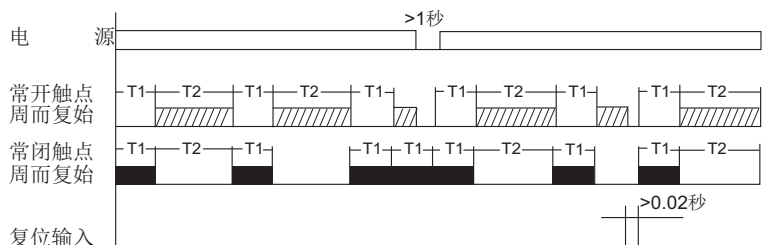
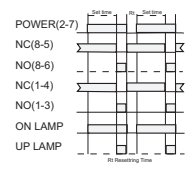
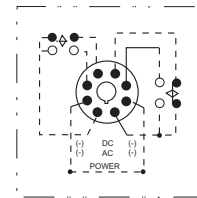
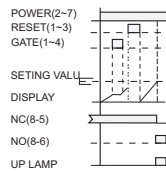
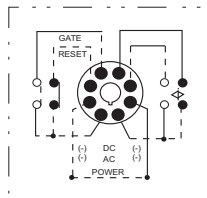
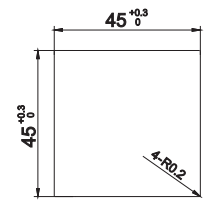
外形、接线图及开孔尺寸 Outline,connecting diagram and tapping size



LD48S-S-1Z



LD48S-S-2Z





## LT4 I 系列 Series



### 主要功能概述 General

- (1) 通电限时继电器，按键设定任意 限时值，多段限时值。
- (2) 既可往复循环限时工作，也可单次限时工作。
- (3) 高亮双色数码管显示（字高0.36英寸），根据提示音不同提醒用户操作。
- (4) 上电设定内部继电器动作方式（四种继电器动作方式状态），可替代市场各类时间继电器，一只LT4I相当于4只时间继电器的功能。
- (5) 内部采用工业级芯片，高精度晶 体为时钟源，信号输入采用光耦隔离，产品具有抗干能力强、延时精度高等优点，可应用在工 控场合。
- (6) DIN(48mm x 48mm)标准面板尺寸，无需另配底座的接线柱式连线方法，方便用户配线，接线端子之间绝缘电阻高达500MΩ。
- (7) 工作电源适用范围宽，85~265VAC/DC自由输入。

- (1) Power on time limit relay, press key to set any time limit value and multiplex time value.
- (2) It reciprocally and circularly limits the working time, and also limits for one time.
- (3) Bicolor and high bright digitron display(Digit height is 0.36 inch),user can operate according to different cue tone.
- (4) Power on to set the action mode of inner relay(action mode state of four kids of relays),it can replace various time relays in the market .One LT4I is equivalent to four pieces of time relays.
- (5) Industrial grade chip is built inside. Taking high accuracy crystal as clock source,signal input adopts photoelectric coupling.The product has characteristics of strong anti-interference capability and high delay accuracy,and is applied and is applied industrial control occasions.
- (6) DIN (48mm x 48mm) standard panel dimension, connection mode of connecting terminals that without additional base, which is convenient for user to wire. Insulation resistance between connecting terminals highly up to 500MΩ.
- (7) With wide applicable range for working power ,85~165VAC/DC free input.

### 技术参数 Technical parameters

|                                 |  |   |
|---------------------------------|--|---|
| 类别 Class                        | LT4I智能式限时时间继电器 LT4I intellectual type time limit time relay  |   |
| 型号 Type                         | LT4I-AB(R为双循环式，可选择使用)<br>LT4I-AB(R denotes double cycle type, for option)  | LT4I-CD(R为循环式，可选择使用)<br>LT4I-CD(R denotes double cycle type, for option)  |
| 额定工作电压<br>Rated working voltage | 85~265VAC/DC 自由输入，其他工作电压可定制<br>85~265VAC/DC input free, other working voltage upon request   |   |
| 消耗功率 Power consumption          | 小于 5W Less than 5W   |   |
| 触点容量<br>Contact capacity        | 2组继电器输出，容量：阻性负载5A/250VAC或5A/28VDC最大<br>2 groups of relay output, capacity:impedance load max 5A/250VAC or 5A/28VDC                           |   |
| 时间范围<br>Time range              | 0.01Sec-9999Sec(底部端子选择)<br>0.01Sec-9999Sec(Choose bottom terminals)  | 0.01Sec-99Hr/59Min(底部端子选择)<br>0.01Sec-99Hr/59Min(Choose bottom terminals) |
| 时间进制方式<br>Time scale mode       | 十进制<br>Decimal system  | 六十进制<br>Sexagesimal   |
| 显示方式<br>Display mode            | 电源指示灯、继电器动作指示灯，双色数码显示当前的延时时间值和设定值<br>Power indicator light, action indicator light of relay, and bicolor digitron displays the current delay |   |

|                                 |   |
|---------------------------------|---|
| 数据设置保存<br>Data setting storage  | 采用EEPROM, 继电器动作方式及数据预置保存时间不少于10年<br>Adopting EEPROM, the action mode of relay and data preset storing time not less than 10 years   |
| 继电器动作方式<br>Action mode of relay | 四种方式 (备注1)<br>Four kinds of modes (Remark 1)  |
| 精确度<br>Accuracy                 | 电压影响误差、重复误差小于±50PPM, 预置误差为0<br>Voltage affects error, repetitive error less than ±50PPM and preset error is 0   |
| 信号输入<br>Signal input            | 复位和暂停信号输入为触点或NPN(发射极对公共端1)采用光耦隔离, 信号宽度不少于0.02Sec<br>Reset and pause signal input is contact or NPN (emitter to common terminal 1), adopting photoelectric coupling isolation, signal width should not less than 0.02Sec |
| 使用环境<br>Operating environment   | 环境温度: -10~+55℃ (不结冰), 湿度35~85%RH<br>Ambient temperature: -10~+55℃ (nonfreezing) Ambient humidity: 35~85%RH  |
| 抗干扰能力<br>Noisy immunity         | AC3kV(操作电端子间)或DC±700V, 脉冲宽度1uS扰动下继电器正常工作<br>AC3kV(between operating power terminals) or DC±700V, time accumulator works normally under disturbance of 1uS impulse width   |
| 使用寿命<br>Service life            | 机械寿命: 5百万次, 电气寿命: 1百万次<br>Mechanical life: 5x10 <sup>6</sup> times, electric life: 1x10 <sup>6</sup> times  |
| 重量 Weight                       | 约121克 About 121g  |

备注1: 输出继电器可以预置为四种工作方式的一种, 见下表

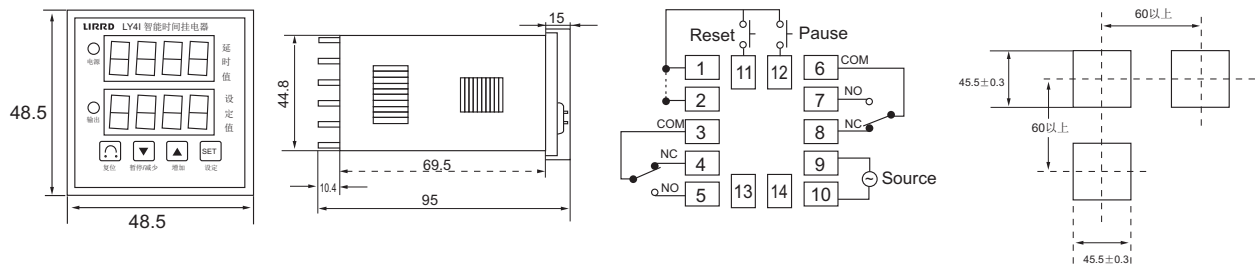
Remark 1: Output relay can preset any of the four working modes, see the following table

| 预置方式代码<br>Code of preset mode | 输出继电器工作说明<br>Working mode instruction for outputting relay  |
|-------------------------------|---|
| H-. on; d-.of                 | 通电后开始延时, 到达预置值时继电器吸合<br>Starting delay after power on, relay closes after reaching preset value   |
| H-. of; d-.of                 | 通电后不延时, 通过面板复位键或底部复位端子使其工作, 到达预置值时继电器吸合<br>Not delay after power on, to make it work through panel reset key or bottom reset terminals, relay closes after reaching preset value                        |
| H-. on; d-.on                 | 通电后开始延时, 继电器吸合, 到达预置值时继电器释放<br>Starting delay after power on, relay closes and it releases after reaching preset value  |
| H-. of; d-. on                | 通电不延时, 继电器吸合, 可通过面板复位键或底部复位端子使其工作, 到达预置值时继电器释放<br>Not delay after power on, relay closes, to make it work through panel reset key or bottom reset terminals, relay releases after reaching preset value |

以上四种继电器工作方式设定按如下操作: LT4I上电前按住复位键不放, 上电后, LED显示以上四种代码中的一种, 通过“√”“^”键设定所需的一种, 再按“set”键确认, 切断电源, 重新上电即可。

To set the above four kinds of working modes for relay as the following operations: For LC4I, press rese without stop before power on, after power on, LED displays any of the above four codes, to set the needed one via “√” “^” key, then press “set” to confirm, cut off the power and power on again.

外形、接线图表盘加工尺寸 Outline, connecting diagram and dial plate processing dimension



## LT4S 系列Series



### 主要功能概述 General

- (1) 4位拨码预置时间, 高亮LED显示, 字高0.36英寸。
- (2) 1位拨码设定延时倍率, 倍率达八种。
- (3) 内置高性能微芯片, 高精度晶体为时钟源, 延时精度高达1%。
- (4) 输入信号采用光耦隔离, 提高了抗干扰能力。
- (5) 工作电源适用范围宽, 85~265VAC/DC自由输入。
- (6) 无需另配底座的接线柱式连线方式, 方便用户配线, 接线端子之间绝缘电阻高达500M $\Omega$ 。
- (7) 三种复位方式, 两组继电器输出, 四种标准型号可组合使用, 适用于各种场合。

- (1) 4 bits dial code preset time ,with LED display of high bright ,digit height is 0.36 inch.
- (2) 1 bit dial code set and delay multiplying factor ,multiplying factors up to 8 varieties.
- (3) With high performance built-in microchip,taking high accuracy crystal as clock source,the delay accuracy highly up to 0.05%.
- (4) Inpus signal adopts photoelectric coupling isolation to increase the anti-interference capability.
- (5) Wide applicable range for working power,85~265VAC/DC free input.
- (6) No need to equip with bdse additionally for binding post type connection method, it is convenient for user to wire.Insulation resistance between connecting terminals highly up to 500M $\Omega$  .
- (7) Three kinds of reset modes, two groups of relays output, four kinds of standards types can be combined to use, and applicable to every occasions.

### 技术参数 Technical parameters

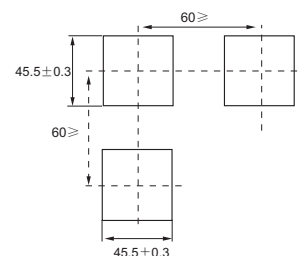
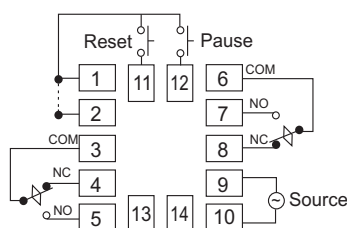
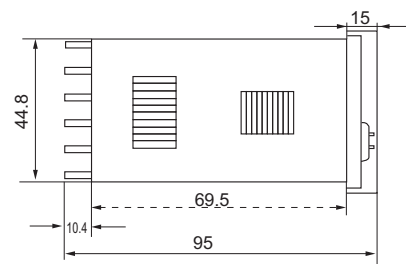
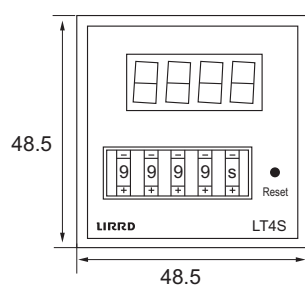
| 类别 Class                                | 多段式预置式限时继电器Multiplex type preset time limit relay  |   |  |   |
|---|--|---|--|---|
| 型号 Type                                 | LT4S   | LT4SE   | LT4SY  | LT4SC   |
| 延时倍率<br>Delay multiplying factor        | 1mS、0.01Sec、0.1Sec、1Sec、1Min、1Hr、1Min/Sec、1Hr/Min  |   |  |   |
| 延时范围<br>Delay range                     | 1-9999倍延时倍率（1Min/Sec、1Hr/Min为60进制, 其他为十进制）<br>1-9999 time delay multiplying factor (1Min/Sec、1Hr/Min is sexagesimal, others are decimal system)  |   |  |   |
| 主要功能描述<br>Description of main functions | 加延时、限时二组继电器,无停电记忆功能<br>Plus delay, time limit the two groups of relay, with battery backup function  | 加延时、限时二组继电器,有停电记忆功能<br>Plus delay, time limit the two groups of relay, with battery backup function | 减延时、限时二组继电器,无停电记忆功能<br>Minus delay, time limit the two groups of relay, with battery backup function | 加延时、限时一组、瞬时一组, 无停电记忆功能<br>Plus delay, time limit, instantaneous one group, with battery backup function |
| 触点容量<br>Contact capacity                | 阻性负载5A/250VAC或5A/28VDC最大<br>Impedance load:Max 5A/250VAC or 5A/28VDC   |   |  |   |
| 控制信号<br>Control signal                  | 有暂停（GATE）、复位（RESET）端子输入, 输入端子禁止输入电压, 短路（ON）阻抗小于3k $\Omega$ , 开放（OFF）阻抗大于200k $\Omega$ , 信号输入光电耦合隔离。<br>With pause and reset terminal input voltage for input terminal is forbidden. Short circuit (ON) impedance less than 3k $\Omega$ , open circuit (OFF) impedance exceed 200k $\Omega$ , signal input is photoelectric coupling insolated. |   |  |   |

|                                 |   |
|---------------------------------|---|
| 复位<br>Reset                     | 上电复位、面板按键复位、底部端子复位（备注1）<br>Power on reset, panel keying reset and bottom terminal rese (Remark 1)   |
| 显示方式<br>Display mode            | 4位高亮LED显示，闪烁指示秒，指示位置根据设定时间倍率同步改变<br>4 bits LED display of high bright, indicating sec flashes, indicating position changes synchronistically according to the set time multiplying factor |
| 额定工作电压<br>Rated working voltage | 85~265VAC/DC自由输入，其他工作电压可定制<br>85~265VAC/DC input free, other working voltage upon request   |
| 时间精度<br>Time accuracy           | 重复误差 Repetitive error:±0.03%,电压误差 Voltage error:±0.05%,<br>温度误差 Temp.error:±0.05%   |
| 消耗功率Power consumption           | ≤4.5VA  |
| 使用环境<br>Operating environment   | 环境温度: -10~+55℃（不结冰），湿度35~85%RH<br>Ambient temperature:-10~+55℃ (nonfreezing) Ambient humidity:35~85%RH  |
| 抗干扰能力<br>Noisy immunity         | AC2kV(操作电端子间)或DC±500V，脉冲宽度1uS扰动下继电器正常工作<br>AC2kV(between operating power terminals )or DC±500V,time accumulator works normally under sisturbance of 1uS impulse width                     |
| 使用寿命<br>Scrvic life             | 机械寿命: 5百万次，电气寿命: 1百万次<br>Mechanical life:5x10 <sup>6</sup> times,electric life:1x10 <sup>6</sup> times  |
| 重量 Weight                       | 约121克 About 121g  |
| 安装方式<br>Installation mode       | 面板嵌入式，采用接线端子方式接线<br>Panel flush type, adopting connecting terminal type for connection  |

备注1：具备停电记忆功能的LT4SE上电复位后LED显示上次掉电时的延时时间，并保持掉电时的继电器的工作状态。无停电记忆功能的其他产品上电复位后显示全0或当前拨码预置值（倒延时模式）。底部复位端子时信号可为触点或NPN结点输入，其短路（ON）阻抗小于3kΩ。

Remark1: LT4SE with battery backup function, after power on and reset, LED display time and keeps the working state of relay before power cut. Other products without the function will display total 0 or the current dial code preset value (delay down mode) after power on and reset. The time signal of bottom reset terminal is contact or NPN knot input, its short circuit (ON) Impedance is less than 3kΩ.

外形、接线图及开孔尺寸 Outline,connecting diagram and tapping size



## LT4S-S 系列 Series



### 主要功能概述 General

- (1) 通电限时继电器，双设定Tno、Tnc（Tno为限时吸合时间，Tnc为限时时间），一只继电器能替代两只继电器用，高两位BCD拨码为限时释放预置时间，低两位BCD拨码为限时预置吸合时间，LED相应显示当前限时时间段，可选做倒计时模式。
- (2) 既可往复循环限时工作，也可单次限时工作。
- (3) 智能提示功能：用户限时值为全0时LED显示“Erro”，提示预置值出错；在复位或单次限时时间结束后LED显示“no（当前转换继电器是吸合状态）或“nc”（当前转换继电器是释放状态）。
- (4) 采用高性能专用微控芯片，底部暂停、复位信号采用光电耦合隔离输入，提高抗干扰能力。
- (5) 高精度晶体振荡器作为系统时钟源，时间精度高达0.05%。
- (6) 八种限时倍率，任意设置继电器限时吸合、释放时间，时间范围宽（0.01Sec~99Hr）。
- (7) DIN(48mm x 48mm)标准面板尺寸，标准8针接口，无需另配底座的接线柱式连线方法，方便用户配线，接线端子之间绝缘电阻高达500MΩ。
- (8) 工作电源适用范围宽，85~265VDC自由输入。

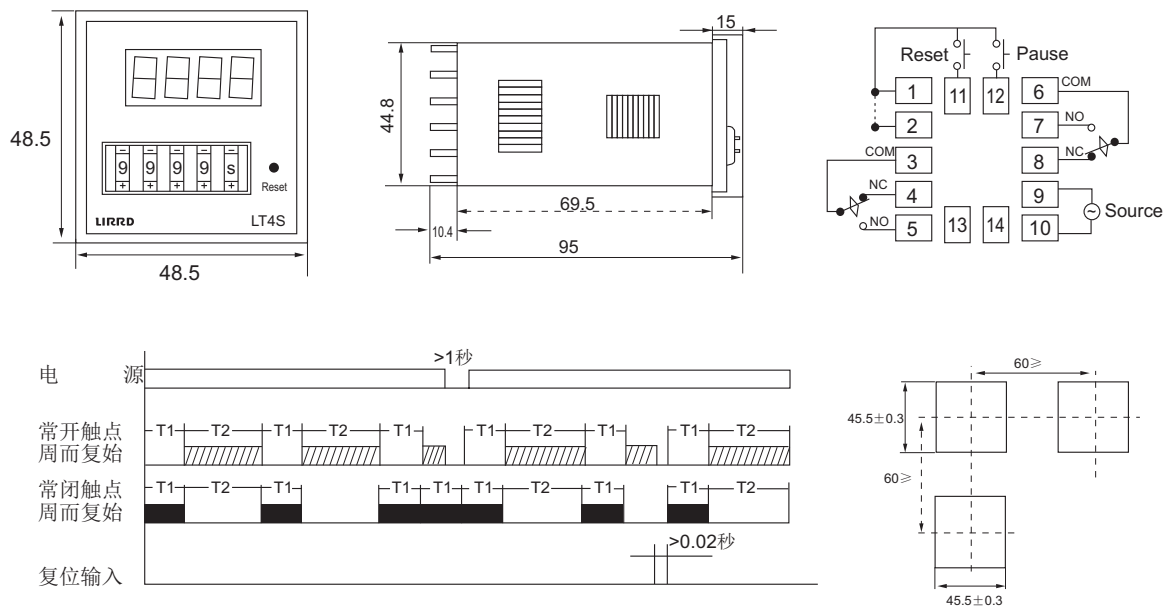
- (1) Power on time limit relay, with double setting Tno, Tnc (Tno is time limit release time) time limit, one relay can be used by replacing two relays. High two bits BCD dial code is the time limit release preset time and low two bits BCD dial code is the time limit preset close time. LED correspondingly displays the current time limit time section and it also can be selected down mode.
- (2) It reciprocally and circularly limits the working time, and also limits for one time.
- (3) Intellectual cue function: When user's time limit value is total 0, LED displays "Erro" and prompts preset value is in error, after reset or single limit time finished, LED displays "no" (current switching relay is under close state) or "nc" (current switching relay is under release state).
- (4) Adopting high performance special microcontrol chip, bottom pause and reset signal adopt photoelectric coupling isolation input, which increases the anti-interference capability.
- (5) High accuracy crystal oscillator is taken as clock source for system, the time accuracy highly up to 0.05%.
- (6) With eight kinds of time limit multiplying factor, to set the time limit close, release time and width of time range (0.01Sec~990Hr) for relay at will.
- (7) DIN (48mm x 48mm) standard panel dimension, no need to equip with base additionally for binding post type connection method, it is convenient for user to wire. Insulation resistance between connecting terminals highly up to 500MΩ.
- (8) With wide applicable range for working power, 85~265VAC/DC free input.

### 技术参数 Technical parameters

|                                       |   |
|---------------------------------------|---|
| 类别 Class                              | 双设定多段式预置型限时继电器 Double setting multiplex type preset time limit relay  |
| 型号 Type                               | LT4S-S  |
| 限时倍率<br>Time limit multiplying factor | 0.01Sec、0.1Sec、1Sec、0.1Min、1Min、0.1Hr、1Hr、10Hr（任意设定两种）<br>0.01Sec、0.1Sec、1Sec、0.1Min、1Min、0.1Hr、1Hr、10Hr（Set two types at will） |
| 限时范围 Time limit range                 | 1-99倍限时倍率 1-99 times time limit multiplying factor  |
| 额定工作电压<br>Rated working voltage       | 85~265VAC/DC 自由输入，其他工作电压可定制<br>85~265VAC/DC input free, other working voltage upon request                                      |
| 消耗功率 Power consumption                | 小于4.5W  |
| 触点容量<br>Contact capacity              | 2组继电器输出，容量：阻性负载5A/250VAC或5A/28VDC最大<br>2 groups of relay output, capacity: impedance load max 5A/250VAC or 5A/28VDC             |

|                               |   |
|-------------------------------|---|
| 显示方式<br>Display mode          | 固定秒闪指示灯，相应的两位LED显示前吸合或释放时间<br>Fixed secretary flash indicator light ,the corresponding two bits LED displays the current close or release time  |
| 精确度<br>Accuracy               | 电压影响误差、重复误差小于±50PPM，预置误差为0<br>Voltage affects error,repitive error less than±50PPM and preset error is 0  |
| 信号输入<br>Signal input          | 复位和暂停信号输入为触点或NPN信号<br>采用光耦隔离，信号宽度不少于0.02Sec<br>Reset and pause signal input is contact or NPN adopting<br>adopting photoelectric coupling solation,signal width should<br>not less than 0.02Sec |
| 使用环境<br>Operating environment | 环境温度：-10~+55℃（不结冰），湿度35~85%RH<br>Ambient temperature:-10~+55℃ (nonfreezing) Ambient humidity:35~85%RH   |
| 抗干扰能力<br>Noisy immunity       | AC2kV(操作电端子间)或DC±500V，脉冲宽度1uS扰动下继电器正常工作<br>AC2kV(between operating power terminals )or DC±500V,time accumulator works normally under<br>sisturbance of 1uS impulse width                        |
| 使用寿命<br>Srvicve life          | 机械寿命：50万次，电气寿命：100万次<br>Mechanical life:5x10 <sup>5</sup> times,electric life:1x10 <sup>6</sup> times   |
| 重量 Weight                     | 约112克 About 112g  |

外形、接线图、时序图及开孔尺寸 Outline,connecting diagram,sequence chart and tapping size



## LD72S 系列 Series



### 主要功能概述 General

- (1) 4位拨码预置时间, 高亮LED显示, 字高0.56英寸。数字直观、醒目。
- (2) 1位拨码设定, 三种延时倍率。
- (3) 内置高性能微芯片, 高精度晶体为时钟源, 延时精度高达0.05%。
- (4) 输入信号采用光耦隔离, 提高了抗干扰能力。
- (5) 工作电源适用范围宽, 85~265VAC/DC自由输入。
- (6) DIN (72mm x 72mm)标准面板尺寸, 无需另配底座的接线端子接线方式, 方便与其他设备配套使用。

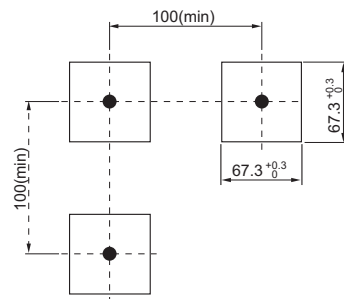
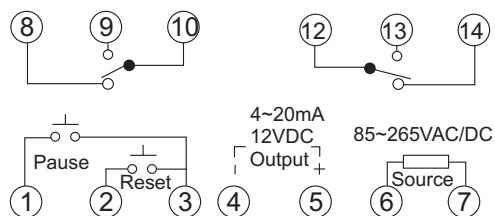
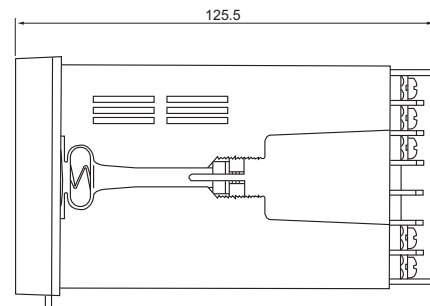
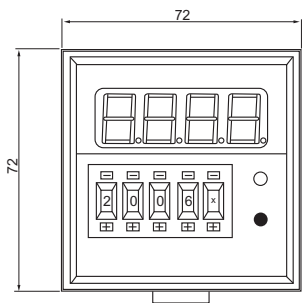
- (1) 4 bits dial code preset time ,with LED display of high bright ,digit height is 0.56 inch. The digit is visual and striking.
- (2) 1 bit dial code setting, three kinds of delay multiplying factor.
- (3) With high performance built-in microchip,taking high accuracy crystal as clock source,the delay accuracy highly up to 0.05%.
- (4) Inpus signal adopts photoelectric coupling isolation to increase the anti-interference capability.
- (5) Wide applicable range for working power,85~265VAC/DC free input.
- (6) DIN (72mm x 72mm) standard panel dimension,connection mode of connecting terminals that without additional base, which is convenient to use with matchable equipments.

### 技术参数 Technical parameters

|  |   |  |
|--|---|--|
| 类别 Class   | 多段式预置式限时继电器Multiplex type preset time limit relay   |  |
| 型号 Type  | LD72S   | LD72SE   |
| 额定工作电压<br>Rated working voltage                                  | 85~265VAC/DC 自由输入, 其他工作电压可定制<br>85~265VAC/DC input free,other working voltage upon request  |  |
| 消耗功率 Power consumption   | 小于5VA Less Than 4.5VA   |  |
| 延时倍率<br>Delay multiplying factor                                 | 0.01Sec、1Min/Sec、1Hr/Min (0.01Sec 为十进制, 其他为60进制)<br>0.01Sec、1Min/Sec、1Hr/Min (0.01Sec is decimal system, others are sexagtesimal)   |  |
| 延时范围 Delay range   | 1-9999倍延时倍率1-9999 times delay multiplying factor  |  |
| 延时方式<br>Delay mode   | 缺省方式为正延时, 可选做倒延时方式, 瞬时方式不可做停电记忆功能<br>Default mode is positive delay, it also can be selected as delay down mode.Instantaneous type is without power cut memory function   |  |
| 显示方式<br>Display mode   | 延时过程中有秒闪指法示灯, 延时结束后有动作指示灯输出<br>Sec flash indicator light works during delay process, action indicator light outputs after delay finish  |  |
| 精确度<br>Accuracy  | 电压影响误差、重复误差小于±50PPM, 预置误差为0<br>Voltage affects error,repetitive error less than±50PPM and preset error is 0   |  |
| 停电记忆功能<br>Battery back-up  | 无W/O  | 有 (此功能可作累时器用)<br>W (The function is also for time accumulator) |
| 重量及外形尺寸<br>Weight and outline dimension                          | 约150克, 72W x 72H x 126D<br>About150g, 72W x 72H x 126D  |  |
| 复位信号、暂停信号<br>输入方式<br>Input mode of reset signal and pause signal | NPN或触点式, 短路 (ON) 阻抗小于3kΩ, 开放 (OFF) 阻抗大于100kΩ, 信号内部采用光电耦合隔离。<br>NPN or contact type, short time (ON) Impedance less than 3kΩ, open circuit (OFF) Impedance exceed 100kΩ. Signal inside adopts photoelectric coupling isolation |  |

|  |   |   |
|--|---|---|
| <p>复位方式及信号宽度<br/>Reset mode and signal width</p>       | <p>上电复位、面板按键复位、底部端子复位，复位后LED显示全0（正方式）或当前拨码预置值（倒方式）<br/>Power on rest, panel keying reset and bottom terminal reset, LED displays 0 (positive mode) after reset or current dial code preset value (inverse code)</p>                                     | <p>面板按键复位、底部端子复位，复位后LED显示全0（正方式）或当前拨码预置值（倒方式）上电复位（恢复掉电前的延时值和继电器状态）<br/>Panel keying reset and bottom terminal reset, LED displays 0 (positive mode) after reset or current dial code preset value (inverse code). Power on reset (Recover the delay value before power cut and the relay state)</p> |
| <p>内部继电器触点容量<br/>Contact capacity of inside relaya</p> | <p>当延时值达到用户拨码预置值后，输出继电器触点转换，触点容量为阻性负载5A/280VAC或5A/28VDC最大（两组继电器）<br/>When the delay value reach user's dial code preset value, contact of output relay changes. Contact capacity is impedance load max 5A/280VAC or 5A/28VDC (two groups of relays)</p> |   |
| <p>工作环境<br/>Operating environment</p>                  | <p>环境温度：-10~+55℃（不结冰），湿度35~85%RH<br/>Ambient temperature:-10~+55℃ (nonfreezing) Ambient humidity:35~85%RH</p>   |   |
| <p>抗干扰能力<br/>Noisy immunity</p>                        | <p>AC2kV(操作电端子间)或DC±500V，脉冲宽度1uS扰动下继电器正常工作<br/>AC2kV(between operating power terminals) or DC±500V,time accumulator works normally under sisturbance of 1uS impulse width</p>   |   |
| <p>使用寿命<br/>Scrvic life</p>                            | <p>机械寿命：5百万次，电气寿命：1百万次<br/>Mechanical life:5x10<sup>6</sup>times,electric life:1x10<sup>6</sup>times</p>  |   |

外形、接线图及开孔尺寸 Outline,connecting diagram and tapping size





LD72S-REC 累时仪系列 Time accumulator series



主要功能概述 General

- (1) 对信号长度进行累时。
- (2) 4位高亮LED显示当前累计时间，字高0.56英寸；小数点根据设定的累时范围自动改变位置，显示数据更加直观、醒目。
- (3) 采用专用高性能微芯片，晶体振荡器作为时钟源，累时精度高达0.05%。
- (4) 自由选择信号源输入方式（底部接线端子选择）和累时方式（仪表内部红色拨动开关选择）。
- (5) DIN (72mm x 72mm)标准面板尺寸，无需另配底座的接线端子接线方式，更方便用户应用。

- (1) To accumulate time to signal length.
- (2) 4 bits LED with high bright display the current accumulated time. Digit height is 0.56 inch. Decimal point automatically changes its position according to the set time accumulating range. The data is more visual and striking.
- (3) Adopting special high performance microchip, taking crystal oscillator as time source and the time accumulating accuracy highly up to 0.05%
- (4) Freely to choose signal source input mode (choose bottom connecting terminals) and time accumulating mode (choose the red toggle switch inside the meter).
- (5) DIN (72mm x 72mm) standard panel dimension, connection mode of connecting terminals that without additional base, which is more convenient for user application.

技术参数 Technical parameters

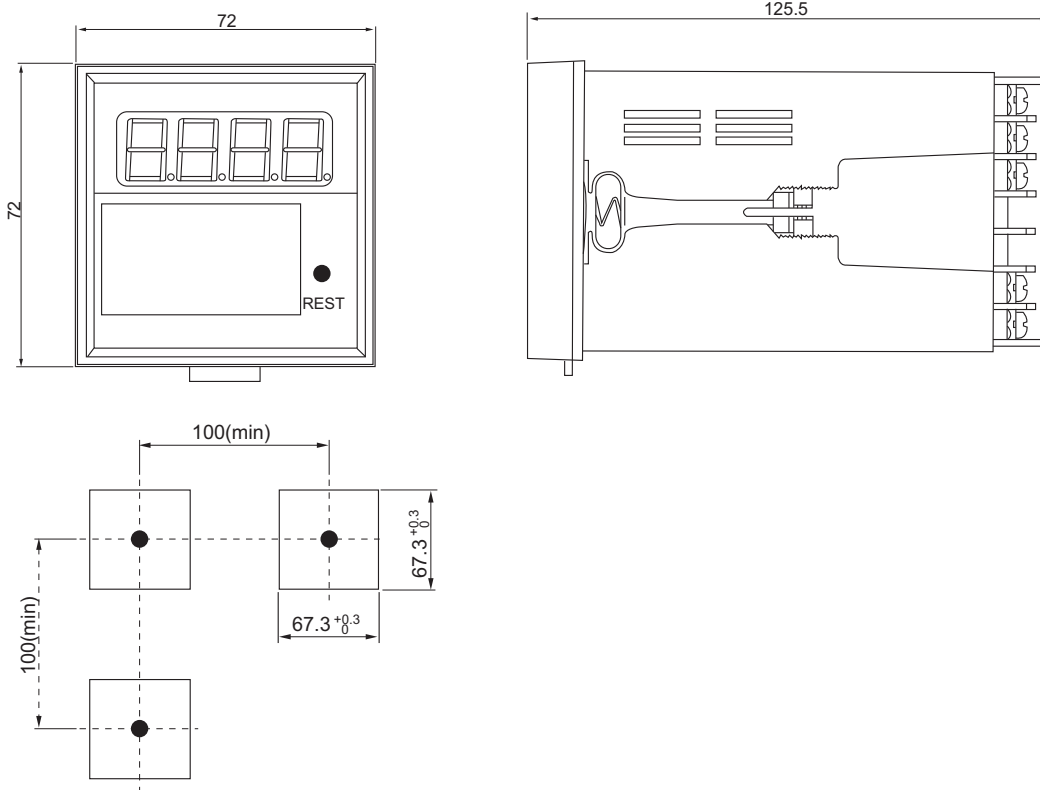
|   |  |
|---|--|
| 类别 Class  | 微电脑累时仪 Microcomputer time accumulator  |
| 型号 Type   | LD72S-REC  |
| 额定工作电压<br>Rated working voltage                           | 85~265VAC/DC 自由输入，其他电压可定制<br>85~265VAC/DC input free, other voltage upon request   |
| 累时范围<br>Time accumulating range                           | 0.01Sec~99.99Sec、0.1Sec~9999Sec、1Sec~9999Sec、0.1Min~999.9Min、1Min~9999Min、1Hr~9999Hr、1S~99Min59Sec、1Min~99Hr59Min<br>(在仪表内部使用红色拨动开关选择累时范围)<br>(Use the red toggle switch inside the meter to choose time accumulating range)   |
| LED显示<br>LED Display                                      | 4位高亮LED显示，字高0.56，小数点根据设定累时范围自动显示，并作为秒闪指示灯用<br>4 bits LED with high brilliance display the current accumulated time. Character height is 0.56 inch. Decimal point automatically changes its position according to the set time accumulating range and used as sec. flash indicator light. |
| 累时启动信号源<br>Signal description of time accumulating start  | PNP电压式、NPN结点（触点式），底部端子选择（见备注）<br>PNP voltage type, NPN knot (contact type), bottom terminal selection (see Note)   |
| 累时启动信号描述<br>Signal description of time accumulating start | 上电累时仪不工作，信号到来累时仪按计时设定范围计时，当信号撤离时停止计时，同时累时仪内部继电器触点转换<br>Time accumulator doesn't work when power on, it times according to the set timing range when signal coming. When signal pulls out, it stops timing, at the same time, the contact of relay inside the time accumulator converts.  |
| 重量及外形尺寸(mm)<br>Weight and outline dimension               | 约153克，72W x 72H x 126D<br>About 153g, 72W x 72H x 126D   |
| 复位方式及信号宽度<br>Reset mode and signal width                  | 面板复位、底部端子复位，复位信号宽度不小于20mS<br>Panel reset, bottom terminal reset, the width of reset signal should not less than 20mS   |

|                               |  |
|-------------------------------|--|
| 自动清零<br>Autoclear             | 多次信号到来时，仪表自动清除上次累时时间，重新计时<br>Many times signal coming, the meter will automatically clear the last accumulated time and retiming.                                      |
| 工作环境<br>Operating environment | 环境温度: -10~+55℃ (不结冰), 湿度35~85%RH<br>Ambient temperature:-10~+55℃ (nonfreezing) Ambient humidity:35~85%RH   |
| 抗干扰能力<br>Noisy immunity       | AC2kV(操作电端子间)或DC±500V, 脉冲宽度1uS扰动下继电器正常工作<br>AC2kV(between operating power terminals) or DC±500V,time accumulator works normally under sisturbance of 1uS impulse width |
| 使用寿命<br>Scrvic life           | 机械寿命: 5百万次, 电气寿命: 1百万次<br>Mechanical life:5x10 <sup>6</sup> times,electric life:1x10 <sup>6</sup> times  |

备注: PNP电压输入可为交流或直流, 为交流时高电平3~30VAC, 低电平0~1.5VAC; 为直流时高电平3-30VDC, 低电平0-1.2VDC (直流时1接正, 3接负)。NPN接点时, 集电极接1, 发射极接3, NPN结点或触点式短路 (ON) 阻抗不高于3kΩ, 开放 (OFF) 阻抗不低于200KΩ。

Note:PNP voltage input can be AC or DC, up level 3-30VAC and low level 0-1.2VDC for DC (1 to positive and 3 to negative when for DC).For NPN knot, collector connects to 1 and emitter connects to 3. NPN knot or contact type short circuit (ON) impedance should not exceed 3kΩ, and open circuit (OFF) impedance should not less than 200KΩ.

接线图及开孔尺寸 Connecting diagram and tapping size



LDP3S-REC 累时仪系列 Time accumulator series



主要功能概述 General

- (1) 对信号长度或两个信号之间的间隔长度进行累时。
- (2) 6位高亮LED显示当前累计时间，字高0.56英寸；小数点根据设定的累时范围自动改变位置，显示数据更加直观、醒目。
- (3) 采用专用高性能微芯片，晶体振荡器作为时钟源，累时精度高达±1%。
- (4) 自由选择信号源输入方式和累时方式（仪表内部短路块选择）。
- (5) DIN (48mm x 96mm)标准面板尺寸，无需另配底座的接线端子接线方式，更方便用户应用。

- (1) To accumulate time to signal length or the interval length between two signals.
- (2) 6 bits LED with high bright display the current accumulated time. Digit height is 0.56 inch. Decimal point automatically changes its position according to the set time accumulating range. The data is more visual and striking.
- (3) Adopting special high performance microchip, taking crystal oscillator as time source and the time accumulating accuracy highly up to 0.05%
- (4) Choose signal source input mode and time accumulating mode (Use short circuit block to choose inside the meter) freely.
- (5) DIN (48mm x 96mm) standard panel dimension, connection mode of connecting terminals that without additional base, which is more convenient for user's application.

技术参数 Technical parameters

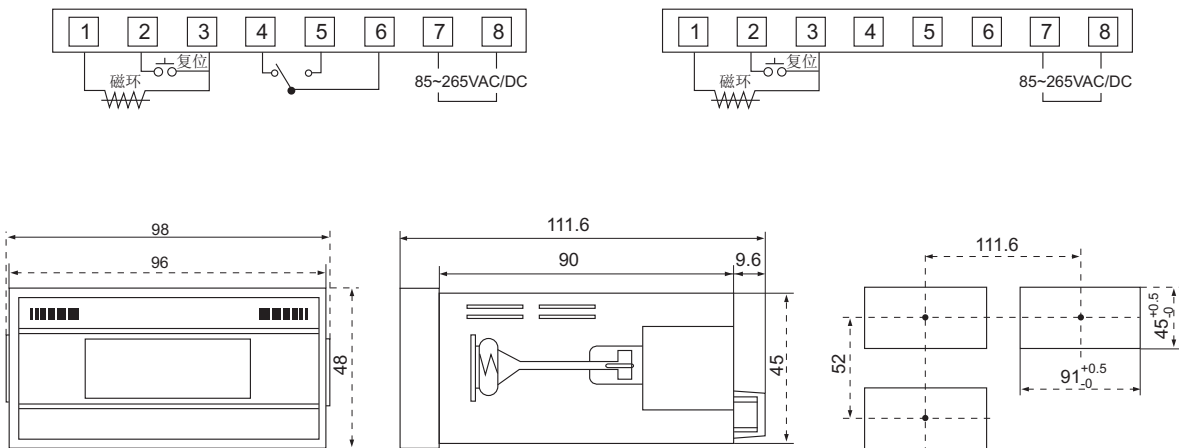
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|---|---|--|
| 类别 Class  | 微电脑累时仪 Microcomputer time accumulator   |  |
| 型号 Type   | LDP3S-REC   | LD3ST-REC  |
| 额定工作电压<br>Rated working voltage                           | 85~265VAC/DC 自由输入，其他电压可定制<br>85~265VAC/DC input free, other voltage upon request  |  |
| 累时范围<br>Time accumulating range                           | 1mS~999.999Sec、0.01Sec~9999.99Sec、0.01Sec~99Min59.99Sec 1Sec~99HR59Min59Sec<br>(在仪表内部使用短路块选择累时范围)<br>(Use short circuit block to choose time accumulating range inside the meter)   |  |
| LED显示<br>LED Display                                      | 6位高亮LED显示，字高0.56，小数点根据设定累时范围自动显示<br>6 bits LED with high brilliance display the current accumulated time. Character height is 0.56 inch.<br>Decimal point automatically changes its position according to the set time accumulating range   |  |
| 累时启动信号源<br>Signal description of time accumulating start  | PNP电压式、NPN结点（触点式），底部端子选择（见备注）<br>PNP voltage type, NPN knot (contact type), bottom terminal selection (see Note)  |  |
| 累时启动信号描述<br>Signal description of time accumulating start | 上电累时仪不工作，信号到来累时仪按计时设定范围计时，当信号撤离时停止计时，同时累时仪内部继电器触点转换<br>Time accumulator doesn't work when power on, it times according to the set timing range when signal coming. When signal pulls out, it stops timing, at the same time, the contact of relay inside the time accumulator converts. | 上电累时仪不工作，信号到来时累时仪不计，当该信号撤离时仪按计时设定范围计时，信号再次到来停止计时，无继电器触点转换<br>Time accumulator doesn't work after power on, when signal coming but the time accumulator doesn't count. When signal pulls out, the time accumulator counts according to the counting set range; When signal coming again, it stops counting, there is no relay contact inversion |

|   |  |   |
|---|--|---|
| 功能特点<br>Function characteristic             | 对信号宽度进行累时<br>To accumulating time to signal length   | 对两个信号间隔的宽度进行累时<br>To accumulating time to the width between two signals |
| 重量及外形尺寸(mm)<br>Weight and outline dimension | 约123克, 48W x 96H x 84D<br>About123g, 48W x 96H x 84D   |   |
| 复位方式及信号宽度<br>Reset mode and signal width    | 面板复位、底部端子复位, 复位信号宽度不小于20mS<br>Panel reset, bottom terminal reset, the width of reset signal should not less than 20mS  |   |
| 自动清零<br>Autoclear                           | 多次信号到来时, 仪表自动清除上次累时时间, 重新计时<br>When Many times signal com, the meter I automatically clear the last accumulated time and retiming.                                     |   |
| 工作环境<br>Operating environment               | 环境温度: -10~+55℃ (不结冰), 湿度35~85%RH<br>Ambient temperature:-10~+55℃ (nonfreezing) Ambient humidity:35~85%RH   |   |
| 抗干扰能力<br>Noisy immunity                     | AC2kV(操作电端子间)或DC±500V, 脉冲宽度1uS扰动下继电器正常工作<br>AC2kV(between operating power terminals )or DC±500V,time accumulator works normally under sisturbance of 1uS impulse width |   |
| 使用寿命<br>Scrvce life                         | 机械寿命: 5百万次, 电气寿命: 1百万次<br>Mechanical life:5x10 <sup>6</sup> times,electric life:1x10 <sup>6</sup> times  |   |

备注: PNP电压输入可为交流或直流, 为交流时高电平3~30VAC, 低电平0~1.5VAC; 为直流时高电平3~30VDC, 低电平0~1.2VDC (直流时1接正, 3接负)。NPN接点时, 集电极接1, 发射极接3, NPN结点或触点式短路 (ON) 阻抗不高于3kΩ, 开放 (OFF) 阻抗不低于200KΩ。

Note:PNP voltage input can be AC or DC, up level 3-30VAC and low level 0-1.2VDC for DC (1 to positive and 3 to negative when for DC).For NPN knot, collector connects to 1 and emitter connects to 3. NPN knot or contact type short circuit (ON) impedance should not exceed 3kΩ, and open circuit (OFF) impedance should not less than 200KΩ.

接线图及开孔尺寸 Connecting diagram and tapping size

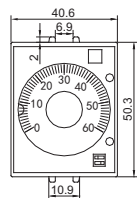


## LST3P 系列 Series

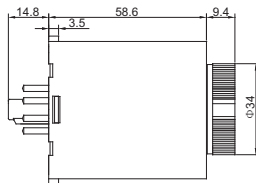
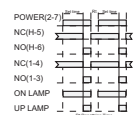
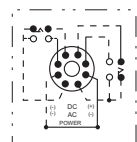


|                            |   |                               |   |
|----------------------------|---|-------------------------------|---|
| 类别 Classification          | 多段式时间继电器 Multi Range Time Relay   |                               |   |
| 型号 Model                   | LST3PA  | LST3PC                        | LST3PG  |
| 外形尺寸 (毫米) Dimension(mm)    | 55.0H × 40.5W × 84.0L   |                               |   |
| 时间范围 Full Timing Range     | A:0.05-0.5s/5s/30s/3min<br>B:0.1-1s/10s/60s/6min<br>C:0.5-5s/50s/5min/30min<br>D:1-10s/100s/10min/60min |                               | E:5-60s/10min/60min/6h<br>F:0.25-2min/20min/2h/12h<br>G:0.5-5min/40min/4h/24h |
| 额定电压 Rated Voltage         | AC:12V-24V-48V-110V-220V-380V 50/60HZ DC:12V-24V-48V-110  |                               |   |
| 指示灯动作 Indicator Operating  | ON, UPG两只指示灯 ON, UP Two Indicator   |                               |   |
| O/P输出接点 Contact            | 型号 Model  | LST3PA                        | LST3PC  |
|                            | 限时 1C Time Limit  |                               | 5A  |
|                            | 限时 2C Time Limit  | 5A(10A)                       |   |
| 瞬时 1C Instantaneous        |   | 5A                            |   |
| 寿命 Service life            | 机械 Mechanical   | 5 × 10 <sup>7</sup> Times     |   |
|                            | 电气 Electrical   | 10 <sup>6</sup> Times         |   |
| 精确度 Accuracy               | 往复误差 Repeat Error   | ±2% max.                      |   |
|                            | 设定误差 Setting Error  | ±5% max.                      |   |
|                            | 电压误差 Voltage Error  | ±5% max.                      |   |
|                            | 温度误差 Temp Error   | ±2% max.                      |   |
| 复位时间 Reset Time            | 0.1sec max.   |                               |   |
| 消耗功率 Power consumption     | 3VA   |                               |   |
| 使用周围温度 Ambient Temperature | -10℃~+50℃   |                               |   |
| 使用周围湿度 Ambient Humidity    | 35~85%RH  |                               |   |
| 重量 Weight                  | 100g  |                               |   |
| 安装于其底座 Mounting & Socket   | 露出 Surface  | PF083A 8PFA                   |   |
|                            | 埋入型 Flush   | Y-40 & US-08 or Y-40 & P3G-08 |   |

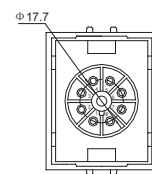
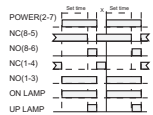
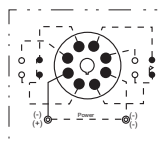
### 安装尺寸和接线、时序图 Installation dimensions and connecting, sequence diagram



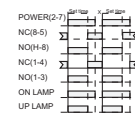
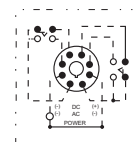
LST3PA



LST3PC



LST3PG

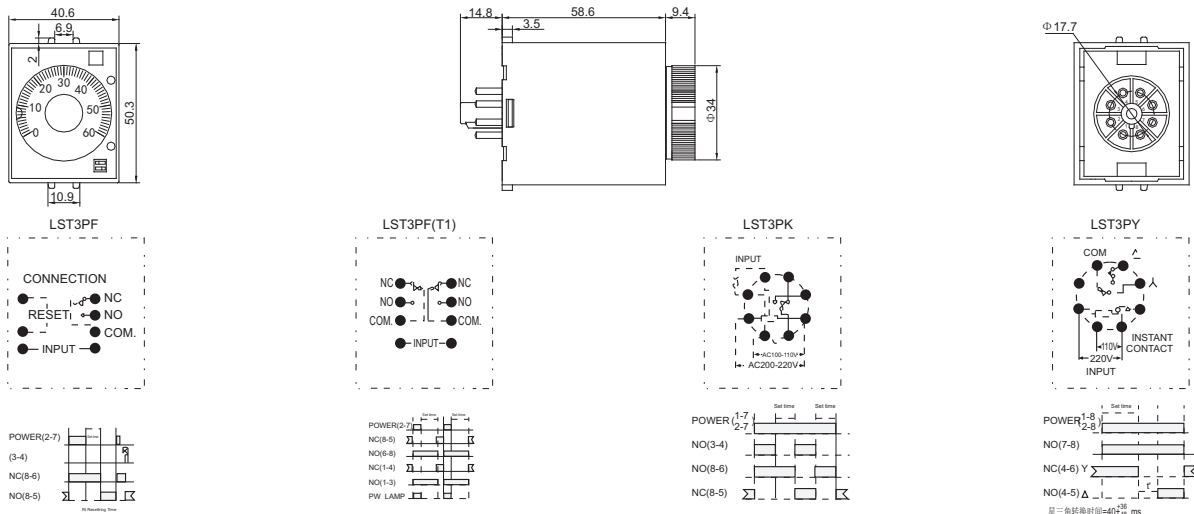


LST3P 系列 Series



|                            |                                  |                               |                                |         |                               |
|----------------------------|----------------------------------|-------------------------------|--------------------------------|---------|-------------------------------|
| 类别 Classification          | 断电时间继电器 Off Time Relay           |                               | 断开延时时间继电器 Off-delay time relay |         | 星三角时间继电器 Y-Δ Time Relay       |
| 型号 Model                   | LST3PF                           |                               | LST3PK                         |         | LST3PY                        |
| 外形尺寸 (毫米) Dimension(mm)    | 55.0H × 40.5W × 84.0L            |                               |                                |         | 55.0H × 40.5W × 84.0L         |
| 时间范围 Full Timing Range     | 0.1~1s                           |                               | 2.5~30s                        |         | 1~10s                         |
|                            | 0.5~5s                           |                               | 5~60s                          |         | 2~30s                         |
|                            | 1~10s                            |                               | 15~180s                        |         | 5~60s                         |
| 额定电压 Rated Voltage         | AC:12V-24V-48V-110V-220V 50/60HZ |                               |                                |         | AC110/220V                    |
| 指示灯动作 Indicator Operating  | 通电指示 Power ON                    |                               |                                |         | Y-Δ Operating Y-Δ指示           |
| O/P输出接点 Contact            | 型号 Model                         | LST3PF                        | LST3PF(T1)                     | LST3PFK | LST3PY                        |
|                            | 限时 1C Time Limit                 | 5A                            |                                | 3A(5A)  | 3A                            |
|                            | 限时 2C Time Limit                 |                               | 3A(5A)                         |         |                               |
|                            | 瞬时 1C Instantaneous              |                               |                                |         |                               |
| 寿命 Service life            | 机械 Mechanical                    | 5 × 10 <sup>7</sup> Times     |                                |         | 5 × 10 <sup>7</sup> Times     |
|                            | 电气 Electrical                    | 10 <sup>4</sup> Times         |                                |         | 2 × 10 <sup>4</sup> Times     |
| 精确度 Accuracy               | 往复误差 Repeat Error                | ±2% max.                      |                                |         | ±2% max.                      |
|                            | 设定误差 Setting Error               | ±5% max.                      |                                |         | ±5% max.                      |
|                            | 电压误差 Voltage Error               | ±5% max.                      |                                |         | ±5% max.                      |
|                            | 温度误差 Temp Error                  | ±2% max.                      |                                |         | ±2% max.                      |
| 复位时间 Reset Time            | 0.1sec max.                      |                               |                                |         | 0.1sec max.                   |
| 消耗功率 Power consumption     | 2.5VA                            |                               |                                |         | 3VA                           |
| 使用周围温度 Ambient Temperature | -10℃~+50℃                        |                               |                                |         | -10℃~+50℃                     |
| 使用周围湿度 Ambient Humidity    | 35~85%RH                         |                               |                                |         | 35~85%RH                      |
| 重量 Weight                  | 100g                             |                               |                                |         | 180g                          |
| 安装于其底座 Mounting & Socket   | 露出 Surface                       | PF083A 8PFA                   |                                |         | PF083A 8PFA                   |
|                            | 埋入型 Flush                        | Y-40 & US-08 or Y-40 & P3G-08 |                                |         | Y-40 & US-08 or Y-40 & P3G-08 |

安装尺寸和接线、时序图 Installation dimensions and connecting, sequence diagram

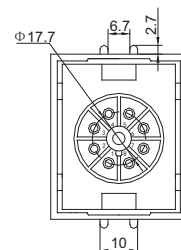
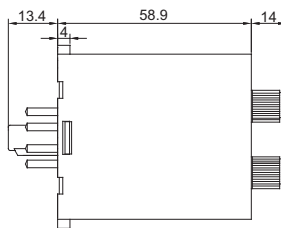
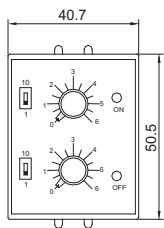


## LST3P 系列 Series

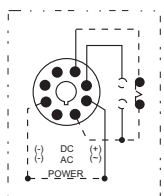


|                            |  |                               |
|----------------------------|--|-------------------------------|
| 类别 Classification          | 多段式时间继电器 Multi Range Time Relay            |                               |
| 型号 Model                   | LST3PR                                     |                               |
| 外形尺寸(毫米) Dimension(mm)     | 55.0H × 40.5W × 84.0L                      |                               |
| 时间范围 Full Timing Range     | 0.5~6s/60s<br>1~10s/10min<br>2.5~30s/30min |                               |
| 额定电压 Rated Voltage         | AC:110/220V<br>DC:24V                      |                               |
| 指示灯动作 Indicator Operating  | ON-OFF Operating ON-OFF 指示                 |                               |
| O/P输出接点 Contact            | 型号 Model                                   | LST3PR                        |
|                            | 限时 1C Time Limit                           | 3A                            |
|                            | 限时 2C Time Limit                           |                               |
|                            | 瞬时 1C Instantaneous                        |                               |
| 寿命 Service life            | 机械 Mechanical                              | 1 × 10 <sup>7</sup> Times     |
|                            | 电气 Electrical                              | 1 × 10 <sup>5</sup> Times     |
| 精确度 Accuracy               | 往复误差 Repeat Error                          | ±2% max.                      |
|                            | 设定误差 Setting Error                         | ±5% max.                      |
|                            | 电压误差 Voltage Error                         | ±5% max.                      |
|                            | 温度误差 Temp Error                            | ±2% max.                      |
| 复位时间 Reset Time            | 0.2sec max.                                |                               |
| 消耗功率 Power consumption     | 3VA  |                               |
| 使用周围温度 Ambient Temperature | -10°C~+50°C                                |                               |
| 使用周围湿度 Ambient Humidity    | 35~85%RH                                   |                               |
| 重量 Weight                  | 150g                                       |                               |
| 安装于其底座 Mounting & Socket   | 露出 Surface                                 | PF083A 8PFA                   |
|                            | 埋入型 Flush                                  | Y-40 & US-08 or Y-40 & P3G-08 |

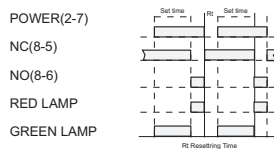
### 安装尺寸 Installation dimensions



### 接线图 Connecting



### 时序图 Sequence diagram

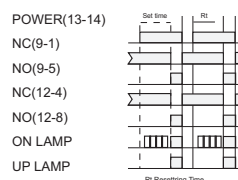
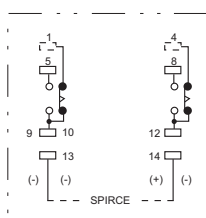
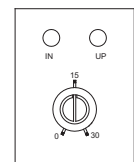
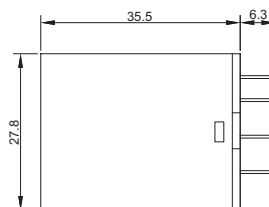
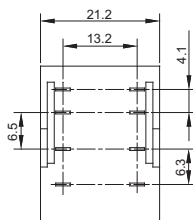


LTDE 系列 Series



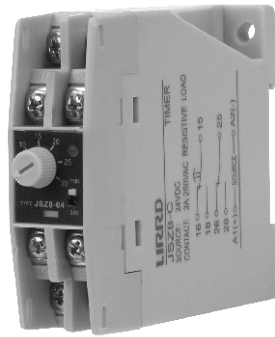
|                            |   |                           |
|----------------------------|---|---------------------------|
| 类别 Classification          | 时间继电器 Time Relay                              |                           |
| 型号 Model                   | LTDE  |                           |
| 外形尺寸 (毫米) Dimension(mm)    | 27.0H × 20.5W × 42.0L                         |                           |
| 时间范围 Full Timing Range     | SEC:1,5,10,30,60<br>MIN:3,5,10,30,60<br>HR:3  |                           |
| 额定电压 Rated Voltage         | DC:12V-24V-36V-48V<br>AC:220V,110V48V 24V 12V |                           |
| 指示灯动作 Indicator Operating  | Power, up 指示 Operating                        |                           |
| O/P输出接点 Contact            | 型号 Model                                      | LTDE-2                    |
|                            | 限时 1C Time Limit                              |                           |
|                            | 限时 2C Time Limit                              | 1A                        |
|                            | 瞬时 1C Instantaneous                           |                           |
| 寿命 Service life            | 机械 Mechanical                                 | 5 × 10 <sup>6</sup> Times |
|                            | 电气 Electrical                                 | 10 <sup>5</sup> Times     |
| 精确度 Accuracy               | 往复误差 Repeat Error                             | ±3% max.                  |
|                            | 设定误差 Setting Error                            | ±10% max ±50ms(最大刻度时间下)   |
|                            | 电压误差 Voltage Error                            | ±2% max.                  |
|                            | 温度误差 Temp Error                               | ±5% max.                  |
| 复位时间 Reset Time            | 0.2sec max.                                   |                           |
| 消耗功率 Power consumption     | 1VA   |                           |
| 使用周围温度 Ambient Temperature | -10℃~+50℃                                     |                           |
| 使用周围湿度 Ambient Humidity    | 48~85%RH                                      |                           |
| 重量 Weight                  | 25g   |                           |
| 安装于其底座 Mounting & Socket   | 露出型 Surface                                   | PYF08A-E                  |
|                            | 埋入型 Flush                                     | With Y-20 adapter         |

安装尺寸和接线、时序图 Installation dimensions and connecting, sequence diagram





## LJSZ8 系列电子式时间继电器 LJSZ8 SERIES ELECTRONIC TYPE TIME RELAY



### 用途 Application

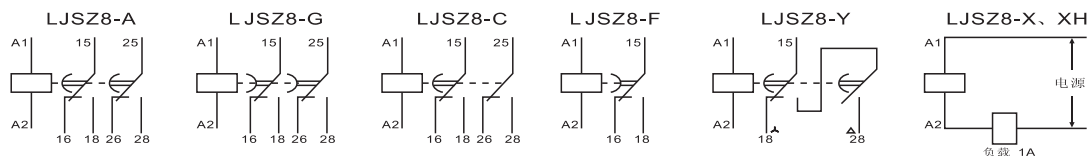
LJSZ8 系列电子式时间继电器是吸收国外先时技术的新颖产品。具有体积小，延时精确高，可靠性好，寿命长等特点。适用于自动控制电路中作延时控制元件，按预定的时间接通分断电路。外形尺寸符合DIN标准，可替代进口产品。

LJSZ8 series Electronic type Timer Relay is a new Product of absorbing international advanced technology. Its features are smaller size, high delay accuracy, great security, long service life and so on. it can be applied as delay controlling component in the auto controlling circuit, then connect with disjunction circuit in preset time the shape accords with DIN standards, which can be instead of imported products.s

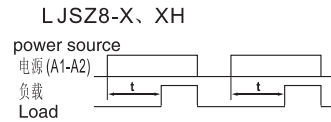
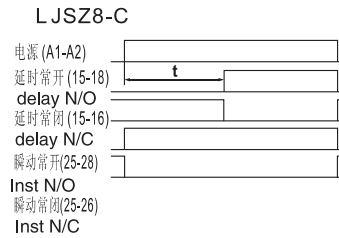
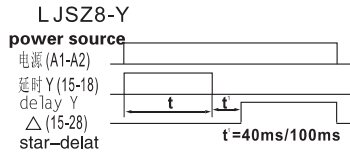
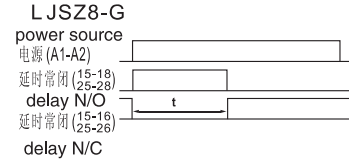
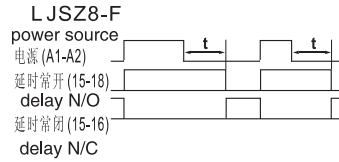
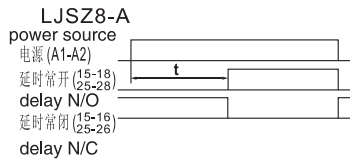
### 主要技术参数 Main technical data

| 型号 Type                   | LJSZ8-A、G  | LJSZ8-C   | LJSZ8-F                                      | LJSZ8-Y   | LJSZ8-X、XH  |
|---------------------------|--|---|--|---|---|
| 触点数量<br>Contact number    | 延时2转换<br>Delay 2 converting  | 延时1转换 瞬时1转换<br>Delay 1 converting<br>inst 1 convertin | 延时1转换<br>Delay 1 converting                  | 星三角转换<br>Star-delta concerting                  | 延时1常开<br>delay 1 N/O  |
| 触点容量 Contact apacity      | AC250V 3A 阻性负载 Resistive load  |   |  |   |   |
| 误差 Error                  | 重复误差 Repeatererror 1%±20ms, 整定误差 Full setting error 10%                        |   |  |   |   |
| 延时范围<br>Full timing range | 01:0.1~1s/min<br>02:0.5~5s/min<br>03:1~10s/min<br>04:3~30s/min<br>05:6~60s/min |   | 01~1s<br>0.5~5s<br>1~10s<br>2.5~30s<br>5~60s | 1~10s<br>3~30s<br>6~60s<br>0.1~3min<br>0.5~5min | 0.1~1s/min<br>0.5~5s/min<br>1~10s/min<br>3~30s/min<br>6~60s/min |
| 额定电压<br>Rated voltage     | AC24V、100~120V、200~240V、DC12、24、48V  |   | AC110、220V<br>DC24V                          | AC110、220V                                      | X-AC/DC,24~240V<br>XH:AC60~240/DC85~240V<br>AC85~240/DC125~240V |

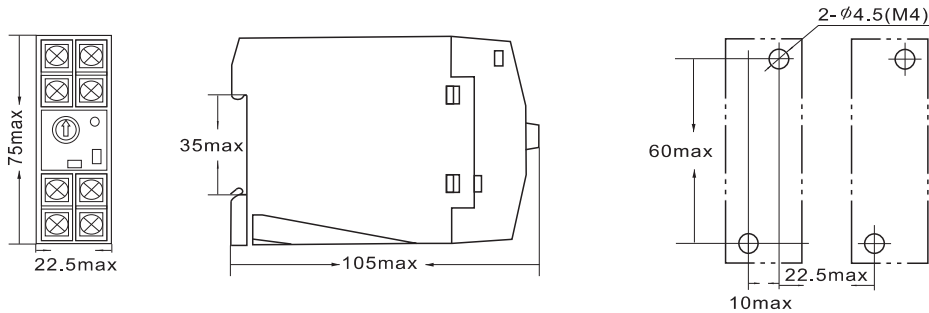
### 接线图 Wiring Diagram



延时波形 Delay Wave



外形尺寸及安装尺寸 Dimensions and mounting size



使用注意事项 Application Cautions

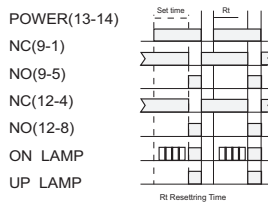
1. LJSZ8-A,G,C,X,XH型可由继电器前部的转换开关设定二档不同的延时范围。
2. LJSZ8-Y 型继电器前部的转换开关是星三角转换时间设定。
3. LJSZ8-F 型的最短通电时间应大于500mS。
4. LJSZ8-X,XH 型应与负载串联后使用，严禁直接连接电源。
5. 重复延时，两次间的休止时间应大于是100mS(LR JSZ8-Y:200mS)。
  - a. JSZ8-A,G,C,X,XH types can be set as two shelves of different delay ranges by the converting seitch in the front of relay.
  - b. The turn switch in the front of JSZ8-Y relay is set by delta star converting time.
  - c. The shortest time of connecting with current in JSZ8-F type must de with longer than 500ms.
  - d. JSZ8-X and XH type can be used after the load is series connected.
  - e. When it is on repeat delay, the rest time between the two delays must be longer than 100ms (LRJSZ8-Y:200mS0).

## LH3Y 系列 Series

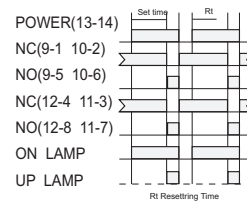


|                            |  |                           |               |
|----------------------------|--|---------------------------|---------------|
| 类别 Classification          | 时间继电器 Time Relay                                       |                           |               |
| 型号 Model                   | LH3Y-□ (ST6P)  |                           |               |
| 外形尺寸 (毫米) Dimension(mm)    | 28.0H × 21.5W × 63.0L                                  |                           |               |
| 时间范围 Full Timing Range     | SEC:1,5,10,30,60<br>MIN:3,5,10,30,60<br>HR:3,5,10,12   |                           |               |
| 额定电压 Rated Voltage         | AC:12V-24V-110/220V<br>DC:240V-380V 50/60Hz DC:12V-24V |                           |               |
| 指示灯动作 Indicator Operating  | Power, up 指示 Power, up Operating                       |                           |               |
| O/P输出接点 Contact            | 型号 Model   | H3Y-2(ST6P-2)             | H3Y-4(ST6P-4) |
| Contact                    | 限时 1C Time Limit                                       |                           |               |
|                            | 限时 2C Time Limit                                       | 5A                        | 3A(4C)        |
|                            | 瞬时 1C Instantaneous                                    |                           |               |
| 寿命 Service life            | 机械 Mechanical  | 5 × 10 <sup>6</sup> Times |               |
|                            | 电气 Electrical  | 10 <sup>5</sup> Times     |               |
| 精确度 Accuracy               | 往复误差 Repeat Error                                      | ±3% max.                  | ±1.5% max.    |
|                            | 设定误差 Setting Error                                     | ±10% max ± 50ms (最大刻度时间下) |               |
|                            | 电压误差 Voltage Error                                     | ±2% max.                  |               |
|                            | 温度误差 Temp Error  | ±5% max.                  |               |
| 复位时间 Reset Time            | 0.2sec max.  |                           |               |
| 消耗功率 Power consumption     | 3VA  |                           |               |
| 使用周围温度 Ambient Temperature | -10°C~+55°C  |                           |               |
| 使用周围湿度 Ambient Humidity    | 48~85%RH   |                           |               |
| 重量 Weight                  | 45g  |                           |               |
| 安装于其底座 Mounting & Socket   | 露出 Surface   | PYF08A                    | PYF14A        |
|                            | 埋入型 Flush  | With Y-20 adapter         |               |

LH3Y-2 时序图 Sequence diagram



LH3Y-4 时序图 Sequence diagram

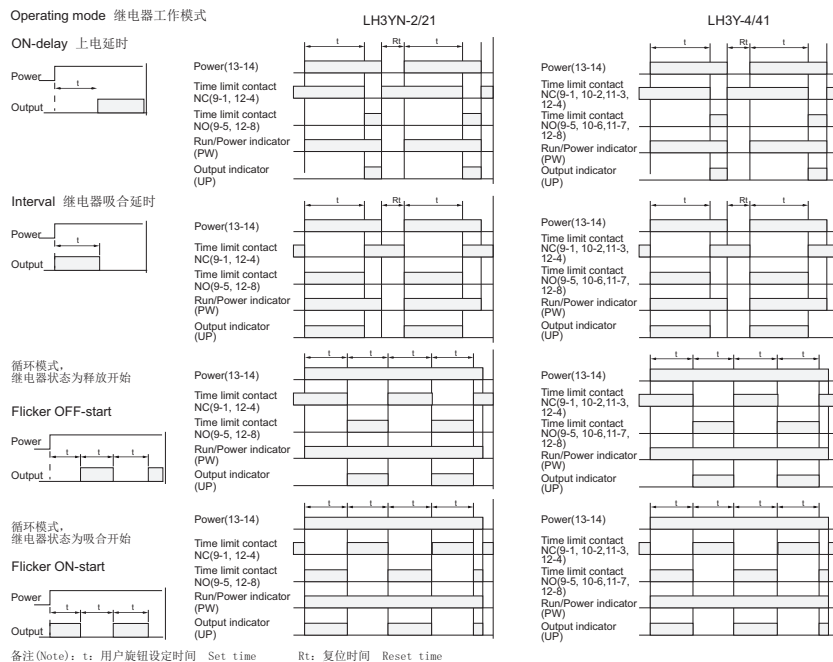


LH3YN 系列 Series

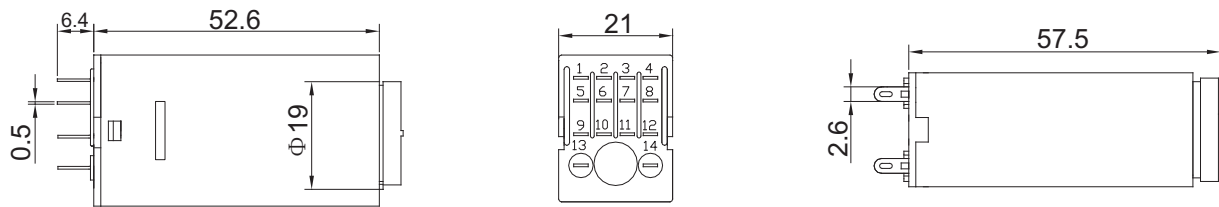


|                            |                    |  |              |            |              |
|----------------------------|--------------------|--|--------------|------------|--------------|
| 类别 Classification          |                    | 时间继电器 Time Relay                                       |              |            |              |
| 型号 Model                   |                    | LH3YN-□ □ (ST6P)                                       |              |            |              |
| 外形尺寸 (毫米) Dimension(mm)    |                    | 28.0H × 21.5W × 63.0L                                  |              |            |              |
| 时间范围 Full Timing Range     |                    | 0.1S~10min   | 0.1min~10hrs | 0.1S~10min | 0.1min~10hrs |
| 额定电压 Rated Voltage         |                    | AC:12V-24V-110/220V<br>DC:240V-380V 50/60Hz DC:12V-24V |              |            |              |
| 指示灯动作 Indicator Operating  |                    | Power, up 指示 Power, up Operating                       |              |            |              |
| O/P输出接点 Contact            | 型号 Model           | H3YN-2   | H3YN-21      | H3YN-4     | H3YN-41      |
| 寿命 Service life            | 机械 Mechanical      | 5 × 10 <sup>6</sup> Times                              |              |            |              |
|                            | 电气 Electrical      | 10 <sup>5</sup> Times                                  |              |            |              |
| 精确度 Accuracy               | 往复误差 Repeat Error  | ±3% max.   |              |            |              |
|                            | 设定误差 Setting Error | ±10% max ± 50ms (最大刻度时间下)                              |              |            |              |
|                            | 电压误差 Voltage Error | ±2% max.   |              |            |              |
|                            | 温度误差 Temp Error    | ±5% max.   |              |            |              |
| 复位时间 Reset Time            |                    | 0.2sec max.  |              |            |              |
| 消耗功率 Power consumption     |                    | 3VA  |              |            |              |
| 使用周围温度 Ambient Temperature |                    | -10℃~+55℃  |              |            |              |
| 使用周围湿度 Ambient Humidity    |                    | 48~85%RH   |              |            |              |
| 重量 Weight                  |                    | 45g  |              |            |              |
| 安装于其底座 Mounting & Socket   | 露出 Surface         | PYF08A   | PYF08A       | PYF14A     | PYF14A       |
|                            | 埋入型 Flush          | With Y-20 adapter                                      |              |            |              |

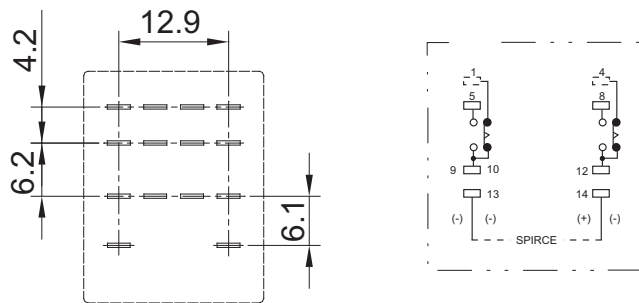
LH3YN 时序图 Sequence diagram



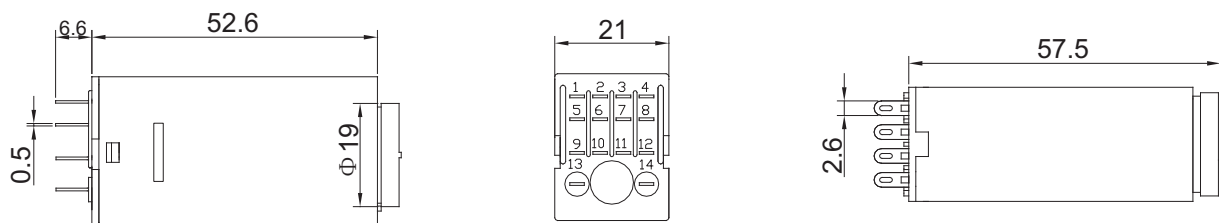
LH3Y-2、LH3YN-2安装尺寸 Installation dimensions



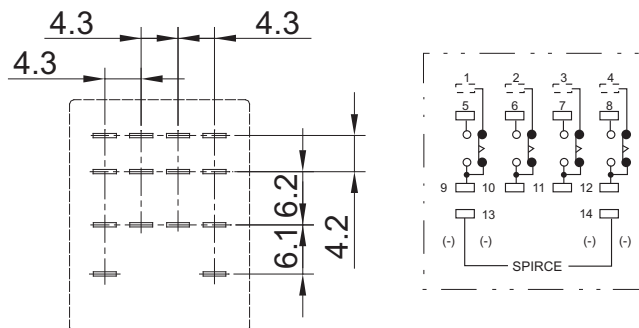
LH3Y-2、LH3YN-2接线图 Connecting



LH3Y-4、LH3YN-4安装尺寸 Installation dimensions



LH3Y-4、LH3YN-4接线图 Connecting

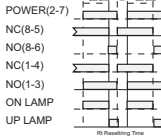
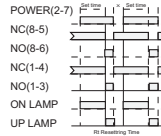
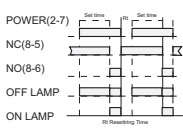
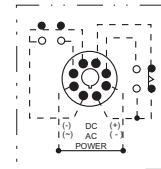
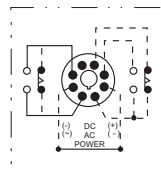
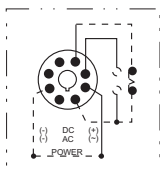
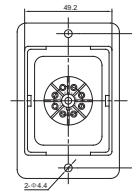
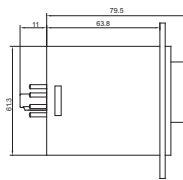
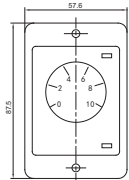


LAH2 系列 Series



|                            |                     |  |                       |             |
|----------------------------|---------------------|--|-----------------------|-------------|
| 类别 Classification          |                     | 时间继电器 Time Relay   |                       |             |
| 型号 Model                   |                     | LAH2-N□  | LAH2-Y□               |             |
| 外形尺寸 (毫米) Dimension(mm)    |                     | 61.0H × 49.0W × 82.0L  | 88.0H × 58.0W × 82.0L |             |
| 时间范围 Full Timing Range     |                     | SEC:1,3,6,10,12,30,60<br>MIN:3,6,10,30,60<br>HR:3,6,10,24    |                       |             |
| 额定电压 Rated Voltage         |                     | AC:12V-24V-110/220V-380V-415V-440V 50/60Hz<br>DC:12V-24V-48V |                       |             |
| 指示灯动作 Indicator Operating  |                     | ON, UP指示   |                       |             |
| O/P输出接点 Contact            | 型号 Model            | AH2-N1/AH2-Y1  | AH2-N2/AH2-Y2         | AH2-N/AH2-Y |
|                            | 限时 1C Time Limit    | 5A   |                       | 5A          |
|                            | 限时 2C Time Limit    |  | 5A                    |             |
|                            | 瞬时 1C Instantaneous |  |                       | 5A          |
| 寿命 Service life            | 机械 Mechanical       | 5 × 10 <sup>6</sup> Times                                    |                       |             |
|                            | 电气 Electrical       | 10 <sup>5</sup> Times  |                       |             |
| 精确度 Accuracy               | 往复误差 Repeat Error   | ± 1% max.  |                       |             |
|                            | 设定误差 Setting Error  | ± 10% max  |                       |             |
|                            | 电压误差 Voltage Error  | ± 1% max.  |                       |             |
|                            | 温度误差 Temp Error     | ± 2% max.  |                       |             |
| 复位时间 Reset Time            |                     | 0.1sec max.  |                       |             |
| 消耗功率 Power consumption     |                     | 3VA  |                       |             |
| 使用周围温度 Ambient Temperature |                     | -10°C ~ +50°C  |                       |             |
| 使用周围湿度 Ambient Humidity    |                     | 48~85%RH   |                       |             |
| 重量 Weight                  |                     | 220g   |                       |             |
| 安装于其底座 Mounting & Socket   | 露出型 Surface         |  | US-08 P3G-08          |             |
|                            | 埋入型 Flush           | 8PFA   |                       |             |

LAH2 安装尺寸和接线、时序图 Installation dimensions and connecting, sequence diagram

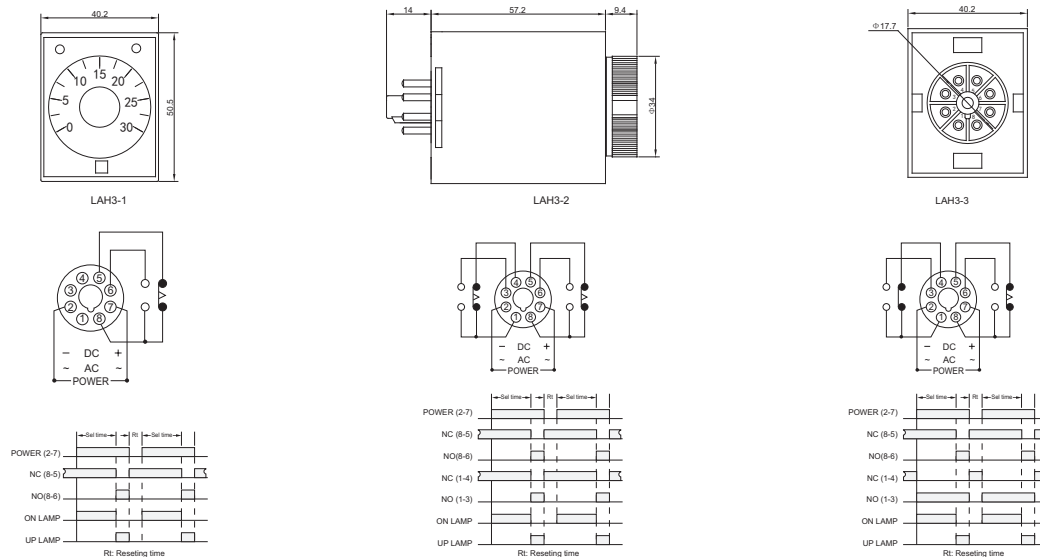


## LAH3-□ 系列 Series



|                            |  |                               |              |
|----------------------------|--|-------------------------------|--------------|
| 类别 Classification          | 时间继电器 Time Relay   |                               |              |
| 型号 Model                   | LAH3-□   |                               |              |
| 外形尺寸 (毫米) Dimension(mm)    | 50.0H × 40.5W × 82.0L  |                               |              |
| 时间范围 Full Timing Range     | SEC:1,3,6,10,12,30,60<br>MIN:3,6,10,12,30,60<br>HR:3,6,10,12 |                               |              |
| 额定电压 Rated Voltage         | AC:12V-24V-110/220V-380V<br>DC:12V-24V                       |                               |              |
| 指示灯动作 Indicator Operating  | ON, UP Operating ON, UP 指示                                   |                               |              |
| O/P输出接点 Contact            | 型号 Model   | LAH3-1                        | LAH3-2       |
|                            | 限时 1C Time Limit   | 5A                            | 5A           |
|                            | 限时 2C Time Limit   |                               | 5A           |
|                            | 瞬时 1C Instantaneous  |                               | 5A           |
| 寿命 Service life            | 机械 Mechanical  | 5 × 10 <sup>6</sup> Times     |              |
|                            | 电气 Electrical  | 10 <sup>5</sup> Times         |              |
| 精确度 Accuracy               | 往复误差 Repeat Error  | ± 1% max.                     |              |
|                            | 设定误差 Setting Error   | ± 10% max                     |              |
|                            | 电压误差 Voltage Error   | ± 1% max.                     |              |
|                            | 温度误差 Temp Error  | ± 2% max.                     |              |
| 复位时间 Reset Time            | 0.1sec max.  |                               |              |
| 消耗功率 Power consumption     | 2.5VA  |                               |              |
| 使用周围温度 Ambient Temperature | -10°C ~ +55°C  |                               |              |
| 使用周围湿度 Ambient Humidity    | 48~85%RH   |                               |              |
| 重量 Weight                  | 160g   |                               |              |
| 安装于其底座 Mounting & Socket   | 露出 Surface   | PF083A 8PFA                   | US-08 P3G-08 |
|                            | 埋入型 Flush  | Y-40 & US-08 or Y-40 & P3G-08 |              |

## LAH3-□ 安装尺寸和接线、时序图 Installation dimensions and connecting, sequence diagram

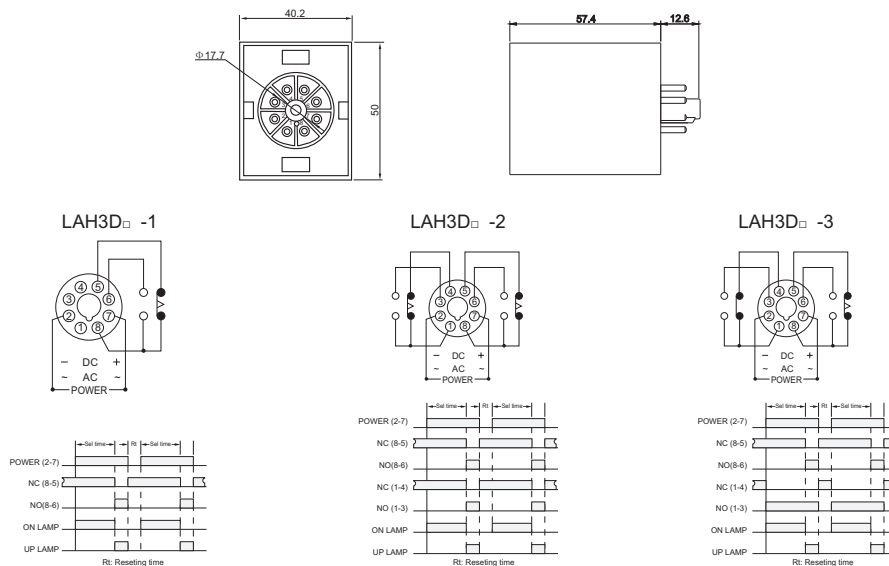


LAH3D□ -□ 系列 Series



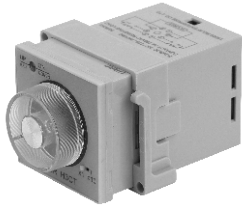
|                             |                    |  |  |                     |
|-----------------------------|--------------------|--|--|---------------------|
| 类别 Classification           |                    | 时间继电器 Time Relay                       |  |                     |
| 型号 Model                    |                    | LAH3D2-□                               | LAH3D3-□                                     | LAH3DM-□            |
| 外形尺寸 (毫米) Dimension(mm)     |                    | 50.0H × 40.5W × 82.0L                  |  |                     |
| 时间范围 Full Timing Range      |                    | 9.9S, 99S,<br>9.9M, 99M,<br>9.9H, 99H, | 99.9S, 999S,<br>99.9M, 999M,<br>99.9H, 999H, | 0.1S~990H           |
| 额定电压<br>Rated Voltage       |                    | AC:12V-24V-110/220V-380V<br>DC:12V-24V |  |                     |
| 指示灯动作 Indicator Operating   |                    | ON, UP Operating ON, UP 指示             |  |                     |
| O/P输出接点<br>Contact          | 型号 Mode            | 限时 1C Time Limit                       | 限时 2C Time Limit                             | 瞬时 1C Instantaneous |
|                             | -1                 | 5A                                     |  |                     |
|                             | -2                 |  | 5A   |                     |
|                             | -3                 | 5A                                     |  | 5A                  |
| 寿命<br>Service life          | 机械 Mechanical      | 5 × 10 <sup>6</sup> Times              |  |                     |
|                             | 电气 Electrical      | 10 <sup>5</sup> Times                  |  |                     |
| 精确度<br>Accuracy             | 往复误差 Repeat Error  | ± 1% max.                              |  |                     |
|                             | 设定误差 Setting Error | ± 10% max                              |  |                     |
|                             | 电压误差 Voltage Error | ± 1% max.                              |  |                     |
|                             | 温度误差 Temp Error    | ± 2% max.                              |  |                     |
| 复位时间 Reset Time             |                    | 0.1sec max.                            |  |                     |
| 消耗功率 Power consumption      |                    | 2.5VA                                  |  |                     |
| 使用周围温度 Ambient Temperature  |                    | -10℃~+55℃                              |  |                     |
| 使用周围湿度 Ambient Humidity     |                    | 48~85%RH                               |  |                     |
| 重量 Weight                   |                    | 160g                                   |  |                     |
| 安装于其底座<br>Mounting & Socket | 露出 Surface         | PF083A 8PFA                            | US-08 P3G-08                                 |                     |
|                             | 埋入型 Flush          | Y-40 & US-08 or Y-40 & P3G-08          |  |                     |

LAH3D□ -□ 安装尺寸和接线、时序图 Installation dimensions and connecting, sequence diagram



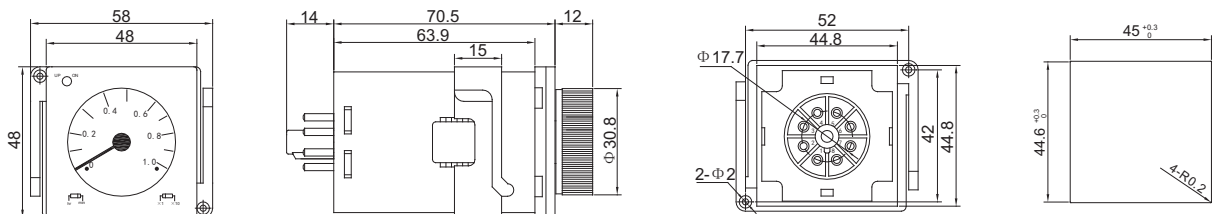


## LH3 系列 Series

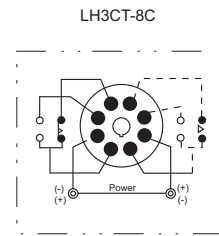
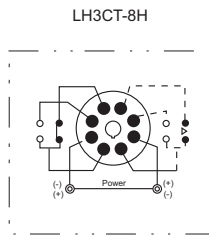
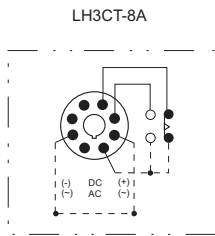


|                            |  |                           |  |           |       |         |          |
|----------------------------|--|---------------------------|--|-----------|-------|---------|----------|
| 类别 Classification          | 多段式时间继电器Multi Time Relay   |                           | 多段式时间继电器Multi Time Relay                                     |           |       |         |          |
| 型号 Model                   | LH3CT  |                           | LH3BA  |           |       |         |          |
| 外形尺寸 (毫米) Dimension(mm)    | 48.0H × 48.0W × 95.0L  |                           | 48.0H × 48.0W × 95.0L  |           |       |         |          |
| 时间范围 Full Timing Range     | B:1S,10S,1M,10M<br>C:3S,30S,3M,30M<br>D:1M,10M,1HR,10HR<br>E:3M,30M,3HR,30HR |                           | SEC:0.5,1.5,10<br>MIN:0.5,1.5,10<br>HR:0.5,1.5,10,50,100     |           |       |         |          |
| 额定电压 Rated Voltage         | AC:24V-48V-110V-220V-240V<br>DC:12V-24V-48V 24 to 240V DC/AC                 |                           | AC:24V-48V-110V-220V-240V<br>DC:12V-24V-48V 24 to 240V DC/AC |           |       |         |          |
| 指示灯动作 Indicator Operating  | ON-Green UP-Red ON-绿灯 UP-红灯  |                           | 计时中闪烁指示 Time Operating Flicker                               |           |       |         |          |
| O/P输出接点 Contact            | 型号 Model   | LH3CT-8A                  | LH3CT-8H   | LH3CT-8C  | LH3BA | LH3BA-8 | LH3BA-8H |
|                            | 限时 1C Time Limit   | 5A                        | 5A   |           |       |         | 5A       |
|                            | 限时 2C Time Limit   |                           |  | 5A        | 5A    | 5A      |          |
|                            | 瞬时 1C Instantaneous  |                           | 5A   |           |       |         | 5A       |
| 寿命 Service life            | 机械 Mechanical  | 1 × 10 <sup>7</sup> Times |  |           |       |         |          |
|                            | 电气 Electrical  | 1 × 10 <sup>5</sup> Times |  |           |       |         |          |
| 精确度 Accuracy               | 往复误差 Repeat Error  | ±2% max.                  |  |           |       |         |          |
|                            | 设定误差 Setting Error   | ±5% max.                  |  |           |       |         |          |
|                            | 电压误差 Voltage Error   | ±5% max.                  |  |           |       |         |          |
|                            | 温度误差 Temp Error  | ±2% max.                  |  |           |       |         |          |
| 复位时间 Reset Time            | 0.1sec max.  |                           |  |           |       |         |          |
| 消耗功率 Power consumption     | 24-240V AC:About 15VA, 12-48V DC:About 2W, 24 to 240V DC/AC:About 10VA       |                           |  |           |       |         |          |
| 使用周围温度 Ambient Temperature | -10℃~+55℃  |                           |  |           |       |         |          |
| 使用周围湿度 Ambient Humidity    | 35~85%RH   |                           |  |           |       |         |          |
| 重量 Weight                  | 100g   |                           |  |           |       |         |          |
| 安装于其底座 Mounting & Socket   | 露出 Surface   | PF08A-E                   |  | PYF113A-E |       |         |          |
|                            | 埋入型 Flush  | US-08 or P3G-08           |  | US-11     |       |         |          |

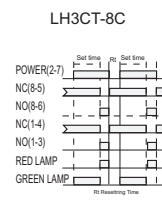
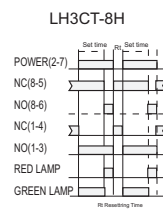
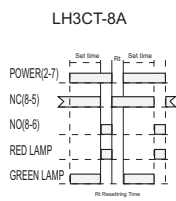
## LH3 安装尺寸 Installation dimensions



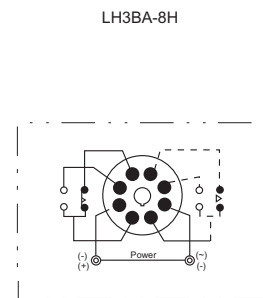
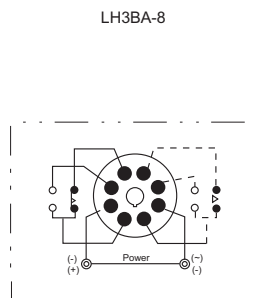
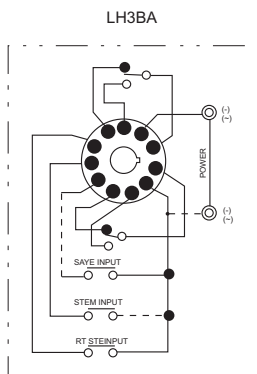
LH3CT 接线图 Connecting



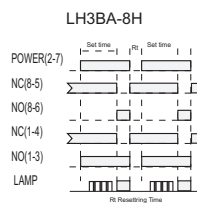
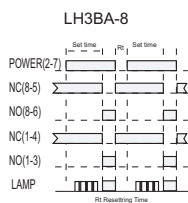
LH3CT 时序图 Sequence diagram



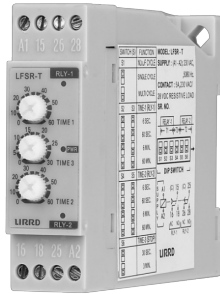
LH3BA 接线图 Connecting



LH3BA 时序图 Sequence diagram



## LFSR-T 系列电机正反转控制器 LFSR-T series motor controller



### 主要功能描述 Instruction

1. 内置高性能工业级MCU，抗干扰能力强，控制准确。 Build in MCU, strong anti-interference capability and accurate control.
2. 6位DIP拨码设定延时时段，电机工作方式，延时范围宽，工作方式多。 6 bit dial code set, electrical work method.
3. 内部继电器分别控制，带停止延时段，电机工作更可靠。 Internal relay control, with off-delay function.
4. 十字螺丝刀共用旋钮时间设定变得相当容易。 Easy to adjust the knob by cross screwdriver.
5. 标准导轨式安装方式，接线柱式引出线，无需另配插座，接线更方便。 Standard din rail mounting type, with posts for wiring.

### 技术参数 Specification

| 类别                         | 电机正反转控制器 Motor controller  |
|----------------------------|--|
| 型号 Model                   | LFSR-T   |
| 延时倍率 Time unit             | 6sec、60sec、6min、60min、30sec、30min(sec: 秒, min: 分)  |
| 延时设定方式 Setup               | 侧面6位DIP开关设定时间和电机工作方式 Set by 6 bit DIP switch   |
| 主要功能描述 Function            | 用于控制电动机或其他负载需要正反转工作的场合 To control the motor forward and reserve  |
| 触点容量 contact capacity      | 阻性负载5A/250VAC或5A/28VDC最大 Resistive load 5A 250VAC or 5A 28VDC max  |
| 显示方式 Display               | 高亮LED显示，指示位置根据当前工作继电器位置改变 LED display  |
| 额定工作电压 Rated voltage       | 230VAC输入，其他工作电压可定制 230V AC input, other voltage up to customer request   |
| 时间精度 Error                 | 重复误差: ±0.03%，电压误差: ±0.05%，温度误差: ±0.05% Repeat error: ±0.03% voltage error: ±0.05% temperature error: ±0.05%  |
| 消耗功率 Power consumption     | ≤4.5VA   |
| 使用环境 Operating environment | 环境温度: -10~+55℃(不结冰), 湿度35~85RH% Ambient temperature -10~+55℃ ambient humidity 35~85RH%   |
| 抗干扰能力 Noise immunity       | AC2kV(操作电源端子间)或DC±500V, 脉冲宽度1uS扰动下继电器正常工作<br>AC2kV(between the terminals of source)、DC±500V(work normally under the square wave noise of pulses width 1uS) |
| 寿命 Service life            | 机械寿命: 5百万次, 电气寿命: 1百万次 Mechanical life: over 5 Million, electrical life: over 1 Million  |
| 重量 Weight                  | 约121克 121g   |
| 安装方式 Mounting method       | 导轨式安装, 彩用接线端子方式接线 Din rail mounting type, with posts for wiring  |

### 延时方式选择开关、接线图 Connection diagrams 安装尺寸 Installation dimensions

