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## 开关电源系列

### POWER SUPPLY SERIES



### LDR 系列开关电源 LDR series power supply



#### 概述 Description

LDR系列开关电源具有体积少、重量轻、导轨式安装等优点，作为直流稳压电源广泛用于通讯设备、工业控制装置等领域。

The LDR series power supply have the advantage of small size, light weight, din rail installation. It is used in Industrial control equipments, Communications equipment, etc.

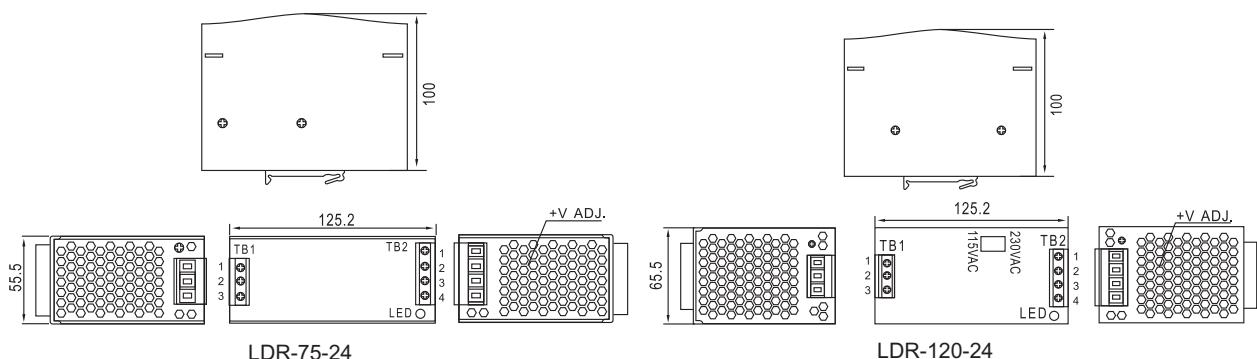
#### 产品特点 Features

- 1、采用进口元器件、可靠性高。AC input range selectable by switch
- 2、内置EMI滤波器，抗干扰性能好。Buit-in EMI filter
- 3、直流纹波小，工作效率高。Protections: Short circuit / Overload / Over voltage / Over temperature
- 4、设计软启动电路、交流浪涌电流限制。Cooling by free air convection
- 5、具有短路、过载、过压保护功能。Can be installed on DIN rail TS-35/7.5 or 15
- 6、输出直流电压可调范围宽。UL 508(industrial control equipment) listed
- 7、标准导轨式安装方式，使用简单。100% full load burn-in test

#### 主要技术参数 Specification

| 型号 Model No .                      |       | LDR-75-24   | LDR-120-24     |
|------------------------------------|-------|---|----------------|
| AC输入电压范围<br>AC input voltage range |       | 85-265(VAC)面板开关选择输入电压<br>85-265(VAC) selectable by switch         |                |
| AC浪涌电流 AC inrush current           |       | 40A、230VAC  |                |
| 过载保护 Overload protection           |       | 105-150%恒流限制, 自动恢复 constant current limting, auto-recovery        |                |
| OVP                                | Range | 115%-142%的输出电压, 输出关闭, 交流周期内自启动                                    |                |
|                                    | Type  | 115%~142% rated out put voltage, Shut off, AC recycle to re-start |                |
| 工作温度 Working temp                  |       | -10°C-60°C  |                |
| 输出电压 Output voltage                |       | DC12V, DC24V, +10%可调(Adjustive)                                   |                |
| 额定输出功率 Power                       |       | 75W   | 120W           |
| 外形尺寸 Dimension(W×H×D)(mm)          |       | 55.5×125.2×100  | 65.5×125.2×100 |

#### 安装尺寸 Installation dimensions



## S-15、25 系列 Series



- 低价格,高可靠
- 105°C输出电容器
- 全球适用AC输入电源
- 效率高、工作温度低
- 软启动电流、有效降低AC输入冲击
- 有短路保护、过载保护
- 体积小、重量轻
- 100%满负荷烧机测试
- 内装EMI滤波器、波纹极小

- Low price and high reliability
- 105°C Output capacitor
- AC input power suitable for the world
- High efficiency and low operation temperature
- Soft-star current can reduce the AC input impact effectly
- With short-circuit and overload protection
- Compact size,light weight
- 100% full-load burn-in test
- Installed with EMI filter,minimum wave

| 性能 Specification                          | S-15-12  | S-15-24                                     | S-25-12              | S-25-24  |
|---|--|---|----------------------|----------|
| 直流输出电压DC output voltage                   | 12V  | 24V   | 12V                  | 24V      |
| 输出电压容差 (注 2) Output voltage range(Note:2) | ±1%  | ±1%   | ±1%                  | ±1%      |
| 额定输出电流Rated output current                | 1.3A   | 0.7A  | 2.1A                 | 1.1A     |
| 输出电流范围Output current range                | 0-1.3A   | 0-0.7A                                      | 0-2.1A               | 0-1.1A   |
| 纹波及噪音 (注3) Wave and noise(Note:3)         | 50mVp-p  | 100mVp-p                                    | 100mVp-p             | 100mVp-p |
| 进线稳定性 (注4) Inlet stability(Note:4)        | ±0.5%  | ±0.5%                                       | ±0.5%                | ±0.5%    |
| 负载稳定性 (注 5) Load stability(Note:5)        | ±0.5%  | ±0.5%                                       | ±0.5%                | ±0.5%    |
| 直流输出功率 Dc output power                    | 15.6W  | 16.8W                                       | 25.2W                | 26.4W    |
| 效率 Efficiency                             | 68%  | 72%   | 76%                  | 80%      |
| 直流电压可调范围Adjustable range for DC voltage   | ±10%   | ±10%  | ±10%                 | ±10%     |
| 输入电压范围 AC input voltage range             | 85-132VAC/170-264VAC 由开关选择 47-63Hz;240-370VDC<br>85-132VAC/170-264VAC selected by switch 47-63Hz;240-370VDC                              |   |                      |          |
| 输入电流 Input current                        | 0.5A/115V 0.25A/230V   |   | 0.6A/115V 0.35A/230V |          |
| 冲击电流 AC Inrush current                    | 冷启动15A/115V 30A/230V Cold-star current 15A/115V 30A/230V   |   |                      |          |
| 漏电流Leakage current                        | <0.5mA/240VAC  |   |                      |          |
| 过载保护 Overload protection                  | 105%-150%类型: 电流限制 复位: 自动恢复 105%-150%<br>Type:pulsing hiccup shutdown Reset:auto recovery   |   |                      |          |
| 过电压保护 Over-voltage protection             | .....  |   |                      |          |
| 高温保护 High-temperature protection          | .....  |   |                      |          |
| 温度系数 Temperature coefficient              | ±0.02% °C(0-50°C)  |   | ±0.02% °C(0-50°C)    |          |
| 启动、上升、保持时间 Setup,rise,hold up time        | 200ms,100ms,30ms   | 800ms,50ms,10ms/115V 300ms,50ms,80ms/230VAC |                      |          |
| 抗震性Vibration                              | 10-500Hz,2G 10min,/1周,时长60分,各轴 10-500Hz,2G 10min,/1cycle,Period for 60min,Each axes  |   |                      |          |
| 耐压性 Withstand voltage                     | 输入输出间: 1.5KvAC输入与外壳: 1.5KvAC输出与外壳: 0.5KvAC<br>Input and output internal:1.5KvAC,input and enclosure:1.5KvAC,Output and enclosure:0.5KvAC |   |                      |          |
| 隔离电阻 Isolation resistance                 | 输入输出间,输入与外壳,输出与外壳:500VDC/100M Ω Input and output internal:<br>Input and enclosure,Output and enclosure:500VDC/100M Ω                     |   |                      |          |
| 工作温度、湿度 Working temperature and humidity  | -10°C~+60°C (参考输出特性图), 20%-90%RH -10°C~+60°C(Refer to output derating curve),20%-90%RH   |   |                      |          |
| 存储温度、湿度 Store temperature and humidity    | -20°C~+85°C,10%~95%RH  |   |                      |          |
| 外形尺寸 Overall dimension                    | 99×97×35mm   |   |                      |          |
| 重量 Weight                                 | 0.3Kgs   |   |                      |          |
| 安全标准 Safety standards                     | 满足UL1012要求 (不申请标记) Meet UL1012 requirement(Not apply for the mark)   |   |                      |          |
| EMC标准 EMC standards                       | 满足FCC部分15J条件 等级B Meet FCC part 15 J Conduction class B   |   |                      |          |
| 其他 OTHER                                  | 输出电压DC5V、7.5V、15V、48V可定制<br>OUTPUT VOLTAGE: DC5V 7.5CV15V 48V ORDER ACCORDING TO YOUR NEEDS  |   |                      |          |

注：1.以上参数测试条件为：230VAC输入，额定负载，25°C 70%RH,温度。

2.容差：包括设定容差，线路稳定性，负载稳定性（注5）。

3.纹波测试：20MHz用“A12”双绞线，中断用0.1UF&47uF电容器短路。

4.进行电压稳定性测试：满负载时进线最低电压到最高电压。

5.负载稳定性测试：负载从0%到100%。

Note: 1.The testing condition for the parameter above is:230VAC input, rated load, 25°C 70% RH. Temperature.

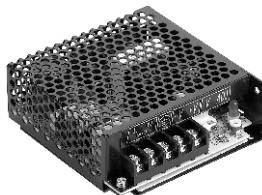
2.Error.include the setting error,line stability and load stability.(Note:5).

3.Wave test:adopting "A12" double wire for 20MHz, and 0.1UF&47uF capacitor short-circuit for interrupting.

4.Inlet voltage stability test:when is over load,the lowest voltage of inlet is up to the highest voltage.

5.Load stability test:The load is from 0% to 100%.

S-35、40 系列 Series



- 低价格,高可靠
- 105°C输出电容器
- 全球适用AC输入电源
- 效率高、工作温度低
- 软启动电流、有效降低AC输入冲击
- 有短路保护、过载保护
- 体积小、重量轻
- 100%满负荷烧机测试
- 内装EMI滤波器、波纹极小
- Low price and high reliability
- 105°C Output capacitor
- AC input power suitable for the world
- High efficiency and low operation temperature
- Soft-star current can reduce the AC input impact effectly
- With short-circuit and overload protection
- Compact size,light weight
- 100% full-load burn-in test
- Installed with EMI filter,minimum wave

| 性能 Specification                           | 型号 Model | S-35-12   | S-35-24  | S-40-12             | S-40-24  |
|--|----------|---|----------|---------------------|----------|
| 直流输出电压 DC output voltage                   |          | 12V   | 24V      | 12V                 | 24V      |
| 输出电压容差 (注 2) Output voltage range (Note:2) |          | ±1%   | ±1%      | ±1%                 | ±1%      |
| 额定输出电流 Rated output current                |          | 3A  | 1.5A     | 3.5A                | 1.8A     |
| 输出电流范围 Output current range                |          | 0-3A  | 0-1.5A   | 0-3.5A              | 0-1.8A   |
| 纹波及噪音 (注3) Wave and noise (Note:3)         |          | 100mVp-p  | 100mVp-p | 100mVp-p            | 100mVp-p |
| 进线稳定性 (注4) Inlet stability (Note:4)        |          | ±0.5%   | ±0.5%    | ±0.5%               | ±0.5%    |
| 负载稳定性 (注 5) Load stability (Note:5)        |          | ±0.5%   | ±0.5%    | ±0.5%               | ±0.5%    |
| 直流输出功率 Dc output power                     |          | 36W   | 36W      | 42W                 | 43W      |
| 效率 Efficiency                              |          | 76%   | 78%      | 76%                 | 78%      |
| 直流电压可调范围 Adjustable range for DC voltage   |          | ±10%  | ±10%     | ±10%                | ±10%     |
| 输入电压范围 AC input voltage range              |          | 85-132VAC/170-264VAC由开关选择 47-63Hz;240-370VDC<br>85-132VAC/170-264VAC selected by switch 47-63Hz;240-370VDC                                      |          |                     |          |
| 输入电流 Input current                         |          | 0.8A/115V 0.45A/230V  |          | 1.2A/115V 0.6A/230V |          |
| 冲击电流 AC Inrush current                     |          | 冷启动18A/115V 36A/230V Cold-star current 18A/115V 36A/230V  |          |                     |          |
| 漏电流 Leakage current                        |          | <0.5mA/240VAC <1mA/240VAC   |          |                     |          |
| 过载保护 Overload protection                   |          | 105%-150%类型: 切断输入 复位: 自动恢复 105%-150%<br>Type: pulsing hiccup shutdown Reset: auto recovery  |          |                     |          |
| 过电压保护 Over-voltage protection              |          | .....   |          |                     |          |
| 高温保护 High-temperature protection           |          | .....   |          |                     |          |
| 温度系数 Temperature coefficient               |          | ±0.03% (0-50°C)   |          |                     |          |
| 启动、上升、保持时间 Setup, rise, hold up time       |          | 200ms, 100ms, 30ms  |          |                     |          |
| 抗震性 Vibration                              |          | 10-500Hz, 2G 10min, /1周, 时长60分, 各轴 10-500Hz, 2G 10min, /1cycle, Period for 60min, Each axes   |          |                     |          |
| 耐压性 Withstand voltage                      |          | 输入输出间: 1.5kVAC 输入与外壳: 1.5kVAC 输出与外壳: 0.5kVAC<br>Input and output internal: 1.5kVAC, input and enclosure: 1.5kVAC, Output and enclosure: 0.5kVAC |          |                     |          |
| 隔离电阻 Isolation resistance                  |          | 输入输出间, 输入与外壳, 输出与外壳: 500VDC/100MΩ Input and output internal:<br>Input and enclosure, Output and enclosure: 500VDC/100MΩ                         |          |                     |          |
| 工作温度、湿度 Working temperature and humidity   |          | -10°C~+60°C (参考输出特性图), 20%-90%RH -10°C~+60°C (Refer to output derating curve), 20%-90%RH  |          |                     |          |
| 存储温度、湿度 Store temperature and humidity     |          | -20°C~+85°C, 10%-95%RH  |          |                     |          |
| 外形尺寸 Overall dimension                     |          | 129×98×38mm   |          |                     |          |
| 重量 Weight                                  |          | 0.4Kgs  |          |                     |          |
| 安全标准 Safety standards                      |          | 满足UL1012要求 (不申请标记) Meet UL1012 requirement (Not apply for the mark)   |          |                     |          |
| EMC标准 EMC standards                        |          | 满足FCC部分15J条件 等级B Meet FCC part 15 J Conduction class B  |          |                     |          |
| 其他 OTHER                                   |          | OUTPUT VOLTAGE: DC5V、7.5V、15V、48V 可定制   |          |                     |          |

注: 1.以上参数测试条件为: 230VAC输入, 额定负载, 25°C 70%RH, 温度。

2.容差: 包括设定容差, 线路稳定性, 负载稳定性 (注5)。

3.纹波测试: 20MHz用 "A12" 双绞线, 中断用0.1UF&47UF电容器短路。

4.进行电压稳定性测试: 满负载时进线最低电压到最高电压。

5.负载稳定性测试: 负载从0%到100%。

Note: 1.The testing condition for the parameter above is: 230VAC input, rated load, 25°C 70% RH, Temperature.

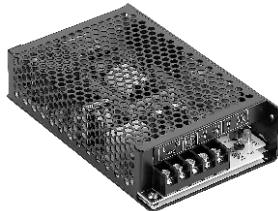
2.Error include the setting error, line stability and load stability. (Note:5).

3.Wave test: adopting "A12" double wire for 20MHz, and 0.1UF&47UF capacitor short-circuit for interrupting.

4.Inlet voltage stability test: when is over load, the lowest voltage of inlet is up to the highest voltage.

5.Load stability test: The load is from 0% to 100%.

## S-50、60、75 系列 Series



- 低价格,高可靠
- 105℃输出电容器
- 全球适用AC输入电源
- 效率高,工作温度低
- 软启动电流、有效降低AC输入冲击
- 有短路保护、过载保护
- 体积小、重量轻
- 100%满负荷烧机测试
- 内装EMI滤波器、波纹极小

- Low price and high reliability
- 105℃ Output capacitor
- AC input power suitable for the world
- High efficiency and low operation temperature
- Soft-star current can reduce the AC input impact effectively
- With short-circuit and overload protection
- Compact size, light weight
- 100% full-load burn-in test
- Installed with EMI filter, minimum wave

| 性能 Specification                            | S-50-12  | S-50-24  | S-60-12  | S-60-24        | S-75-12   | S-75-24  |
|---|--|--|--|----------------|---|----------|
| 直流输出电压DC output voltage                     | 12V  | 24V  | 12V  | 24V            | 12V   | 24V      |
| 输出电压容差(注2)<br>Output voltage range(Note:2)  | ±1%  | ±1%  | ±1%  | ±1%            | ±1%   | ±1%      |
| 额定输出电流Rated output current                  | 4.2A   | 2.1A   | 5A   | 2.5A           | 6A  | 3.2A     |
| 输出电流范围Output current range                  | 0-4.2A   | 0-2.1A   | 0-5A   | 0-2.5A         | 0-6A  | 0-3.2A   |
| 纹波及噪音(注3)<br>Wave and noise(Note:3)         | 100mVp-p   | 100mVp-p   | 120mVp-p                                       | 150mVp-p       | 120mVp-p  | 120mVp-p |
| 进线稳定性(注4)<br>Inlet stability(Note:4)        | ±0.5%  | ±0.5%  | ±0.5%  | ±0.5%          | ±0.5%   | ±0.5%    |
| 负载稳定性(注5)<br>Load stability(Note:5)         | ±0.5%  | ±0.5%  | ±0.5%  | ±0.5%          | ±0.5%   | ±0.5%    |
| 直流输出功率Dc output power                       | 50.4W  | 50.4W  | 60W  | 60W            | 75W   | 76.8W    |
| 效率 Efficiency                               | 78%  | 78%  | 76%  | 79%            | 78%   | 82%      |
| 直流电压可调范围<br>Adjustable range for DC voltage | ±10%   | ±10%   | ±10%   | ±10%           | ±10%  | ±10%     |
| 输入电压范围<br>AC input voltage range            | 85-132/170-264VAC由开关选择<br>47-63Hz;240-370VDC<br>85-132/170-264VAC selected by switch; 240-370VDC   |  |  |                | 85-264VAC 47-63Hz;120-370VDC                                |          |
| 输入电流 Input current                          | 1.3A/115V 0.65A/230V   |  |  |                | 2A/115V 1A/230V   |          |
| 冲击电流 AC Inrush current                      | 冷启动18A/115V 36A/230V<br>Cold-star current 18A/115V 36A/230V  |  |  |                | 冷启动30A/115V 60A/230V<br>Cold-star current 18A/115V 36A/230V |          |
| 漏电流Leakage current                          | <0.5mA/240VAC  |  |  |                |   |          |
| 过载保护 Overload protection                    | 105%-150%类型: 切断输入 复位: 自动恢复 105%-150%Type:pulsing hiccup shutdown Reset:auto recovery               |  |  |                |   |          |
| 过电压保护 Over-voltage protection               | .....  |  |  |                | 115%-135%   |          |
| 高温保护 High-temperature protection            |  |  | .....  |                |   |          |
| 温度系数 Temperature coefficient                |  |  |  | ±0.03%℃(0-50℃) |   |          |
| 启动、上升、保持时间 Setup,rise,hold up time          | 200ms,100ms,30ms   |  | 800ms,50ms,10ms/115V<br>300ms,50ms,80ms/230VAC |                | 200ms,100ms,30ms  |          |
| 抗震性Vibration                                | 10-500Hz,2G 10min,/1周,时长60分,各轴 10-500Hz,2G 10min,/1cycle,Period for 60min,Each axes                |  |  |                |   |          |
| 耐压性 Withstand voltage                       |  | 输入输出间: 1.5kVAC输入与外壳: 1.5kVAC输出与外壳: 0.5kVAC<br>Input and output internal:1.5kVAC, input and enclosure:1.5kVAC, Output and enclosure:0.5kVAC |  |                |   |          |
| 隔离电阻 Isolation resistance                   |  | 输入输出间,输入与外壳,输出与外壳:500VDC/100MΩ<br>Input and output internal:<br>Input and enclosure,Output and enclosure:500VDC/100MΩ                      |  |                |   |          |
| 工作温度、湿度 Working temperature and humidity    | -10℃~+60℃ (参考输出特性图), 20%-90%RH -10℃~+60℃(Refer to output derating curve),20%-90%RH                 |  |  |                |   |          |
| 存储温度、湿度 Store temperature and humidity      |  |  | -20℃~+85℃,10%-95%RH                            |                |   |          |
| 外形尺寸 Overall dimension                      | 157×97×38mm  |  | 159×97×38mm                                    |                |   |          |
| 重量 Weight                                   |  |  | 0.5Kgs   |                |   |          |
| 安全标准Safety standards                        | 满足UL1012要求 (不申请标记) Meet UL1012 requirement(Not apply for the mark)                                 |  |  |                |   |          |
| EMC标准 EMC standards                         | CISPR22(按55022), IEC801-2,3,4, IEC555-2认证<br>CISPR22(EN 55022), IEC801-2,3,4, IEC555-2Verification |  |  |                |   |          |
| 其他 OTHER                                    | 输出电压DC5V、7.5V、15V、48V可定制 OUTPUT VOLTAGE:DC5V 7.5CV15V 48V ORDER ACCORDING TO YOUR NEEDS            |  |  |                |   |          |

注: 1.以上参数测试条件为: 230VAC输入, 额定负载, 25℃ 70%RH, 温度。

2.容差: 包括设定容差, 线路稳定性, 负载稳定性(注5)。

3.纹波测试: 20MHz用“A12”双绞线, 中断用0.1μF&47μF电容器短路。

4.进行电压稳定性测试: 满负载时进线最低电压到最高电压。

5.负载稳定性测试: 负载从0%到100%。

Note: 1.The testing condition for the parameter above is:230VAC input, rated load, 25℃ 70% RH. Temperature.

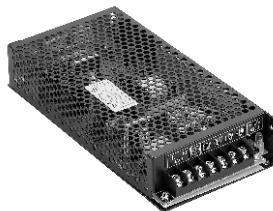
2.Error include the setting error, line stability and load stability.(Note:5).

3.Wave test:adopting "A12" double wire for 20MHz, and 0.1μF&47μF capacitor short-circuit for interrupting.

4.Inlet voltage stability test:when is over load, the lowest voltage of inlet is up to the highest voltage.

5.Load stability test:The load is from 0% to 100%.

S-100、120 系列 Series



- 低价格,高可靠
- 105°C输出电容器
- 全球适用AC输入电源
- 效率高、工作温度低
- 软启动电流、有效降低AC输入冲击
- 有短路保护、过载保护
- 体积小、重量轻
- 100%满负荷烧机测试
- 内装EMI滤波器、波纹极小
- Low price and high reliability
- 105°C Output capacitor
- AC input power suitable for the world
- High efficiency and low operation temperature
- Soft-star current can reduce the AC input impact effectly
- With short-circuit and overload protection
- Compact size,light weight
- 100% full-load burn-in test
- Installed with EMI filter,minimum wave

| 性能 Specification                          | 型号 Modle  | S-100-12   | S-100-24   | S-120-12   | S-120-24 |
|---|---|------------|------------|------------|----------|
| 直流输出电压 DC output voltage                  | 12V   | 24V        | 12V        | 24V        |          |
| 输出电压容差 (注 2) Output voltage range(Note:2) | ±1%   | ±1%        | ±1%        | ±1%        |          |
| 额定输出电流 Rated output current               | 8.5A  | 4.5A       | 10A        | 5A         |          |
| 输出电流范围 Output current range               | 0-8.5A  | 0-4.5A     | 0-10A      | 0-5A       |          |
| 纹波及噪音 (注3) Wave and noise(Note:3)         | 100mVp-p  | 100mVp-p   | 100mVp-p   | 100mVp-p   |          |
| 进线稳定性 (注4) Inlet stability(Note:4)        | ±0.3%   | ±0.2%      | ±0.3%      | ±0.2%      |          |
| 负载稳定性 (注 5) Load stability(Note:5)        | ±0.3%   | ±0.2%      | ±0.3%      | ±0.2%      |          |
| 直流输出功率 Dc output power                    | 102W  | 108W       | 120W       | 119W       |          |
| 效率 Efficiency                             | 81%   | 84%        | 81%        | 84%        |          |
| 直流电压可调范围 Adjustable range for DC voltage  | 10.8-13.2V  | 21.6-26.4V | 10.8-13.2V | 21.6-26.4V |          |
| 输入电压范围 AC input voltage range             | 85-132VAC/170-264VAC 由开关选择 47-63Hz;240-370VDC<br>85-132VAC/170-264VAC selected by switch 47-63Hz;240-370VDC                                     |            |            |            |          |
| 输入电流 Input current                        | 2.4A/115V 1.2A/230V   |            |            |            |          |
| 冲击电流 AC Inrush current                    | 冷启动电流 30A/115V 60A/230V Cold-star current 30A/115V 60A/230V   |            |            |            |          |
| 漏电流 Leakage current                       | <1mA/240VAC   |            |            |            |          |
| 过载保护 Overload protection                  | 105%-150%   |            |            |            |          |
| 过电压保护 Over-voltage protection             | 类型: 切断输出 复位: 自动恢复 Type:pulsing hiccup shutdown Reset:Recycle AC ON/OFF  |            |            |            |          |
| 高温保护 High-temperature protection          | .....   |            |            |            |          |
| 温度系数 Temperature coefficient              | ±0.03% (0-50°C)   |            |            |            |          |
| 启动、上升、保持时间 Setup,rise,hold up time        | 200ms,100ms,30ms  |            |            |            |          |
| 抗震性 Vibration                             | 10-500Hz,2G 10min,/1周,时长60分,各轴 10-500Hz,2G 10min,/1cycle,Period for 60min,Each axes   |            |            |            |          |
| 耐压性 Withstand voltage                     | 输入输出间: 1.5kVAC 输入与外壳: 1.5kVAC 输出与外壳: 0.5kVAC<br>Input and output internal: 1.5kVAC, input and enclosure: 1.5kVAC, Output and enclosure: 0.5kVAC |            |            |            |          |
| 隔离电阻 Isolation resistance                 | 输入输出间,输入与外壳,输出与外壳: 500VDC/100MΩ Input and output internal:<br>Input and enclosure,Output and enclosure: 500VDC/100MΩ                            |            |            |            |          |
| 工作温度、湿度 Working temperature and humidity  | -10°C -+60°C (参考输出特性图), 20%-90%RH -10°C -+60°C (Refer to output derating curve), 20%-90%RH<br>-20°C -+85°C, 10%-95%RH                           |            |            |            |          |
| 存储温度、湿度 Store temperature and humidity    | 199×98×38mm   |            |            |            |          |
| 外形尺寸 Overall dimension                    | 0.65Kgs   |            |            |            |          |
| 重量 Weight                                 | 满足UL1012要求 (不申请标记) Meet UL1012 requirement(Not apply for the mark)  |            |            |            |          |
| 安全标准 Safety standards                     | 满足FCC部分15J条件 等级B Meet FCC part 15 J Conduction class B  |            |            |            |          |
| EMC标准 EMC standards                       | 输出电压DC5V、7.5V、15V、48V可定制 OUTPUT VOLTAGE:DC5V 7.5CV15V 48V<br>ORDER ACCORDING TO YOUR NEEDS  |            |            |            |          |
| 其他 OTHER                                  |   |            |            |            |          |

注: 1.以上参数测试条件为: 230VAC输入, 额定负载, 25°C 70%RH, 温度。

2.容差: 包括设定容差, 线路稳定性, 负载稳定性 (注5)。

3.纹波测试: 20MHz用 "A12" 双绞线, 中断用0.1UF&47UF电容器短路。

4.进行电压稳定性测试: 满负载时进线最低电压到最高电压。

5.负载稳定性测试: 负载从0%到100%。

Note:1.The testing condition for the parameter above is:230VAC input, rated load, 25°C 70% RH, Temperature.

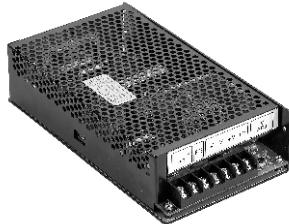
2.Error include the setting error, line stability and load stability.(Note:5).

3.Wave test:adopting "A12"double wire for 20MHz, and 0.1UF&47UF capacitor short-circuit for interrupting.

4.Inlet voltage stability test:when is over load,the lowest voltage of inlet is up to the highest voltage.

5.Load stability test:The load is from 0% to 100%.

## S-145、150 系列 Series



- 低价格,高可靠
- 105°C 输出电容器
- 全球适用AC输入电源
- 效率高、工作温度低
- 软启动电流、有效降低AC输入冲击
- 有短路保护、过载保护
- 体积小、重量轻
- 100%满负荷烧机测试
- 内装EMI滤波器、波纹极小
- Low price and high reliability
- 105°C Output capacitor
- AC input power suitable for the world
- High efficiency and low operation temperature
- Soft-star current can reduce the AC input impact effectly
- With short-circuit and overload protection
- Compact size,light weight
- 100% full-load burn-in test
- Installed with EMI filter,minimum wave

| 性能 Specification                          | 型号 Modle | S-145-12  | S-145-24 | S-150-12    | S-150-24     |
|---|----------|---|----------|-------------|--------------|
| 直流输出电压 DC output voltage                  |          | 12V   | 24V      | 12V         | 24V          |
| 输出电压容差 (注 2) Output voltage range(Note:2) |          | ±1%   | ±1%      | ±1%         | ±1%          |
| 额定输出电流 Rated output current               |          | 12A   | 6A       | 12.5A       | 6.5A         |
| 输出电流范围 Output current range               |          | 0-12A   | 0-6A     | 0-12.5A     | 0-6.5A       |
| 纹波及噪音 (注3) Wave and noise(Note:3)         |          | 100mVp-p  | 100mVp-p | 180mVp-p    | 240mVp-p     |
| 进线稳定性 (注4) Inlet stability(Note:4)        |          | ±0.3%   | ±0.2%    | ±0.3%       | ±0.2%        |
| 负载稳定性 (注 5) Load stability(Note:5)        |          | ±0.3%   | ±0.2%    | ±0.3%       | ±0.2%        |
| 直流输出功率 Dc output power                    |          | 144W  | 144W     | 150W        | 156W         |
| 效率 Efficiency                             |          | 80.5%   | 83.5%    | 82%         | 85%          |
| 直流电压可调范围 Adjustable range for DC voltage  |          | 10.8-13.2V  | 21-28V   | 10.6-13.2V  | 21-28V       |
| 输入电压范围 AC input voltage range             |          | 85-132VAC/170-264VAC 由开关选择 47-63Hz;240-370VDC<br>85-132VAC/170-264VAC selected by switch 47-63Hz;240-370VDC                                     |          |             |              |
| 输入电流 Input current                        |          | 3.2A/115V 1.6A/230V   |          |             |              |
| 冲击电流 AC Inrush current                    |          | 冷启动 18A/115V 36A/230V Cold-star current 18A/115V 36A/230V   |          |             |              |
| 漏电流 Leakage current                       |          | <1mA/240VAC   |          |             |              |
| 过载保护 Overload protection                  |          | 105%-150%类型: 切断输入 复位: 自动恢复 105%-150%<br>Type:pulsing hiccup shutdown Reset:auto recovery  |          |             |              |
| 过电压保护 Over-voltage protection             |          | .....   |          |             |              |
| 高温保护 High-temperature protection          |          | .....   |          |             |              |
| 温度系数 Temperature coefficient              |          | ±0.03% °C(0-50°C)   |          |             |              |
| 启动、上升、保持时间 Setup,rise,hold up time        |          | 100ms,50ms,20ms   |          |             |              |
| 抗震性 Vibration                             |          | 10-500Hz,2G 10min,/1周,时长60分,各轴 10-500Hz,2G 10min,/1cycle,Period for 60min,Each axes   |          |             |              |
| 耐压性 Withstand voltage                     |          | 输入输出间: 1.5kVAC 输入与外壳: 1.5kVAC 输出与外壳: 0.5kVAC<br>Input and output internal: 1.5kVAC, input and enclosure: 1.5kVAC, Output and enclosure: 0.5kVAC |          |             |              |
| 隔离电阻 Isolation resistance                 |          | 输入输出间,输入与外壳,输出与外壳: 500VDC/100M Ω Input and output internal:<br>Input and enclosure,Output and enclosure: 500VDC/100M Ω                          |          |             |              |
| 工作温度、湿度 Working temperature and humidity  |          | -10°C~+60°C (参考输出特性图), 20%-90%RH -10°C~+60°C (Refer to output derating curve), 20%-90%RH  |          |             |              |
| 存储温度、湿度 Store temperature and humidity    |          | -20°C~+85°C, 10%~95%RH  |          |             |              |
| 外形尺寸 Overall dimension                    |          | 199×98×38mm   |          | 199×98×38mm | 199×110×50mm |
| 重量 Weight                                 |          | 0.7Kgs  |          |             |              |
| 安全标准 Safety standards                     |          | 满足UL1012要求 (不申请标记) Meet UL1012 requirement(Not apply for the mark)  |          |             |              |
| EMC标准 EMC standards                       |          | 满足FCC部分15J条件 等级B Meet FCC part 15 J Conduction class B  |          |             |              |
| 其他 OTHER                                  |          | 输出电压DC5V、7.5V、15V、48V可定制 OUTPUT VOLTAGE:DC5V 7.5CV15V 48V<br>ORDER ACCORDING TO YOUR NEEDS  |          |             |              |

注：1.以上参数测试条件为：230VAC输入，额定负载，25°C 70%RH,温度。

2.容差：包括设定容差，线路稳定性，负载稳定性（注5）。

3.纹波测试：20MHz用“A12”双绞线，中断用0.1UF&47uF电容器短路。

4.进行电压稳定性测试：满负载时进线最低电压到最高电压。

5.负载稳定性测试：负载从0%到100%。

Note:1.The testing condition for the parameter above is:230VAC input, rated load, 25°C 70% RH, temperature.

2.Error.include the setting error, line stability and load stability.(Note:5).

3.Wave test:adopting "A12" double wire for 20MHz, and 0.1UF&47uF capacitor short-circuit for interrupting.

4.Inlet voltage stability test: when is over load, the lowest voltage of inlet is up to the highest voltage.

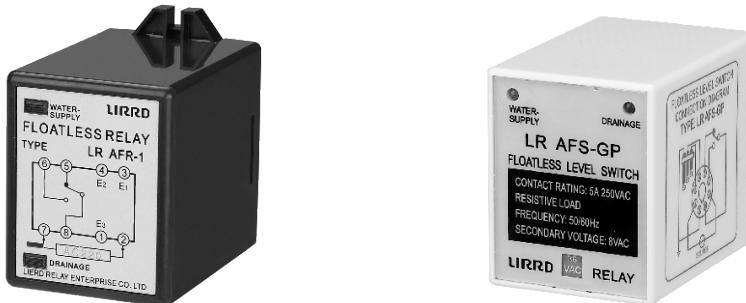
5.Load stability test: The load is from 0% to 100%.

# E

## 液位继电器系列 FLOATLESS RELAY SERIES

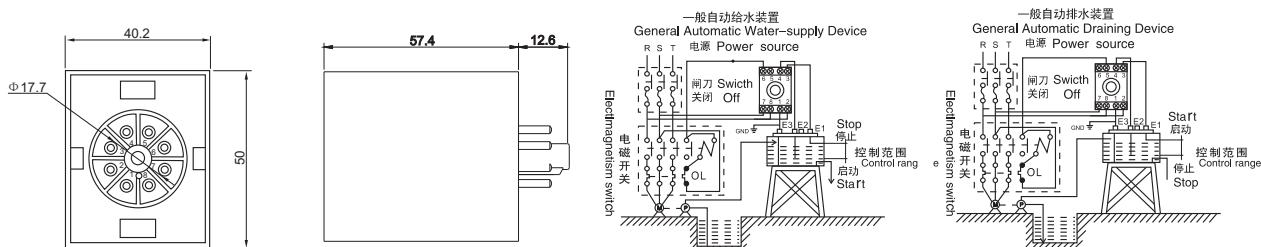


LAF 系列 Series

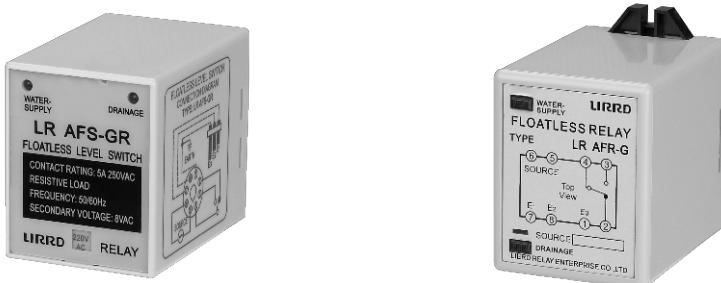


| 类别 Classification          | 液面控制器 Floatless Relay  | 液面控制器 Floatless Relay  |
|----------------------------|--|--|
| 型号 Model                   | LA FR-1  | LA FS-GP   |
| 外形尺寸 (毫米) Dimension(mm)    | 61.0H×49.0W×70.0L  | 50.0H×40.0W×58.0L  |
| 底座型号 Socket Type           | PF083A PF085A  | PF03A PF085A   |
| 用途型式 Using Mode            | 一般用 General<br>高灵敏 High Sensing<br>长距离 Long Distance<br>低密度 Low Density<br>二线式 Two Lines | AFR-1<br>AFR-1H<br>AFR-1L<br>AFR-1S<br>AFR-1R                |
| 额定电压 Rated Voltage         | AC: 110V, 220V, 240V 50/60Hz   | AC: 110V, 220V, 240V 50/60Hz                                 |
| 指示灯动作 Indicator Operating  | 两只LED灯作状况指示 Two LED'S Use For Two Status   | 两只LED灯作状况指示 Two LED'S Use For Two Status                     |
| 动作电压 Operate Voltage       | 额定电压值的85~110% 85~110% Of Rated Voltage   | 额定电压值的85~110% 85~110% Of Rated Voltage                       |
| 电极内电压 Electrode Voltage    | 8VAC (Except Highsensing 24VAC)  | 8VAC (Except Highsensing 24VAC)                              |
| 动作电阻 Operate Resistance    | 4K Ω min (GENERAL)   | 4K Ω min (GENERAL)   |
| 释放电阻 Release Resistance    | 15K Ω min (GENERAL)  | 15K Ω min (GENERAL)  |
| 反应时间 Response Time         | 动作:80ms以下, 释放:160ms以下 Operate:80ms max., Release: 160ms max.                             | 动作:80ms以下, 释放:160ms以下 Operate:80ms max., Release: 160ms max. |
| 接点容量度 Contact Capacity     | 5A, 250VAC (RESISTIVELOAD)   | 5A, 250VAC (RESISTIVELOAD)                                   |
| 电缆长度 Length Of Cable       | 1KM max. (General)   | 1KM max. (General)   |
| 寿命 Service life            | 5×10 <sup>6</sup> Times<br>10 <sup>5</sup> Times   | 5×10 <sup>6</sup> Times<br>10 <sup>5</sup> Times             |
| 绝缘电阻 Insulation Resistance | 100M Ω SDC 500V) Min.  | 100M Ω DC 500V) Min.   |
| 耐电硬度 Dielectric Strength   | 1500VAC, 50/60Hz, For 1 Minute   | 1500VAC, 50/60Hz, For 1 Minute                               |
| 消耗功率 Power Consumption     | 3.2VA  | 3.2VA  |
| 使用环境温度 Ambient Temperature | -10°C~+55°C  | -10°C~+55°C  |
| 使用环境湿度 Ambient Humidity    | 45~85% RH  | 45~85% RH  |
| 重量 Weight                  | 200g   | 200g   |

安装尺寸和接线图 Installation dimensions and connecting diagram



LAF 系列 Series



| 类别 Classification          |                   | 液面控制器 Floatless Relay  | 液面控制器 Floatless Relay  |
|----------------------------|-------------------|--|--|
| 型号 Model                   |                   | LAFS-GR  | LAIR-G   |
| 外形尺寸 (毫米) Dimension(mm)    |                   | 50.0×40.0×58.0   | 61.0×49.0×70.0   |
| 底座型号 Socket Type           |                   | PF085A PF083A  | PF085A PF083A  |
| 用途型式 Using Mode            |                   | --   | AFR-G  |
| 高灵敏 High Sensing           | 一般用 General       | --   | --   |
|                            | 长距离 Long Distance | --   | --   |
|                            | 低密度 Low Density   | --   | --   |
|                            | 二线式 Two Lines     | AFS-GR   | --   |
| 额定电压 Rated Voltage         |                   | AC: 110V, 220V, 240V 50/60Hz                                 | AC: 110V, 220V, 240V 50/60Hz                                 |
| 指示灯动作 Indicator Operating  |                   | 两只LED灯作状况指示 Two LED'S Use For Two Status                     | 两只LED灯作状况指示 Two LED'S Use For Two Status                     |
| 动作电压 Operate Voltage       |                   | 额定电压值的85~110% 85~110% Of Rated Voltage                       | 额定电压值的85~110% 85~110% Of Rated Voltage                       |
| 电极内电压 Electrode Voltage    |                   | 8VAC (Except Highsensing 24VAC)                              | 8VAC (Except Highsensing 24VAC)                              |
| 动作电阻 Operate Resistance    |                   | 4K Ω min (GENERAL)   | 4K Ω min (GENERAL)   |
| 释放电阻 Release Resistance    |                   | 15K Ω min (GENERAL)  | 15K Ω min (GENERAL)  |
| 反应时间 Response Time         |                   | 动作:80ms以下, 释放:160ms以下 Operate:80ms max., Release: 160ms max. | 动作:80ms以下, 释放:160ms以下 Operate:80ms max., Release: 160ms max. |
| 接点容量度 Contact Capacity     |                   | 5A, 250VAC (RESISTIVELOAD)                                   | 5A, 250VAC (RESISTIVELOAD)                                   |
| 电缆长度 Length Of Cable       |                   | 1KM max. (General)   | 1KM max. (General)   |
| 寿命 Service life            | 机械 Mechanical     | 5×10 <sup>6</sup> Times                                      | 5×10 <sup>6</sup> Times                                      |
|                            | 电气 Electrical     | 10 <sup>5</sup> Times  | 10 <sup>5</sup> Times  |
| 绝缘电阻 Insulation Resistance |                   | 100M Ω (DC 500V) Min.  | 100M Ω (DC 500V) Min.  |
| 耐电硬度 Dielectric Strength   |                   | 1500VAC, 50/60Hz, For 1 Minute                               | 1500VAC, 50/60Hz, For 1 Minute                               |
| 消耗功率 Power Consumption     |                   | 3.2VA  | 3.2VA  |
| 使用环境温度 Ambient Temperature |                   | -10℃~+55℃  | -10℃~+55℃  |
| 使用环境湿度 Ambient Humidity    |                   | 45~85% RH  | 45~85% RH  |
| 重量 Weight                  |                   | 150g   | 150g   |

安装尺寸和接线图 Installation dimensions and connecting diagram

