

ESDR SERIES



Wiring Diagram



Accessories



P1004-95, P1004-95-X Versa-Pot
Panel mountable, industrial potentiometer recommended for remote time delay adjustment.



P1023-6 Mounting bracket
The 90° orientation of mounting slots makes installation/removal of modules quick and easy.



P0700-7 Versa-Knob
Designed for 0.25 in. (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.



P1015-64 (AWG 14/16) Female Quick Connect
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



P1015-18 Quick Connect to Screw Adapter
Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.



C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



P1023-20 DIN Rail Adapter
Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

Description

The ESDR Series offers independent time adjustment of both delay periods. Adjustment options include fixed, onboard or external adjust. The ESDR is recommended for air drying, automatic oiling, life testing, chemical metering and automatic duty cycling. This series is designed for general purpose commercial and industrial applications where a small, cost effective, reliable, solid-state timer is required. The factory calibration for fixed time delays is $\leq \pm 5\%$. The repeat accuracy, under stable conditions, is 0.1% of the selected time delay. This series is designed for input voltages of 12VDC to 230VAC in five ranges. Time delays of 0.1 seconds to 1000 minutes are available in six ranges. The output is rated 1A steady and 10A inrush. The modules are totally solid state and encapsulated to protect the electronic circuitry.

Operation (Recycling - ON Time First)

Upon application of input voltage, the output energizes and the T1, ON time begins. At the end of the ON time, the output de-energizes and the T2, OFF time begins. At the end of the OFF time, the output energizes and the cycle repeats as long as input voltage is applied.

Reset: Removing input voltage resets the output and time delays, and returns the sequence to the first delay.

Operation (Recycling - OFF Time First)

Upon application of input voltage, the T2 OFF time begins. At the end of the OFF time, the output energizes and the T1 ON time begins. At the end of the ON time, the output de-energizes and the cycle repeats as long as input voltage is applied.

Reset: Removing input voltage resets the output and time delays, and returns the sequence to the first delay.

Features & Benefits

| FEATURES | BENEFITS |
|--|--|
| Microcontroller based | Repeat Accuracy $\pm 0.1\%$, Factory calibration $\pm 5\%$ |
| 1A steady, 10A inrush solid-state output | Provides 100 million operations in typical conditions. |
| Totally solid state and encapsulated | No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity |
| ON/OFF recycling with independent adjustment of both time periods | Separate on and off timing settings are knob adjustable for added flexibility |
| Compact, low cost design measuring 2 in. (50.8mm) square | Allows flexibility for OEM applications |

Ordering Information

See next page.

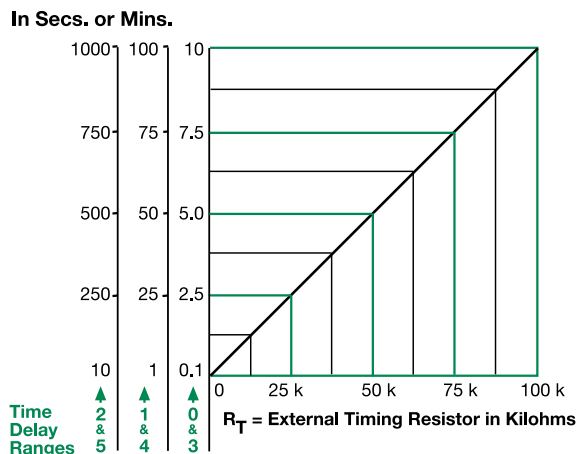
ESDR SERIES

Ordering Information

| MODEL | INPUT VOLTAGE | ADJUSTMENT | T1 ON TIME | FIRST DELAY | T2 OFF TIME | SWITCHING MODE |
|------------|---------------|------------|------------|-------------|-------------|----------------|
| ESDR120A0P | 12VDC | Onboard | 0.1 - 10s | On time | 0.1 - 10s | Positive |
| ESDR120B3P | 12VDC | Onboard | 0.1 - 10s | Off time | 0.1 - 10m | Positive |
| ESDR123B4P | 12VDC | Onboard | 0.1 - 10m | Off time | 1 - 100m | Positive |
| ESDR125A5P | 12VDC | Onboard | 10 - 1000m | On time | 10 - 1000m | Positive |
| ESDR221A2 | 24VAC | Onboard | 1 - 100s | On time | 10 - 1000s | n/a |
| ESDR320A0P | 24VDC | Onboard | 0.1 - 10s | On time | 0.1 - 10s | Positive |
| ESDR320A3P | 24VDC | Onboard | 0.1 - 10s | On time | 0.1 - 10m | Positive |
| ESDR420A0 | 120VAC | Onboard | 0.1 - 10s | On time | 0.1 - 10s | n/a |
| ESDR420A1 | 120VAC | Onboard | 0.1 - 10s | On time | 1 - 100s | n/a |
| ESDR420A4 | 120VAC | Onboard | 0.1 - 10s | On time | 1 - 100m | n/a |
| ESDR420B1 | 120VAC | Onboard | 0.1 - 10s | Off time | 1 - 100s | n/a |
| ESDR420B4 | 120VAC | Onboard | 0.1 - 10s | Off time | 1 - 100m | n/a |
| ESDR421A1 | 120VAC | Onboard | 1 - 100s | On time | 1 - 100s | n/a |
| ESDR421A4 | 120VAC | Onboard | 1 - 100s | On time | 1 - 100m | n/a |
| ESDR423A3 | 120VAC | Onboard | 0.1 - 10m | On time | 0.1 - 10m | n/a |
| ESDR423A4 | 120VAC | Onboard | 0.1 - 10m | On time | 1 - 100m | n/a |
| ESDR424A1 | 120VAC | Onboard | 1 - 100m | On time | 1 - 100s | n/a |
| ESDR450A1 | 120VAC | External | 0.1 - 10s | On time | 1 - 100s | n/a |

If you don't find the part you need, call us for a custom product 800-843-8848

External Resistance vs. Time Delay

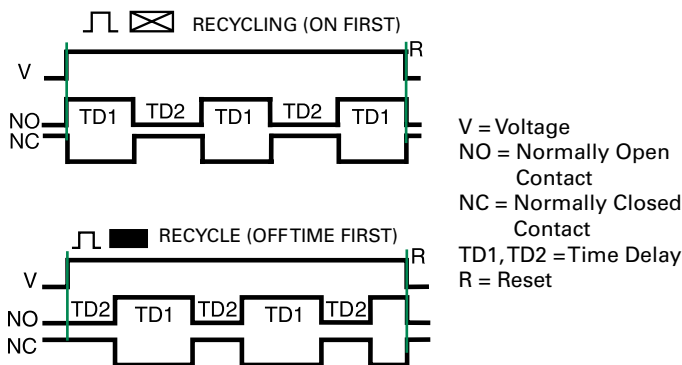


This chart applies to externally adjustable part numbers.
The time delay is adjustable over the time delay range selected by varying the resistance across the R_T terminals; as the resistance increases the time delay increases.

When selecting an external R_T , add the tolerances of the timer and the R_T for the full time range adjustment.

Examples: 1 to 50 S adjustable time delay, select time delay range 1 and a 50 K ohm R_T . For 1 to 100 S use a 100 K ohm R_T .

Function Diagrams



ESDR SERIES

Specifications

| | |
|------------------------------------|--|
| Time Delay | |
| Range | 0.1s - 1000m in 6 adjustable ranges or fixed |
| Repeat Accuracy | ±0.1% or 20ms, whichever is greater |
| Tolerance | |
| (Factory Calibration) | ≤ ± 5% |
| Time Delay vs Temp. | |
| & Voltage | ≤ ±2% |
| Reset Time | ≤ 150ms |
| Input | |
| Voltage | 12 or 24VDC; 24, 120, or 230VAC |
| Tolerance | ±20% |
| Power Consumption | AC ≤ 2VA; DC ≤ 1W |
| AC Line Frequency/DC Ripple | 50/60 Hz / ≤ 10% |
| Output | |
| Type | Solid state |
| Maximum Load Current | 1A steady state, 10A inrush at 60°C |
| OFF State Leakage Current | AC ≅ 5mA @ 230VAC; DC ≅ 1mA |
| Voltage Drop | AC ≅ 2.5V @ 1A; DC ≅ 1V @ 1A |

Protection

Circuitry
Dielectric Breakdown
Insulation Resistance
Polarity

Encapsulated
≥ 2000V RMS terminals to mounting surface
≥ 100 MΩ
DC units are reverse polarity protected

Mechanical
Mounting
Dimensions

Surface mount with one #10 (M5 x 0.8) screw
H 50.8 mm (2"); **W** 50.8 mm (2");
D 30.7 mm (1.21")
0.25 in. (6.35 mm) male quick connect terminals

Termination
Operating/Storage
Temperature
Humidity
Weight

-40° to 75°C / -40° to 85°C
95% relative, non-condensing
≅ 2.4 oz (68 g)

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru