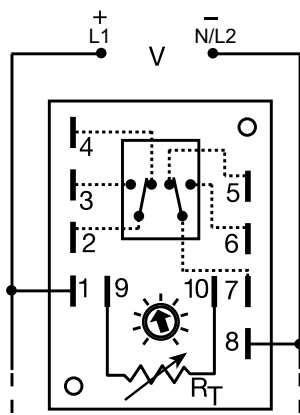


## ERDM SERIES



### Wiring Diagram



V = Voltage

A knob, or terminals 9 & 10 are only included on adjustable units. Relay contacts are isolated.

$R_T$  is used when external adjustment is ordered.

### Description

The ERDM Series is a combination of digital electronics and a reliable electromechanical relay. These devices offer a DPDT relay output for relay logic circuits, and isolation of input to output voltages. Cost effective for OEM applications, such as random starting, sequencing ON, switch de-bouncing, anti-short cycling, and other common delay-on-make applications.

#### Operation (Delay-on-Make)

Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output energizes and remains energized until input voltage is removed.

**Reset:** Removing input voltage resets the time delay and output.

### Features & Benefits

| FEATURES   | BENEFITS  |
|--|---|
| <b>Digital integrated circuitry with electromechanical relay</b> | Repeat Accuracy + / - 0.5%                      |
| <b>Isolated 10A, DPDT output contacts</b>                        | Allows control of loads for AC or DC voltages   |
| <b>Encapsulated</b>  | Protects against shock, vibration, and humidity |

### Accessories

**P1004-16, P1004-16-XVersa-Pot**  
Panel mountable, industrial potentiometer recommended for remote time delay adjustment.

**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.

### Ordering Information

| MODEL     | INPUT VOLTAGE | ADJUSTMENT   | TIME DELAY | MODEL   | INPUT VOLTAGE | ADJUSTMENT   | TIME DELAY |
|-----------|---------------|--------------|------------|---------|---------------|--------------|------------|
| ERDM123   | 12VDC         | Onboard knob | 0.1 - 10s  | ERDM422 | 120VAC        | Onboard knob | 0.1 - 5s   |
| ERDM126   | 12VDC         | Onboard knob | 0.6 - 60s  | ERDM423 | 120VAC        | Onboard knob | 0.1 - 10s  |
| ERDM128   | 12VDC         | Onboard knob | 0.1 - 10m  | ERDM425 | 120VAC        | Onboard knob | 0.3 - 30s  |
| ERDM222   | 24VAC         | Onboard knob | 0.1 - 5s   | ERDM427 | 120VAC        | Onboard knob | 0.1 - 5m   |
| ERDM4130S | 120VAC        | Fixed        | 30s        | ERDM429 | 120VAC        | Onboard knob | 0.2 - 15m  |
| ERDM4210  | 120VAC        | Onboard knob | 1 - 100m   |         |               |              |            |

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

# ERDM SERIES

## Specifications

### Time Delay

**Type** Digital integrated circuitry  
**Range** 0.1s - 500m in 11 adjustable ranges or  
0.1s - 1000m fixed

**Adjustment** Fixed, onboard or external adjust

**Repeat Accuracy** ±0.5%

**Tolerance** ≤ ±10%

**(Factory Calibration)** ≤ 150ms

**Recycle Time** ≤ ±2%

### Input

**Voltage** 12, 24, or 120VDC; 24, 120, or 230VAC

**Tolerance** -15% - 20%

**12VDC & 24VDC/AC** -20% - 10%

**120VAC/DC & 230VAC** 50/60 Hz

**AC Line Frequency**

### Output

**Type** Isolated relay contacts

**Form** DPDT

**Rating** 10A resistive @ 120/240VAC & 28VDC;

1/3 hp @ 120/240VAC

**Life** Mechanical - 1 x 10<sup>7</sup>; Full Load - 1 x 10<sup>6</sup>

### Protection

**Isolation Voltage** ≥1500V RMS input to output

**Insulation Resistance** ≥100 MΩ

**Polarity** DC units are reverse polarity protected

### Mechanical

**Mounting** Surface mount with two #6

(M3.5 x 0.6) screws

**Dimensions** **H** 88.9 mm (3.5"); **W** 63.5 mm (2.5");

**D** 43.2 mm (1.7")

0.25 in. (6.35 mm) male quick connect terminals

### Termination

**Environmental** -40° to 65°C / -40° to 85°C

**Operating/Storage** Temperature

**Weight** ≈ 5.7 oz (162 g)

## Selection Guides

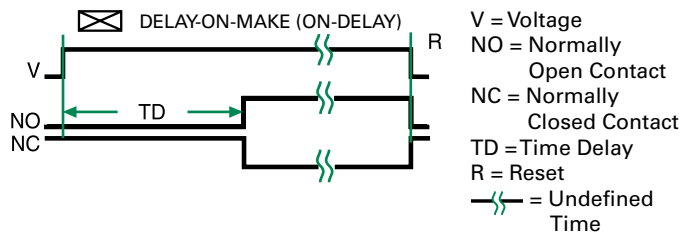
| R <sub>T</sub> Selection Chart |     |     |      |     |     |                          |
|--------------------------------|-----|-----|------|-----|-----|--------------------------|
| Desired Time Delay*            |     |     |      |     |     | R <sub>T</sub><br>Megohm |
| Seconds                        |     |     |      |     |     |                          |
| 1                              | 2   | 3   | 4    | 5   | 6   |                          |
| 0.1                            | 0.1 | 0.1 | 0.2  | 0.3 | 0.6 | 0.0                      |
| 0.19                           | 0.6 | 1   | 1.7  | 3   | 6   | 0.1                      |
| 0.28                           | 1.1 | 2   | 3.2  | 6   | 12  | 0.2                      |
| 0.37                           | 1.6 | 3   | 4.7  | 9   | 18  | 0.3                      |
| 0.46                           | 2.1 | 4   | 6.2  | 12  | 24  | 0.4                      |
| 0.55                           | 2.6 | 5   | 7.7  | 15  | 30  | 0.5                      |
| 0.64                           | 3.0 | 6   | 9.2  | 18  | 36  | 0.6                      |
| 0.73                           | 3.5 | 7   | 10.7 | 21  | 42  | 0.7                      |
| 0.82                           | 4.0 | 8   | 12.2 | 24  | 48  | 0.8                      |
| 0.91                           | 4.5 | 9   | 13.7 | 27  | 54  | 0.9                      |
| 1.0                            | 5.0 | 10  | 15   | 30  | 60  | 1.0                      |

\* When selecting an external R<sub>T</sub> add at least 20% for tolerance of unit and the R<sub>T</sub>.

| R <sub>T</sub> Selection Chart |     |      |     |     |                          |
|--------------------------------|-----|------|-----|-----|--------------------------|
| Desired Time Delay*            |     |      |     |     | R <sub>T</sub><br>Megohm |
| Minutes                        |     |      |     |     |                          |
| 7                              | 8   | 9    | 10  | 11  |                          |
| 0.1                            | 0.1 | 0.2  | 1   | 10  | 0.0                      |
| 0.6                            | 1   | 1.7  | 10  | 50  | 0.1                      |
| 1.1                            | 2   | 3.2  | 20  | 100 | 0.2                      |
| 1.6                            | 3   | 4.7  | 30  | 150 | 0.3                      |
| 2.1                            | 4   | 6.2  | 40  | 200 | 0.4                      |
| 2.6                            | 5   | 7.7  | 50  | 250 | 0.5                      |
| 3.0                            | 6   | 9.2  | 60  | 300 | 0.6                      |
| 3.5                            | 7   | 10.7 | 70  | 350 | 0.7                      |
| 4.0                            | 8   | 12.2 | 80  | 400 | 0.8                      |
| 4.5                            | 9   | 13.7 | 90  | 450 | 0.9                      |
| 5.0                            | 10  | 15   | 100 | 500 | 1.0                      |

\* When selecting an external R<sub>T</sub> add at least 20% for tolerance of unit and the R<sub>T</sub>.

## Function Diagram



## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9