

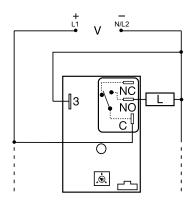
# HRDM SERIES

# Delay-on-MakeTimer





### Wiring Diagram



NO = Normally Open L = Load C = Common, Transfer Contact

NOTE: A knob, or terminals 4 & 5 are only included on adjustable units. R<sub>T</sub> is used when external adjustment is ordered. Relay contacts are not isolated.

# Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY
HRDM120	12VDC	Onboard	0.1 - 10s
HRDM3112S	24VDC	Fixed	12s
HRDM413M	120VAC	Fixed	3m
HRDM415M	120VAC	Fixed	5m

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

# **Description**

The HRDM Series combines an electromechanical relay output with microcontroller timing circuitry. It offers 12 to 230V operation in five ranges and factory fixed, onboard, or external adjustable time delays with a repeat accuracy of  $\pm 0.5\%$ . The output contact rating allows for direct operation of heavy loads, such as compressors, pumps, blower motors, heaters, etc. This series is ideal for OEM applications where cost is a factor.

#### 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 relay energizes and remains energized until input voltage is removed.

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

### **Features & Benefits**

FEATURES	BENEFITS	
Microcontroller based	Repeat Accuracy + / - 0.5%	
Compact, low cost design	Allows flexiblility for OEM applications	
Isolated, 30A, SPDT, NO output contacts	Allows direct operation of heavy loads: compressors, pumps, blower moters, heaters.	
Encapsulated	Protects against shock, vibration, and humidity	

#### **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.



# **P1015-13** (AWG 10/12), **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.

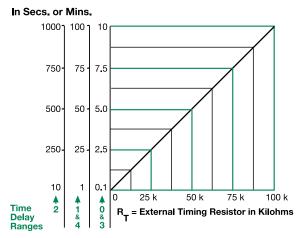


#### P1023-20 DIN Rail Adapter

Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

# HRDM SERIES

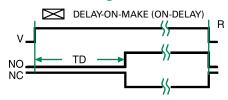
# **External Resistance vs. Time Delay**



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 RT terminals; as the resistance increases the time delay increases. When selecting an external R $_{\text{T}}$ , add the tolerances of the timer and the R $_{\text{T}}$ 

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

### **Function Diagram**



V = Voltage NO = Normally **Open Contact** NC = Normally**Closed Contact** TD =Time Delay R = Reset - = Undefined Time

## **Specifications**

**Time Delay** 

Microcontroller circuitry Type Range 0.1s - 100m in 5 adjustable ranges or fixed **Repeat Accuracy** ±0.5% or 20 ms, whichever is greater

**Tolerance** 

(Factory Calibration) ±1%, ±5% **Reset Time** ≤ 150ms

Time Delay vs Temp.

& Voltage ±2%

Input

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

**Tolerance** 

**12VDC & 24VDC** -15% - 20% 24 to 230VAC -20% - 10% **AC Line Frequency** 50/60 Hz

 $AC \le 4VA$ ;  $DC \le 2W$ **Power Consumption** 

Output

Type Electromechanical relay **Form** Non-isolated, SPDT

Ratings		SPDT-NO	SPDT-NC
<b>General Purpose</b>	125/240VAC	30A	15A
Resistive	125/240VAC	30A	15A
	28VDC	20A	10A
Motor Load	125VAC	1 hp*	1/4 hp**
	240VAC	2 hn**	1 hn**

Life Mechanical - 1 x 106;

Electrical - 1 x 105, \*3 x 104, \*\*6,000

**Protection** 

IEEE C62.41-1991 Level A Surge

Circuitry Encapsulated

≥ 2000V RMS terminals to mounting surface **Dielectric Breakdown** 

**Insulation Resistance**  $\geq 100~M\Omega$ 

**Polarity** DC units are reverse polarity protected

**Mechanical** 

Mounting Surface mount with one #10 (M5 x 0.8) screw

**Dimensions** 3 x 2 x 1.5 in. (76.7 x 51.3 x 38.1mm)

**Termination** 0.25 in. (6.35 mm) male quick connect terminals

**Environmental** 

Operating/Storage

**Temperature**  $-40^{\circ}$  to  $60^{\circ}$ C /  $-40^{\circ}$  to  $85^{\circ}$ C Humidity 95% relative, non-condensing

Weight  $\approx 3.9$  oz (111 g)

# 单击下面可查看定价,库存,交付和生命周期等信息

# >>Littelfuse(美国力特)