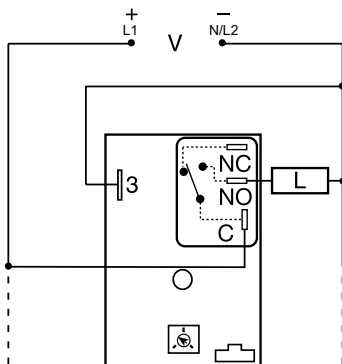


HRDM SERIES

Delay-on-Make Timer



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_T 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 flexibility for OEM applications |
| Isolated, 30A, SPDT, NO output contacts | Allows direct operation of heavy loads: compressors, pumps, blower motors, 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.



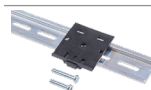
P1015-13 (AWG 10/12), P1015-64 (AWG 14/16) Female Quick Connect
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



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.



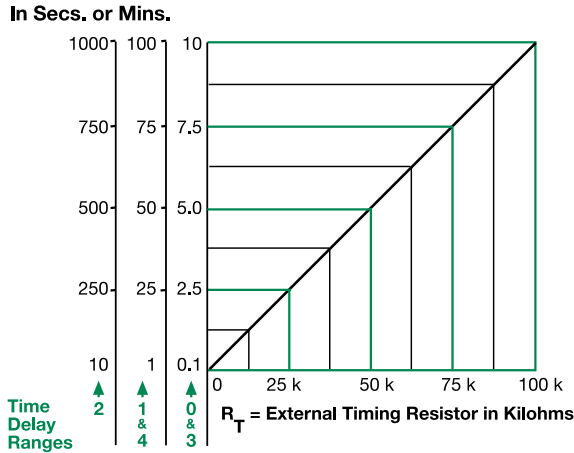
C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



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

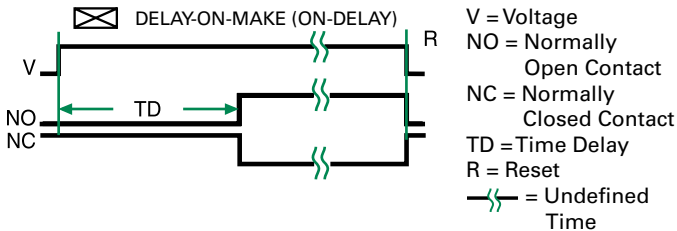
HRDM SERIES

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 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 Diagram



Specifications

Time Delay

Type Microcontroller circuitry
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

Power Consumption AC ≤ 4VA; DC ≤ 2W

Output

Type Electromechanical relay

Form Non-isolated, SPDT

Ratings

| | SPDT-NO | SPDT-NC |
|------------------------|---------|----------|
| General Purpose | 30A | 15A |
| Resistive | 30A | 15A |
| | 28VDC | 10A |
| Motor Load | 1 hp* | 1/4 hp** |
| | 2 hp** | 1 hp** |

Life

Mechanical - 1 x 10⁶;
Electrical - 1 x 10⁵, *3 x 10⁴, **6,000

Protection

Surge IEEE C62.41-1991 Level A

Circuitry Encapsulated

Dielectric Breakdown ≥ 2000V RMS terminals to mounting surface

Insulation Resistance ≥ 100 MΩ

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° to 60°C / -40° to 85°C

Humidity 95% relative, non-condensing

Weight ≈ 3.9 oz (111 g)