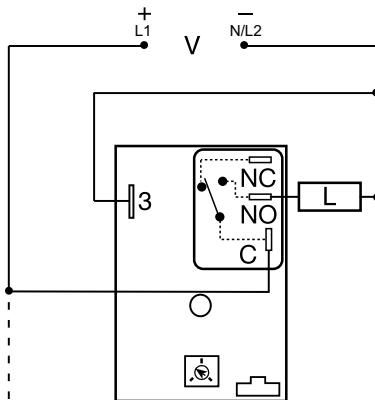


HRDI SERIES

Interval Timer



Wiring Diagram



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

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.

Description

The HRDI Series combines an electromechanical relay output with microcontroller timing circuitry. It offers 12 to 230V operation in five ranges and factory fixed, external, or onboard 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 (Interval)

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

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

Features & Benefits

| FEATURES | BENEFITS |
|--|---|
| Microcontroller based | Repeat Accuracy $\pm 0.5\%$ |
| 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.

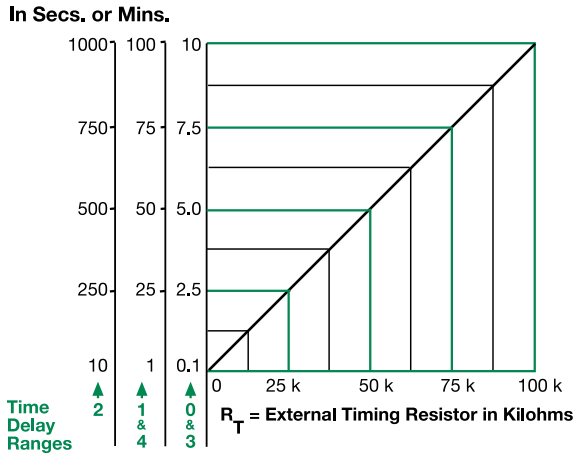
Ordering Information

| MODEL | INPUT VOLTAGE | ADJUSTMENT | TIME DELAY |
|----------|---------------|------------|------------|
| HRDI117S | 12VDC | Fixed | 7s |
| HRDI421 | 120VAC | Onboard | 1 - 100s |
| HRDI422 | 120VAC | Onboard | 10 - 1000s |

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

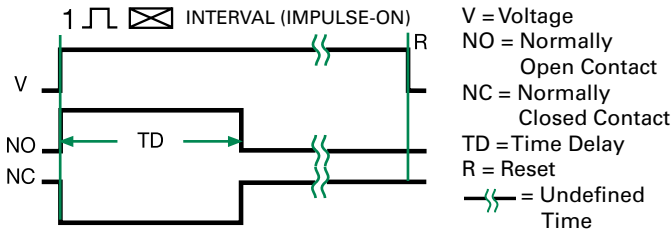
HRDI SERIES

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 20ms, whichever is greater | |
| Tolerance (Factory Calibration) | ±1%, ±5% | |
| Recycle 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 | SPDT, non-isolated | |
| Ratings | SPDT-NO | SPDT-NC |
| General Purpose | 125/240VAC | 30A |
| Resistive | 125/240VAC | 30A |
| | 28VDC | 20A |
| Motor Load | 125VAC | 1 hp* |
| | 240VAC | 2 hp** |
| Life | Mechanical - 1 x 10 ⁶ ; Electrical - 1 x 10 ⁵ , *3 x 10 ⁴ , **6,000 | |
| Protection | IEEE C62.41-1991 Level A | |
| Surge 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 | H 76.7 mm (3"); W 51.3 mm (2"); D 38.1 mm (1.5") | |
| 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) | |