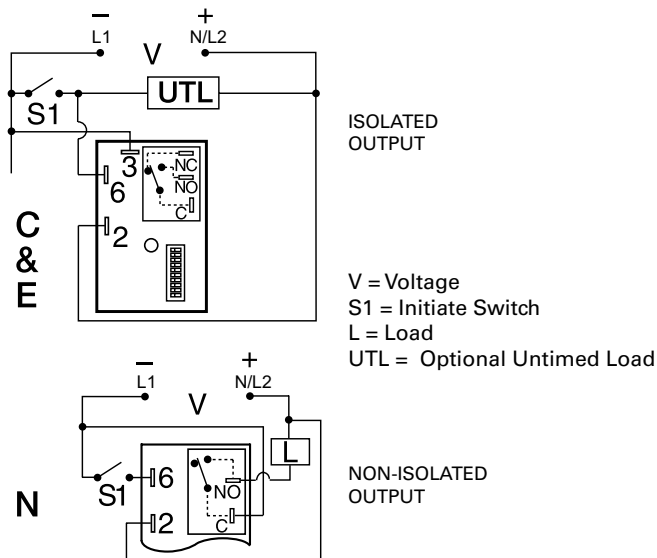


HRV SERIES

Coin Counter



Wiring Diagram



Ordering Information

MODEL	INPUT VOLTAGE	VEND TIME	MODE OF OPERATION	OUTPUT FORM & RATING
HRV11SC	12VDC	1 - 127s	Coin totalizer	30A SPDT, NO (isolated)
HRV24AC	24VAC	0.25 - 31.75m	Accumulating	30A SPDT, NO (isolated)
HRV41AE	120VAC	1 - 127s	Accumulating	30A SPDT, NO (isolated)
HRV41SE	120VAC	1 - 127s	Coin totalizer	30A SPDT, NO (isolated)
HRV42SE	120VAC	5 - 635s	Coin totalizer	30A SPDT, NO (isolated)
HRV43AE	120VAC	0.1 - 12.7m	Accumulating	30A SPDT, NO (isolated)
HRV43AN	120VAC	0.1 - 12.7m	Accumulating	30A SPDT, NO (non-isolated)
HRV43SE	120VAC	0.1 - 12.7m	Coin totalizer	30A SPDT, NO (isolated)

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



Description

The HRV combines the accuracy of microcontroller based circuitry with an electromechanical relay output. The HRV's switching capacity allows direct control of loads like compressors, pumps, motors, heaters, and lighting. The HRV "S" version provides a vend time after the selected number of initiate switch closures to start is reached. The HRV "A" version includes all of the "S" features and allows the total vend time to be extended for each additional initiate switch closure. The HRV is ideal for cost sensitive single coin or token vending machines. The electronic circuitry is encapsulated to protect against humidity and vibration.

Operation

Coin Totalizer & Vending Timer ("S" Version):

Input voltage must be applied prior to & during operation. When the total number of S1 initiate switch closures equals the number to start set on the lower 3 DIP switches, the load energizes and the vending time set on the upper 7 DIP switches begins. At the end of the vending time, the load de-energizes and the vending time is reset. Closing the initiate switch during vend timing will have no affect on vend time delay.

Accumulating Vending Timer ("A" Version):

Input voltage must be applied prior to and during operation. When the total number of S1 initiate switch closures equals the number to start set on the lower 3 DIP switches, the load energizes and the vending time starts. For every initiate switch closure, the HRV unit adds one time per coin period, as set on the upper 7 DIP switches, to the total vending time.

Operation Note: If S1 is closed when input voltage is applied, the output remains de-energized and the S1 counter remains at zero closures. At least one "vend time" and one "closures to start" DIP switch must be in the "ON" position for proper operation.

Reset: Removing input voltage resets the vend time delay, the S1 closure counter, and de-energizes the output relay.

Features & Benefits

FEATURES	BENEFITS
Microcontroller based	Repeat accuracy + / - 0.1%, Setting accuracy 0 - 2%, or 50ms
Encapsulated	Protects against shock, vibration, and humidity
30A , 1Hp at 125VAC, normally open contacts	Allows direct control of loads like compressors, pumps, motors, and heaters without a contactor
Switch selectable coin start	Allows user flexibility to select the number of coins to start vending cycle
Coin switch can be connected to a counter	Provides user with accurate count of total number of coins collected

HRV SERIES

Accessories



P1023-6 Mounting bracket

The 90° orientation of mounting slots makes installation/removal of modules quick and easy.



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.



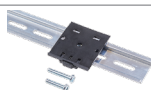
P1015-18 Quick Connect to Screw Adapter

Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.



C103PM (AL) DIN Rail

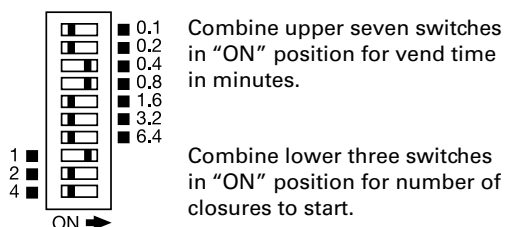
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



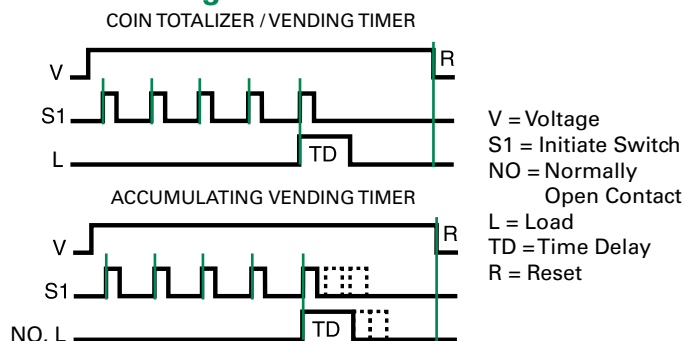
P1023-20 DIN Rail Adapter

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

Switch Adjustment



Function Diagram



Specifications

Count Functions/

Switch Type

Minimum Switch

Closure Time

Minimum Switch Open

(between closures) Time

Count Range to Start

Maximum Counts

("A" Version)

Time Delay/Range ***

Adjustment

Setting Accuracy

Repeat Accuracy

Reset Time

Time Delay vs Temp.

& Voltage

Input

Voltage

Tolerance

12VDC & 24VDC/AC

120 & 230 VAC

AC Line Frequency/DC Ripple

Power Consumption

Output

Type

Form

Ratings

General Purpose

125/240VAC

Resistive

125/240VAC

28VDC

Motor Load

125VAC

240VAC

Life

Protection

Surge

Circuitry

Dielectric Breakdown

Insulation Resistance

Mechanical

Mounting

Dimensions

Termination

Environmental

Operating/Storage

Temperature

Humidity

Weight

Mechanical (counts on switch closure)

≥ 20ms

≥ 20ms

1 - 7 counts

250

Adjustable 1s - 31.75m in 4 ranges

7 of a 10 position DIP switch

0% to +2% or 50ms, whichever is greater

±0.1% or 20ms, whichever is greater

≤ 150ms

≤ ±2%

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

-15% - 20%

-20% - 10%

50/60 Hz / ≤ 10%

AC ≤ 4VA; DC ≤ 2W

Electromechanical relay

Isolated, SPDT or non-isolated, SPDT

SPDT-NO

SPDT-NC

30A

15A

30A

15A

20A

10A

1 hp*

1/4 hp**

2 hp**

1 hp**

Mechanical - 1 x 10⁶;

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

IEEE C62.41-1991 Level A

Encapsulated

≥ 1500V RMS input to output on isolated units

≥ 100 MΩ

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

H 76.7 mm (3"); **W** 50.8 mm (2");

D 38.1 mm (1.5")

0.25 in. (6.35 mm) male quick connect terminals

-40° to 70°C / -40° to 85°C

95% relative, non-condensing

≈ 3.9 oz (111 g)

***For CE approved applications, voltage must be removed when a switch position is changed.

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[HRV11SC](#) [HRV41AE](#) [HRV41SE](#) [HRV43AE](#) [HRV42SE](#) [HRV24AC](#) [HRV43AN](#)