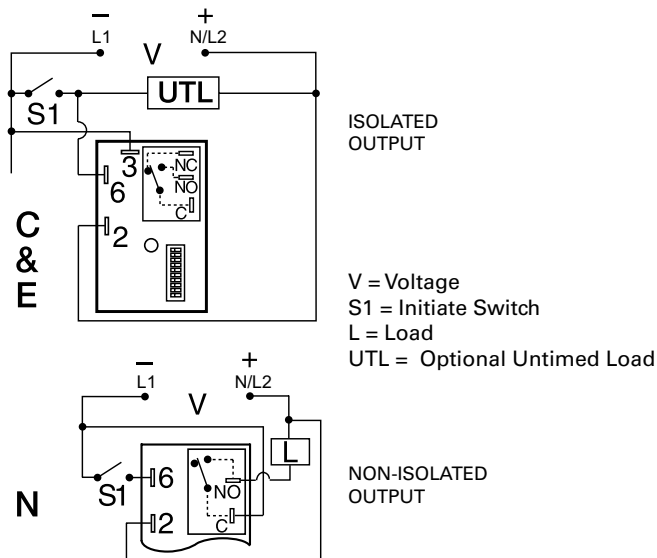


HRV SERIES

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.



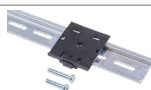
P1015-18 Quick Connect to Screw Adapter

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



C103PM (AL) DIN Rail

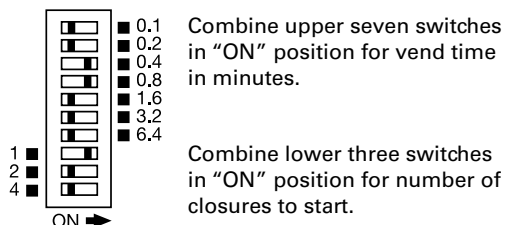
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



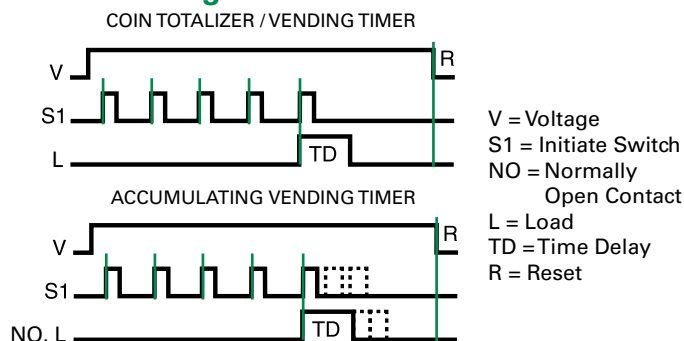
P1023-20 DIN Rail Adapter

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

Mechanical (counts on switch closure)

Minimum Switch

Closure Time

≥ 20ms

Minimum Switch Open (between closures) Time

≥ 20ms

Count Range to Start

1 - 7 counts

Maximum Counts

250

("A" Version)

Time Delay/Range ***

Adjustable 1s - 31.75m in 4 ranges

Adjustment

7 of a 10 position DIP switch

Setting Accuracy

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

Repeat Accuracy

±0.1% or 20ms, whichever is greater

Reset Time

≤ 150ms

Time Delay vs Temp.

≤ ±2%

& Voltage

Input

Voltage

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

Tolerance

12VDC & 24VDC/AC

-15% - 20%

120 & 230 VAC

-20% - 10%

AC Line Frequency/DC Ripple

50/60 Hz / ≤ 10%

Power Consumption

AC ≤ 4VA; DC ≤ 2W

Output

Type

Electromechanical relay

Form

Isolated, SPDT or non-isolated, SPDT

Ratings

SPDT-NO

SPDT-NC

General Purpose

30A

15A

125/240VAC

Resistive

30A

15A

125/240VAC

28VDC

20A

10A

Motor Load

125VAC

1 hp*

1/4 hp**

240VAC

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

≥ 1500V RMS input to output on isolated units

Insulation Resistance

≥ 100 MΩ

Mechanical

Mounting

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

Dimensions

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

Termination

Environmental

Operating/Storage

Temperature

-40° to 70°C / -40° to 85°C

Humidity

95% relative, non-condensing

Weight

≈ 3.9 oz (111 g)

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