

# HRPS / HRIS SERIES



## Description

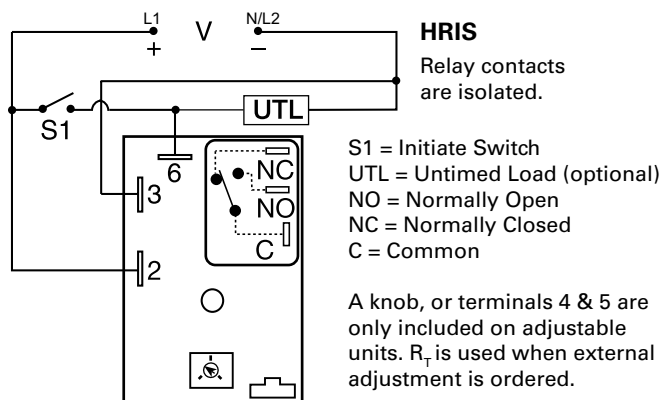
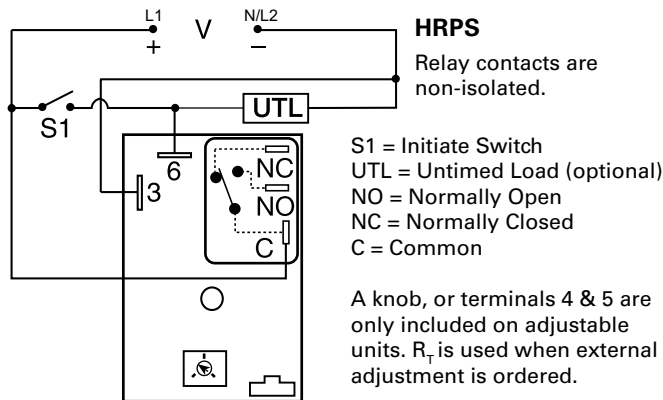
The HRPS/HRIS Series combines an electromechanical relay output with microcontroller timing circuitry. It is a factory programmed module available in any 1 of 13 standard functions. It offers 12 to 240V operation in two universal ranges and factory fixed, onboard, or external adjustable time delays with 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. The HRPS has non-isolated SPDT relay contacts, and the HRIS has isolated SPDT relay contacts. Both offer the most popular timer functions in the industry.

### Operation (Interval)

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

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

## Wiring Diagram



## Features & Benefits

FEATURES	BENEFITS
<b>Microcontroller based</b>	Repeat Accuracy +/- 0.5% , factory calibration +/- 2%
<b>Compact design</b>	Allows flexibility for OEM applications
<b>30A, SPDT, Normally Open output contacts</b>	Allows for direct operation of heavy loads
<b>Encapsulated</b>	Protects against shock, vibration, and humidity

## Ordering Information

MODEL	INPUT VOLTAGE	ADJUST.	TIME DELAY	FUNCTION
HRISW21FT	24 - 240VAC/24 - 110VDC	Onboard	0.1 - 10s	Alternating
HRISW27I	24 - 240VAC/24 - 110VDC	Onboard	0.1 - 10h	Interval
HRPSD12HI	12 - 48VDC	Fixed	2h	Interval
HRISW25B	24 - 240VAC/24 - 110VDC	Onboard	1 - 100m	Delay on break

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# HRPS / HRIS SERIES

## 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.



**P1015-64 (AWG 14/16), P1015-13 (AWG 10/12) 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.

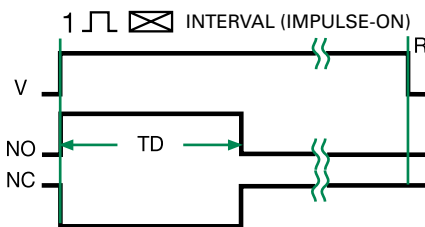


**C103PM (AL) DIN Rail**  
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.

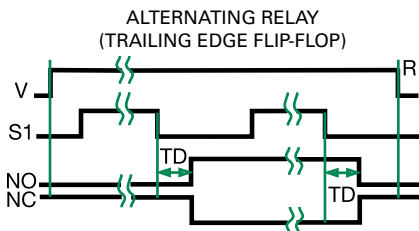


**P1023-20 DIN Rail Adapter**  
Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

## Function Diagrams



V = Voltage  
S1 = Initiate Switch  
NO = Normally Open Contact  
NC = Normally Closed Contact  
TD = Time Delay  
R = Reset  
— = Undefined Time



## Specifications

### Time Delay

**Type** Microcontroller circuitry  
**Range** 0.1s - 1000h in 9 adjustable ranges or fixed  
**Repeat Accuracy** ±0.5% or 20ms, whichever is greater

**Tolerance (Factory Calibration)** ±2%  
**Reset Time** ≤ 150ms  
**Initiate Time** ≤ 20ms

**Time Delay vs Temp. & Voltage** ±2%

### Input

**Voltage** 12 to 48VDC; 24 to 240VAC/24 to 110VDC

**Tolerance**  
**12 to 48VDC** -15% - 20%  
**24 to 110VDC/240VAC** -20% - 10%

**AC Line Frequency** 50/60Hz

**Power Consumption** AC ≤ 4VA; DC ≤ 2W

### Output

**Type** Electromechanical relay

**Form** SPDT

**Ratings** **SPDT-NO** **SPDT-NC**

**General Purpose** **125/240VAC** 30A 15A

**Resistive** **125/240VAC** 30A 15A  
**28VDC** 20A 10A

**Motor Load**  
**125VAC** 1 hp\* 1/4 hp\*\*  
**240VAC** 2 hp\*\* 1 hp\*\*

**Life** Mechanical - 1 x 10<sup>6</sup>  
Electrical - 1 x 10<sup>5</sup>, \*3 x 10<sup>4</sup>, \*\*6,000

### Protection

**Surge** IEEE C62.41-1991 Level A

**Circuitry** Encapsulated

**Isolation Voltage** ≥ 1500V RMS input to output; isolated units

**Insulation Resistance** ≥ 100 MΩ

**Polarity** DC units are reverse polarity protected

### Mechanical

**Mounting** Surface mt. with one #10 (M5 x 0.8) screw

**Dimensions** **H** 76.2 mm (3.0"); **W** 50.8 mm (2.0");

**D** 38.1 mm (1.5")

0.25 in. (6.35 mm) male quick connects

### Termination

### Environmental

### Operating/Storage

**Temperature** -40° to 60°C / -40° to 85°C

**Humidity** 95% relative, non-condensing

**Weight** ≈ 3.9 oz (111 g)