

# KRPS Series Single Function Time Delay Relay



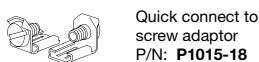
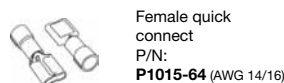
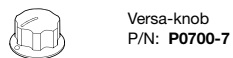
US Patent 6708135



- Choose 1 of 13 Standard Functions
- Special Time Ranges and Functions Available
- Factory Programmed
- Microcontroller Circuitry, +/-0.5% Repeat Accuracy
- Isolated 10 A SPDT Output Contacts
- Input Voltage from 12...240 V in 2 Ranges
- Delays from 100 ms...1000 h in 9 Ranges

Approvals:

## Accessories

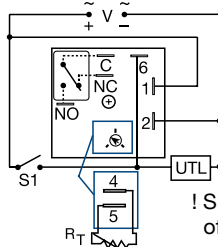


See accessory pages for specifications.

## Description

The KRPS Series is a factory programmed time delay relay available in any 1 of 13 functions and measures only 2 inches square. The KRPS offers a wide range of fixed, onboard, or externally adjustable time delays. Modules are manufactured without the function assigned. When an order is received, the function software is added making the modules complete. This approach provides fast delivery on all part numbers. The output relay contacts offer a full 10 A rating with complete isolation. Its microcontroller timing circuit provides excellent repeat accuracy and stability. Encapsulation protects against shock, vibration, and humidity. The KRPS Series is a cost effective approach for OEM applications that require small size, isolation, accuracy, and long life. Special time ranges and functions are available; contact Technical Assistance (see below) for more information.

## Connection



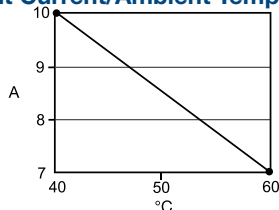
V = Voltage C = Common, Transfer Contact  
NC = Normally Closed NO = Normally Open  
S1 = Initiate Switch UTL = Untimed Load

A knob is supplied for adjustable units, or  $R_T$  terminals 4 & 5 for external adjust. See external adjustment vs. time delay chart. The untimed load is optional. S1 is not used for some functions. Dashed lines are internal connections.

## External Resistance vs Time Delay

For details on external  $R_T$  see the external resistance vs. time delay chart at the beginning of this section.

## Output Current/Ambient Temperature



## Available Models-

KRPS1110SM  
KRPS913MB  
KRPSA110SM  
KRPSA15SM  
KRPSA21RE  
KRPSA23B  
KRPSA25M  
KRPSD10.1SFT  
KRPSD21TS  
KRPSD24B  
KRPSD31B

KRPS4160MM  
• KRPSA10.1SFT  
KRPSA12SM  
KRPSA18SPSD  
KRPSA22B  
KRPSA24RE  
KRPSA28PSE  
KRPSD10.1SM  
KRPSD22B  
KRPSD24M  
KRPSD35PSD

KRPS425M  
KRPSA10.5SS  
KRPSA12STS  
KRPSA21B  
KRPSA22M  
KRPSA25B  
KRPSD10.1SF  
KRPSD21M  
KRPSD22S  
KRPSD25S

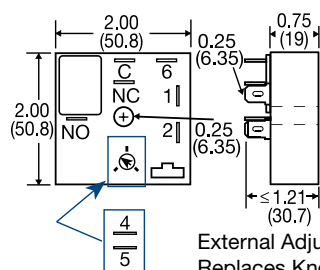
Don't see what you need? Call us for a minimum quantity and price quote!

## Ordering Table

KRPS Series	X Input	X Adjustment	X Time Delay*	X Function**
	<b>A</b> - 24 ... 240 V AC/DC	<b>1</b> - Fixed	<b>1</b> - 0.1 ... 10 s	<b>Specify Function</b> (Refer to Function Chart for Code)
	<b>D</b> - 12 ... 48 V DC	<b>2</b> - Onboard Adjustment	<b>2</b> - 1 ... 100 s	*If Fixed Delay is selected, insert delay [0.1 ... 1000] followed by (S) secs., (M) mins., or (H) hrs.
		<b>3</b> - External Adjustment	<b>3</b> - 10 ... 1000 s	
			<b>4</b> - 0.1 ... 10 m	
			<b>5</b> - 1 ... 100 m	
			<b>6</b> - 10 ... 1000 m	
			<b>7</b> - 0.1 ... 10 h	
			<b>8</b> - 1 ... 100 h	
			<b>9</b> - 10 ... 1000 h	

Example P/N: **KRPSA23RE** Fixed - **KRPSD10.5SI**

## Mechanical View



Inches (Millimeters)

## \*\*Function Chart

Function	Code
Delay On Make	<b>M</b>
Delay On Break	<b>B</b>
Recycle (ON Time First, Equal Times)	<b>RE</b>
Recycle (OFF Time First, Equal Times)	<b>RD</b>
Single Shot	<b>S, SD</b>
Interval	<b>I</b>
Trailing Edge Single Shot	<b>TS</b>
Inverted Single Shot	<b>US</b>
Inverted Delay On Break	<b>UB</b>
Accumulative Delay on Make	<b>AM</b>
Motion Detector/Retriggerable Single Shot	<b>PSD</b>
Alternating Relay	<b>FT</b>

For a Complete List of Functions with Descriptions, see Timer Function Section.

# KRPS Series Single Function Time Delay Relay

## Technical Data

<b>Time Delay</b> Type: Microcontroller circuitry Range: 0.1 s ... 1000 h in 9 adjustable ranges or fixed Repeat Accuracy: +/-0.5% or 20 ms, whichever is greater Tolerance (Factory Calibration): ≤ +/-2% Reset Time: ≤ 150 ms Initiate Time: ≤ 40 ms; ≤ 750 operations per minute Time Delay/Temp. & Input Voltage: ≤ +/-2%		<b>Protection</b> Circuitry: Encapsulated Isolation Voltage: ≥ 1500 V RMS Input to Output Insulation Resistance: ≥ 100 MΩ Polarity: DC units are reverse polarity protected	
<b>Input</b> Voltage: 12 ... 48 V DC; 24 ... 240 V AC/DC Tolerance: -15% ... +20% Line Frequency/DC Ripple: 24 ... 240 V AC/DC Power Consumption: 50 ... 60 Hz/≤ 10% AC ≤ 2 VA; DC ≤ 2 W		<b>Mechanical</b> Mounting: Surface mt. with one #10 (M5 x 0.8) screw Package: 2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm) Termination: 0.25 in. (6.35 mm) male quick connects	
<b>Output</b> Type: Isolated relay contacts Form: Single pole double throw, SPDT Rating (at 40°C): 10 A resistive at 125 V AC 5 A resistive at 230 V AC & 28 V DC 1/4 hp at 125 V AC Max. Switching Voltage: 250 V AC Life (Operations): Mechanical - 1 x 10 <sup>7</sup> Electrical - 1 x 10 <sup>5</sup>		<b>Environmental</b> Operating Temp.: -40°C ... +60°C Storage Temp.: -40°C ... +85°C Humidity: 95% relative, non-condensing Weight: ≈ 2.6 oz (74 g)	

## Function Diagrams

For a Complete List of Functions with Descriptions, see Timer Function Section.

