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Wiring Diagram


Ordering Information

| MODEL | INPUT VOLTAGE | TIME <br> DELAY/COUNTS | FUNCTION |
| :--- | :--- | :--- | :--- |
| KSPUA2I | 24 to 240VAC | $1-1023 \mathrm{~s}$ | Interval |
| KSPUA8C | 24 to 240VAC | $1-1023$ counts <br> (binary) with <br> pulsed output | Counter with <br> pulsed output |

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

## Description

The KSPU Series is a factory programmed module available in any 1 of 14 standard functions. The KSPU offers a single adjustable timer or counter function. Switch adjustment allows accurate selection of the time delay or number of counts the first time and every time. The 1A steady, 10A inrush rated solid-state output provides 100 million operations, typical. Its microcontroller timing circuit provides excellent repeat accuracy and stability. Encapsulation protects against shock, vibration, and humidity. The KSPU Series is a cost effective approach for OEM applications that require small size, solid state reliability, and accurate switch adjustment.

## Features \& Benefits

| FEATURES | BENEFITS |
| :--- | :--- |
| Microcontroller based | Repeat Accuracy $+/-0.1 \%$ |
| Compact design | Allows flexiblility for OEM applications |
| 1A steady, 10A inrush <br> solid-state output | Provides 100 million operations in typical conditions. |
| Totally solid state <br> and encapsulated | No moving parts to arc and wear out over time and <br> encapsulated to protect against shock, vibration, <br> and humidity |

Accessories
P1015-64 (AWG 14/16), P1015-14 (AWG 18/22) 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 . $(6.35 \mathrm{~mm}$ ) 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.

## KSPU SERIES

Specifications
Time Delay
Range*

Repeat Accuracy
Setting Accuracy
Reset Time
Initiate Time
Time Delay vs. Temperature
\& Voltage
Input
Voltage/Tolerance
AC Line Frequency/DC Ripple
Power Consumption
Output
Type
Form
Rating
Voltage Drop
Off State Leakage Current
Counter Output
Protection
Circuitry
Dielectric Breakdown
Insulation Resistance
Polarity
Mechanical
Mounting
Dimensions

## Termination

Environmental
Operating/Storage
Temperature
Humidity
Weight
$0.1-102.3 \mathrm{~s}, \mathrm{~m}$ or h in $0.1 \mathrm{~s}, \mathrm{~m}$ or h increments
$1-1023 \mathrm{~s}, \mathrm{~m}$ or h in 1 s , m or h increments
1 - 63 s or m in 1 s or m increments
$\pm 0.1 \%$ or 20 ms , whichever is greater
$\leq \pm 1 \%$ or 20 ms , whichever is greater
$\leq 150 \mathrm{~ms}$
$\leq 20 \mathrm{~ms}$
$\leq \pm 2 \%$

24 to 240VAC, 12 to $120 \mathrm{VDC} / \leq \pm 15 \%$
$50 / 60 \mathrm{~Hz} / \leq 10 \%$
$A C \leq 2 V A ; D C \leq 1 W$
Solid state
NO, SPST-NO
1A steady state, 10A inrush for 16 ms
$A C \cong 2.5 \mathrm{~V}$ @ $1 \mathrm{~A} ; \mathrm{DC} \cong 1 \mathrm{~V} @ 1 \mathrm{~A}$
$A C \cong 5 \mathrm{~mA} @ 240 \mathrm{VAC} ; \mathrm{DC} \cong 1 \mathrm{~mA}$
Output pulse width: $300 \mathrm{~ms} \pm 20 \%$
Time Delay/Counts Variable 7 \& 8
Encapsulated
$\geq 2000 \mathrm{~V}$ RMS terminals to mounting surface
$\geq 100 \mathrm{M} \Omega$
DC units are reverse polarity protected
Surface mount with one \#10 (M5 x 0.8) screw
H $50.8 \mathrm{~mm}\left(2^{\prime \prime}\right)$; W $50.8 \mathrm{~mm}\left(2^{\prime \prime}\right)$;
D 30.7 mm (1.21")
0.25 in. ( 6.35 mm ) male quick connect terminals
$-40^{\circ}$ to $60^{\circ} \mathrm{C} /-40^{\circ}$ to $85^{\circ} \mathrm{C}$
$95 \%$ relative, non-condensing
$\cong 2.4 \mathrm{oz}(68 \mathrm{~g})$

## Adjustment Switch Operation

| Adjustment Switch Operation |  |  |  |
| :---: | :---: | :---: | :---: |
| TIME DELAY |  | COUNTER |  |
| 0.1..102.3 | 1... 1023 | 1... 165 | 1... 63 |
| FF ${ }^{\text {O }}$ N | OFF ${ }^{\text {ON }}$ | OFF ${ }^{\text {ON }}$ | OFF - ${ }_{\text {ON }}$ |
| - $=0.1$ |  | $\square-1$ | $\square=-$ |
| - $=0.2$ | $\square$ | - |  |
| - $=0.4$ | $\square$ | - $=3$ | - $=4$ |
| $\underline{-}=0.8$ | $\square-8$ | - $=4$ | -88 |
| - $=1.6$ | $\square=16$ | - 5 | -16 |
| 3.2 | - -32 | - 10 | $\underline{\square}-32$ |
| - 6.4 | $\square-64$ | - 20 | $\square-\frac{3}{\square}$ |
| $\square-12.8$ | $\square-128$ | $\square=30$ | $\square=\frac{1}{1}$ |
| $\square-25.6$ | - 256 | - $=40$ | - 2 |
| $\square$-51.2 | 512 | - 50 | 4 |
| 6.3 | 544 | 57 counts | 44 s Delay 2 counts to Start |

* for selecting time in minutes or seconds


## Function Diagrams


$\mathrm{V}=$ Voltage
NO = Normally Open Contact
NC = Normally Closed Contact TD = Time Delay R = Reset $\boldsymbol{- T}=$ Undefined Time
*For CE approved applications, power must be removed from the unit when a switch position is changed.

