



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.

See Appendix B, page 165, Figure 1 for dimensional drawing.

Features:

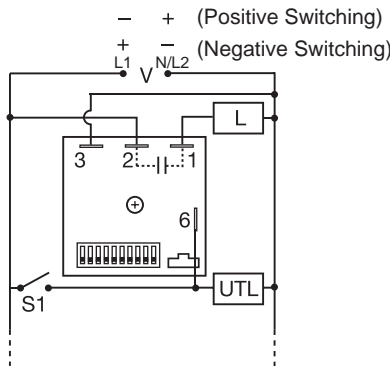
- Choose 1 of 14 standard functions
- Special time ranges & functions available
- Factory programmed
- Microcontroller circuitry, $\pm 0.1\%$ repeat accuracy
- 1A steady, solid-state output, 10A inrush
- Accurate switch adjustment
- 12 to 240V in 3 options
- Delays from 0.1s - 1023h
- Counts 1 to 1023

Approvals:

Auxiliary Products:

- **Female quick connect:**
P/N: P1015-64 (AWG 14/16)
P/N: P1015-14 (AWG 18/22)
- **Quick connect to screw adaptor:**
P/N: P1015-18
- **DIN rail:** P/N: C103PM (Al)
- **DIN rail adaptor:** P/N: P1023-20

Connection:



V = Voltage
S1 = Initiate Switch
L = Load
UTL = Untimed Load

Switch Adjustment:

Adjustment Switch Operation			
TIME DELAY		COUNTER	
0.1...102.3	1...1023	1...165	1...63
OFF ▶ ON	OFF ▶ ON	OFF ▶ ON	OFF ▶ ON
0.1 0.2 0.4 0.8 1.6 3.2 6.4 12.8 25.6 51.2	1 2 4 8 16 32 64 128 256 512	1 2 3 4 5 10 20 30 40 50	1 2 3 4 8 16 32 M 1 2 4
6.3	544	57 counts	44 s Delay 2 counts to Start

Available Models:

KSPU11M
KSPUA2I
KSPUA8C

If desired part number is not listed, please call us to see if it is technically possible to build.

Order Table:

KSPU	X	X
Input		Time Delay/Counts
-A - 24 to 240VAC		-1 - 0.1 - 102.3s
-P - 12 to 120VDC		-2 - 1 - 1023s
positive switching		-3 - 0.1 - 102.3m
-N - 12 to 120VDC		-4 - 1 - 1023m
negative switching		-5 - 0.1 - 102.3h
-1 - 12VDC		-6 - 1 - 1023h
positive switching		-7 - 1 - 165 counts (straight) w/ pulsed output
-4 - 120VAC		-8 - 1 - 1023 counts (binary) w/ pulsed output
-9 - 120/240VAC		-9 - 1 - 7 counts to start 1 - 63s or m interval time

X
Function
Specify function

Functions:

M, B, RE, RD, S, SD, I,
TS, US, UB, AM, PSD,
C, CI

For a complete list of functions with descriptions and diagrams, see Appendix A - Timer Functions, pages 156-164.

Specifications

Time Delay	
Type	Microcontroller circuitry
Range	.01 - 102.3s, m or h in 0.1s, m or h increments 1 - 1023s, m or h in 1s, m or h increments 1 - 63s or m in 1s or m increments
Repeat Accuracy	$\pm 0.1\%$ or 20ms, whichever is greater
Setting Accuracy	$\leq \pm 1\%$ or 20ms, whichever is greater
Reset Time	≤ 150 ms
Initiate Time	≤ 20 ms
Time Delay vs Temp. & Voltage	$\leq \pm 2\%$
Count Range	1 - 1023 in 3 ranges
Count Rate	≤ 25 counts per second
Input	
Voltage	12 to 120VDC; 24 to 240VAC
Tolerance	$\leq \pm 15\%$
AC Line Frequency / DC Ripple	50/60 Hz / $\leq 10\%$
Power Consumption	AC ≤ 2 VVA; DC ≤ 1 W
Output	
Type	Solid-state output
Rating	1A steady, 10A inrush for 16ms
Voltage Drop	AC ≈ 2.5 V @ 1A; DC ≈ 1 V @ 1A

OFF State Leakage Current	AC ≈ 5 mA @ 240VAC; DC ≈ 1 mA
Counter Output	Output pulse width: 300ms $\pm 20\%$ Time Delay/Counts Variable 7 & 8

Protection

Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface
Insulation Resistance	≥ 100 M Ω
Polarity	DC units are reverse polarity protected

Mechanical

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

Environmental

Operating / Storage Temperature	-40° to 60°C / -40° to 85°C
Humidity	95% relative, non-condensing
Weight	≈ 2.4 oz (68 g)