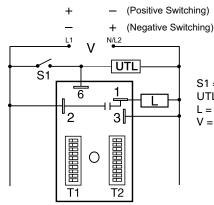
HSPZA22SL

Littelfuse® Expertise Applied | Answers Delivered

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

Description

The HSPZA22SL is a factory programmed module available in any 1 of 13 standard functions. The HSPZA22SL offers dual switch adjustable timer or counter functions. 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 HSPZA22SL is a cost effective approach for OEM applications that require small size, solid state reliability, and accurate switch adjustment.

Operation (Single Shot Lockout)

Upon application of input voltage and momentary or maintained closure of S1, the output relay energizes and TD1 single shot time delay begins. The output relay de-energizes at the end of TD1 and the TD2 lockout time delay begins. During TD2 (and TD1) closing switch S1 has no effect on the operation. After TD2 is complete, closing S1 starts another operation. If S1 is closed when input voltage is applied, the output energizes and the TD1 time delay begins.

Reset: Removing input voltage resets the time delays and the output and returns the cycle to the first delay.

Features & Benefits

FEATURES	BENEFITS		
Microcontroller based	Repeat Accuracy + / - 0.1%		
User selectable time delay	Timing settings are switch selectable 0.1s - 1023h in a dual switch timer function for added flexibility		
1A steady, 10A inrush solid-state output	Provides 100 million operations in typical conditions.		
Totally solid-state and encapsulated	No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity		

Accessories



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.

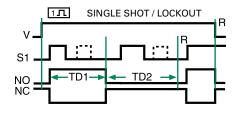


HSPZA22SL

Switch Adjustment

Adjustment Switch Operation				
TIME DELAY		TIME DELAY and COUNTER		
0.1102.3	1512	11023	1165	
OFF FON - 0.1 - 0.2 - 0.4 - 0.8 - 1.6 - 1.2 - 1.2.8 - 151.2 - 6.3	OFF ►ON 1 1 4 4 8 8 16 32 16 9 128 128 128 128 128 128 128 128 128 128	OFF DON 1 1 2 2 4 8 8 16 6 4 12 128 128 1256 1512 544	OFF FON 1 2 2 3 3 5 5 5 5 6 10 40 5 5 5 7 counts	

Function Diagrams



V = VoltageS1 = Initiate Switch NO = Normally Open Contact NC = Normally **Closed Contact** TD1,TD2 = Time Delay R = Reset

Specifications

Time Delay

Type Microcontroller circuitry Range 1-1023s, m or h in 1s, m or h increments **Repeat Accuracy** ±0.1% or 20ms, whichever is greater **Setting Accuracy** ≤ ±1% or 20ms, whichever is greater **Reset Time**

≤ 150ms **Initiate Time** ≤ 20ms Time Delay vs Temp.

& Voltage $\leq \pm 2\%$

Count Range 1 - 1023 in 2 ranges **Count Rate** ≤ 25 counts per second

Input Voltage 24 to 240VAC **Tolerance** $\leq \pm 15\%$

AC Line Frequency/ DC Ripple 50/60Hz $/ \le 10\%$

Power Consumption $AC \le 2VA$; $DC \le 1W$ Output Type Solid-state output

Rating 1A steady, 10A inrush for 16ms AC $\approx 2.5 \text{V} @ 1\text{A}$; DC $\approx 1 \text{V} @ 1\text{A}$ **Voltage Drop OFF State Leakage Current** AC \approx 5mA @ 240VAC; DC \approx 1mA Output pulse width: 300ms ±20% **Counter Output**

Protection Circuitry

Encapsulated \geq 2000V RMS terminals to mounting surface **Dielectric Breakdown Insulation Resistance** $\geq 100~M\Omega$

Polarity DC units are reverse polarity protected

Mechanical Mounting

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

0.25 in. (6.35 mm) male quick connects

Dimensions H 76.2 mm (3.0"); **W** 50.8 mm (2.0"); **D** 38.1 mm (1.5")

Termination Environmental Operating/Storage

-40° to 60°C / -40° to 85°C **Temperature** Humidity 95% relative, non-condensing

Weight $\approx 3.9 \text{ oz } (111 \text{ g})$

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