

**PCSP Module
NHPU ProgramaCube™
Power Timing Module**

10 YEAR WARRANTY



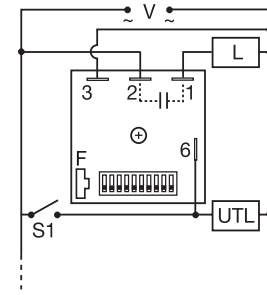
- High Load Current
- In Stock, Factory Direct
- Choose from 12 standard functions
- Microcontroller based
- Accurate timing
- 24 ... 1023 h
- Delays from ... 1023 h

Obsolete Specification
Redesigned product is available
see new specifications at:
www.ssac.com/standard/standard.htm

Description

The NHPU Series is a factory programmed module available in any 1 of 12 standard functions. The NHPU offers a single adjustable timer or counter function. 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. Switch adjustment allows accurate selection of the time delay or number of counts, the first time and every time. The NHPU includes a high current solid state output. Its microcontroller timing circuit provides excellent repeat accuracy and stability. Encapsulation protects against shock, vibration, and humidity. The NHPU Series is a cost effective approach for OEM applications that require small size, solid state reliability, accurate switch adjustment, and are In Stock. Special time ranges and functions are available; contact Applications Assistance for more information. Patent Pending

Approvals:



V = Voltage L = Load UTL = Untimed Load
S1 = Initiate Switch F = Cover (Factory use only)

Ordering table

NHPU Series	X Output/Rating	X Input	X Time Delay/Counts	X Function**	Code
	-A - 6 A	-2 - 24 V AC	-1 - 0.1 ... 102.3 s	Specify Function (Refer to Function Chart for Code)	C
	-B - 10 A	-4 - 120 V AC	-2 - 1 ... 1023 s		CI
	-C - 20 A	-9 - 120/230 V AC	-3 - 0.1 ... 102.3 m		M
			-4 - 1 ... 1023 m		B
			-5 - 0.1 ... 102.3 h		RE
			-6 - 1 ... 1023 h		S
			-7 - 1 ... 165 counts (straight) w/pulsed output		I
			-8 - 1 ... 1023 counts (binary)w/pulsed output		TS
			-9 - 1 ... 7 counts to start 1 ... 63 s or m interval time		PS

Example P/N: **NHPUB43TS**
Fixed **NHPU C4C**

****Function Chart**

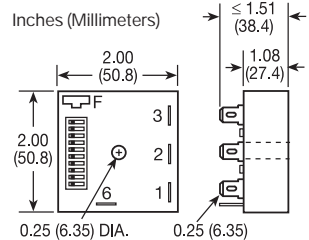
- Counter/Pulsed Output
- Counter/Interval Time
- Delay on Make Timer
- Delay on Break Timer
- Recycle Timer (ON Time First, Equal Times)
- Single Shot Timer
- Interval Timer
- Trailing Edge Single Shot Timer
- Motion Detector/Retriggerable Single Shot Timer
- Inverted Single Shot Timer
- Accumulative Delay on Make Timer
- Inverted Delay on Break Timer

Technical Data

Time Delay	Microcontroller circuitry	
Type	0.1 ... 102.3 s, m or h in 0.1 s, m or h increments	
Range	1 ... 1023 s, m or h in 1 s, m or h increments 1 ... 63 s or m in 1 s or m increments	
Repeat Accuracy	+/-0.1% or 16 ms at 60 Hz, 20 ms at 50 Hz, whichever is greater	
Tolerance (Factory Calibration)	≤ +/-2%	
Recycle Time	≤ 250 ms	
Initiate Time	≅ 40 ms	
Time Delay vs. Temperature & Voltage	≤ +/-2%	
Count Range	1 ... 1023 in 3 ranges	
Count Rate	≤ 10 counts per s	
Input		
Voltage	24, 120, or 120/230 V AC	
Tolerance	≤ +/-15%	
Line Frequency	50 ... 60 Hz	
Output		
Type	Solid state	
Rating	Output	Steady state Inrush***
	A 6 A	60 A
	B 10 A	100 A
	C 20 A	200 A
Minimum Load Current	100 mA	
Voltage Drop	≅ 2.5 V at 1 A	
Leakage	8.6 mA at 230 V AC 4.5 mA at 120 V AC 0.9 mA at 24 V AC	
Counter Output (Variable 7 & 8)	Pulse width: 300 ms +/-20%	
Protection		
Circuitry	Encapsulated	
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface	
Insulation Resistance	≥ 100 MΩ	
Mechanical		
Mounting ***	Surface mount with one #10 (M5 x 0.8) screw	
Termination	0.25 in. (6.35 mm) male quick connect terminals	
Operating/Storage Temperature	-40°C ... +60°C / -40°C ... +85°C	
Humidity	95% relative, non-condensing	
Weight	≅ 3.9 oz (111 g)	

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, 4, 8, 16, 32, 40, 50
6.3	544	57 counts	44 s Delay 2 counts to Start



F = Cover (Factory Use Only)

Accessories

- Female quick connect P/N's:
P1015-13 (AWG 10/12)
P1015-64 (AWG 14/16)
P1015-14 (AWG 18/22)
- Quick connect to screw adaptor P/N: P1015-18

See accessory pages at the end of this section.