

# PCSP Module NHPS ProgramaCube™ Power Timing Module



- High Load Currents
- In Stock, Factory Direct
- Choose from 10 Standard Functions
- Microcontroller Timing Accuracy
- Knob for Adjustable Timing Delay
- 24 ... 1000 h
- Delays

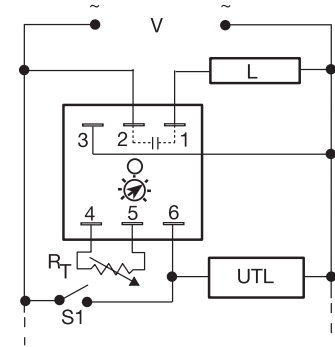
Obsolete Specification

Redesigned product is available  
see new specifications at:  
[www.ssac.com/standard/standard.htm](http://www.ssac.com/standard/standard.htm)

## Description

The NHPS Series is a factory programmed module available in any 1 of 10 standard functions. The NHPS offers a single, fixed, or an adjustable time delay. 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 NHPS includes a high current solid state output. It can switch motors, lamps and heaters directly without the addition of a contactor. It can switch up to 20 A with up to 100 million operations typical. Its microcontroller timing circuit provides excellent repeat accuracy and stability. Encapsulation protects against shock, vibration, and humidity. The NHPS Series is a cost effective approach for OEM applications that require small size, solid state reliability, and In Stock modules. Special time ranges and functions are available, contact Applications Assistance for more information.

Patent Pending



A knob is supplied for adjustable units or  $R_T$  terminals for external adjust.

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

## Ordering Table

NHPS Series	Output Rating	Input	Adjustment	Time Delay*	Function**
X	X	X	X	X	X
A	6 A	24 V AC	Fixed	0.1 ... 10 s	Specify Function (Refer to Function Chart for Code)
B	10 A	120 V AC	Knob Adjust	1 ... 100 s	
C	20 A	120/230 V AC	External Adjust	10 ... 1000 s	
				0.1 ... 10 m	
				1 ... 100 m	
				10 ... 1000 m	
				0.1 ... 10 h	
				1 ... 100 h	
				10 ... 1000 h	

\*If Fixed Delay is selected, insert delay [0.1 ... 1000] followed by (S) secs., (M) mins., or (H) hrs.

Example P/N: **NHPSA422M**  
Fixed - **NHPSB9120MB**

## \*\*Function Chart

Delay on Make	Code
Delay on Break	M
Recycle (ON Time First, Equal Times)	B
Single Shot	RE
Interval	S
Trailing Edge Single Shot	I
Inverted Single Shot	TS
Inverted Delay on Break	US
Accumulative Delay on Make	UB
Motion Detector/Retriggerable Single Shot	AM
	PS

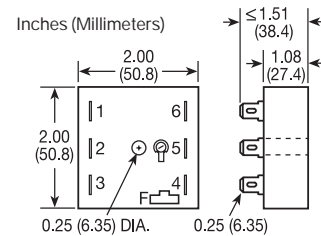
## Technical Data

Time Delay	
Type	Microcontroller circuitry
Range	0.1 s ... 1000 h in 9 adjustable ranges or fixed
Repeat Accuracy	+/-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%
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 rated current
Leakage	8.6 mA at 230 V AC 4.5 mA at 120 V AC 0.9 mA at 24 V AC
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
Package	2 x 2 x 1.51 in. (50.8 x 50.8 x 38.4 mm)
Termination	0.25 in. (6.35 mm) male quick connect terminals
Environmental	
Operating Temperature	-40°C ... +60°C
Storage Temperature	-40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 3.9 oz (111 g)

\*\*\*Must be bolted to a metal surface using the included heat sink compound. The maximum mounting surface temperature is 90°C. Inrush: Non-repetitive for 16 ms.

R <sub>T</sub> Selection Chart									
Desired Time Delay*									R <sub>T</sub>
Seconds			Minutes			Hours			
1	2	3	4	5	6	7	8	9	KΩ
0.1	1	10	0.1	1	10	0.1	1	10	0
1	10	100	1	10	100	1	10	100	10
2	20	200	2	20	200	2	20	200	20
3	30	300	3	30	300	3	30	300	30
4	40	400	4	40	400	4	40	400	40
5	50	500	5	50	500	5	50	500	50
6	60	600	6	60	600	6	60	600	60
7	70	700	7	70	700	7	70	700	70
8	80	800	8	80	800	8	80	800	80
9	90	900	9	90	900	9	90	900	90
10	100	1000	10	100	1000	10	100	1000	100

\* When selecting an external R<sub>T</sub> add at least 15% for tolerance of unit and the R<sub>T</sub>.



F = Cover (Factory use only)

## Accessories

Quick connect to screw adaptor P/N: P1015-18	
Versa-knob P/N: P0700-7	
External adjust potentiometer P/Ns: P1004-95 (fig A) P1004-95-X (fig B)	
Female quick connect P/N: P1015-64 (AWG14/16)	

See accessory pages at the end of this section.