

# SCR POWER CONTROL DRIVER BOARD ZERO CROSS (BURST) FIRED - NWUPCM-1B



- **Fast Synchronous Burst Firing Algorithm**
- **0.5-1% Control Resolution**
- **Zero Cross Firing**
- **Suitable for resistive (SCR/SSR) and Inductive (SSR) Loads**
- **PWM input – inexpensive PLC interface**
- **Inputs of 4-20mA, 0-10V, 0-5V, Pot, PWM**
- **Line voltage compensation increases process stability**
- **Automatic 50/60Hz operation (30 to 90Hz capable)**
- **Adjustable Power Limit (-PL) Option**
- **Single phase and three phase control**
- **LED power and output indicators**

## Product Description

The microprocessor based NWUPCM-1B provides linear burst fire control of resistive and inductive loads. The output power is proportional to the command input which can be dip switch selected from six different industry standard inputs. The output can drive SSRs or SCR gates directly.

## Ordering Codes

NWUPCM-1B-

Power Control Module

Single Pole

Burst Fire

SCR or SSR

## Input Specifications

|                                   |  |
|-----------------------------------|--|
| Power Supply                      | 24VAC +/-10%,100mA max                             |
| Frequency Range                   | 47-63Hz 24V power supply, 30-90Hz synch input      |
| Command Inputs                    | 4-20mA, 0-20mA, 0-5V, 1-5V, 0-10V, 2-10V, Pot, PWM |
| Command Input Impedance           | 10K (0-10V), 250 Ohms (4-20mA), 100K (0-5V)        |
| PWM Input Frequency Range         | 500Hz - 15KHz                                      |
| External Potentiometer Resistance | 10-25KOhm  |

## Output Specifications

|                    |   |
|--------------------|---|
| SSR Control Output | SSR Drive, DC Pulse, nominally 10V @ 20mA   |
| SCR Drive Output   | 16KHz Burst for 1.35mS every half cycle. Initial pulse peak current of 600mA, maintain pulses, 300mA, 10uS pulse width per pulse, rise time of 100nS. |
| Response Time      | 30mS  |
| Linearity          | 2%  |

## Output Specifications(cont.)

|                                 |                                |
|---------------------------------|--------------------------------|
| Power Limit Adjustment Range    | 10-100% of max. Output Power   |
| Line Voltage Compensation Range | +/-15% up to 100% output power |
| Regulation                      | +/-3%                          |

## Thermal Specifications

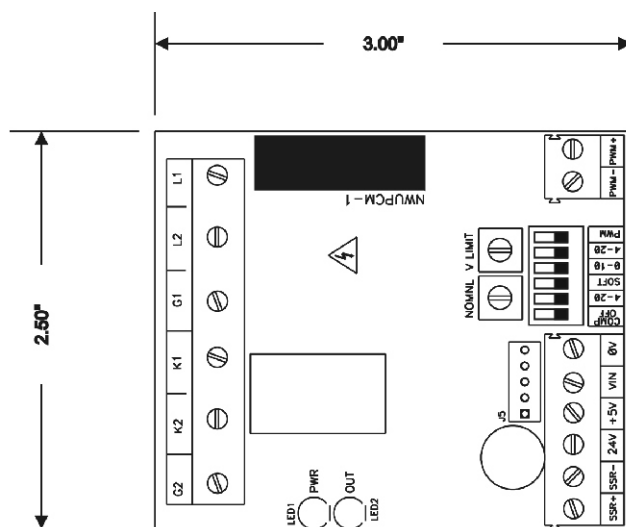
|                             |                 |
|-----------------------------|-----------------|
| Operating Temperature Range | 0 to 50 degC    |
| Storage Temperature Range   | -40 to 100 degC |

## Dip Switch Selections

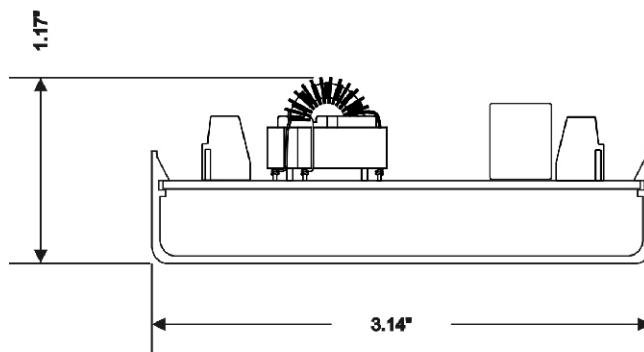
| Dip Switch 1 | Dip Switch 3 | #of cycles | Cycle Time (60Hz) | Cycle Time (50Hz) | Resolution (% of FS) |
|--------------|--------------|------------|-------------------|-------------------|----------------------|
| *OFF         | *OFF         | ~16        | 266mS             | 320mS             | ~1%                  |
| ON           | OFF          | 60         | 1S                | 1.2S              | 1.66%                |
| OFF          | ON           | 600        | 10S               | 12S               | 0.166%               |
| ON           | ON           | 6000       | 100S              | 120S              | 0.0166%              |

| Command Input        | 2   | 4   | 5   | 6   |
|----------------------|-----|-----|-----|-----|
| 0-5V (Default)       | OFF | OFF | OFF | OFF |
| Potentiometer        | OFF | OFF | OFF | OFF |
| 0-10V                | OFF | ON  | OFF | OFF |
| 4-20mA               | ON  | OFF | ON  | OFF |
| 1-5V                 | ON  | OFF | OFF | OFF |
| 2-10V                | ON  | ON  | OFF | OFF |
| PWM (isolated input) | OFF | OFF | OFF | ON  |

## Dimensions



NWUPCM-1 MODULE (ALONE)



NWUPCM-1 MODULE (MOUNTED IN SNAP TRACK)