



MODEL B5K

WIDE BAND AMPLIFIERS

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MARINE ELECTRIC SYSTEMS, INC., designed CML MACARR™ wide band power amplifiers for audio and ultrasonic testing.

The SPG Series of Wide Band Power Amplifiers have been the standard in the industry for over 30 years. Major applications for these amplifiers include Undersea Propagation Systems, Ultra-Sonic, Sonar and Audio testing. Power ranges vary from 1KVA to 100KVA with frequency bandwidths from 100HZ to 10KHZ on standard units and between 5HZ and 200KHZ for custom requirements. Other uses include testing sonar transducers, hydrophones, undersea telephone, and mine detection systems. 2KVA and 5KVA amplifiers have been especially designed to fit into a 25" submarine hatch.

CML MACARR's SPG Series also have wide application in the industrial field including vibration test machines, audio power amplifiers, and the testing of inductors and capacitors. Commercial and military versions are also offered to suit individual requirements. Our application engineers will be happy discuss specific needs..

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Features:

- Power Ratings 1 KVA to 100KVA
- Full power into reactive loads
- Low Distortion
- +/-0.5db frequency response
- Ideal for CW and Pulsed duty
- Selectable output taps for matching wide range of load impedences
- Rugged construction for marine and airborne installations

Applications:

- Sonar Testing
- Vibration Testing
- Industrial Process Control
- High Intensity Acoustic Systems
- "S" Models designed to fit into standard 25" diameter Submarine hatch



33 B Route 17S
East Rutherford, NJ 07073
phone: (201) 531-8600
fax: (201) 531-8606

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CML MACARR SPG series-wide band power amplifiers

SPECIFICATIONS

OUTPUT FREQUENCY: Standard full power frequency range is 100-10,000 Hz except for Model A3K which has a 200-15,000 Hz range. **Other frequency ranges** between 5 Hz and 200KHz are available on a custom basis.

OUTPUT CONFIGURATION: 2 wire floating.

DUTY CYCLE: Continuous duty at full rated output power. Please consult CML MACARR for pulsed or intermittent duty ratings.

FREQUENCY RESPONSE: ± 0.5 db, 100-10,000 Hz Model A3K ± 0.5 db 200-15,000 Hz.

HARMONIC DISTORTION: Less than 3%, 100-10,000 Hz ; less than 1.5 % mid-band.

HUM AND NOISE: At least 60 db below rated output tap voltage.

OUTPUT IMPEDANCE SELECTION: Taps are selected by link change. Front panel tap select switches are available at additional charge.

INPUT SERVICE: Models rated 1KVA to 20KVA require 208/230 volts $\pm 5\%$, 3 phase, 57-65 Hz . However, the Model S5K is also available with

input of 440/460/480 volts, $\pm 5\%$, 3 phase, 57-65 Hz — specify Model S5KM5963. Models rated at 30KVA output and higher require 440/480 volts $\pm 5\%$, 3 phase, 57-65 Hz .

SIGNAL INPUT VOLTAGE: 1.0 volt RMS for rated output.

SIGNAL INPUT IMPEDANCE: 600 ohms, single ended.

KEYED OPERATION: All models are suitable for operation with keyed input signals.

METERING: All models include complete front panel metering. In addition, models rated at 3KVA to 100KVA have recessed front panel section with test points for critical circuit parameters — to keep down-time to a minimum.

PROTECTIVE CIRCUITS: CML MACARR instantaneous overload circuitry protects both amplifier and load. Rapid front panel reset permits return to normal operation with minimum down-time.

FINISH: Panels are satin blue enamel; cabinets are blue armorhide. Special colors are available on a custom basis.

MODEL	OUT-PUT POWER KVA	LOAD POWER FACTOR RANGE AT RATED KVA	STANDARD OUTPUT IMPEDANCE TAPS OHMS	DIMENSIONS* H x W x D (APPROX.) INCHES	WEIGHT (Approx.) LBS.	TYPE OF COOL-ING	
A1K	1	± 0.4 to Unity	4/16/36/64/144/576	22 $\frac{3}{4}$ x 19 x 20 $\frac{1}{2}$	345	FORCED AIR ↓	
A2K	2	± 0.4 to Unity	4/16/36/64/144/576	22 $\frac{3}{4}$ x 19 x 17	400		
S2K	2	± 0.4 to Unity	4/16/36/64/144/576	22 $\frac{3}{4}$ x 17 x 17	400		
A3K	3	± 0.7 to Unity	4/16/36/64/144/576	22 $\frac{3}{4}$ x 17 x 17	400		
S5K	5	± 0.4 to Unity	16/64/256	68 x 17 x 17	800		
B5K	5	± 0.1 to Unity	8/32/72/128/288/1152	45 x 24 x 24	850		
A10K	10	± 0.1 to Unity	16/64/144/256/576/2304	47 x 68 x 24	1,700		
A20K	20	± 0.3 to Unity	16/64/144/256/576	47 x 68 x 24	2,100		
VA30K	30	± 0.1 to Unity	16/64/144/256/576	72 x 72 x 36	3,000		WATER COOLED ↓
VA50K	50	± 0.4 to Unity	16/64/144/256/576	72 x 72 x 36	4,200		
VA100K	100	± 0.1 to Unity	16/64/144/256	2 sections, ea. 90 x 72 x 57	9,400		

*Model A1K and A3K are standard 19" rack mount units; bench adapters available on special order. All other models are furnished complete in cabinet enclosures. Model B5K includes casters. Models S2K and S5K are designed to go through a 25" standard submarine hatch.



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