

### FEATURES

- Linear Amplifier with wide bandwidth to 10,000 Hz
- Low output distortion - less than 0.5% THD
- Plug in oscillator offers flexibility
- Front panel controls for voltage and frequency



**ACM-250 with  
OSN-1-45/2500**



**ACM-3000  
OSN-1-45/2500**

### PRECISION, HIGH QUALITY POWER FOR LABORATORY AND PRODUCTION APPLICATIONS

Behlman's ACM Series AC Power Sources deliver clean, regulated linear power. Models provide from 250 VA up to 9000 VA of power at output frequencies from 45 to 10,000 Hz. The ACM Series combines highly advanced magnetics with solid state circuitry for stability and reliability.

The ACM series has many unique features including: low output distortion, wide bandwidth, fast transient response, dual voltage ranges, variable voltage & frequency controls.

A digital feedback system in the power amplifier ensures precise regulation and low distortion.

Sophisticated electronic overload and short circuit protection systems recover instantly when an overload is removed.

The ACM Series is ideal for a variety of laboratory and manufacturing applications.

All performance specifications are based on 25° C ambient temperature, nominal input line, unity power factor and operation at 74 to 100% of output voltage range.

**Specifications subject to change without prior notice.**

**Table 1: ACM SERIES MODEL SELECTION**

Model Number	Power Output		Output Current/Phase (Amps)		Weight. lbs (kgs)	Dimensions 19" (48.3 cm) Rack-mount chassis H" x D" (cm)	No. of chassis
	Rated	Maximum	135 V range	270 V range			
<b>Single-phase output models</b>							
<b>ACM-250</b>	250 VA	335 VA	2.5	1.3	40 (18.2)	5.25" x 15" (13.3 x 38.1)	1
<b>ACM-750</b>	750 VA	1000 VA	7.5	3.8	69 (31.3)	7.00" x 19" (17.8 x 48.3)	1
<b>ACM-1000</b>	1000 VA	1350 VA	10.0	5.0	90 (40.9)	8.75" x 19" (22.2 x 48.3)	1
<b>ACM-1500</b>	1500 VA	2025 VA	15.0	7.5	126 (57.2)	14.00" x 19" (35.6 x 48.3)	2
<b>ACM-3000</b>	3000 VA	4050 VA	30.0	15.0	189 (85.8)	21.00" x 22" (53.3 x 48.3)	3
<b>Three-phase output models</b>							
<b>ACM-3X250</b>	750 VA	1000 VA	2.5	1.3	75 (34.0)	7.00" x 19" (17.8 x 48.3)	1
<b>ACM-3X350</b>	1050 VA	1425 VA	3.5	1.8	115 (52.2)	8.75" x 22" (22.2 x 55.9)	1
<b>ACM-3X500</b>	1500 VA	2025 VA	5.0	2.5	153 (69.5)	14.00" x 19" (35.6 x 48.3)	2

**OSCILLATOR SPECIFICATIONS**

The oscillators and input modules depicted below are designed to plug into Behlman's precision ACM Power Sources. They are available in fixed and variable frequency output configurations. Variable frequency oscillators provide digital readout of frequency.

**Table 2: ACM SERIES OSCILLATOR MODEL SELECTION**

Single Phase	Three Phase	Frequency Range	Frequency Accuracy
<b>Fixed Frequency</b>	<b>Fixed Frequency</b>		
OSN-1-50 OSN-1-60 OSN-1-400 OSN-1-CSF	OSN-3-50 OSN-3-60 OSN-3-400 OSN-3-CSF	50 Hz 60 Hz 400 Hz 50 Hz, 60 Hz, 400 Hz and customer selected frequency. Note 3	+/- 0.01% +/- 0.01% +/- 0.01% +/- 0.01%
<b>Variable Frequency</b>	<b>Variable Frequency</b>		<b>Meter Accuracy</b>
OSN-1-45/2500 OSN-1-45/10000	OSN-3-45/2500 OSN-3-45/10000	45-2500 Hz, single band 45-10000 Hz, dual band	+/- 0.01% of reading +/- 0.01% of reading
<b>External Input</b>	<b>External Input</b>		
EIP-1 Note 4 & 5	EIP-3 Note 4 & 5		

## INPUT

### Voltage:

#### ACM-250—ACM-1500 and ACM-3X250—ACM-3X500

**Standard:** 115/230 VAC +/- 10%, 1-phase

**Option 05:** 100/200 VAC +/- 10%, 1-phase

#### ACM-3000

**Standard:** 120/208 VAC +/- 10%, 3-phase

**Option 03:** 230/400 VAC +/- 10%, 3-phase

**Option 04:** 240/415 VAC +/- 10%, 3-phase

**Frequency:** 47-63 Hz

## PROTECTIVE CIRCUITS

**Input:** Fast-acting main circuit breaker

**Overload:** Electronic overload and short circuit protection which folds back the voltage and instantaneously recovers when the overload is removed

**Thermal:** Internal temperature sensor shuts off output to prevent heat damage

## ENVIRONMENTAL / CONNECTIONS

**Operating Temp:** 32° F to 131° F (0-55° C)

**Humidity:** 0-95% RH non-condensing

**Input Connections:** Barrier strip on rear

**Output Connections:** Barrier strip on rear

## CONTROLS/INDICATORS

**Power On/Off:** Circuit breaker and indicator

**Output On/Off:** Toggle switch

**Range Select:** Toggle switch (High/Low)

**Volts display:** DMM for volts

**OSCILATOR** Plug-in Oscillator see table 2 for selection.

**Volts adj.** Ten-turn potentiometer

**Freq. adj.** Ten-turn potentiometer (variable freq. models)

**Freq. display** DMM for frequency (variable freq. models)

## NOTES

1. Switch selectable -four fixed frequencies of 50, 60, 400 Hz, and one customer specified frequency, from 45 to 2500 Hz.
2. Provides user direct access to the amplifier for external signal input capability.
3. Amplifier drive signal 0 - 8.0V RMS into 15K ohms impedance.

## OUTPUT

**Power:** See Table 1

**Voltage:** 0-135, 0-270 VAC, Switch selectable

**Option 06:** 0-34, 0-135 VAC, Switch selectable

**Note :** *Current output on 0-34VAC range is 4 times the 0-135VAC range per phase up to maximum of 30 Amps per phase*

**Frequency:** 45-2500 Hz

**Option 07:** 45-10000 Hz

**Current:** See Table 1

**Peak current:** 200% of rated output current... Repetitive current required to charge a capacitor in a typical diode capacitor filter

**Power Factor:** 100% of rated output into any power factor load ... (unity to zero, leading or lagging)

**Distortion:** Less than 0.5% THD at rated power output into linear load, up to 2500 Hz

**Option 07:** Less than 1.0% THD at rated power output into linear load, up to 2500 Hz.

Less than 2.0% THD at rated power output into linear load, up to 10000 Hz

**Max. Power Output:** Obtainable at 100% of either output voltage range

**Max. Output Current :** Up to 120% of rated current output for a maximum of one-half hour

+/- 0.1% for +/- 10% line change

**Line Regulation:** +/- 0.5% no load to full load

**Load Regulation:** +/- 0.5% no load to full load

**Amplifier response:** 50 microseconds to 90% of programmed value

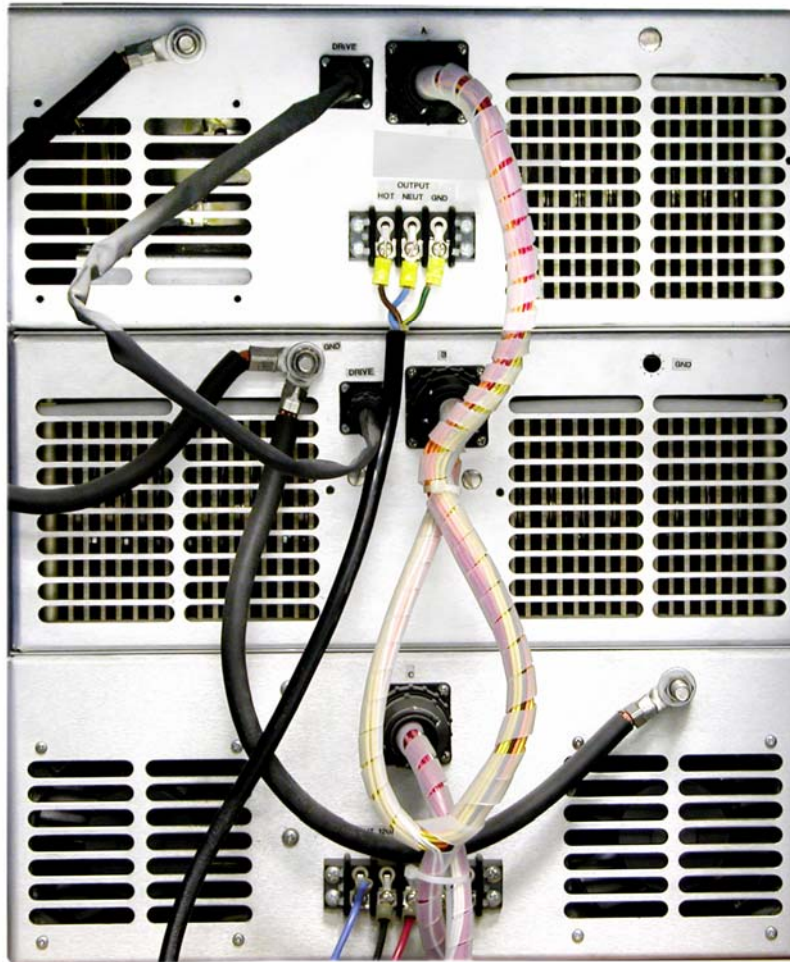
## AC Power Source/ Frequency Converter

### ADDITIONAL OPTIONS:

- 08V/F:** External 0-10VDC control of amplitude (V) and frequency (F), via rear terminal strip.  
(Select 08A or 08B on oscillator options)  
Not available with oscillator option 11.
- 09:** Allows user to sync AC source with external signal via BNC connector.  
Not available with oscillator option 11
- 13:** Allows user to parallel phases on three phase models
- CE:** Available with CE mark
- CS-2:** Slides

### OSCILLATOR OPTIONS:

- 08A:** Removes front panel controls for voltage and frequency. To be used with Option 08 on the AC source.
- 08B:** Local-Remote. In remote mode, uses the 0-10VDC control. In local mode, uses front panel controls for voltage and frequency.  
To be used with Option 08 on the AC source.
- 10V/F:** Locking controls. Allows user to lock potentiometer adjustment of voltage and/or frequency.
- 11:** Specifies original style Behlman oscillator connector for compatibility with legacy Behlman amplifiers.



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