POWER AMPLIFIER A 732

FEATURES

- 60 V.A. power output capability
- Wide power frequency range
- D.C. coupled
- Air cooled

APPLICATIONS

To drive the 20 Newton vibration exciter type EX 24 for constant force, single or multiple exciter modal analysis.

A half power selector switch allows to decrease the output current, to drive the EX 6 exciter (3, 4 or 6 Newton) or the EX 12 exciter (10 Newton).

General purpose power amplifier for constant current into unmatched load applications.

The power amplifier type A 732 has been particularly designed to drive electrodynamic vibration exciters. The main characteristics are the high output impedance (current source) and the output current proportional to and in phase with the input voltage. These features make the A 732 amplifier especially suitable for constant force mechanical impedance measurements.

The air cooling is rated for long time operation at full output power and for full output current into unmatched loads. The A 732 uses modern semi-conductor, transistors and I.Cs technology to provide reliable operation over a wide temperature range.

SPECIFICATIONS

ELECTRICAL	
Input impedance	10 k. Ohm
Input voltage	± 5 V
Transconductance	0.8 A/V - (0.4 A/V)[1]
Continuous RMS output power (matched load)	60 Watt - (30 W)[1]
Output current max. peak amplitude	± 4 Amp (± 2 Amp)[1]
Output voltage max. peak amplitude	± 30 Volt
DC output offset adjustment range	± 0.3 Amp
Full power frequency range (resistive load)	from 1 Hz to 15 kHz
Half power frequency range (resistive load)	from DC to 20 kHz
Max. distortion, from 10 Hz to 10 kHz	typically < 0.5%
Hum and noise below full output current	at least 70 dB
Output current-input voltage phase shift	from DC to 5 kHz: ± 1° from 5 kHz to 15 kHz: ± 5°
Output impedance (current source)	at least 10,000 Ohm
Min-load resistance	1 Ohm
Max-load impedance	7.5 Ohm - (15 Ohm)[1]
Power supply requirements	A.C. single phase 50/60 Hz - 220 V ± 10% - approx. 90 VA at full output

ENVIRONMENTAL		
	Operating	Non operating
Air temperature	from 0° C to + 40°C	from - 20° C to + 85° C
Altitude	up to 1500 m	up to 4500 m
Max. relative humidity	90 % without condensation	

GENERAL	
Air cooling	1 fan. air out of rear side Max. dissipation: 80 W
Size (overall)	3 U x 21 TE drawer; 128 mm high; 271 mm deep; 106 mm wide
Weight	Approximately 4 kg

[1] (half power selector switch on)

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PRODERA

POWER AMPLIFIER A 735

FEATURES

- 120 V.A. power output capability
- Wide power frequency range
- D.C. coupled
- Air cooled

APPLICATIONS

To drive the 50 Newton vibration exciter type EX 58 for constant force, single or multiple exciter modal analysis.

A half power selector switch allows to decrease the output current, to drive the EX 24 exciter (20 Newton).

General purpose power amplifier for constant current into unmatched load applications.

The power amplifier type A 735 has been particularly designed to drive electrodynamic vibration exciters. The main characteristics are the high output impedance (current source) and the output current proportional to and in phase with the input voltage. These features make the A 735 amplifier especially suitable for constant force mechanical impedance measurements.

The air cooling is rated for long time operation at full output power and for full output current into unmatched loads. The A 735 uses modern semi-conductor, transistors and I.Cs technology to provide reliable operation over a wide temperature range.

SPECIFICATIONS

ELECTRICAL	
Input impedance	10 k. Ohm
Input voltage	± 5 V
Transconductance	1.6 A/V - (0,8 A/V)[1]
Continuous RMS output power (matched load)	120 W - (60 W)[1]
Output current max. peak amplitude	± 8 Amps (± 4 Amps)[1]
Output voltage max. peak amplitude	± 30 V
DC output offset adjustment range	± 0.6 Amp
Full power frequency range (resistive load)	From 1 Hz to 15 kHz
Half power frequency range (resistive load)	From DC to 20 kHz
Max. distortion, from 10 Hz to 10 kHz	Typically < 0.5 %
Hum and noise below full output current	at least 70 dB
Output current-input voltage phase shift	from DC to 5 kHz : ± 1° from 5 kHz to 15 kHz : ± 5°
Output impedance (current source)	at least 10,000 Ohm
Min-load resistance	2 Ohm
Max-load impedance	3.7 Ohm - (7.5 Ohm)[1]
Power supply requirements	A.C. single phase 50/60 Hz 220 V ± 10 % Approx. 180 VA at full output

ENVIRONMENTAL		
	Operating	Non operating
Air temperature	from 0° C to + 40°C	from - 20° C to + 85° C
Altitude	up to 1500 m	up to 4500 m
Max. relative humidity	90 % without condensation	

GENERAL	
Air cooling	1 fan. air out of rear side Max. dissipation: 160 W
Size (overall)	3 U x 42 TE drawer 128 mm high; 271 mm deep - 212 mm wide
Weight	Approx. 6 kg

[1] (half power selector switch on)

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PRODERA

POWER AMPLIFIERS A 648 / A 648S

FEATURES

- 400 V.A. power output capability
- Wide power frequency range
- D.C. coupled
- Air cooled
- Output peak current, peak voltage and exciter position analogue display (for the A 648S)
- Built-in electronic protection against mains over voltage, power stages or load temperature, load mismatch, exciter over travel

APPLICATIONS

To drive the 200 Newton vibration exciter type EX 220 for constant force, single or multiple exciter modal analysis.

General purpose power amplifier for constant current into unmatched load applications.

The power amplifier type A 648 has been particularly designed to drive electrodynamic vibration exciters. The main characteristics are the high output impedance (current source) and the output current proportional to and in phase with the input voltage. These features make the A 648 amplifier especially suitable for constant force mechanical impedance measurements.

The air cooling is rated for long time operation at full output power and for full output current into unmatched loads. The A 648 uses modern semi-conductor, transistors and I.Cs technology to provide reliable operation over a wide temperature range.

SPECIFICATIONS

ELECTRICAL	
Input impedance	110 k. Ohm ± 10 %
Input voltage	± 5 V
Transconductance	4 A/V
Continuous RMS output power (matched load)	400 W
Output current max. peak amplitude	± 20 Amps
Output voltage max. peak amplitude	± 40 V
DC output offset adjustment range	± 2 Amps
Full power frequency range (resistive load)	From 1 Hz to 10 kHz
Half power frequency range (resistive load)	From DC to 15 kHz
Max. distortion, from 10 Hz to 10 kHz	Typically < 0.5%
Hum and noise below full output current	at least 70 dB
Output current-input voltage phase shift	from DC to 2 kHz: ± 1° from 2 kHz to 10 kHz: ± 5°
Output impedance (current source)	at least 1 000 Ohm
Min-load resistance	0.45 Ohm
Max-load impedance	2 Ohm
Power supply requirements	A.C. three phase 50/60 Hz; 220/380 V ± 10 % Approx. 800 VA at full output

ENVIRONMENTAL		
	Operating:	Non operating:
Air temperature	from 0° C to + 40°C	from - 20° C to + 85° C
Altitude	up to 1500 m	up to 4500 m
Max. relative humidity	90% without condensation	

GENERAL	
Air cooling	1 fan. air out of rear side Max. dissipation 600 Watts;
Size (overall)	19 inches panel rack 4 U 177 mm high; 570 mm deep
Weight	Approx. 24 kg

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PRODERA

AMPLIFIER A649 HV

MAIN FEATURES

- Up to 1,600 V.A. power output capability
- Wide power frequency range
- D.C. coupled
- Air cooled
- Output peak current, peak voltage and exciter position analog display
- Built-in electronic protection against mains over voltage, power stages or load temperature, load mismatch, exciter over travel.

APPLICATIONS

To drive up to 550 Newton the PRODERA exciter type EX 520 C 50 for constant force, single or multiple exciter modal analysis.

General purpose power amplifier for constant current into unmatched load applications.

The power amplifier type A 649 HV has been particularly designed to drive electrodynamic vibrations exciters. The main characteristics are the high output impedance (current source) and the output current proportional to and in phase with the input voltage. These features make the A 649 HV amplifier especially suitable for constant force mechanical impedance measurements.

The air cooling is rated for long time operation at full output power and for full output current into unmatched loads. The A 649 HV uses modern semi-conductor, transistors and I.Cs technology to provide reliable operation over a wide temperature range.

SPECIFICATIONS

ELECTRICAL	
Input impedance	110 k. Ohms ± 10 %
Input voltage	± 5 V
Continuous RMS output power (matched load)	1,150 Watt
Output current maximum peak amplitude	± 20 Amps
Output voltage maximum peak amplitude	± 80 Volt
DC output offset adjustment range	± 2 Amp
Power supply requirements	380 V (415 V as an option) ± 10%, 50 Hz, three-phase, earth, neutral not distributed. Consumption of about 1.7 kVA at full power.

ENVIRONMENTAL		
	Operating	Non operating
Air temperature	From 0° C to + 40°C	From - 20° C to + 85° C
Altitude	Up to 1 500 m	Up to 4 500 m
Maximum relative humidity	90% without condensation	

GENERAL	
Air cooling	2 fans air out of rear side. Max. dissipation: 1,800 Watt
Dimensions	19 inches panel rack 6U Height: 267 mm; Depth: 570 mm
Weight	Approximately 46 kg

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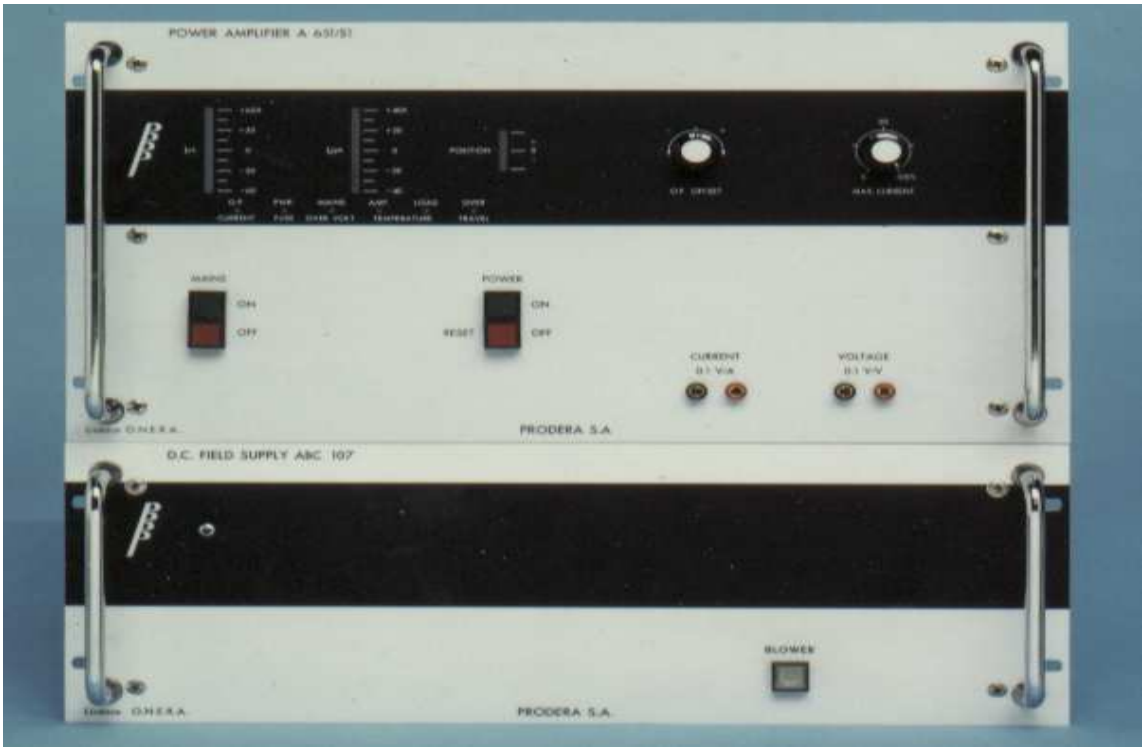
POWER AMPLIFIER A 651/S1



FEATURES

- 1 000 V.A. power output capability
- Wide power frequency range
- D.C. coupled
- Air cooled
- Output peak current, peak voltage and exciter position analogue display
- Built-in electronic protection against mains over voltage, power stages or load temperature, load mismatch, exciter over travel

APPLICATIONS

To drive the 1 000 Newton vibration exciter type EX 1060 for constant force, single or multiple exciter modal analysis.

In conjunction with the A651/S2 power extension, to drive the 2 000 Newton vibration exciter type EX 2060 (modal analysis).

General purpose power amplifier for constant current into unmatched load applications.

The power amplifier type A 651/S1 has been particularly designed to drive electrodynamic vibration exciters. The main characteristics are the high output impedance (current source) and the output current proportional to and in phase accordance with the input voltage. These features make the A 651/S1 amplifier especially suitable for constant force mechanical impedance measurements.

The air cooling is rated for long time operation at full output power and for full output current into unmatched loads. The A 651/S1 uses modern semi-conductor, transistors and I.Cs technology to provide reliable operation over a wide temperature range.

SPECIFICATIONS

ELECTRICAL	
Input impedance	110 k. Ohm ± 10 %
Input voltage range	± 5 V
Transconductance	12 A/V
Continuous RMS output power (matched load)	1 200 W
Output current max. peak amplitude	± 60 Amps
Output voltage max. peak amplitude	± 40 V
DC output offset adjustment range	± 6 Amps
Full power frequency range (resistive load)	From 1 Hz to 8 kHz
Half power frequency range (resistive load)	From DC to 10 kHz
Max. distortion, from 10 Hz to 8 kHz	Typically 0.5%
Hum and noise below full output current	At least 70 dB
Output current-input voltage phase shift	From 0 to 1 kHz: ± 1° From 1 kHz to 5 kHz: ± 5°
Output impedance (current source)	At least 300 Ohm
Min-load resistance	0.15 Ohm
Max-load impedance	0.67 Ohm
Power supply requirements	A.C. triphase 50/60 Hz - 220/380 V ± 10 % Approx. 2.2 kVA at full output
Dimensions of the amplifier	19 inch panel rack 6U, height: 267 mm, depth: 570 mm
Dimensions of the field supply ABC 107	19 inch panel rack 4U, height: 177 mm, depth: 570 mm
Weight of the amplifier	Approximately 55 kg
Weight of the field supply ABC 107	Approximately 18 kg

ENVIRONMENTAL		
	Operating	Non operating
Air temperature	from 0°C to + 40°C	from - 20°C to + 85°C
Altitude	up to 1500 m	up to 4500 m
Max. relative humidity	90 % without condensation	

GENERAL	
Air cooling	4 fans air out of rear side Max. dissipation: 1 800 W
Total dimensions	19 inch panel rack 10 U, height: 444 mm, depth: 570 mm
Total weight (A 651 S1 + ABC 107)	Approx. 73 kg

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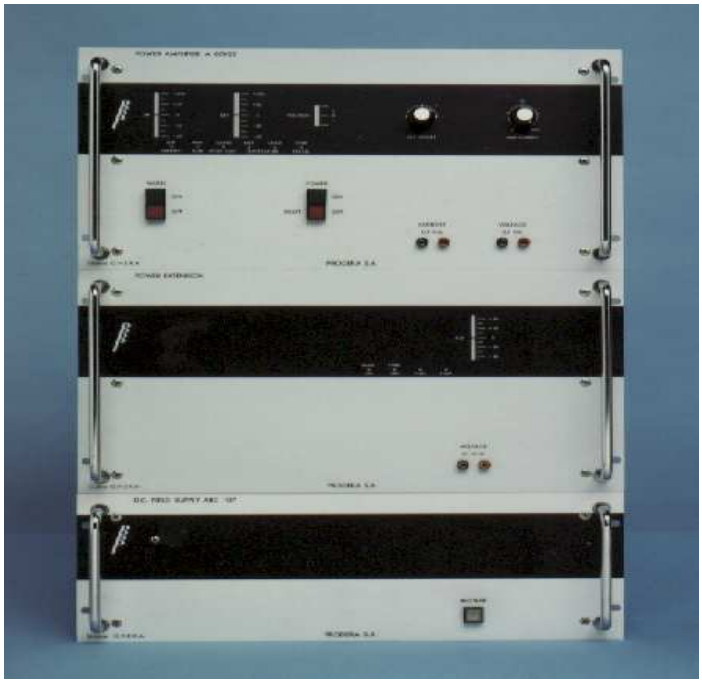
POWER AMPLIFIER A 651/S2



FEATURES

- 2 400 V.A. power output capability
- Wide power frequency range
- D.C. coupled
- Air cooled
- Output peak current, peak voltage and exciter position analogue display
- Built-in electronic protection against mains over voltage, power stages or load temperature, load mismatch, exciter over travel

APPLICATIONS

To drive the 2 000 Newton vibration exciter type EX 2060 for constant force, single or multiple exciter modal analysis.

In conjunction with the A651/S2 power extension, to drive the 2 000 Newton vibration exciter type EX 2060 (modal analysis).

General purpose power amplifier for constant current into unmatched load applications.

The power amplifier type A 651/S2 has been particularly designed to drive electrodynamic vibration exciters. The main characteristics are the high output impedance (current source) and the output current proportional to and in phase accordance with the input voltage. These features make the A 651/S2 amplifier especially suitable for constant force mechanical impedance measurements.

The air cooling is rated for long time operation at full output power and for full output current into unmatched loads. The A 651/S2 uses modern semi-conductor, transistors and I.Cs technology to provide reliable operation over a wide temperature range.

SPECIFICATIONS

ELECTRICAL	
Input impedance	110 k. Ohm ± 10%
Input voltage range	± 5 V
Transconductance	12 A/V
Continuous RMS output power (matched load)	2 400 W
Output current max. peak amplitude	± 60 Amps
Output voltage max. peak amplitude	± 80 V
DC output offset adjustment range	± 6 Amps
Full power frequency range (resistive load)	From 1 Hz to 8 kHz
Half power frequency range (resistive load)	From DC to 10 kHz
Max. distortion, from 10 Hz to 8 kHz	Typically 0.5%
Hum and noise below full output current	At least 70 dB
Output current-input voltage phase shift	From DC to 1 kHz: ± 1° From 1 kHz to 5 kHz: ± 5°
Output impedance (current source)	At least 300 Ohm
Min-load resistance	0.30 Ohm
Max-load impedance	1.33 Ohm
Power supply requirements	A.C. triphase 50/60 Hz; 220/380 V ± 10% Approx. 4.4 kVA at full output
Dimensions of the amplifier	19 inch panel rack 12 U, height: 533 mm, depth: 570 mm
Dimensions of the field supply ABC 107	19 inch panel rack 4U, height: 177 mm, depth: 570 mm
Weight of the amplifier	Approximately 110 kg (two times 55 kg)
Weight of the field supply ABC 107	Approximately 18 kg

ENVIRONMENTAL		
	Operating	Non operating
Air temperature	from 0°C to + 40°C	from - 20°C t o + 85°C
Altitude	up to 1500 m	up to 4500 m
Max. relative humidity	90 % without condensation	

GENERAL	
Air cooling	7 fans air out of rear side Max. dissipation : 3 600 W
Total dimensions	19 inch panel rack 16 U, height: 710 mm, depth: 570 mm
Total weight (A 651 S2 + ABC 107)	Approx. 128 kg

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PRODERA

POWER AMPLIFIER A 709

FEATURES

- 4 000 V.A. power output capability
- Wide power frequency range
- D.C. coupled
- Air cooled
- Output peak current, peak voltage and exciter position analogue display
- Built-in electronic protection against mains over voltage, power stages or load temperature, load mismatch, exciter over travel

APPLICATIONS

To drive the 5 000 Newton vibration exciter type EX 5080 for constant force, single or multiple exciter modal analysis.

General purpose power amplifier for constant current into unmatched load applications.

The power amplifier type A 709 has been particularly designed to drive electrodynamic vibration exciters. The main characteristics are the high output impedance (current source) and the output current proportional to and in phase accordance with the input voltage. These features make the A 709 amplifier especially suitable for constant force mechanical impedance measurements.

The air cooling is rated for long time operation at full output power and for full output current into unmatched loads. The A 709 uses modern semi-conductor, transistors and I.Cs technology to provide reliable operation over a wide temperature range.

SPECIFICATIONS

ELECTRICAL	
Input impedance	110 k. Ohm ± 10%
Input voltage range	± 5 V
Transconductance	16 A/V
Continuous RMS output power (matched load)	4 000 W
Output current max. peak amplitude	± 80 Amps
Output voltage max. peak amplitude	± 100 V
DC output offset adjustment range	± 6 Amps
Full power frequency range (resistive load)	From 1 Hz to 5 kHz
Half power frequency range (resistive load)	From DC to 8 kHz
Max. distortion, from 10 Hz to 5 kHz	0.5%
Hum and noise below full output current	at least 66 dB
Output current-input voltage phase shift	from DC to 500 Hz: ± 1° from 500 Hz to 2 kHz: ± 5°
Output impedance (current source)	at least 250 Ohm
Min-load resistance	0.28 Ohm
Max-load impedance	1.1 Ohm
Power supply requirements	A.C. three phase 50/60 Hz - 220/380 V ± 10% - Approx. 7.6 kVA at full output

ENVIRONMENTAL		
	Operating	Non operating
Air temperature	from 0° C to + 40°C	from - 20° C to + 85° C
Altitude	up to 1500 m	up to 4500 m
Max. relative humidity	90 % without condensation	

GENERAL	
Air cooling	One centrifuge blower air out of rear side Max. dissipation : 6 700 W
Size (overall)	19 inches standard cabinet 597 mm width; 1 500 mm high; 728 mm deep
Weight	Approx. 310 kg

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