

# PRODUCT DATA

## Power Amplifier — Type 2732

### USES

- Drives Modal Exciter Type 4824
- Drives any modal or vibration exciter requiring a 120 VA power amplifier

### FEATURES

- 120 VA power output
- Adjustable RMS output-current limit
- Low or high output impedance
- Low distortion over wide frequency range
- Extensive built-in protection, including interlock
- Rear panel voltage and current monitor points
- Front panel indicator LEDs showing clipped output signal, temperature overload, current overload, output signal phase (0° or 180°), operating mode

### Description

Power Amplifier Type 2732 has a usable frequency range from 40 Hz to 15 kHz (full capacity) or DC to 150 kHz (reduced capacity). The rated AC output is 120 VA into a 4 Ω exciter or resistive load, in the frequency range DC to 15 kHz ( $\pm 0.5$  dB). The maximum voltage gain is 17 dB. Harmonic content of the output is very small as heavy negative feedback is used. The instrument can tolerate temperature and supply line variations while maintaining excellent stability. Type 2732 can be used as a voltage generator with low output impedance and a flat voltage frequency response, or as a current generator with high output impedance and a flat current frequency response. The RMS output-current limit is adjustable. The instrument consists of an input stage, a preamplifier, a power amplifier and various warning and safety circuits with indication lamps. A multifunction display shows output current and output voltage.



- (current or voltage), current state and interlock input disabled
- Multifunction display (backlit LCD) showing approximate output current and output voltage
- Powers DC Static Centering Unit Type 1056 (optional)

### Protection

Type 2732 features extensive protection circuits for itself and the connected vibration exciter. When triggered, the protection circuits disconnect the input signal and an LED lights up, indicating the reason for the instrument shutdown. Overload protection against excessive coil current is provided by setting the RMS output current to between 1 and 5.5 A. This enables Type 2732 to safely drive modal and vibration exciters with different maximum current ratings. The signal to the exciter is switched off if the preset current limit is exceeded, and the red current LED lights up. The power output stage is protected by a temperature-sensing safety device to prevent output transistor temperatures that exceed design limits and lead to transistor failure. The temperature protection circuit blocks the amplifier input signal, lighting the red temperature LED. Further protection is provided by an interlock relay that disconnects the input if the operator switches between voltage mode and current mode during operation. Resetting after current, temperature and interlock shutdown is done by simply turning the amplifier gain control fully anticlockwise.

## Specifications – Power Amplifier Type 2732

### COMPLIANCE OF STANDARDS



compliance with EMC Directive



compliance with EMC requirements of Australia and New Zealand

### Safety, EMC Emission and Immunity:

According to relevant standards:

EN/IEC 61010-1, UL 61010-1, EN/IEC 61000-6-2, EN/IEC 61000-6-4, CISPR22 Class A limit, FCC Rules Part 15, EN/IEC 61326

**Temperature:** According to IEC 60068-2-1 & IEC 60068-2-2

Operating temperature: +5 to +40°C (41 to 104°F)

Storage temperature: -25 to +70°C (-13 to 158°F)

**Humidity:** According to IEC 60068-2-78, Damp Heat: 90% RH (non-condensing at 40°C (104°F))

**Mechanical:** Non-operating according to IEC 60068-2-6, IEC 60068-2-27, IEC 60068-2-29

### POWER OUTPUT CAPACITY

120 VA into a 4 Ω exciter or resistive load, at 25°C and nominal mains voltage. (4-pin Neutrik® Speakon® socket at rear panel)

### OUTPUT VOLTAGE CAPACITY

22 V RMS, DC to 15 kHz

### OUTPUT CURRENT CAPACITY

5.5 A RMS, 40 Hz to 15 kHz  
5.0 A RMS, 15 Hz to 15 kHz

### MAX. VOLTAGE GAIN

17 dB (±2 dB) @ 1 kHz

### FREQUENCY RANGE

**Full Capacity:** 40 Hz to 15 kHz

**Reduced Capacity:** DC to 150 kHz (-20 dB)

### FREQUENCY RESPONSE

Typical small signal response (-20 dB) in low impedance mode:

**DC Input:** DC to 15 kHz ±0.5 dB; DC to 150 kHz ±3 dB

**AC Input:** 15 Hz to 15 kHz ±0.5 dB (2 separate BNC sockets at rear panel)

### HARMONIC DISTORTION

<0.1% (40 Hz to 5 kHz) Low Impedance Mode

<0.2% (5 kHz to 15 kHz) Low Impedance Mode

<0.2% (40 Hz to 2 kHz) High Impedance Mode

<0.8% (2 kHz to 15 kHz) High Impedance Mode

### INPUT IMPEDANCE

>10 kΩ

### DC STABILITY

Less than ±100 mV drift from 0V for ±10% variation of mains supply from nominal, and for 10° to 40°C (50° to 104°F) variation in ambient temperature

### CONTROLS

Power on/off

Continuously variable gain control, 0 to Cal. (17 dB) with integral reset

Continuously variable current limit control 1 to 5.5 A (RMS)

Switch for voltage mode or current mode operation

Switch for phase inversion (0° or 180°)

### INDICATOR LAMPS (LED)

Clipping

Temperature overload

Current overload

State

Voltage mode

Current mode

Interlock

Phase (0° or 180°)

### MULTIFUNCTION DISPLAY (LCD)

Voltage, RMS, read-out accuracy ±5%, Adjustable ±1 digit, 40 Hz to 15 kHz

Current, RMS, read-out accuracy ±5%, Adjustable ±1 digit, 40 Hz to 15 kHz

### PROTECTION

Input signal is removed and an indicator lamp is lit when the following parameters exceed preset limits:

Driver Coil Current – true RMS adjustable limit 1 to 5.5 A (RMS)

Power Transistor Temperature

Heat Sink Temperature

Output Signal Distortion – no shut-down

### OTHER FEATURES

Electronic peak current limiting

### POWER REQUIREMENTS

Single phase 100, 120, 230 V RMS, ±10%, 50 – 60 Hz. Approx. 230 VA at full load

Appliance inlet with fuse cartridge and voltage selector at rear

### FUSES

**100 V or 120 V:** T 6.3 A slow blow

**230 V:** T 2.5 A slow blow

### MONITOR OUTPUT

**Voltage:** 0.1 V/V ±3%, 2 Hz to 35 kHz

**Current:** 0.1 V/A ±3%, 2 Hz to 35 kHz

BNC Output

### DIMENSIONS

**Height:** 2 HE equivalent of 88 mm (3.5 in.)

**Width:** 482.6 mm (19 in.) with flanges for standard 19-inch rack mounting

**Depth:** 450 mm (13.8 in.)

### WEIGHT

14 kg (31 lb.)

## Ordering Information

### Type 2732 Power Amplifier

includes the following accessories:

Mains Cable

### OPTIONAL ACCESSORIES

AQ 0649

Cable with 4-pin Neutrik® Speakon® plug, 5 m (16.4 ft)

AQ 0648

Extension cable with Neutrik® Speakon® 4-pin connector at both ends, 10 m (32.8 ft)

### TRADEMARKS

Neutrik and Speakon are registered trademarks of Neutrik AG

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