USES
• Drives Vibration Exciter Type 4808
• Drives Vibration Exciter Type 4809 safely to full rating

FEATURES
• 180 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 relay
• Rear panel voltage and current monitor points
• Front panel indicators (LEDs) showing clipped output signal, temperature and current overloads, output signal phase (0° or 180°), operating mode (current or voltage), current state and interlock input disabled
• Multifunction display (backlit LCD) showing output current and output voltage

Description
Power Amplifier Type 2719 is designed to drive small vibration exciters, particularly the 112 N (25 lbf) Vibration Exciter Type 4808. The RMS output-current limit is adjustable, making Type 2719 equally suitable to drive the 45 N (10 lbf) Vibration Exciter Type 4809 safely to full rating. The power amplifier has a usable frequency range from DC to 100 kHz. The rated AC output is 180 VA into a 0.8 Ω exciter or resistive load, in the frequency range DC to 15 kHz (±0.5 dB). The maximum voltage gain is 14 dB. The 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. Two output modes are selectable via the front panel. The power output stage is directly coupled to the output, and hence to the connected vibration exciter. A current-limiting circuit prevents excessive instantaneous output current peaks. During operation, the voltage, current levels and waveforms can be inspected at the monitor points on the rear panel or RMS readings can be obtained from the LCD display.

Type 2719 consists of an input stage (both AC-coupled and direct), a preamplifier, a power amplifier and various warning and safety circuits with indication lamps. A multifunction display shows output current and output voltage. The amplifier 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.

Protection
Power Amplifier Type 2719 features extensive protection circuits for itself and the connected vibration exciter. When triggered, the protection circuits disconnect the input signal and light an LED, indicating the reason for instrument shutdown. Overload protection against excessive coil current is provided by setting the RMS output current to between 1 A and 15 A. This feature enables Type 2719 to safely drive vibration exciters with different maximum current ratings. The signal to the exciter is switched off if the preset current limit is exceeded. 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. When triggered, the temperature protection circuit blocks the amplifier input signal. Further protection is provided by an interlock relay that disconnects the input if the operator switches between voltage mode and current mode during operation of Type 2719. Resetting is performed by simply turning the amplifier gain control fully anticlockwise. Dedicated LED indicators advise you of the current operating mode and any distortion when excessive signal levels saturate the preamplifier and cause distortion of the output waveform. The instrument remains operative in this condition.
Specifications – Power Amplifier Type 2719

COMPLIANCE WITH STANDARDS

- Compliance with EMC Directive (CE)
- Compliance with EMC requirements of Australia and New Zealand

Safety, EMC Emission and Immunity:

According to relevant standards:
- EN/IEC61010–1, UL 61010–1,
- EN/IEC61000–6–2, EN/IEC61000–6–4,
- CISPR22 Class A limit, FCC Rules Part 15,
- IEC 60068–2–29

Temperature: According to IEC 60068–2–1 and 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

Reliability: According to MIL–HDBK217F, GB (Part-stress)

Enclosure: According to IEC 60529

POWER OUTPUT CAPACITY

180 VA into a 0.8 Ω exciter or resistive load, at 25°C and nominal mains voltage.

144 VA into a 1 Ω exciter or resistive load, at 40°C or at 10% above nominal mains voltage.

(4-pin Neutrik® Speakon® socket at rear panel)

OUTPUT VOLTAGE CAPACITY

12 V RMS, DC to 15 kHz, via 4-pin Neutrik® Speakon® plug

OUTPUT CURRENT CAPACITY

- 7.5 A RMS at or below 5 Hz
- 15 A RMS, 40 Hz to 10 kHz
- 12 A RMS at 15 kHz

FREQUENCY RANGE

- Full Capacity: 40 Hz to 10 kHz
- Reduced Capacity: DC to 100 kHz

FREQUENCY RESPONSE

- Typical small signal response in low impedance mode:
  - DC Input: DC to 15 kHz ±0.5 dB; DC to 100 kHz ±3 dB
  - AC Input: 15 Hz to 15 kHz ±0.5 dB

INPUT IMPEDANCE

>10 kΩ

DC STABILITY

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

CONTROLS

- Power on/off
- Continuously variable gain control, 0 to Cal. (14 dB) with integral reset
- Continuously variable current limit control 1 to 15 A (RMS)
- Switch for voltage mode or current mode operation
- Switch for phase inversion (0° or 180°) between input and output

MULTIFUNCTION DISPLAY (LCD) AND INDICATOR LAMPS

- Clipping
- Temperature overload
- Current overload
- Power on/off
- Ready

OTHER FEATURES

- Electronic peak current limiting

POWER REQUIREMENTS

- Single phase 100, 120, 230 V RMS, ±10%. Approx. 400 VA at full load
- Appliance inlet with fuse holder and voltage selector at rear

FUSES

- 100 v or 120 V: T63 A
- 230 V: T3.15 A

DIMENSIONS

- Height: 2HE equivalent of 88 mm
- Width: 482.6 mm (19 in) with flanges for standard 19 inch rack mounting
- Depth: 350 mm (13.8 in)

WEIGHT

- 14.0 kg (31 lb.)

Ordering Information

Type 2719 Power Amplifier

Includes the following accessories:
- 3 × JP0035 BNC Plugs
- Mains Cable
- Amplifier wiring: 12 m (40 ft)
- Options: Power Amplifier Type 2719

Optional Accessories:

- Drive cable with two 4-pin Neutrik® Speakon® plugs at both ends for driving Type 4808 (new version), 5 m (16.4 ft)
- Cable with 4-pin Neutrik® Speakon® plug to two banana plugs for driving Type 4809, 5 m (16.4 ft)

TRADEMARKS

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HEADQUARTERS: DK-2850 Nærum · Denmark · Telephone: +45 4580 0500 · Fax: +45 4580 1405

www.bksv.com · info@bksv.com

Australia (+61) 2 8869 8888 · Austria (+43) 1 8657 2400 · Brazil (+55) 11 5188 8161
Canada (+1) 514 695 6225 · China (+86) 10 680 2996 · Czech Republic (+420) 2 6702 1100
Finland (+358) 9-755 950 · France (+33) 1 6980 7100 · Germany (+49) 421 17 87 0
Hong Kong (+852) 2548 7486 · Hungary (+36) 1 215 83 05 · Ireland (+353) 1 897 4083
Italy (+39) 02 576 68061 · Japan (+81) 3 5716 1612 · Republic of Korea (+82) 2 3471 0065
Netherlands (+31) 318 65 6290 · Norway (+47) 68 77 11 55 · Poland (+48) 22 816 75 56
Portugal (+351) 21 416 90 04 · Singapore (+65) 377 4512 · Slovak Republic (+421) 25 443 0701
Spain (+34) 91 659 08 20 · Sweden (+46) 8 449 8600 · Switzerland (+41) 44 8807 035
Taiwan (+886) 2 2502 7255 · United Kingdom (+44) 14 38 739 000 · USA (+1) 800 332 2040

Local representatives and service organisations worldwide