

# Product Data

## Battery Driven Power Supply — Type 2804

### USES:

- Field measurements of sound and vibration
- Field recording of data
- Measurements of sound insulation
- Traffic noise measurements

### FEATURES:

- Two identical channels

- Cross switching between inputs and outputs
- 200 V, 28 V or 0 V polarization voltage supply for condenser microphones
- Fits Brüel & Kjær modular cassette system for rack mounting
- Standard 1.5 V dry cells
- Meter indication of battery condition
- Two 28 V 10 – 32 UNF Microdot sockets for preamplifiers

The Microphone Power Supply Type 2804 is a portable supply for Brüel & Kjær  $\frac{1}{2}$ " Microphone Preamplifier Types 2639, 2645, 2669 B, 2669 L (with adaptor ZG 0350) and  $\frac{1}{4}$ " Types 2670 (with Adaptor ZG 0350) and 2633. It supplies 200 V, 28 V or 0 V polarization voltage for the condenser microphone, and 28 V supply for powering the preamplifier.

Two channels are provided. The inputs and outputs can be interchanged by a single switch to facilitate measurement at two positions without re-connecting the equipment.

Two additional power output Microdot sockets are available at the back, each supplying 28 V DC. Maximum current is  $2 \times 2$  mA or  $1 \times 4$  mA.

For use with the wide range of condenser microphones available from Brüel & Kjær, 0 V, 28 V or 200 V microphone polarization may be selected by a simple internal modification to the printed circuit board located under the bottom panel of the 2804. The polarization voltage setting can be checked from a socket on the rear panel of the instrument. Half-inch Condenser Microphone Type 4130 is designed for use with a nominal polarization voltage of 28 V, while 0 V is used for Pre-polarized Condenser Microphone Types 4155, 4188 and 4189.



To prevent battery drain the heating elements in the Types 2639 and 2645 are not powered from Type 2804. However, provision is made on

the rear of the 2804 for feeding the heating element from an external 6 V DC supply.

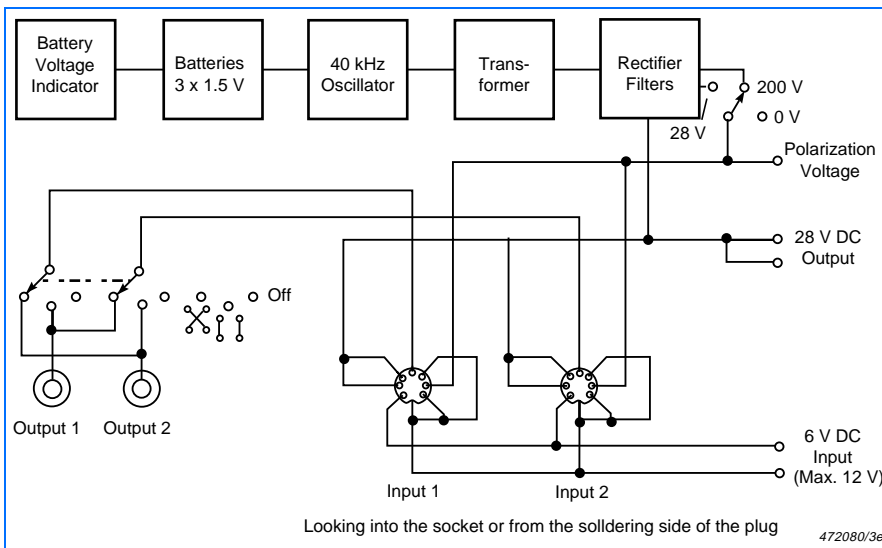


Fig 1 Block Diagram of the Type 2804

## Specifications 2804

### INPUTS:

Two 7-pin sockets for direct connection of Microphone Preamplifiers: 1/2" Types 2639, 2645, 2669 B, 2669 L (with Adaptor ZG 0350) and 1/4" Types 2670 (with Adaptor ZG 0350) and 2633

### SIGNAL OUTPUTS:

Two standard 14 mm Brüel & Kjær sockets. Input to output connections interchangeable by front panel switch

### 28 V DC OUTLETS:

Two 10 - 32 NF Microdot sockets. Max. current 2x2 mA or 1x4 mA with no preamplifier at the input. Short circuit protected

### POLARIZATION VOLTAGE:

200 V, 28 V, selectable with jumper on the circuit board. 0 V selection requires a simple circuit adjustment. Stability ±2% for all conditions mentioned above and battery voltage from 3 to 5 V

### NOISE AND RIPPLE:

Gives no additional noise on output of preamplifiers

### ATTENUATION:

0 dB, both channels

### CROSS-TALK ATTENUATION:

> 100 dB for frequencies below 20 kHz  
> 80 dB up to 200 kHz

### Power Supply

#### BATTERIES:

3x1.5 V Non-rechargeable alkaline batteries, type LR 20 ("D" size). 40 hours battery life for continuous operation with two preamplifiers.

Battery condition continuously displayed on meter during operation

#### PREAMPLIFIER SUPPLY VOLTAGE:

+28 V (2x2 mA or 1x4 mA) on input sockets or on output Microdot sockets at the rear

#### SOCKETS FOR HEATING ELEMENT:

Sockets are provided for an external DC source (Max. 12 V) for heating element in Types 2639 and 2645

### Dimensions and Weight:

**Height:** 132.6 mm (5.2 in)

**Width:** 69.5 mm (2.7 in), 2/12 of 19" rack module

**Depth:** 200.0 mm (7.9 in)

**Weight:** 1 kg (2.2 lb), 1.27 kg (2.8 lb) including batteries

**Note:** All values are typical at 25 °C (77 °F), unless measurement uncertainty is specified. All uncertainty values are specified at 2σ (i.e. expanded uncertainty using a coverage factor of 2)

### COMPLIANCE WITH STANDARDS:

	CE-mark indicates compliance with: EMC Directive.
<b>Safety</b>	EN 61010-1 and IEC 1010-1: Safety requirements for electrical equipment for measurement, control and laboratory use.
<b>EMC Emission</b>	EN 50081-1: Generic emission standard. Part 1: Residential, commercial and light industry. EN 50081-2: Generic emission standard. Part 2: Industrial environment. CISPR 22: Radio disturbance characteristics of information technology equipment. Class B Limits. FCC Rules, Part 15: Class B limits.
<b>EMC Immunity</b>	EN 50082-1: Generic immunity standard. Part 1: Residential, commercial and light industry. EN 50082-2: Generic immunity standard. Part 2: Industrial environment. <b>Note:</b> The above is guaranteed using accessories listed in this Product Data sheet only.
<b>Temperature</b>	IEC 68-2-1 & IEC 68-2-2: Environmental Testing. Cold and Dry Heat. Operating Temperature (normal batteries): -10 to +40°C (14 to +104°F) Operating Temperature (alkaline batteries): -10 to +60°C (14 to +140°F) Storage Temperature (batteries removed): -25 to +70°C (-13 to +158°F) IEC 68-2-14: Change of Temperature: -xx to +yy°C (2 cycles, 1°C/min.)
<b>Humidity</b>	IEC 68-2-3: Damp Heat: 90% RH (non-condensing at 40°C (104°F))
<b>Enclosure</b>	IEC 529: Protection provided by enclosures: IP 20

# Ordering Information

**Type 2804** Battery Driven Power Supply  
**Includes the following accessories:**  
3×QB0004: 1.5 V non-rechargeable alkaline  
batteries, type LR20 ("D" size)

## Optional Accessories

**QB 0008:** 1.25 V rechargeable NiCd  
batteries, type R20 ("D" size)  
**DB 2609:** Adaptor for connecting earlier  
Brüel & Kjær male plugs to input

Brüel&Kjær reserves the right to change specifications and accessories without notice



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