

- Filtered output according to ITU-T Recommendation 0.41
- Amplified output, x1, x10, x100, x1000
- RMS DC filtered/amplified output
- 2 fully independent channels
- KEMO® Psophometric Filter
- 110V or 240V AC supply
- Rear Panel outputs
- 19inch 1U, 390mm deep rack mounting chassis
- Optional custom transit case available

The RM2-PSP is a dual channel Psophometer and Psophometric filter in accordance with ITU-T 0.41. These weighting filters are designed for measuring the impact of noise on telecommunications circuits used in speech transmission. Still widely used in established Rail and other critical communication channels used by Emergency and Military services around the world.



The rear panel of the RM2-PSP has 4 outputs per channel via 50Ω BNC connectors:

1. Input Monitor (unity gain) on both front and rear panels
2. Amplified output (x1, x10, x100 or x1000 up to 10V peak voltage swing)
3. Filtered amplified output according to ITU-T recommendation O.41
4. RMS DC output corresponding to filtered amplified output (1V RMS out gives 1V DC +/- 5%)

The RMS-PSP chassis is connected to earth via the IEC mains connector, however the signal 0V is not connected to earth internally. Both of these are accessible via rear 4mm connectors.

Technical Specifications

Maximum Ratings	Value
Input Isolation to case and outputs	1500V
Power into signal inputs	50mW maximum AC+DC
DC current into signal inputs	3mA
AC input voltage	6V RMS
Operating Temperature Range	5 to 35°C
AC Supply input voltage	105-125V or 210-250V AC at 50-60Hz
AC Supply input power	25VA
Maximum gain	x1000
Physical	
Dimensions (mm)	420(W) x 390(D) x 50(H)
Mass (kg)	4.9
Enclosure Material	Aluminium Chassis/Stainless Steel front/rear

Due to continued product development Kemo Limited reserve the right to change specification without notice.

Performance	Value
Channels	2 fully independent
Input Impedance	600 Ohms
Output Impedance	50 Ohms
Gain	x1, x10(20dB), x100(40dB), x1000(60dB)
Gain matching between channels	Within 0.1dB at 1kHz
Output voltage swing	±12V maximum
Recommended input voltage range	1 to 4 volts
RMS calibrated range	0.1 to 1 volts based on filtered amplified O/P
RMS to DC conversion gain	1:1 ±0.5dB
Frequency Response	ITU-T O.41 (1994) Table 1/O.41 (at x1 gain)
Frequency Response tolerance	ITU-T O.41 (1994) Table 1/O.41 (at x1 gain)
Input frequency range	100Hz to 6kHz for filtered output and RMS DC
Input level indicator (nominal)	Green 1V, Amber 7V, red 9V (peak)
Overload indicator (nominal)	10V peak
Output Noise	< 300 nV√ Hz (typical)
Output connectors	BNC 50Ω
Input connectors	2 x 4mm on 19mm spacing for each channel
Filter Module	KEMO FM-1200/PSP

The word Psophometer comes from the Greek word **psóphos**, meaning noise, and the suffix **meter** meaning measuring instrument.

A psophometer is an instrument used in telecommunications to measure the perceptible noise on a telephone circuit. It essentially measures the level of noise signals, taking into account how humans perceive noise at different frequencies, this allows an understanding of how it impacts the quality of telephone conversations.

A wide range of applications including rail and military use Psophometric measurements to determine the effect on critical communication channels

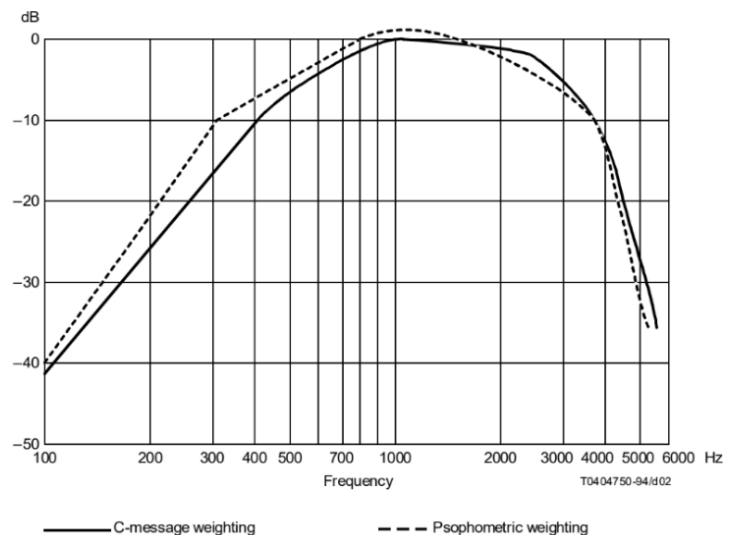


FIGURE A.1/O.41
Comparison between psophometric and C-message weighting

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