

Single line minirecorder PM 8110

120mm chart width

Four calibrated input ranges and
variable span adjustment

2 Standard chart speeds (3 options)

Adjustable zero setting

Built-in calibration

Compact dimensions and low weight

Mains or battery operation

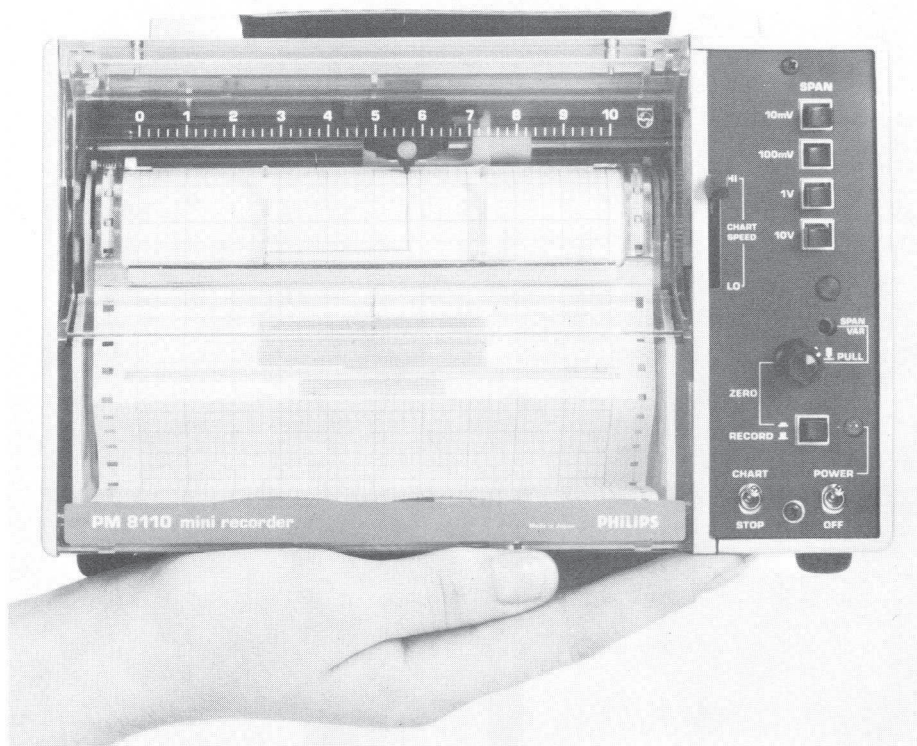
Ideal for OEM

Most R & D labs will find the PM 8110 an ideal back-up recorder to support the more sophisticated types, especially where trends, rather than instantaneous values need to be seen. Industry too needs compact portable recorders for on-site monitoring or for incorporation in OEM equipment. The very compact and light weight PM 8110 will fulfil these and many other varied applications.

Used with suitable transducers, for instance, it will monitor mechanical or physical parameters: it can also find application in pollution monitoring, gas chromatography or similar chemical analyses.

The 120mm chart width achieves a 20% better resolution than conventional 100mm types and the various options for chart speeds enhance the general performance. The convenient Z-fold chart allows full access to all recordings over its full length and the nylon pen ink cartridge is easily fitted or removed.

All controls are located on the front panel and a calibration facility is built-in. Easy servicing is assured by a modular design which gives easy access to all components.



TECHNICAL SPECIFICATION

Accuracy

Maximum error $\pm 1\%$ of FSD

Reproduceability

$< 0.5\%$ of FSD

Temperature drift

$< 20\mu\text{V}/^\circ\text{C}$ max.

Input sensitivity

Push-button control, 4 positions: 10mV, 100mV, 1V and 10V

Variable span control between the ranges increases span to $100V_{\text{FSD}}$

Zero setting

Continuous zero adjustment over full scale and zero check switch

Step response time

$< 0.5\text{s}$ for FSD

Frequency response

10% amplitude decrease for sinusoidal voltage with amplitude of 66% of scale: 2Hz

Chart speeds

PM 8110/OX:

Standard, 5 and 20mm/min. On/Off switch at the front

For alternative chart speeds, see options.

Chart

Z-fold chart, refolding automatically

Effective recording width: 120mm

Length per book: 15m

Writing systems

Disposable nylon pen cartridge

Recording length 2500m approx.

Manual pen lift

The chart and writing system is protected by a transparent front cover.

Potentiometer

Straight rod, with direct coupling to measuring carriage

Linearity: $\pm 0.15\%$ of FSD

Input impedance

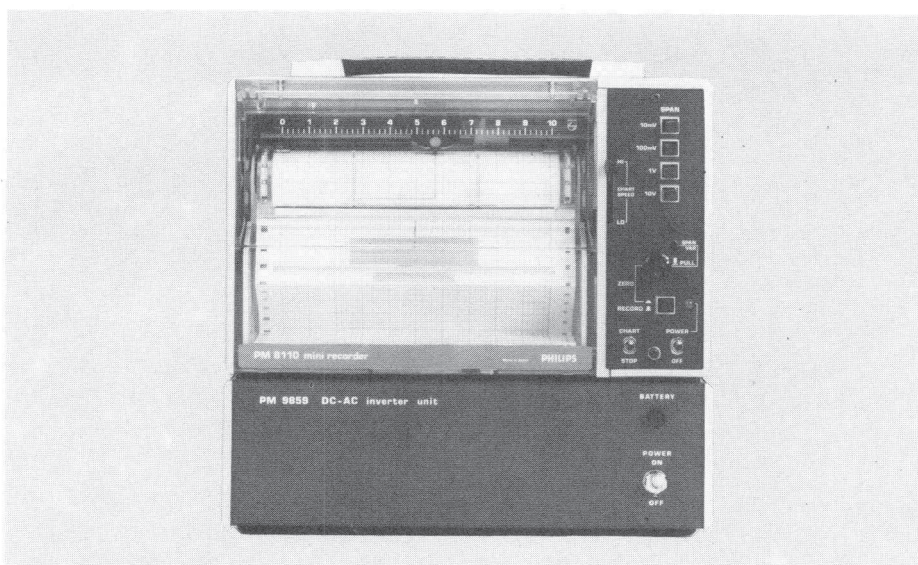
1M Ω

Source impedance

10k Ω max.

Damping

Factory adjusted. Overshoot $< 1\text{mm}$



PM 8110 shown fitted with DC-AC inverter PM 9859

Stray voltage rejection

With $1k\Omega$ between Hi and Lo
AC CMRR 80dB
AC SMRR 15dB 40dB with optional filter
DC CMRR 90dB

Max. input voltage

Between Hi and Lo
100V_{DC+ACpk} for 10mV and 100mV ranges
300V_{DC+ACpk} for 1V and 10V ranges

Max. voltage between Lo and ground

24V_{DC} (Test voltage 500V_{eff})

Isolation resistance

> 5M Ω between input terminals and earth

Power requirements

100–117–217–234V $\pm 10\%$

Dimensions and weight

(w \times h \times d) 214 \times 130 \times 170mm
(8.4 \times 5.1 \times 6.9-in)
3kg (6.6lb)

Measuring system

Null balance potentiometric servo system with DC-amplifier and servo motor

Calibration voltage

At the rear a switch is provided which connects a 50mV calibration voltage to the input of the instrument. This voltage serves to calibrate the variable span setting.

ACCESSORIES SUPPLIED

- Carrying handle
- Power cable
- Operating manual
- Chart
- 2 folded books of 15m each, 0...10lin. type PM 9910
- Ink
- 2 disposable nylon pen cartridges, colour blue type PM 9856/05.

OPTIONAL ACCESSORIES

- PM 9859 DC-AC inverter for internal and external battery operation. Input voltage (DC) 12V $\pm 10\%$ or 24V $\pm 10\%$ (selected by switch). Input current approx. 0.5A at 12V_{DC}. Output voltage (AC) 220V square wave, 50 or 60Hz. Output power 10VA max. Internal batteries (PM 9397) provide 5 hours operation and a switch selects internal/external battery operation.

Dimensions: (w \times h \times d)

214 \times 65 \times 170mm

Weight:

1.3kg without internal batteries
2.7kg with internal batteries fitted

Mounting:

the inverter is fitted underneath the minirecorder

- PM 9397 Rechargeable battery (2 required) sealed lead acid 6V 3Ah
PM 9880 19-in rackmount kit
PM 9881 Input signal filter
AC SMRR 40dB

INSTRUMENT OPTIONS

- PM 8110/2x Mini recorder with non-standard chart speeds of 20 and 80mm/h
PM 8110/4x Mini recorder with non-standard chart speeds of 20 and 80mm/min.
N.B. Other chart speeds on request.

CONSUMABLES

- PM 9856/05 Nylon pen cartridges blue, set of 10
PM 9910 Pack of Z-fold charts, 5 books each 20m length, scale 0...10lin.