1. TECHNICAL DATA

All values mentioned in this description are nominal; those given with tolerances are binding and guaranteed by the manucfacturer.

1.1. ELECTRICAL SPECIFICATIONS

1.1.1. D.C. voltage measurements

Range: 100 μV . . . 1000 V
4 sub-ranges: 999.9 mV; 9.999 V; 99.99 V; 999.9 V

Resolution: 100 μV

Accuracy: ± 0.2% of reading ± 0.05% of full scale

Temperature coefficient: 300 ppm/°C of reading

Input impedance:

Range	Input impedance
999.9 mV 9.999 V	10 MΩ ± 1%
99.99 V 999.9 V	9 M 01 ± 1%

Protected up to: 1000 V . . . or 1000 V~ rms
1400 V peak

1.1.2 A.C. voltage measurements

Range: 100 μV . . . 1000 V
4 sub-ranges: 999.9 mV; 9.999 V; 99.99 V; 999.9 V

Resolution: 100 μV

Accuracy: ± 0.5% of reading ± 0.1% of full scale (50Hz)
Valid > 1% of range

Frequency influence: Additional error

Error	± % of full scale
40 Hz. . . 1 kHz	± 0.5
1 kHz. . . 10 kHz	± 1
10 kHz. . . 20 kHz	± 5

Temperature coefficient: 300 ppm/°C of reading

Input impedance:

Range	Input impedance
999.9 mV 9.999 V	2 M Ω ± 1%
99.99 V 999.9 V	1 M 802 ± 1%

AC-DC conversion: True RMS

Crest factor: 2 at end of range

Protected up to: 600 V~ rms + 400 V ⎓
1400 V peak

1.1.3. D.C. current measurements

Range

10 μA - 100 mA
1 mA - 10 A
2 fixed ranges with separate inputs; 99.99 mA
9.999 A

Resolution

Range	Resolution
99.99 mA	10 μA
9.999 A	1 mA

Accuracy

± 0.5% of reading ± 0.1% of full scale

Temperature coefficient

500 ppm/^{O}C of reading

Voltage drop over shunt

Range	Voltage drop
99.99 mA	< 200 mV
9.999 A	< 150 mV

Protected up to

Range	Protection	
99.99 mA	Fuse 315 mA quick	250 V rms
9.999 A	No protection	

1.1.4. A.C. current measurements

Range

10 μA - 100 mA
1 mA - 10 A
2 fixed ranges with separate inputs; 99.99 mA
9.999 A

Resolution

Range	Resolution
99.99 mA	10 μA
9.999 A	1 mA

Accuracy

± 0.8% of reading ± 0.1% of full scale at 50 Hz input signal

Temperature coefficient

500 ppm/^{O}C of reading

Voltage drop over shunt

Range	Voltage drop
99.99 mA	< 200 mV
9.999 A	< 150 mV

Protected up to

Range	Protection	
99.99 mA	Fuse 315 mA quick	250 V rms
9.999 A	No protection	

1.1.5. Resistance measurements

Range

0.1 Ω .... 10 M Ω
5 sub-ranges: 999.9 Ω ; 9.999 kΩ ; 99.99 kΩ
999.9 kΩ; 9.999 M Ω

Resolution

0.1 Ω

Accuracy

Range	± % of reading	± % of full scale
999.9 Ω 9.999 kΩ 99.99 kΩ	± 0.5	± 0.1
999.9 kΩ 9.999 MΩ	± 1	± 0.1

Temperature coefficient

Range	Temp. coefficient
999.9 Ω 9.999 kΩ 99.99 kΩ 999.9 kΩ	300 ppm/°C of reading
9.999 MΩ	500 ppm/°C of reading

Protected up to: 250 V rms

1.1.6. Diode measurements

Driving current: 1 mA

Range: +999.9

Protected up to: 250 V rms

1.1.7. Temperature measurements

Probe to be used: PM 9248

Measuring range: −60 °C . . . +200 °C

Accuracy (Probe combined with PM 2517)

Range	± %of reading	± °C
− 60 °C . . . +100 °C	1	2
+ 100 °C . . . + 200 °C	+1, −3	2

1.2. GENERAL DATA

Display: 7-segment 11 mm LED display, with automatic decimal point indication.

Maximum reading: 9999

Overrange indication: 0 (only 0 of 10^2 digit is lighted)

Polarity indication: + or − automatically

Unit indication: mV, Ω, MΩ by LED's
V, kΩ, °C, (m)A by function selector

Function indication: V ⎓, V~, kΩ, , °C, (m)A ⎓, (m)A~ by function selector

Inputs: Combined V, mA, ⏚, Ω socket
Common socket
Special 10A input socket
Floating inputs

Range selection: Automatic : for function V and Ω
Manual : for all ranges

Series mode rejection ratio (SMRR) dc ranges

Range	SMRR	
99.99 mV 9.999 V	60 dB	48 HZ — 1 kHz
99.99 V 999.9 V	40 dB	48 Hz — 1 kHz

Common mode rejection ratio (CMRR)

dc ranges	100 dB	
ac ranges	80 dB	50/60 Hz

Analog to digital conversion: Integrating

Conversion time: 200 msec.

Conversion rate: 5 conv/sec.

Protection: Max. voltage between 0 and mains earth (⏚) 400V⎓
For specific protections refer to the function specifications

Response time

Without ranging

Function	Response time
V ⎓, A ⎓, °C	max. 1 sec.
V~ A~	max. 1 sec.
Ω	max. 1 sec.

With ranging

Function	Response time
V ⎓	max. 3 sec.
V~	max. 5 sec.
Ω	max. 6 sec.

Recovery time: max. 3 sec.

Data hold: Via probe input

Climatic conditions

Reference temperature	±23 °C	± 2 °C
Rate range of use	–10 °C...	+55 °C
Specified range	0 °C...	+45 °C
Limit range of storage and transport	–40 °C...	+70 °C
Relative humidity (excluding condensation)	20% ...	80%

Power supply

4x 1.5 V batteries, e.g. types: Philips R 14 TR
4x 1.5 V NiCd rechargeable batteries; refer to 1.3. (special requirements), e.g. types: DEAC, RS 15
GENERAL ELECTRIC, GCT 1.5 SB
FURUKAWA, S 104
External 9 V power supply PM 9218

Operation

OFF
STAND BY, display for 40 sec. if DISPLAY switch is activated
ON, continuous display

Battery life-time: 30 hours (continuous display)

Mechanical data

Dimensions	Length	165 mm
	Width	115 mm
	Height	50 mm
Cabinet	Material	ABS
Weight	≈0.7 kg (without batteries)	

1.3. POWER SUPPLY WITH RECHARGEABLE BATTERIES

The PM 2517 delivered from the factory is wired for use with dry-cell batteries power supply or for a 9 V external power supply using the PM 9218. For rechargeable batteries power supply the wiring inside the instrument has to be modified. The charging time is 18 hours.

Note: When the instrument is wired for rechargeable battery power supply, dry-cell batteries should not be used.
The 9 V external power supply will damage the dry-cell batteries. When dry-cell batteries are used again, the instrument should be wired to its original state.

For changing the wiring proceed as follows:

- Remove the battery cover
- Remove the two special nuts situated under the battery cover
- Pull the rear cover from the instrument.

Note: Take care that the wiring to the battery compartment does not break. When mounting the rear cover again take care that the wiring is fitted properly.