

Electricity Meters

TM-10

TV and satellite signal level meter

This TV and satellite signal level meter measures the quality of TV VHF / UHF signals from an antenna to the customer's IRD. It is compact, portable and very easy to use, making it the ideal test instrument for satellite installers. It is very useful for optimising the placement or orientation of installations. Its large LCD with bar graph shows the reading of several values, such as frequency, field value, operative option and the unit of measurement. The metal enclosure provides good protection of internal systems or outdoor applications.

- TV and satellite signal level measurements
- PLL tuning control for frequency selection
- Audio level measurement of 4.5 / 5.5 / 6 and 6.5 MHz
- Line voltage measurement (70 V)
- Rechargeable battery / Auto shut-off
- 99 favourite channel memory
- Peak holder function for detecting maximum input level
- Buzzer for acoustic signal strength monitoring
- Automatically records selected adjustment



Technical specifications

Frequency range	5 to 862 MHz; 250 kHz
Tuning control	PLL control
for frequency	(tuning control of frequency)
Input level range	30 to 120 dB μ V; ± 3 dB (0 to +40 °C) -0.1 dB
HF input	F connector
Audio	A: +4.5 MHz / B: +5.5 MHz C: +6 MHz / D: +6.5 MHz
Frequency range	frequency
resolution	(5 to 862 MHz in steps of 250 kHz)
Memory	video, audio, peak value
Units	dB, μ V, DCV, ACV
Power	12 V / 1200 mA rechargeable batteries
Battery life	3 hours
External power supply	12 V DC, 500 mA
Indicators	frequency, channel, level, dB, μ V, ACV, DCV function, battery level, audio level (bandwidth) and bar graph
Dimensions	180 x 75 x 150 mm
Weight	1500 g



Contents

TM-10 TV and satellite signal level meter, carrying case, battery charger, internal batteries and user's manual (For U.K. customers: incl. U.K. AC Mains Power Adaptor)

Model No.	Description
TM-10	TV and satellite signal level meter

PCE-123

Multifunction calibrator for thermocouple and frequency inputs

This precision multifunction calibrator is a device that doesn't need mains connection and it has a frequency source of 1 Hz to 62.5 kHz in over 700 steps. You will be able to simulate phase regulation signals and individual signals in your technical checks and adjustments (MSR). You will be able to check and calibrate all the measurement parameters. The nominal value indicator allows you to prepare an electrical output signal. This calibrator also possesses an automatic graduation, set output percentage steps (0 to 100%) and a direct indication of the output value.

- 4 to 20 mA (1 k Ω , 24 V power supply)
- 0 to 100 mV / 0 to 1 V / 0 to 12 V
- K, J, E, T thermocouples (°C and °F)
- Frequency range: 1 to 62500 Hz
- Basic accuracy: 0.025 %
- Easy to use
- Step and auto-ramp features
- Output 0 to 100 %
(mA, mV, V)
- ISO calibration certificate (optional)



Technical specifications

mA DC Current (1 k Ω max. load , 24 V power supply)	
Range	4 to 20 mA / 0 to 20 mA / 0 to 24 mA
Resolution	1 μ A
Accuracy	± 0.025 % ± 3 μ A
mV, V DC Voltage (1 mA power supply)	
Ranges / Resolution	0 to 100.00 mV / 10 μ V 0 to 10.000 V / 1 mV 0 to 1.0000 V / 100 μ V
Accuracy	± 0.05 % ± 30 μ V ± 0.05 % ± 3 mV ± 0.05 % ± 300 μ V
K, J, E, T Thermocouples	
Ranges	-200 to 0 °C and 0 to +1370 °C
Resolution	1 °C
Accuracy	± 1.1 °C and ± 0.8 °C
Frequency	
Ranges	1 to 125 Hz and 126 to 62.5 kHz
Resolution	1 to 125 Hz / 1 Hz 126 to 62.5 kHz in 604 steps
Accuracy	± 0.04 Hz
Power	9 V battery or 6 batteries (1.5 V)
Dimensions	88 x 168 x 26 mm
Weight	330 g

Contents

PCE-123 precision multifunction calibrator, carrying case, type-K adaptor, batteries, test cables with alligator clips and user's manual

Model No.	Description
PCE-123	Multifunction calibrator

Optional accessories

CAL-123	ISO certificate
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PCE-OC 1

Handheld Digital Storage Scope Meter / Oscilloscope with USB-Interface

This programmable universal oscilloscope offers enhanced features that similar types test instruments on the market today don't have. The most frequent use of the oscilloscope is troubleshooting malfunctioning electronic equipment. One of the advantages is that the oscilloscope can be used in a frequency range of 5 MHz in real 2-channel-use and shows the signals graphically: where a single voltmeter may show a totally unexpected voltage, the scope may reveal that the circuit is oscillating.

- Dual channel and auto calibration
- DC to 5 MHz, 1 MHz oscilloscope band width
- Built-in auto ranging true RMS multimeter
- PC interface for transferring measurement data and waveform
- Backlight display, 132 x 128 pixels
- Data hold and run mode
- Low battery indicator
- ISO calibration certificate (optional)



Technical specifications

Oscilloscope	
Input channels	2
Band width frequency	5 MHz DC
Sampling rate	25 MS/s (dual) / 50 MS/s (single)
Input	AC, DC
Input impedance	1 M Ω
Accuracy	± 3.0 % vertical / ± 0.01 % horizontal
Waveform memory	16 curves
Multimeter	
Ranging	auto, manual
Voltage DC	1000 V DC / ± 0.3 % +3 dgt.
Voltage AC	750 V AC (TRUE RMS) / ± 0.75 % +5 dgt. (50 to 450 Hz)
Resistance	5 / 50 / 500 k Ω / 5 M Ω / ± 0.5 % +5 dgt.
Continuity buzzer	1.7 V test voltage
Frequency	100 Hz / 1 / 10 / 100 kHz / 1 / 10 MHz ± 0.05 % +5 dgt.
Revolutions	240 to 60,000 r.p.m.
General specifications	
Display	132 x 128 pixels
Power	3.7 V Li-Ion battery or mains power adaptor
Interface	USB
Dimensions / Weight	90 x 195 x 40 mm / 460 g
Approvals	DIN 57 411 / VDE 0411; IEC 1010; EN 61010; CAT III / 600 V

Contents

PCE-OC 1 oscilloscope, software, USB cable, test leads, case, holster, batterie charger, Li-Ion battery and user's manual

Model No.	Description
PCE-OC 1	Oscilloscope

Optional accessories

CAL-PCE-OC 1	ISO certificate
PCE-CA 502	Amp clamp adaptor to 1000 A

Serie PCE-UT

Digital storage 2 channel oscilloscopes

High performance, 2 channel oscilloscopes with colour display (PCE-UT2025B monochrom display) that are an ideal replacement for analogue scopes in service, quality testing, repair and education environments. The Serie are 2-channel oscilloscopes with 25 MHz up to 250 MHz bandwidth, 250 MS/s up to 500 MS/s sampling rate. With the software you can carry out communication between a computer and an oscilloscope through serial or USB, and in turn perform remote control. This software also provides testing, waveform and sampling data reading functions to facilitate further signal testing and analysis.

- Up to 500 MS/s real time or 25 GS/s ET sampling rate (depending on model)
- PC interface for transferring measurement data, waveform and sampling data reading
- 5,7 " colour display, 320 x 240 pixels (PCE-UT 2025B monochrom display)
- FFT, ADD, SUB, MULT, DIV and REV maths functions
- Extensive cursor measurements
- USB and RS-232 interface
- Comes with 2 x probes, software and user manual
- ISO calibration certificate (optional)



Technical specifications

Model	PCE-UT 2025B	PCE-UT 2042C	PCE-UT 2082C	PCE-UT 2152C	PCE-UT 2202C
Band width frequency	25 MHz	40 MHz	80 MHz	150 MHz	200 MHz
Rise Time	<14 ns	<8.7 ns	<4.5 ns	<2.3 ns	<2.3 ns
Sample rate	250 MS/s	500 MS/s to 1 GS/s	500 MS/s to 1 GS/s	500 MS/s to 1 GS/s	500 MS/s to 1 GS/s
Vertical sensitivity	2 mV to 5 V/div	2 mV to 5 V/div	2 mV to 5 V/div	2 mV to 5 V/div	2 mV to 5 V/div
Record length (max)	1 M	1 M	1 M	1 M	1 M
Sample rate	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s	real time 500 MS/s to 1 GS/s, equivalent: 25 GS/s
Scan time base	20 ns to 50 s/div	10 ns to 50 s/div	5 ns to 50 s/div	2 ns to 50 s/div	2 ns to 50 s/div
Trigger type	Edge, Pulse, Video and Alternate	Edge, Pulse, Video and Alternate	Edge, Pulse, Video and Alternate	Edge, Pulse, Video and Alternate	Edge, Pulse, Video and Alternate
Automatic waveform measurements	28	28	28	28	28
Ports	RS-232	USB Device, USB Host, RS-232	USB Device, USB Host, RS-232	USB Device, USB Host, RS-232	USB Device, USB Host, RS-232
Mathematics	Add, Subtract, Divide, Reverse and FFT	Add, Subtract, Divide, Reverse and FFT	Add, Subtract, Divide, Reverse and FFT	Add, Subtract, Divide, Reverse and FFT	Add, Subtract, Divide, Reverse and FFT
Memory	1Mb (2x 512k) and 10 settings	1Mb (2x 512k) and 10 settings	1Mb (2x 512k) and 10 settings	1Mb (2x 512k) and 10 settings	1Mb (2x 512k) and 10 settings
Display	Monochrome LCD, 320 x 240, diagonal 145 mm	64 k, full colour LCD, 320 x 240, diagonal 145 mm	64 k, full colour LCD, 320 x 240, diagonal 145 mm	64 k, full colour LCD, 320 x 240, diagonal 145 mm	64 k, full colour LCD, 320 x 240, diagonal 145 mm
Power	100 to 240 V, 45 Hz to 440 Hz	100 to 240 V, 45 Hz to 440 Hz	100 to 240 V, 45 Hz to 440 Hz	100 to 240 V, 45 Hz to 440 Hz	100 to 240 V, 45 Hz to 440 Hz
Dimensions	320 x 150 x 130 mm	320 x 150 x 130 mm	320 x 150 x 130 mm	320 x 150 x 130 mm	320 x 150 x 130 mm
Weight	4.1 kg	4.1 kg	4.1 kg	4.1 kg	4.1 kg
Approvals	CAT II	CAT II	CAT II	CAT II	CAT II

Contents

PCE-UT oscilloscope (one of these models), probe x 2 (1x, 10x switchable), software, power cord and english user's manual

Model No.

Description

PCE-UT 2025B	25 MHz Oscilloscope, monochrom Display
PCE-UT 2042C	40 MHz Oscilloscope, colour Display
PCE-UT 2082C	80 MHz Oscilloscope, colour Display
PCE-UT 2152C	150 MHz Oscilloscope, colour Display
PCE-UT 2202C	200 MHz Oscilloscope, colour Display

Optional accessories

CAL-PCE-UTO	ISO certificate
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