

35080M/199XRAY

Non-Invasive kVp Divider and Medical ScopeMeter

Technical Data



35080M Non-Invasive kVp Divider

The 35080M Non-Invasive kVp Divider quickly and accurately measures kVp for all modalities. The unit checks both above and below table tubes and displays the direct kVp values on either the 35050AT Dosimeter, the 199XRAY Medical ScopeMeter, or optional Excel Add-in software. The 35080M is highly portable and eliminates the need for bulky and heavy high-voltage divider tanks. In fact, it's so compact in size that it fits into a shirt pocket.

A patented* wide-range filter pack is included with the 35080M and provides accurate readings for the range of 50 kVp to 150 kVp. Four optional filter packs are available for use with the 35080M for CT, mammographic, and mobile applications.

199XRAY Medical ScopeMeter

The 199XRAY Medical ScopeMeter has all of the normal oscilloscope functions, as well as the speed, performance, and analysis power for the more demanding applications. This high-performance oscilloscope offers specifications found on top-end bench instruments. With up to 200 MHz bandwidth, 2.5 GS/s real-time sampling, and a deep memory of 27,500 points per input, the 199XRAY is ideal for engineers who need the full capabilities of a high-performance oscilloscope in a handheld, battery-powered instrument.

In addition, the 199XRAY is especially designed for use with x-ray systems. This ScopeMeter displays kVp waveforms and direct kVp values simultaneously on an easy-to-read screen. Now you no longer have to waste time calculating scope traces to derive the kVp values.

The winning combination

The 35080M and 199XRAY are commonly used x-ray tools unmatched by traditional meters. This winning combination allows busy service engineers and biomedical personnel the ability to perform fast and accurate verification of kVp values for calibration or QA assessment. Fluke Biomedical is offering this combination in a convenient kit with all the accessories you need to get started.

35080M

Non-Invasive kVp Divider



Technical specifications

Range

50 kVp to 150 kVp, using only the wide-range radiographic filter pack (Model 37617). Range and versatility are extended with the use of special optional filter packs

Accuracy

$\pm 2\%$ of reading in the range of 50 kVp to 150 kVp, exclusive of linearity, filtration, and gain effects. Linearity corrections automatically applied when using 35080M with either 35050AT Dosimeter or 199XRAY

Response time

150 μ s (10 % to 90 %)

Calibration

Internally generated signal provides a calibration check

Minimum time for valid reading

1 ms, three-phase; one line cycle, single-phase

Tube current

Wide dynamic range from 4 mA to 3000 mA (three-phase), 2 mA to 1500 mA (single-phase). Generator settings will vary in waveform and distance. Less than ± 1 kVp effect for wide-range radiographic filter pack covering 50 kVp to 150 kVp. Specialty filter packs may have different characteristics

Environmental

Temperature range

0 °C to 35 °C

Relative humidity

20 % to 80 %

Storage temperature

-35 °C to 50 °C

Orientation

Long axis of the Model 35080M Non-invasive kVp Divider oriented perpendicular to axis of x-ray tube to eliminate heel effect

Power requirements

9 V battery, 60 hours operation

Dimensions (LxWxH)

6 cm x 9 cm x 21 cm
(2.38 in x 3.5 in x 8.25 in)

Weight

0.68 kg (1.5 lb)

Key features

- New miniaturized configuration for convenient transport to the job site
- Fast/easy non-invasive kVp values for calibration/QA
- Non-invasive technology eliminates the hazards of high-voltage cables and the need for bulky divider tanks
- Auto ON/OFF when connected/disconnected
- Optional filter packs enable testing in all modalities
- Rh/Rh measurement capability when 35080M is used with cadmium K-edge and linear mammo filter pack pair
- Convenient storage/carrying case

FlukeView® for Windows®

Documenting

- Transfer waveforms, screens, and measurement data from the ScopeMeter to a PC. Print or import the data into your report

Enhancing

- Add user text to individual ScopeMeter settings, providing guidance to the operator when recalling a setup

Archiving

- Create a library of waveforms with your comments for easy reference and comparison. Store complete replay cycles for analysis of waveform changes. Store complete memory content of the ScopeMeter on your PC for backup purposes

Waveform comparison

- Store reference waveforms, add operator instructions, and send both to the ScopeMeter for waveform comparison and “Pass/Fail” testing

Analysis

- Use cursors, perform spectrum analysis, or export data to other analysis programs

MA190 Accessory Kit

The MA190 accessory set enables interconnection of the Fluke 199XRAY for use in the field of Medical Imaging and Video systems. The kit is included in the Fluke 199XRAY as a standard. The accessory kit includes the following:

- 50 Ω BNC feedthrough terminator, in insulated enclosure, to maintain proper termination of test connections during measurement
- 50 Ω BNC terminator with 10:1 signal attenuation, to keep test terminal properly loaded while getting optimum signal amplitude to benefit from the instrument’s extended offset range
- 1 Ω current shunt for current measurements, in insulated enclosure
- Safety-designed BNC cable, 1.5 m (5 ft), with plastic connectors for safe connection to test terminals even when not at ground potential
- Insulated BNC (f) to 4 mm banana-plug adapter
- Dual 4 mm banana receptacles (1 red, 1 black)

Dimensions (LxWxH)

25.6 cm x 16.9 cm x 6.4 cm
(10.1 in x 6.6 in x 2.5 in)

Weight

2 kg (4.4 lb)

Ordering information

Model

35080M/199XRAY kVp Divider and Medical ScopeMeter Kit [includes Non-Invasive kVp Divider (35080M), wide-range filter pack (37617), carrying case (121002900), Medical ScopeMeter (199XRAY), Medical ScopeMeter Accessory Kit (MA190)]

199XRAY Medical ScopeMeter with kVp capabilities [includes the MA190 Medical ScopeMeter Accessory Kit]

35080M Non-Invasive kVp Divider [includes wide-range filter pack (37617) and carrying case (1210029000)]

199XRAY standard accessories

MA190 Medical ScopeMeter Accessory Kit [includes FlukeView® for Windows® software, 50 Ω BNC feed-through terminator, 50 Ω BNC terminator with 10:1 signal attenuation, 1 Ω current shunt for current measurements, safety-designed BNC cable (1.5 m/5 ft), insulated BNC (f) to 4 mm banana-plug adapter, dual 4 mm banana receptacles (1 red, 1 black)]

35080M standard accessories

37617 Wide-Range Filter Pack
1210029000 Carrying Case

35080M optional accessories

33551 CT Filter Pack
37351 Linear mammo Filter Pack
37355 Cadmium K-Edge Filter Pack
37946 Mobile Filter Pack
38237 Low range Filter Pack

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About Fluke Biomedical

Fluke Biomedical is the world’s leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance. Highly credentialed and equipped with a NVLAP Lab Code 200566-6 accredited laboratory, Fluke Biomedical also offers the best in quality and customer service for all your equipment calibration needs.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today’s challenges.

Fluke Biomedical Regulatory Commitment

As a medical test device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 certified and our products are:

- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required
- NRC Compliant, where required