

## FH40GL

### Digital Survey Meter

The FH40G Family of advanced digital survey meters is designed for multiple radiation protection measurements. This integrated design represents a versatile, user-friendly radiation measurement system that can be operated stand-alone or networked.



- Versatile multipurpose meter
- Backlit LCD digital readout & 3 decade logarithmic analog bargraph
- Setup and Calibration via Windows PC programs
- Data Logging up to 256 data records
- Simultaneously operates internal and external detectors
- Audible & visual dose and dose rate alarms

The Model FH40GL is a stand-alone unit with an internal proportional detector and can simultaneously function with an external detector.

The Model FH40GX only operates with an external detector. The external probes utilized with either model of FH 40G are "smart" with the calibration parameters automatically adjusting with a change of probes.

Measured values are shown via a clear, backlit LCD display. Measurements are digital with a 3 decade logarithmic analog bargraph.

An intelligent rate meter algorithm (ADF mode) detect and indicates small changes in dose rate, suppressing random noise. Additional information includes alarm settings(s), audio speaker, battery voltage, external probe parameters, date and time and many user-selectable functions.

The FH40G is rugged, lightweight, fits snugly in the palm of the hand and is easy to operate with large keys that enable users wearing gloves. Internal diagnostics ensure proper functioning of the detector(s) and the electronics. If the battery voltage falls below a pre-defined value, the corresponding icon on the display flashes

giving the user 20 hours of remaining time before replacing the batteries.

Alarm values are established for dose rate and integrated dose. When an alarm value is exceeded, a permanent signal is emitted. In parallel to the measured value display, an audible speaker can be activated to signal detector pulses.



The memory of the FH40G models are designed to record up to 256 data points containing measurement number, date, time and dose rate at the internal detector and external detector, status, and barcode information.

The stored values can be read directly from the LCD, accessed at any time and can also be processed and transferred for archiving to a PC via the FH40G serial interface.

## FH40GL Specifications

Dose rate equivalent Hx: 10 nSv/h to 100 mSv/h

Exposure rate: 1  $\mu$ R/h to 10R/h

Air Kerma rate: 10nGy/h to 100 mGy/h

Energy Range: 36 keV - 1.3 MeV

Polar Response: -90 to +90 (+/-20% for energy greater than 65 keV)

(65 ft.) watertight cable,

10 mR/h to 10,000 R/h

FHZ512A: 38.1 x 38.1 mm (1.5 x 1.5 in.) NaI probe

FHZ752S: BF<sup>3</sup> Neutron probe, provides simultaneous gamma and neutron measurements when used with the FH40GL

### General

FHZ752SH: He<sup>3</sup> Neutron probe, provides simultaneous gamma and neutron measurements when used with the FH40GL

Overrange: at 100 Sv/h no display decrease

Alarm Thresholds: dose rate 0 to 9.9 R/h (0 to 99 mSv/h)

dose 0 to 1000 R (0 to 10 Sv)

Audible: 80 db at 30 cm

FHZ632L: Proportional probe, 100  $\mu$ R/h -10 R/h

Interface: RS-232, infrared

FHZ672E-10:

Highly sensitive Organic Scintillator and Proportional tube in one portable unit for NBR applications

Interference: Electromagnetic/RF shielded case

EN50 081-1, EN50 082-2

FHZ732GM:

GM Pancake, 44.45 mm Dia 1700 cpm/mR/h sensitivity

Batteries: 2 standard "AA", 250 hours with

Alkaline, 500 hours with Lithium

NBR:

Natural Background Reduction

Operating Temperature: -30°C to 55 °C (-22 °F to 131 °F)

Storage Temperature: -40°C to 70°C (-40°F to 158 °F)

FH-40G with FHZ-672E probe

Size: 195 x 73 x 42 mm (7.7 x 2.9 x 1.7 in)

Weight: 453 g. (1 lb) FH40GL, with batteries

### Instrument Options

### Instrument Configuration Options

FH40GOPT1: PC IR Interface cable

FH40GOPT2: Windows PC Software

FH40GL: Includes internal proportional detector

FH40GOPT3: Windows PC Calibration Software

FH40GX: Without internal detector.

FH40GOPT4: Coiled Cable, 1.2 m, FH40G to external Teleprobe

### Optional External Probes

Teleprobe: A lightweight telescoping probe for

gamma. Extends to 4 m. (13 ft)

10  $\mu$ R/h -1000 R/h (100 nSv - 10 Sv/h)

UWDS: FHZ312 Energy compensated GM

underwater probe, with 19.812 m

This specification sheet is for informational purposes only and is subject to change without notice. Thermo makes no warranties, expressed or implied, in this product summary.  
© 2003 Thermo Electron Corporation, *question everything*, and *Analyze. Detect. Measure. Control* are trademarks of Thermo Electron Corporation. FH40GL-1203

#### USA:

504 Airport Road  
Santa Fe, NM 87507  
USA  
(505) 471 3232  
(505) 428 3535 fax

#### UK:

Bath Road  
Beenham, Reading RG7 5PR  
England  
+44 (0) 118 971 2121  
+44 (0) 118 971 2835 fax

#### Rest of Europe:

Frauenauracher Strasse 96  
D 91056 Erlangen  
Germany  
+49 (0) 9131 909-0  
+49 (0) 9131 909-205 fax

#### Rest of World:

Viktoriastrasse 5  
D 42929 Wermelskirchen  
Germany  
+49 (0) 21 96 72 28 0  
+49 (0) 21 96 72 28 24 / 25 fax