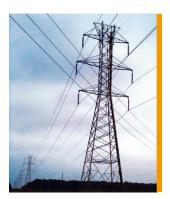


MAGNETIC FIELD HITESTER FT3470

Complies with ICNIRP 2010

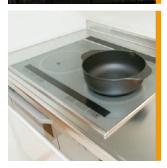
Providing robust support for 3-axis magnetic flux density measurement



Measurement of environmental magnetic fields



Measurement of magnetic fields in the vicinity of electrical power equipment



Compliance testing of household appliances



Your one-stop solution for magnetic field measurement

The FT3470-50 Series complies with the ICNIRP 2010 guidelines as well as other relevant standards for evaluation testing.

1. International guidelines **ICNIRP 2010 compliant.**

The guideline value has been changed to **200 µT** (for public exposure) at 50/60 Hz. The FT3470-50 Series completely supports related measurements.

2. Magnetic field measurement methods The FT3470-50 Series complies with IEC 62110/IEEE 644 as well as IEC 62233.

3. Magnetic field measuring instrument requirements The FT3470-50 Series complies with IEC 61786.

Measurement underneath transmission lines

The memory function is helpful when using the standard-defined measurement method for averaging readings taken at three different heights. The FT3470-50 series can also be used to take measurements at substations, underground lines, and pole-mounted transformers.



Long-term measurement and waveform observation

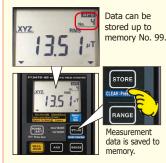
Using the output function, the FT3470-50 series can be combined with the MEMORY HiCORDER MR8880-20 to observe waveforms, allowing the capture of level and waveform output.



<Convenient functionality>

Memory function

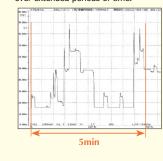
The instrument can store up to 99 measurement data points in its memory



Saved data can be checked and deleted on-site.

Level output

The level output function allows RMS values to be recorded with a recorder or logger, making it useful for applications involving observation of data over extended periods of time



Checking data on a computer

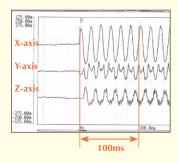
The bundled application software can be used to check measurement data. Compatible OS: Windows XP, Vista, 7 Functions : RMS logger, batch export and tester setup Storage format : CSV format



Batch capture: Measurement data recorded using the instrument's memory function can be imported to a computer with a single operation.

Waveform output

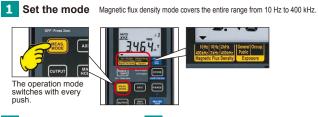
You can also observe magnetic field waveforms by connecting the instrument to an oscilloscope or recorder.



Features

1. Simple operation for easy measurement

Procedure for measuring magnetic flux density (in microteslas)



2 Position the probe

3 Measure the magnetic flux density





DVANTAGE The FT3470-50 series can also be used to measure exposure levels as defined by IEC/EN 62233 (compliant with the ICNIRP 2010 guidelines).

3. Two 3-axis sensors

Select from two differently sized sensors according to the needs of your application.



100cm² Sensor

Ships with the **FT3470-51 and FT3470-52** Standard sensor for use with the IEC/EN 62233 standard. φ122×295Lmm, 220g



3cm² Sensor

Ships with the **FT3470-52** Enables detailed analysis of magnetic field distribution for measurement targets. D27×165Lmm, 95g



The X-, Y-, and Z-axes of Hioki's 3-axis sensors are labeled, making it easy to identify the direction of magnetic fields.





2. User-selectable display units

SI unit of magnetic flux density



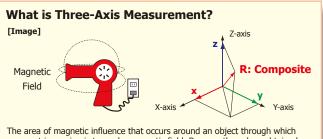
G(Gauss)

Unit of magnetic flux density

SI unit of magnetic field strength



The FT3470-50 series can use different units of magnetic flux density as required by the applicable standard or regulation.



The area of magnetic influence that occurs around an object through which a current is passing is termed a magnetic field. Because the values obtained when measuring a magnetic field vary with direction due to the field's directionality, it is necessary to measure all three axes of the magnetic field.

The FT3470-50 Series is capable of accurate measurement because **it measures three axes simultaneously** and calculates the composite (R) value. It can also **measure each axis (X, Y, and Z) separately**.







2	4	RMS	μT
Z-axis me	easurer	nent i	Z

Also consider: **POWER QUALITY ANALYZER PW3198**

Record and Analyze Power Supply Problems Simultaneously with a Single Unit The New World Standard for Power Quality Analysis



- •Assess power quality problems in accordance with international standards (IEC61000-4-30 Class A)
- •High-precision, gapless recording (V: ± 0.1 % rdg., A and W: ± 0.2 % rdg. ± 0.1 % f.s.)
- •CATIV 600V Safe enough for incoming power lines
- High-order harmonics and up to 80kHz bandwidth
- Wide dynamic input range and rated up to 6000V peak
- All standard interfaces included (LAN, USB, SD card)
- Synchronize multiple devices with optional GPS BOX

Specifications (Accuracy guaranteed for 1 year)

Measurement accuracy will be maintained when the tester and sensor are used in an environment where the temperature is 23°C ±5°C and humidity is 80% RH or less with no condensation

Basic specification	IS	
Magnetic flux density	10Hz to 400kHz/ 10Hz to 2kHz/ 2kHz to 400kHz	
Exposure level	General Public/ Occupational	
Indicated axes	X, Y, Z/ R (measured axes: X, Y, Z)	
Measurement method	True RMS	
Range switching	Auto/ manual	
Display update rate	Slow function off: 250msec. Slow function on: 2sec. (Slow function: Functionality for applying the 1-sec RMS value integration time required by IEC/EN 62233)	
Crest factor	3 or less But exposure level (occupational) for r1 is 1.45 or less.	
Function	Switching magnetic flux density (T, A/m, G), Slow function, Maximum value hold, Memory function (99 measurements), Auto power off, Buzzer sound	
Interface	USB1.1	
Storage environment	-10 to 50°C, 80% RH or less (no condensation)	
Operating environment	0 to 40°C, 80% RH or less (no condensation)	
Period of guaranteed accuracy	1 year	
Power supply	Four LR6 alkaline batteries 1.5V, Rated power supply voltage DC1.5V×4, AC adapter 9445-02	
Continuous usage	Approx. 10 h (with sensor connected, continuous, low load operation)	
Dimensions	100W×150H×42D mm (3.94"W×5.91"H×1.65"D)	
Mass	830g (29.3 oz)	
Applicable standards	Safety EN61010 EMC EN61326, EN61000-3-2, EN61000-3-3	
Standard compliance	IEC61786	

■ Magnetic flux density accuracy specifications

FT3470-51/52 (with 100cm² Sensor)

13470-31/32 (with 100cm- Sensor)				
Measurement items	Range	Measurement mode	Prescribed accuracy range	Measurement accuracy
	r0	- 10Hz-400kHz - 10Hz-2kHz	0.050 to 2.000 µT	±3.5% rdg.± 0.5% f.s.
X Y	r1		0.50 to 20.00 µT	(50Hz to 100kHz
7	r2 r2 r2 r2 r2 r2 r2	5.0 to 200.0 µT	when in	
	r3	2KHZ-400KHZ	0.050 to 2.000 mT	10Hz-400kHz mode)
R r	r0	10Hz-400kHz 10Hz-2kHz 2kHz-400kHz	0.100 to 3.464 µT	±3.5% rdg.± 0.5% f.s.
	r1		1.00 to 34.64 µT	(50Hz to 100kHz
	r2		10.0 to 346.4 µT	when in
	r3		0.100 to 3.464 mT	10Hz-400kHz mode)

FT3470-52 (with 3cm² Sensor)

Ν

leasurement items	Range	Measurement mode	Prescribed accuracy range	Measurement accuracy
X Y	rO	10Hz-400kHz 10Hz-2kHz	0.200 to 2.000 µT	±3.5% rdg.± 0.5% f.s. (50Hz to 100kHz
		2kHz-400kHz	0.050 to 2.000 µT	
Z	r1	10Hz-400kHz	0.50 to 20.00 µT	when in
	r2	10Hz-2kHz 2kHz-400kHz	5.0 to 200.0 µT	10Hz-400kHz mode
	r3		0.050 to 2.000 mT	
R -	r0	10Hz-400kHz 10Hz-2kHz	0.400 to 3.464 µT	±3.5% rdg.± 0.5% f.s.
		2kHz-400kHz	0.100 to 3.464 µT	(50Hz to 100kHz
	r1	10Hz-400kHz	1.00 to 34.64 µT	when in
	r2	10Hz-2kHz	10.0 to 346.4 µT	10Hz-400kHz mode)
	r3	2kHz-400kHz	0.100 to 3.464 mT	

Exposure level (General Public/ Occupational)

Measurement items	Range	Measurement mode	Measurement accuracy	
X, Y, Z	r0	0.50 to 20.00 %	$\pm 3.5\%$ rdg. $\pm 0.5\%$ f.s. for smoothed edge 5	
A, I, Z	r1	5.0 to 200.0 %	Hz to 1 kHz operation	
R r0 r1	r0	1.00 to 34.64 %	$\pm 5.0\%$ rdg. $\pm 0.5\%$ f.s. for smoothed edge	
	r1	10.0 to 346.4 %	1 kHz to 100 kHz operation	

*Smoothed edge: Exposure level is here defined as the time doman evalution introduced in IEC/ EN 62233 applied to the magnetic flux density indicated in the ICNIRP 2010 Guidelines.)

Ordering Information



Output

Output

type

Output

Output mode

accuracy REC

Output rate

MON

REC

MON

Model : MAGNETIC FIELD HITESTER FT3470

Model No. (Order Code) (Note) FT3470-51 (100 cm² Sensor bundled)

Magnetic flux density (T), Exposure level (%)

Exposure level output (output via the X-axis)

Composite RMS value level output (output via the X-axis)

 $\pm 3.5\%$ rdg $\pm 3mV$ ($\pm 5.0\%$ rdg $\pm 3mV$ when the exposure level is or exceeds 1kHz)

An output rate based on the magnetic flux density unit

Waveform output for each axis (X, Y, Z)

±3.5% rdg.± 10mV

T is used.

0.1 mV/display value count

Accessories: 100 cm² Sensor ×1, Instruction manual ×1, CD-R (PC application software Data Viewer for FT3470) ×1, USB cable ×1, LR6 (AA) alkaline battery ×4, AC adapter (9445-02 or 9445-03) ×1, Carrying case ×1

DISTRIBUTED BY



3 cm² Senso

Model : MAGNETIC FIELD HITESTER FT3470

 Model No. (Order Code)
 (Note)

 FT3470-52
 (100 cm² Sensor, 3 cm² Sensor bundled)

 Accessories: 100 cm² Sensor ×1, 3 cm² Sensor ×1, Instruction manual ×1, CD-R (PC application software Data Viewer for FT3470) ×1, USB cable ×1, LR6 (AA) alkaline battery ×4, AC adapter (9445-02 or 9445-03) ×1, Extension cable 9758 ×1, Output cable 9759 ×1, Carrying case ×1



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