373 Series

Electromagnetic Coating Thickness Tester

LE-373

The LE-373 is an electromagnetic coating thickness tester for measuring the thickness of coatings such as paint or plating (except electro nickel coating) on magnetic substrates.It can transmit data to a computer, and includes 16 different functions such as application (calibration curve) memory, measurement data memory, upper and lower limit setting for coating thickness management, simple statistical processing, and data output.

Eddy Current Coating Thickness Tester

LH-373

The LH-373 is a coating thickness tester for measuring the thickness of insulating coatings on non-magnetic metal substrates.It is capable of measuring relatively thin coatings such as alumite with high accuracy.As with the LE-373, there are added functions to output data to a computer, and carry out simple statistical processing including times measured, average, maximum and minimum values, and standard deviation.

Dual-Type Coating Thickness Tester

LZ-373

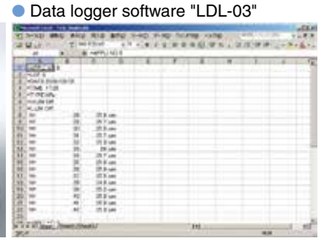
The LZ-373 is a dual type coating thickness tester capable of measuring the thickness of coatings on both magnetic substrates and non-magnetic metal substrates.It is ideal for workplaces handling a variety of materials and coatings.It includes 16 added functions as well as data output to a computer, and simple statistical processing including times measured, average, maximum and minimum values, and standard deviation.

Model / Measuring Method	LZ-373 / Electromagnetic and Eddy-current	
	LE-373 / Electromagnetic	LH-373 / Eddy-current
Probe Type	LEP-J (Fe)	LHP-J (NFe)
Applications	Non-magnetic coatings on magnetic metal (iron, steel)	Insulating coatings on non-magnetic metal (non-iron)
Measurable Range	0 to 2500µm or 99.0 mils	0 to 1200µm or 47.0 mils
Measuring Accuracy	Under 50µm: ±1µm, 50µm to under 1000µm: ±2%, 1000µm and over: ±3%	
Resolution	Under 100µm: 0.1µm, 100µm and over: 1µm	
Data Memory	Approx. 39,000 points	
Application Memory	100 (LZ-373:50 types each of electromagnetic and eddy-current)	
Display Method	Digital (LCD with backlight, smallest display unit: 0.1µm)	
External Output	PC (USB or RS-232C)	
Power Supply	1.5 V alkaline batteries (size AA) x 4	
Power Consumption	80 mW (with backlight off)	
Battery Life	100 hours (continuous use with backlight off)	
Operating ambient temp.	0 to 40 ℃	
Functions	16, various settings	
Dimensions & Weight	Main unit: 75 (W) x 145 (D) x 31 (H) mm, 0.34 kg	
Conformity Standard	Electromagnetic induction:JIS K5600-1-7,JIS H8501,JIS H0401 / ISO 2808,ISO 2064,ISO 1460,ISO 2178,ISO 19840 / BS 3900-C5 / ASTM B 499,ASTM D 7091-5,ASTM E 376 Eddy-current:JIS K5600-1-7,JIS H8680-2,JIS H8501 / ISO 2808,ISO 2360,ISO 2064,ISO 19840 / BS 3900-C5 / ASTM D 7091-5,ASTM E 376	
Accessories	Iron substrate (FE-373), aluminum substrate (NFE-373), calibration foil set, probe adapter, carrying case, 1.5 V batteries (size AA alkaline) x 4, operating manual	
Options	Calibration foils (other than the furnished set), measuring stand LW-990, Personal computer cable VZC-53, RS-232C-USB converter, Data logger software "LDL-03", Data management software "McWave Series" and "MultiProp"	

● Optional equipment

●Measuring stand LW-990

● Data logger software "LDL-03"



● Data Management software "McWave Series" and "MultiProp"

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⚠ Safety precautions

- Please read the "Operating Manual" carefully before using in order to use the device correctly and safely.
- Do not place anywhere there is a great deal of water, humidity, steam, dust, or oily smoke. These can cause malfunction.

Requests

- For enquiries regarding this product, please contact us at the address above, or by e-mail.
- To improve the product, specifications and the external appearance may be changed without notice. In addition, please note that due to printing, the product's color may appear different from the actual article.

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373 Series Coating Thickness Testers

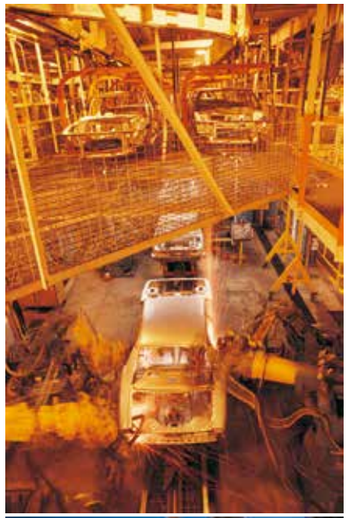
SCIENCE OF SENSING

Electromagnetic Coating Thickness Tester LE-373
Eddy Current Coating Thickness Tester LH-373
Dual-Type Coating Thickness Tester LZ-373

KETT ELECTRIC LABORATORY

Kett 373 Series Coating Thickness Testers.

Numerous features condensed into a compact body.



● The 373 series can be expected to be useful in many workplaces where coating thickness management is required.

JIS 5600 This product conforms with the JIS 5600 standard.

The LE-373 is an electromagnetic coating thickness tester for measuring the thickness of non-magnetic coatings such as paint or plating (except electro nickel coating) on magnetic metal substrates.The LH-373 is a coating thickness tester for measuring the thickness of insulating coatings on non-magnetic metal substrates. It is capable of measuring relatively thin coatings such as alumite.The LZ-373 is a dual type coating thickness tester capable of measuring the thickness of coatings on both magnetic metal substrates and non-magnetic metal substrates. The 373 series of coating thickness testers is ideal for workplaces handling a variety of materials and coatings.Each model can transmit data to a computer, and includes 16 different functions such as application (calibration curve) memory, measurement data memory, upper and lower limit setting for coating thickness management, simple statistical processing, and data output. We also provide options such as a measurement stand, external output cable, and data management software.

● **A small sized, lightweight compact body.**

The size is 75 mm in width, 145 mm in length, and 31 mm in thickness, with a weight of 340 g.The size fits in one hand for easy use in the measurement workplace.

● **Multiple functionality built in.**

We include all of the functions normally required for coating thickness management.It is possible to set 16 functions as required, such as Application, Substrate Calibration, Delete Data, Data Memory, Limits, Statistics (times measured, average, standard deviation, max value, min value), Display Property, Date/Time, Auto Off Time, Brightness, Lighting Time, Unit, Data Output, Lot Splitting, Measurement Modes, and Maintenance.

● **Plenty of options.**

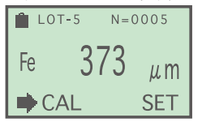
If the optional measurement stand LW-990 is used, it is easy to measure curved surfaces such as pipes that are normally hard to measure. Further, repeatability error and personal error can be kept at a minimum for normal flat surface measurement. By using in combination with the data management software "Data Logger LDL-03" or the "McWAVE Series", data can be saved in MS Excel format, measurement data can be edited, and various management diagrams can be created.

Optional measurement stand LW-990

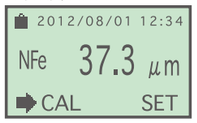
[McWAVE is the registered trademark of CEC Co.Excel is a trademark and registered trademark of the Microsoft Corporation in the USA and other countries.]

● Measurement screen for the 373 series and the configuration screen for the 16 functions.[The display portion is an image of the screen and not the actual device.]

●Measurement screen for the LE-373/LZ-373
Example of the lot data number being displayed.

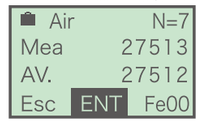


●Measurement screen for the LH-373/LZ-373
Example display of date and time.

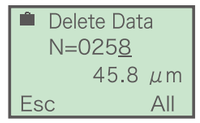


●Application Selection
Recall of application (calibration curve) memory.

●Substrate Cal. (substrate calculation)
Calibrate characteristics based on substrate material, shape, and thickness.

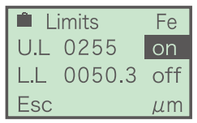


●Delete Data
Deletion of individual or all data.

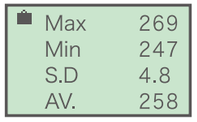


●Data Memory
Saving or non saving of measurement data.

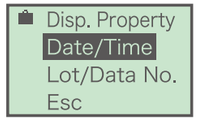
●Limits (setting upper and lower limit)
Set upper and lower limits for measurement management.



●Statistics (calculation)
Max value, min value, standard deviation, average.



●Disp. Property (selection)
Selecting date and time or lot data number.

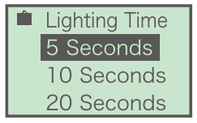


●Date/Time
Setting date and time.

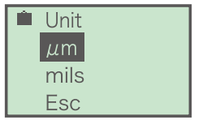
●Auto Off Time
Setting time until auto off.

●Brightness (backlight)
Setting backlight brightness.

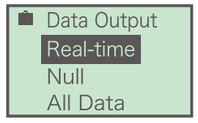
●Lighting Time
Setting backlight lighting time.



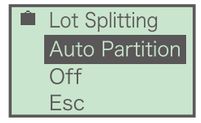
●Unit
Switching display units.



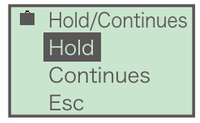
●Data Output
Set data output.



●Lot Splitting (auto)
Set to split lots when calculating statistics.



●Measurement Modes
Set for fixed or continuous display of the measured value.



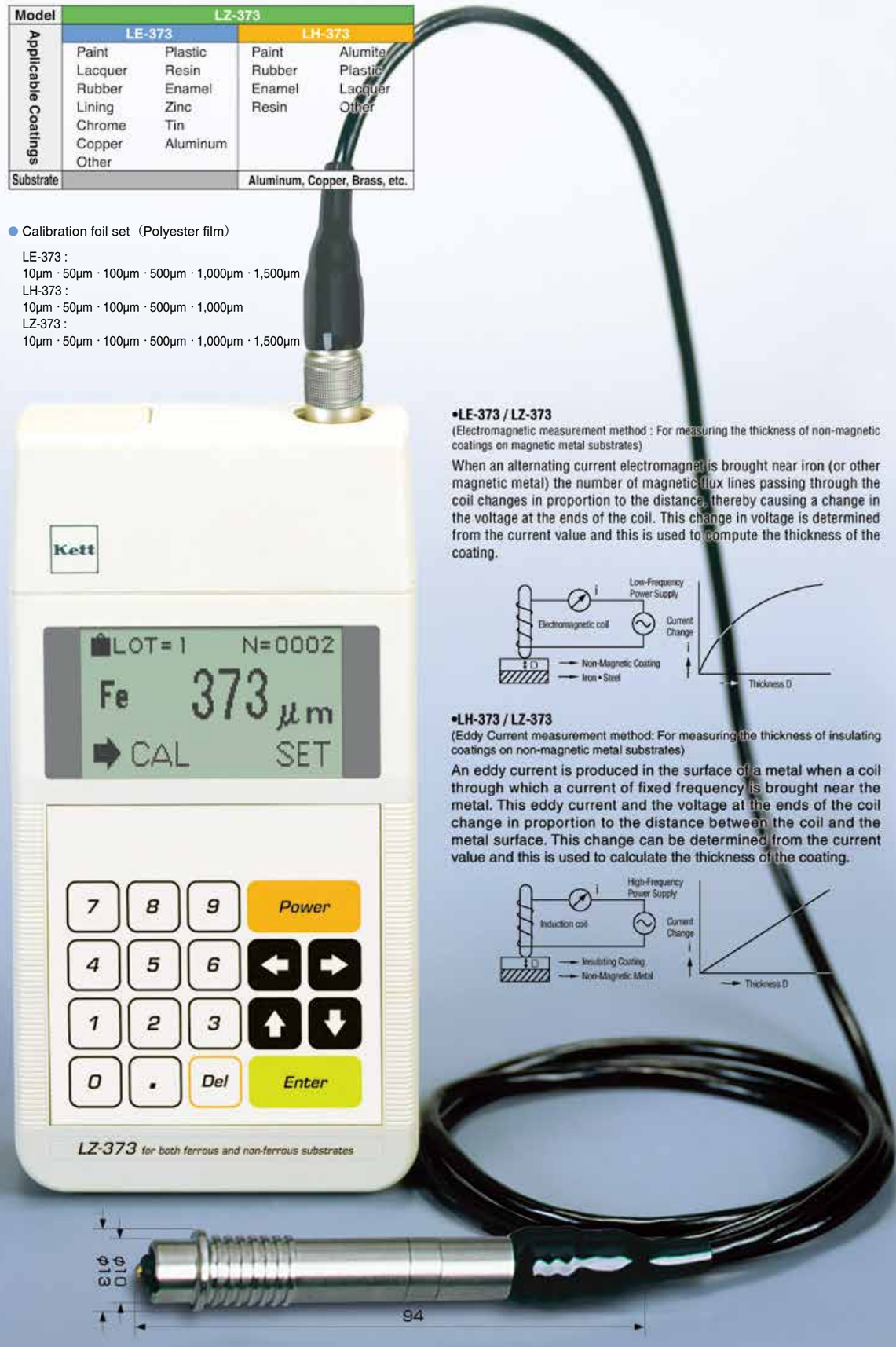
●Maintenance
Used for maker maintenance.

● Applicable Coatings

Model	LZ-373			
	LE-373		LH-373	
Applicable Coatings	Paint	Plastic	Paint	Alumite
	Lacquer	Resin	Rubber	Plastic
	Rubber	Enamel	Enamel	Lacquer
	Lining	Zinc	Resin	Other
	Chrome	Tin		
	Copper	Aluminum		
	Other			
Substrate			Aluminum, Copper, Brass, etc.	

● Calibration foil set（Polyester film）

LE-373 :
10µm · 50µm · 100µm · 500µm · 1,000µm · 1,500µm
LH-373 :
10µm · 50µm · 100µm · 500µm · 1,000µm
LZ-373 :
10µm · 50µm · 100µm · 500µm · 1,000µm · 1,500µm



•LE-373 / LZ-373

(Electromagnetic measurement method : For measuring the thickness of non-magnetic coatings on magnetic metal substrates)

When an alternating current electromagnet is brought near iron (or other magnetic metal) the number of magnetic flux lines passing through the coil changes in proportion to the distance, thereby causing a change in the voltage at the ends of the coil. This change in voltage is determined from the current value and this is used to compute the thickness of the coating.

•LH-373 / LZ-373

(Eddy Current measurement method: For measuring the thickness of insulating coatings on non-magnetic metal substrates)

An eddy current is produced in the surface of a metal when a coil through which a current of fixed frequency is brought near the metal. This eddy current and the voltage at the ends of the coil change in proportion to the distance between the coil and the metal surface. This change can be determined from the current value and this is used to calculate the thickness of the coating.