

# Introduction of New Capacitance Checker

## AEK-3750F

under development



Improved measurement accuracy

High-speed measurement

Full functionality

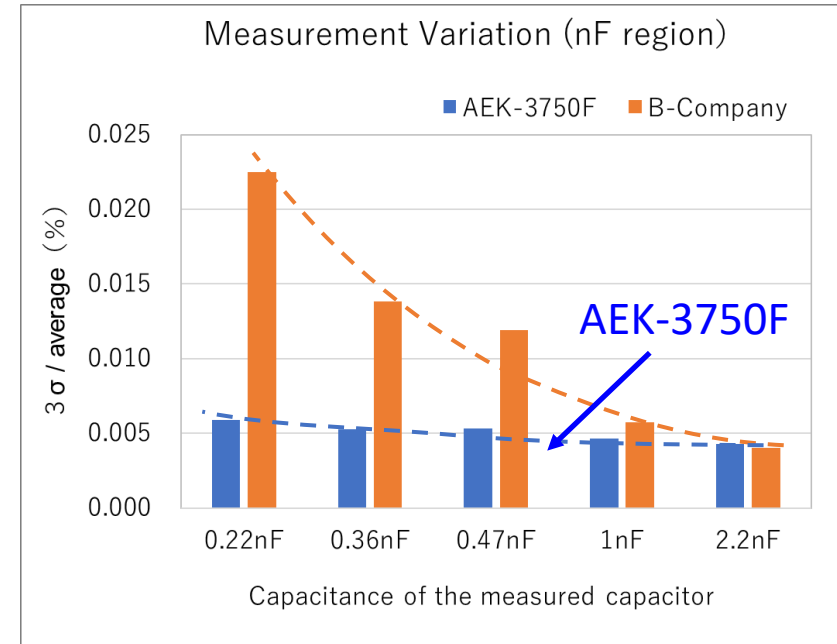
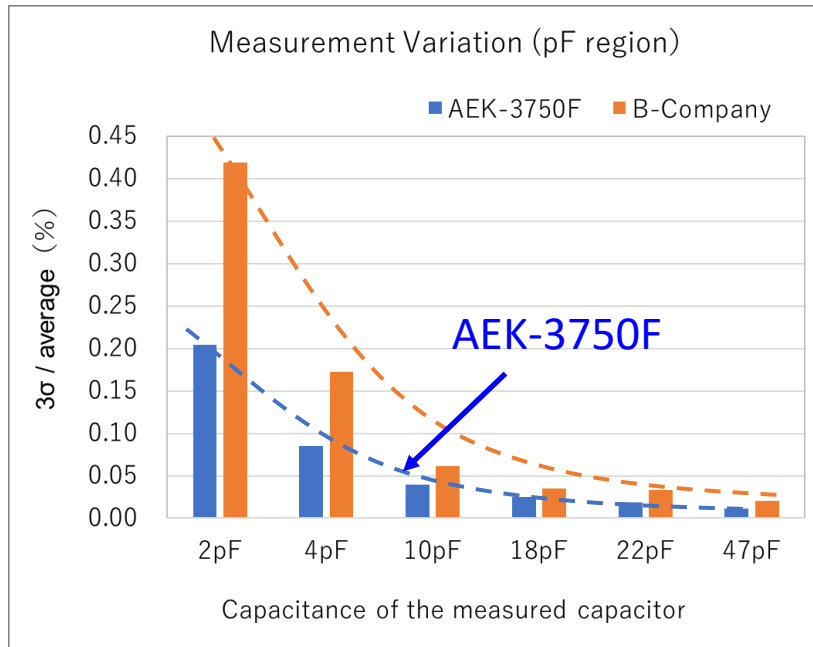
# 【Improved measurement accuracy】

Comparison of measurement accuracy with other companies' instruments

： Measurements taken within our company

『Measuring conditions』

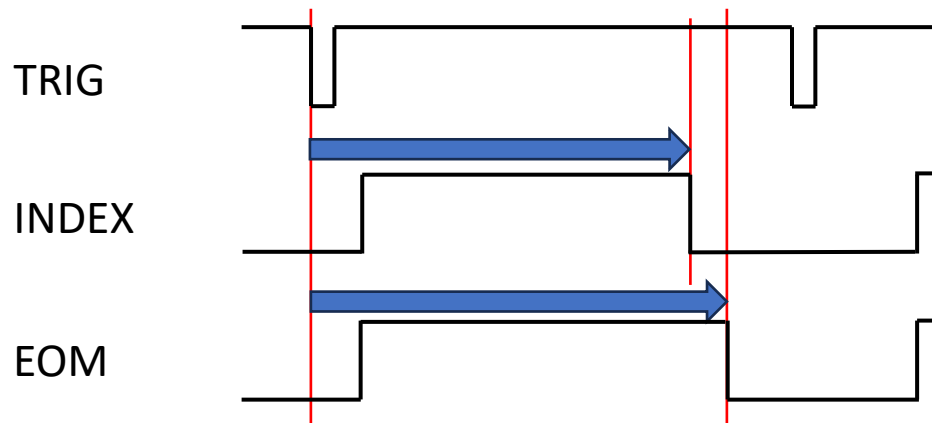
- 1kHz 1V asynchronous (Measurement speed setting :FAST)
- Repeatedly measure the same capacitor 100 times



Excellent measurement accuracy is obtained.

# 【 High-speed measurement 】

ASYNC measurement time (1kHz)	<b>AEK-3750F</b>	<b>company B's instrument</b>	<b>(our conventional) AE-365E</b>
from measurement start to INDEX signal output	<b>1. 1 m s</b>	<b>1. 2 5 m s</b>	<b>1. 1 m s</b>
from measurement start to EOC signal output	<b>1. 6 m s</b>	<b>2. 2 5 m s</b>	<b>1. 9 m s</b>



The time from the start of measurement to the analog measurement end signal (INDEX) and to the end-of-measurement signal (EOM) are both short.

# 【 Full functionality 】

Function	AEK-3750F	(our conventional) AE-365E
Number of display digits	5.5 digits	3.5 digits
4-terminal contact check	○	○
Low-C reject	○	×
Chatter detection	○	×
Trigger-synchronous mode	○	×
BIN classification	○	×
LAN、 USB interface	○	×

Significantly enhanced functionality compared to previous models

# 【Characteristics and Specifications】

## Characteristics

- High-speed measurement
- High resolution
- Comparator [HI/GO/LO], BIN classification function selectable.
- Probe contact failure detection function by measurement error detection.
- 4-terminal contact check function.
- Trigger synchronous measurement mode: Inrush current prevention and zero residual voltage measurement of MLCC.
- Open / short / load compensation and drift compensation.
- Various measuring ranges/voltage configurations.

## Specifications

measurement method	4-terminal measurement method
Measuring frequency	120Hz: $\pm 0.04\%$ / 1kHz: $\pm 0.01\%$ , sine wave
Measurement signal output impedance	Approx. 5 ohms
Full scale and zero temperature coefficient	Within $\pm 100\text{ppm}/^\circ\text{C}$
Basic precision (Typical range, ambient temperature $23^\circ\text{C} \pm 5^\circ\text{C}$ )	C : $\pm 0.09\%$ rdg $\pm 10$ digits tan $\delta$ : $\pm 0.16\%$
1kHz / FAST measurement time (With external trigger input)	Trigger ASYNC measurement [from measurement start to INDEX signal output: approx. 1.1ms, EOC signal output: approx. 1.6ms]. Trigger SYNC measurement [from measurement start to INDEX signal output: approx. 1.9ms, EOC signal output: approx. 1.9ms].
Standard interface	Handler I/O, RS-232C, USB, LAN
Ambient operating environment	Temperature: $0^\circ\text{C}$ to $+40^\circ\text{C}$ , humidity: 80% or less (no condensation)
Power Requirements	AC88V to 264V, 50 to 60Hz, approx. 175VA
Dimensions / Weight	250(W) $\times$ 99(H) $\times$ 300(D)mm (excluding protruding parts such as rubber feet) / Approx. 3kg

# 【Measuring range】

Measuring range	120Hz			1kHz				Capacitance Display Range	Capacitance Recommended measurement range
	0.1V	0.5V	1V	0.1V	0.5V	1V	5V		
2pF							○	0.00000pF ~ 2.00000pF	0pF ~ 2.00000pF
4pF							○	0.00000pF ~ 4.00000pF	2.00001pF ~ 4.00000pF
20pF					○	○	○	0.0000pF ~ 20.0000pF	4.00001pF ~ 20.0000pF
40pF					○	○	○	0.0000pF ~ 40.0000pF	20.0001pF ~ 40.0000pF
200pF		○	○	○	○	○	○	0.000pF ~ 200.000pF	40.0001pF ~ 200.000pF
400pF		○	○	○	○	○	○	0.000pF ~ 400.000pF	200.001pF ~ 400.000pF
2nF	○	○	○	○	○	○	○	0.00000nF ~ 2.00000nF	400.001pF ~ 2.00000nF
4nF	○	○	○	○	○	○	○	0.00000nF ~ 4.00000nF	2.00001nF ~ 4.00000nF
20nF	○	○	○	○	○	○	○	0.0000nF ~ 20.0000nF	4.00001nF ~ 20.0000nF
40nF	○	○	○	○	○	○		0.0000nF ~ 40.0000nF	20.0001nF ~ 40.0000nF
200nF	○	○	○	○	○	○		0.000nF ~ 200.000nF	40.0001nF ~ 200.000nF
400nF	○	○	○	○	○	○		0.000nF ~ 400.000nF	200.001nF ~ 400.000nF
2μF	○	○	○	○	○	○		0.00000μF ~ 2.00000μF	400.001nF ~ 2.00000μF
4μF	○	○	○	○	○	○		0.00000μF ~ 4.00000μF	2.00001μF ~ 4.00000μF
20μF	○	○	○	○	○	○		0.0000μF ~ 20.0000μF	4.00001μF ~ 20.0000μF
40μF	○	○	○	○	○			0.0000μF ~ 40.0000μF	20.0001μF ~ 40.0000μF
60μF						○		0.0000μF ~ 60.0000μF	40.0001μF ~ 60.0000μF
120μF					○			0.000μF ~ 120.000μF	60.0001μF ~ 120.000μF
200μF	○	○	○	○	●	●		0.000μF ~ 200.000μF	120.001μF ~ 200.000μF
400μF					●	●		0.000μF ~ 400.000μF	200.001μF ~ 400.000μF
500μF	○	○	○					0.000μF ~ 500.000μF	400.001μF ~ 500.000μF
600μF				○				0.000μF ~ 600.000μF	500.001μF ~ 600.000μF
1mF		○						0.00000mF ~ 1.00000mF	600.001μF ~ 1.00000mF
2mF	○	●	●	●	●	●		0.00000mF ~ 2.00000mF	1.00001mF ~ 2.00000mF
4mF	○	●	●					0.00000mF ~ 4.00000mF	2.00001mF ~ 4.00000mF
20mF	●	●	●					0.0000mF ~ 20.0000mF	4.00001mF ~ 20.0000mF

\* ○ : Constant voltage mode / ● : Open terminal voltage mode

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**Measuring equipment for evaluation is being prepared.**