Resolution

Depends on which sensors are used. 0.1, 0.5, 1, 2 μm
(0.02, 0.05, 0.2, 0.5, 1μm by using optional CL-0200 *2)

The display resolution and linearity when used in combination with the VE Series electrostatic capacitance-type gap detectors are as follows.

Sensor type	Measurement range (μm)	Display resolution (μm)	Linearity（%/F.S.)
VE-5010*1	200	0.1（0.02）*	0.15（0.12）*
VE-5010	500	0.1（0.05）*	0.15（0.12）*
VE-1020	1000	0.1（0.1）*	0.15（0.12）*
VE-1520	1500	0.5（0.2）*	0.15（0.12）*
VE-3020	3000	1（0.5）*	0.15（0.12）*
VE-8020	8000	2（1）*	0.15（0.13）*

* （）: When using CL-0200 High-resolution calculation function (option)

■ VE Series electrostatic capacitance-type gap detectors

Model name	VE-5010	VE-1020	VE-1520	VE-3020	VE-8020
Measurement range (μm) *1	0 to 500	0 to 1000	0 to 1500	0 to 3000	0 to 8000
Minimum diameter of target (mm) *2	φ6	φ8	φ10	φ20	φ40
Cable length	1.5 m (attached cable as standard)		1.5 m (VL-1520 as sold separately)		
Temperature function	$k_1 = 1.7 \times 10^{-5}$, $k_2 = 3.4 \times 10^{-5}$				
Operating temperature range *3	0 to +80ºC				

Note: The VL-1520 signal cable is sold separately.

Note:
*1: The measurement range refers to the maximum gap between the surface of the sensor tip and the object under measurement.
*2: The surface measurement area of the object under measurement must be larger than the external diameter of the sensor.
*3: The operating temperature range is the temperature range in which the sensor can operate, not the operating range for which accuracy is guaranteed. The operating range for which accuracy is guaranteed at 23±2ºC. The temperature characteristics of the VE series are shown in the formula below.

Temperature characteristics

$\Delta D (K_1 \times L + K_2 \times D) \Delta t$
K_1 : Linear expansion coefficient of the sensor housing (1.7×10^{-5})
K_2 : Rate of expansion of the sensor electrode material (3.4×10^{-5})
Δt : Change in temperature
D : Measured gap
ΔD : Change in the output of the converter