KES-FB4-A

Surface Tester

The KES-FB4-A Surface Tester analyzes hand movements—particularly, sliding over surface—performed by artisans and professionals when judging a fabric’s texture. This device performs this movement mechanically, making it possible to obtain objective numerical data.

Obtainable data includes frictional coefficients, fluctuations of frictional coefficients, and surface roughness for such targets as general fabric, cloth, paper, non-woven fabric, and film-like samples. Surface friction and roughness characteristic data is useful for determining fullness and softness, smoothness, crispness.

|------------------------------|------------------------------------------------------------------------------------------------|

FEATURE

Sensor that imitates fingertips

The sensor unit’s design features a load and surface treatment that mimics a fingertip, allowing for quantification similar to that of the human fingertip.
KES-FB4-A  Surface Tester

Dimensions/Weight (approx.)
- Measuring unit: 8550 x 2520 x 4420 (mm) / 50 kg
- Amplifier: 5180 x 2400 x 4440 (mm) / 10 kg

Power source
- 100 VAC, power consumption: 50W Max. for the main device, 300W Max. for compressor.

Measurement environment
- Temperature and humidity: 20 to 30°C / 50 to 70% RH
- Temperature and humidity should be kept constant during measurement. (Standard temperature and humidity conditions: 20°C / 65% RH)
- The instrument should be located to minimize influence from wind or vibrations.

Surface friction detection
- Detector: Ring type detector with differential transformer
- Load (full scale): 200 gf (with standard measurement)
- Accuracy: ±0.5% or less of full scale

Surface roughness detection
- Detector: Differential transformer
- Displacement (full scale): 0.4 mm
- Accuracy: ±1.0% or less of full scale

Active secondary filter
- µ = 0.6, Т = 1 cps

Obtainable Data

<table>
<thead>
<tr>
<th>Item</th>
<th>Characteristic value</th>
<th>Description</th>
<th>Reading the data</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUF</td>
<td>Mean friction coefficient</td>
<td>Higher values mean less tendency to slip</td>
<td></td>
</tr>
<tr>
<td>MMD</td>
<td>Fluctuation of mean friction coefficient</td>
<td>Higher values mean less smoothness and more roughness</td>
<td></td>
</tr>
<tr>
<td>SMU</td>
<td>Surface roughness</td>
<td>Higher values mean more surface unevenness</td>
<td></td>
</tr>
</tbody>
</table>

Precaution
- For safety use, please read the operation manual / the instruction carefully and thoroughly before using the tester.
- Specification details recorded here are subject to change without notice.
- We appreciate your understanding.

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