Motor Condition Monitoring Devices
K6CM series

- K6CM takes the burden of monitoring off maintenance engineers.
- Stay alert to signs of motor failure through monitoring conditions.

- K6CM’s threshold setting keeps users informed of maintenance timing
- "Motor Condition Monitoring Tool" for PCs
- Clamp-type CT which is easy to install on existing equipment
No need for time-consuming patrol inspection or expertise. **K6CM informs you of the motor's maintenance timing**.

It's difficult to prevent motor issues caused by degradation.

The conventional motor condition check had several check items. Therefore a skilled maintenance engineer was required to judge the motor's maintenance timing. Additionally, inspection was time-consuming because there were many motors.

<table>
<thead>
<tr>
<th>Phenomenon</th>
<th>Vibration</th>
<th>Heat generation</th>
<th>Decreased electrical resistance</th>
<th>Overcurrent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bearing wear</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Insulation degradation</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overload</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Open phase</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Motor failure mode**
- Abnormality of rotary shaft
- Bearing wear
- Overload
cavitation (for pumps)
- Insulation degradation
- Overload
- Cavitation (for pumps)

<table>
<thead>
<tr>
<th>Blower fan</th>
<th>Coupling</th>
<th>Rotary shaft</th>
<th>Three-phase induction motor</th>
</tr>
</thead>
</table>
K6CM (comprehensive current diagnosis type) can consistently monitor motor conditions by observing the current waveform of the motor. Additionally, you can understand the motor’s maintenance timing without depending on an engineer, because K6CM provides threshold value setting.

Motors can be maintained in advance of failure due to degradation.

<table>
<thead>
<tr>
<th>Degradation level</th>
<th>Current waveform of the motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold level</td>
<td>&quot;Normal&quot;</td>
</tr>
<tr>
<td>Failure critical</td>
<td>&quot;Distortion&quot;</td>
</tr>
<tr>
<td>Failure warning</td>
<td>&quot;Increased distortion&quot;</td>
</tr>
</tbody>
</table>

When an abnormality occurs in the load such as bearing, rotary shaft, or reducer, the motor does not rotate smoothly and a distortion occurs in its current waveform. K6CM measures its distortion as a degradation level.

What is comprehensive current diagnosis?

When an abnormality occurs in the load such as bearing, rotary shaft, or reducer, the motor does not rotate smoothly and a distortion occurs in its current waveform. K6CM measures its distortion as a degradation level.

With a factory floor signal light

With an office PC

With the accessory software "Motor Condition Monitoring Tool", you can monitor motor conditions remotely.

* The screen is a sample image.

Monitors the 3-phase induction motor which is the driving force of every facility.
Motor Condition Monitoring Device Lineup

To make an integrated diagnosis with a single parameter

K6CM-CIM

Alarm bar
- Green: Status normal
- Orange: Failure warning
- Red: Failure critical

Display
- [PV]: Present value
- [MIN]: Minimum value
- [MAX]: Maximum value

Switches the units of the measured value displayed
- [CIM]: Degradation level
- [A]: Current

Example: Connections

Three-phase induction motor

Inverter

Contactor

PC

HUB

EtherNet/IP

External trigger

Clamp-type CT which is easy to retrofit

K6CM-CICB400

Signal light
- Motor status
- Alarm output 2
- Self-diagnosis
- Alarm output 1

 EtherNet/IP connection

Motor Condition Monitoring Device Lineup

Comprehensive current diagnosis type

Type 01

Bearings wear
Insulation degradation
Overload
Open phase
To measure the insulation resistance level

- **Type 02**

  
  **Insulation resistance monitoring type**

  **K6CM-ISM**

  **ZCT K6CM-ISZBI**

  
  - Insulation degradation

To measure the vibration and temperature level

- **Type 03**

  
  **Vibration/temperature monitoring type**

  **K6CM-VBM**

  
  - Bearing wear
  - Overload
  - Open phase

**Motor Condition Monitoring Tool**

**K6CM common software**

Software for setup and monitoring

Software for PC

**Motor Condition Monitoring Tool**

[Windows 7, Windows 8, Windows 10, (32bit/64bit) (English/Japanese)]

* Software included with main unit.

- Applicable motor: 3-phase induction motor
- For explanation purposes, all indication lights of units are on.

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Our shared Value Design for Panel (herein after referred to as Value Design) concept for the specifications of products used in control panels will create new value for our customers' control panels.

Combining multiple products that share the Value Design concept will further increase the value provided to control panels.