



Instant Detection Thoroughly prevent metal contamination

Early Observer detects the instant of blade chipping to thoroughly prevent foreign matter contamination.



F&B Projec

Early Observer MEL-E Series

Blade damage

Real-time monitoring

Damage Signal

Instant Detection

Instant Line Stop



Benefits of Real-Time Detection

Food Loss Reduction

Reducing the search area for fragments.
Significantly reduces waste volume.

Consumer Damage Prevention

Prevent the leakage of metal fragments into the market and safeguard social trust.

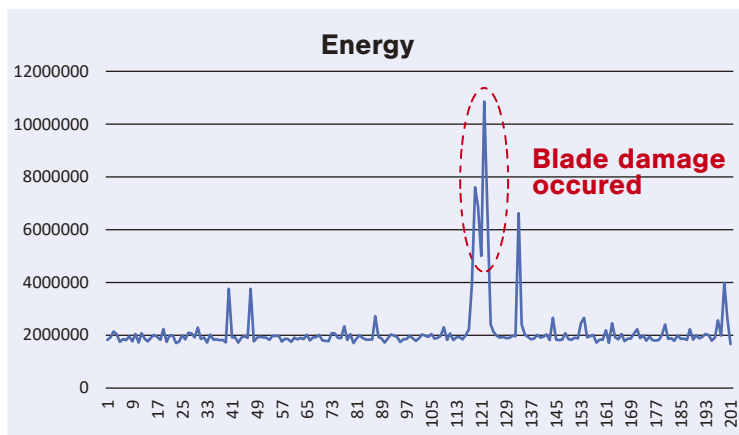
Maintaining Productivity

Preventing reduced production efficiency due to prolonged line stoppages.

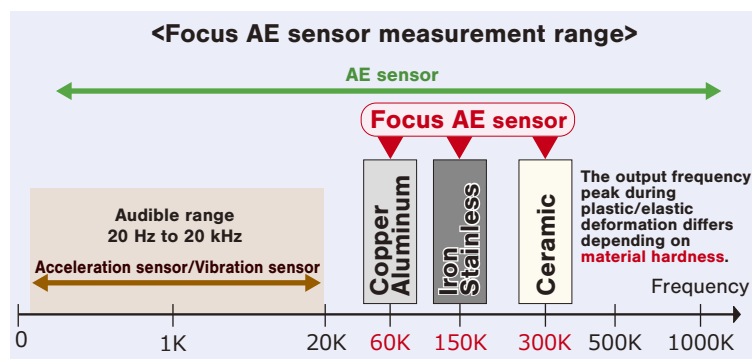
Foreign object contamination due to blade damage is a critical control point in **HACCP**.

JCC Co., Ltd.

Energy Measurement During Blade Chipping (Ex.)



Early Observer is a unique sensor system that measures the high frequency energy generated during blade breakage.



Mitsubishi Electric MELSEC compatible MEL-E series



Freddo*



Freddo Plus*



Freddo

- Measurement performance:** Sampling frequency 10 MHz, min. edge processing speed 1 ms
- Filter feature:** HPF/LPF switch selection
- Fail-safe feature:** Breaking/short/abnormal voltage
- Sensor signal check feature:** Compare sensor signal levels to verify reliability

Freddo Plus (Specialized Features)

- Threshold alarm feature:** Set 8 threshold patterns and output alarms
- Logging feature:** Equipped with microSDHC slot for logging measurement data

Type Uno



Type Quattro



Type Uno/Quattro

- Measurement performance:** Sampling frequency 10 MHz, min. edge processing speed 10 ms
- Filter feature:** HPF switch selection / LPF Fixed at 1000 kHz
- Fail-safe feature:** Breaking/short/abnormal voltage
- Sensor signal check feature:** Compare sensor signal levels to verify reliability
- 4-sensor switching measurement feature:** 4 sensors connected/switching measurement (Type Quattro only)

* The Freddo series can only communicate with MELSEC iQ-R and PC software.

Chemical-Resistant Waterproof Focus AE Sensor

-Specifications-

Sensor Specifications

Model: FAEN-S150WI-HRB-5 (for stainless steel)

FAEN-S300WI-HRB-5 (for ceramic)

Size: $\phi 22 \times 30$ mm (excluding protruded part)

Waterproof protection: IP67

Operating temperature: -20 to 80 °C

Material: SUS304

Cable: Environment-resistant robot cable (length 5 m)

Environmentally resistant robot extension cable

Model: EO-HRB-BNC-[] m

Diameter: $\phi 4$

Ambient operating temperature: -253 to 200 °C

Bend resistance: Valid

Acid resistance: Valid

Alkali resistance: Valid

Sheath: Fluorinated ethylene propylene

* The maximum cable length of the system is 20 m.

* To extend the cable, use the waterproof relay connector set (EO-CONCT-BNC-W).

JCC Corporation

<https://www.j-isb.jp/>

<Kobe Office>

Dainichi Kakogawa Building 3F, 2444, Kitazaike, Kakogawa-cho

Kakogawa-shi, Hyogo-ken, 675-0031, Japan

TEL: +81-79-423-2550 / FAX: +81-79-423-2551

<Technical Center>

4-1-2, Ueno-cho, Toyota-shi, Aichi-ken, 471-0015, Japan

TEL: +81-565-87-2205 / FAX: +81-565-87-2206

* As of December 2025 The specifications may be changed notice.