LubeDefense™
Automated Lubrication Monitoring Kit

CTC introduces its innovative LubeDefense™ Automated Lubrication Monitoring Solution which integrates the advanced features of the SCD Series signal conditioner relay and display enclosure with the stack light feature. This comprehensive solution harnesses the power of CTC's Dynamic IEPE Vibration and Ultrasound technology and converts the data into a 4-20 mA output signal that can be displayed and alarmed for automated lubrication monitoring. Our LubeDefense™ System detects high frequency vibration between 20 kHz - 40 kHz, associated with lubrication issues, and then provides an alarm condition based on lubrication condition.

Kit Components

1

SCD Series Signal Conditioner Enclosure with Stack Light
Factory configurable for 1 to 4 signal conditioners.
With optional red stack light.

2

SC300 Series Signal Conditioners
Available in single-band vibration or dual-band vibration options.
Factory installed in your SCD enclosure for easy installation.

3

UEA or UEB Series Ultrasound Sensors
Available in top or side exit configurations.

4

Zerk Mounting Adapters
Feature a tapped hole for convenient sensor mounting along with a grease fitting adapter for easy lubrication. They come in a wide variety of configurations for mounting thread and grease fitting style.

5

CTC Cabling of Your Choice
Suggested:
CB102-J2A-020-Z
(Please note, length is fully customer configurable).

How It Works

CTC's UEB Series top exit dynamic IEPE vibration and ultrasound accelerometers have a linear vibration output of 0.5 Hz - 23 kHz within a ± 3 dB tolerance. The UEA side exit series has a linear output of 1Hz to 17kHz within a ± 3 dB tolerance. The resonant peak of these sensors is 42 kHz, which allows the sensor to give a premium output in the vibration range and the ultrasound range.

When paired with CTC's SC300 Series signal conditioners installed in an SCD relay and display enclosure, the input signal from a UEB sensors can be converted into an overall value that can be displayed via screens on the front of the enclosure and alarmed via the internal relays.

LubeDefense™ with Vibration and Ultrasound Alarm Bands

If your application requires both standard vibration and ultrasound bands to be monitored and alarmed, configure your SCD Series enclosure with SC320 Series signal conditioners. The SC320 Series features dual band technology which allows the user to configure two independent process control output signals from one sensor. Each band can be configured to hone in on the user's desired frequency ranges. For this type of application, a popularly ordered configuration would be band one set to 10 Hz to 1 kHz and band two set to 20 kHz to 40 kHz. One or two sensors (as shown in the diagram below) may be wired to the box, as each sensor requires two displays - one for the vibration band and one for the ultrasound band.

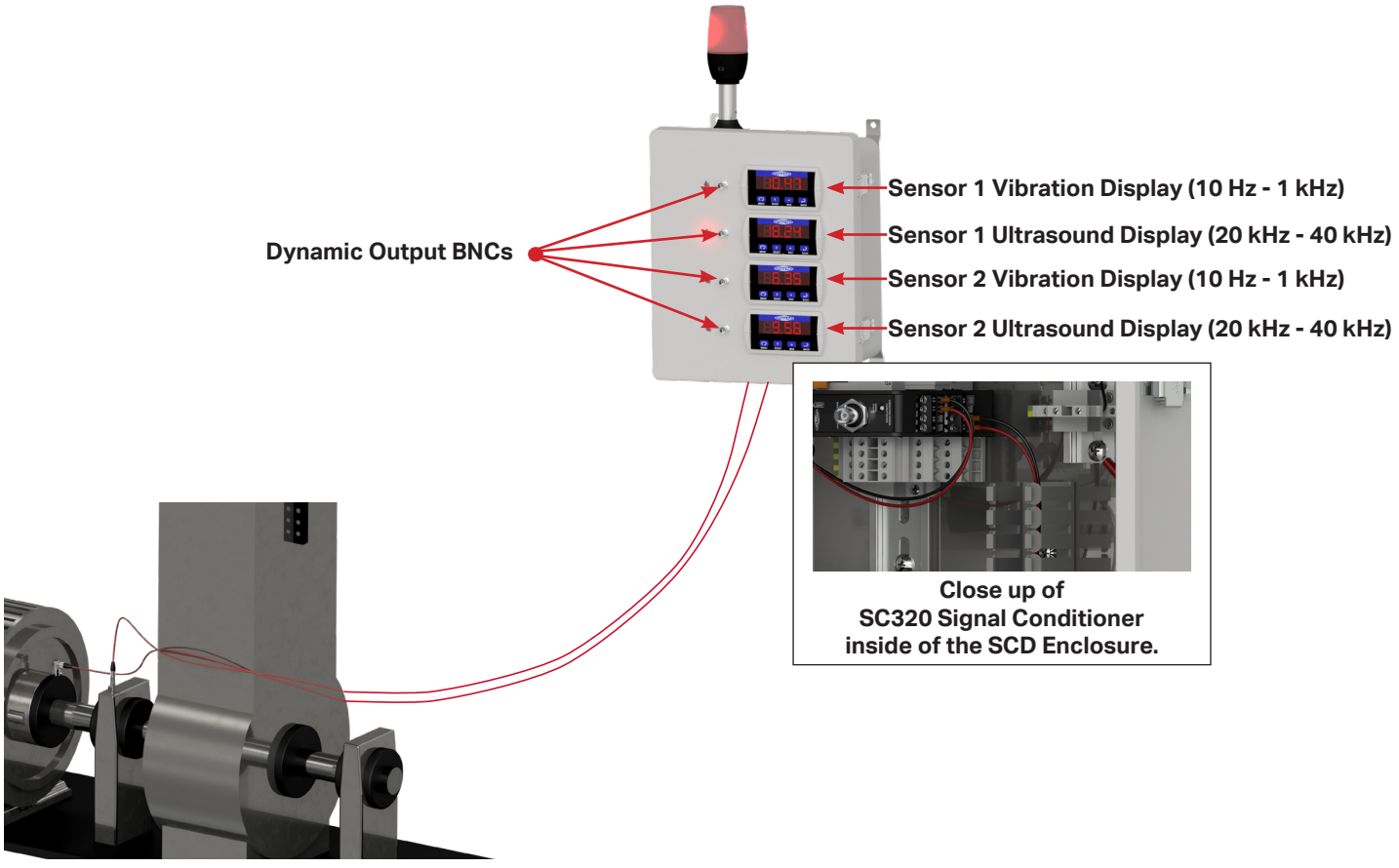

Diagram showing two Ultrasound sensors mounted on bearing housings, attached to connectors with cabling running into the bottom of the SCD Enclosure.

LubeDefense™ with Ultrasound Alarm Bands Only

If your application is purely focused on lubrication monitoring and only ultrasound frequencies require alerting, save some cost by opting for CTC's SC310 Series signal conditioners. These signal conditioners feature one band of vibration monitoring which can be set to monitor frequencies from 20 kHz to 40 kHz. One to four sensors (as shown in the diagram below) may be wired to the box, as each sensor requires only one display for the ultrasound band.

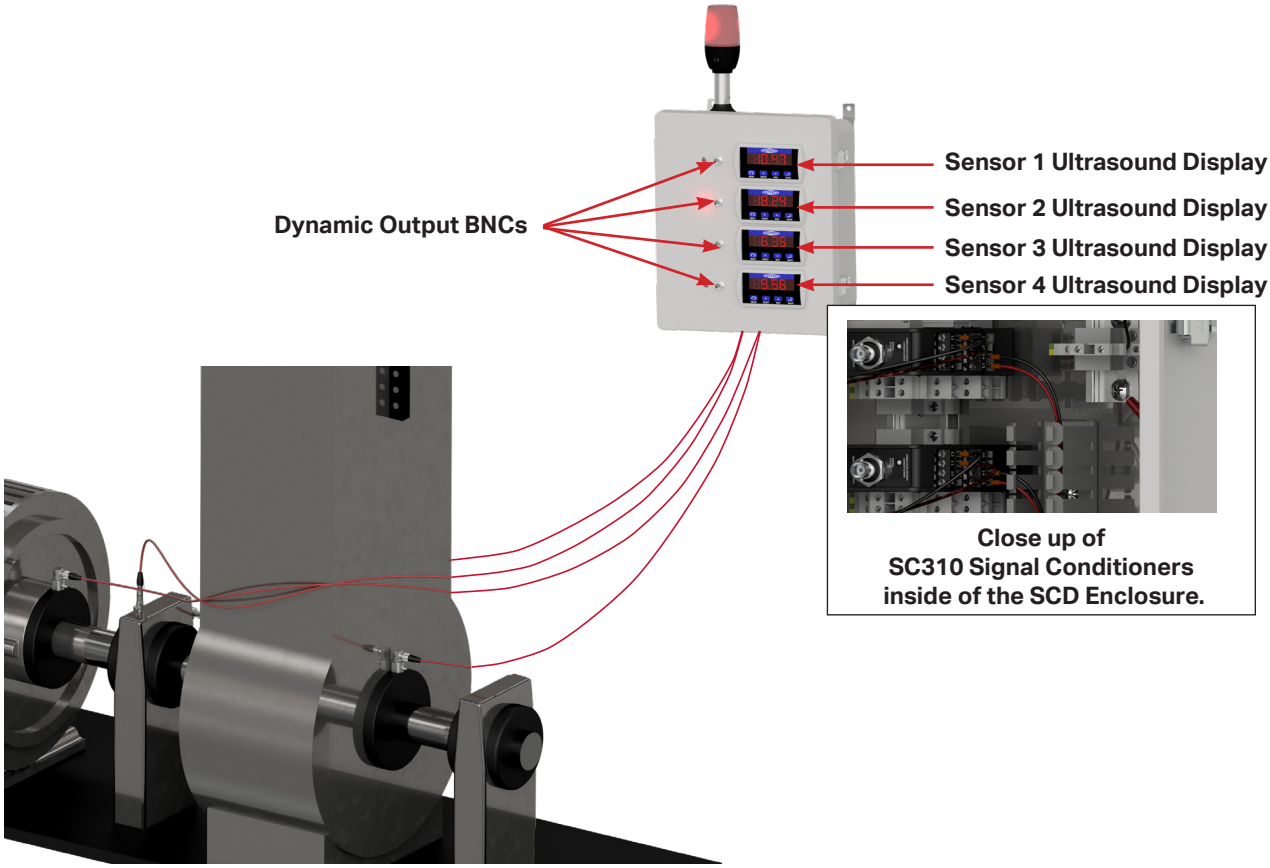

Diagram showing four Ultrasound sensors mounted on bearing housings, attached to connectors with cabling running into the bottom of the SCD Enclosure.