TK-3 Proximity System Test Kit

Bently Nevada* Asset Condition Monitoring

Description

The TK-3 Proximity System Test Kit simulates shaft vibration and position for calibrating Bently Nevada monitors. It verifies the operating condition of the monitor readouts as well as the condition of the proximity transducer system. A properly calibrated system ensures that the transducer inputs and the resulting monitor readings are accurate.

The TK-3 uses a removable spindle micrometer assembly to check the transducer system and position monitor calibration. This assembly features a universal probe mount that will accommodate probe diameters from 5 mm to 19 mm (0.197 in to 0.75 in). The mount holds the probe while the user moves the target toward or away from the probe tip in calibrated increments and records the output from the Proximitor* Sensor using a voltmeter. The spindle micrometer assembly also features a convenient magnetic base for ease of use in the field.

Vibration monitors are calibrated using the motor-driven wobble plate. A swing-arm assembly located over the wobble plate holds the proximity probe in place. This assembly uses a universal probe mount, identical to that used with the spindle micrometer assembly. By using the absolute scale factor of the proximity probe in conjunction with a multimeter, the user adjusts the probe to find a position where the desired amount of mechanical vibration (as determined by peak-to-peak DC voltage output) is present. No oscilloscope is needed.

The user can then compare a vibration monitor's reading to the known mechanical vibration signal input viewed by the proximity probe. The mechanical vibration signal from the TK-3 can range from 50 to 254 µm (2 to 10 mils) peak-to-peak.

Specifications

Power Requirements

Electric:

95-125 Vac, 50/60 Hz, 1A minimum

190-250 Vac, 50/60 Hz, 1A minimum

Air:

90 psi (6.2 bar) maximum

Wobulator Range

Vibration Amplitude Range:

50 µm to 254 µm (2 to 10 mils) peak-to-peak.

Maximum Speed

Electric:

0 to 5000 cpm ± 1000 cpm

Air:

0 to 5000 cpm ± 1000 cpm

Spindle Micrometer Range:

0 – 25.4 mm (0 – 1000 mils).

Target Button and Wobble Plate:

AISI 4140 Alloy Steel.

NOTE: Contact your nearest Sales Professional for details on special target and wobble plate materials.

Physical Size

Height:

195 mm (7.68 inches)

Width:

299 mm (11.8 inches)

Depth:

248 mm (9.76 inches)

Weight:

5.22 kg (11.5 lb)

Environmental

Operational Temperature Range

0 °C to 54 °C (32 °F to 130 °F)

Storage Temperature Range

-18 °C to 65 °C (0 °F to 150 °F)

Humidity

95% Non-Condensing Humidity

Exposure

Designed to meet IP54 for dust and water exposure (closed)

CE Mark Directives

EMC Directives 2004/108/EC – with amendments

IEC/EN61000-6-2

Electrostatic Discharge

EN61000-4-2 Criteria A

Electro-Magnetic Field (Radiated Immunity)

EN61000-4-3 Criteria A

Electrical Fast Transient Burst

EN61000-4-4

AC Power Cable, Criteria B

Line to Ground, Criteria B

Neutral to Ground, Criteria B

Protective Earth to Ground, Criteria B

Line/Neutral/Protective Earth to Gnd, Criteria B

Surge Capability

EN61000-4-5

AC Power Ports, Criteria A

Conducted Immunity

EN61000-4-6

AC Power, Criteria A

Voltage Dips and Interrupts

EN61000-4-11

40%, 10 Cycles (200 mS) Criteria A

70%, 25 Cycles (500 mS) Criteria C

0%, 250 Cycles (5 Sec), Criteria C

IEC/EN61000-6-4

Radiated Emissions

EN61000-6-4

Conducted Emissions

EN61000-6-4

Low Voltage Directive

IEC/EN 61010-1

Ordering Information

Electric Driven TK-3e

177313 – AXX – BXX

A: Scale Units

0 1	English
0 2	Metric

B: Power Cord Type

0 1	American
0 2	European

Air Driven TK-3g

177314 – AXX

A: Scale Units

0 1	English
0 2	Metric

Accessories

168836

MDS 100 – Data Acquisition CBT (Computer Based Training) Module

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