# TK3 Proximity System Test Kit Datasheet

Bently Nevada Machinery Condition Monitoring

178087 Rev. F



## Description

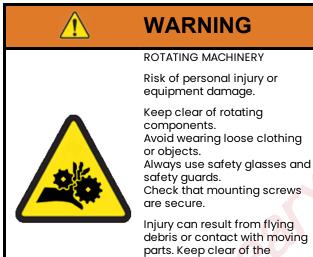
The TK-3 Proximity System Test Kit simulates shaft vibration and position for calibrating Bently Nevada monitors. It verifies the operating condition of the monitor readouts as well as the condition of the proximity transducer system. A properly calibrated system ensures that the transducer inputs and 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  $254 \,\mu m$  (2 to 10 mils) peak-to-peak.





Injury can result from flying debris or contact with moving wobble plate when operating either the TK-3e or TK-3g.



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# Specifications

Power Requi	rements	Environmento	1	
Electric	95-125 Vac, 50/60 Hz, 1A minimum 190-250 Vac, 50/60 Hz, 1A minimum	Equipment is for indoor use only.Maximum altitude is 2000m. Operational 0 °C to 50 °C (32 °F to 122 °F)		
Air	Power can be disconnected by disconnecting the power cable from the TK-3 unit. 90 psi (6.2 bar) maximum	Temperature Range	Temporary operation below minimum temperature is acceptable. For extended continuous use, maximum operating	
Wobulator F	lange		temperature is 40°C.	
Vibration Amplitude Range:	50 µm to 254 µm (2 to 10 mils) peak-to-peak.	Storage Temperature Range	−18 °C to 65 °C (0 °F to 150 °F)	
Maximum Sj	beed	Humidity	95% Non-Condensing Humi <mark>d</mark> ity	
Electric	0 to 5000 cpm ± 1000 cpm	Exposure	Designed to meet IP54 for dust	
Air	0 to 5000 cpm ± 1000 cpm		and water exposure (closed)	
Spindle Micrometer Range	0 – 25.4 mm (0 – 1000 mils).			
Target Button and Wobble Plate	AISI 4140 Alloy Steel.			
	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)			



### Compliance and Certifications

#### FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

#### **EMC**

EN 61000-6-2

EN 61000-6-4

EMC Directive 2014/30/EU

#### **RoHS**

RoHS Directive 2011/65/EU

#### LVD

EN 61010-1

LV Directive 2014/35/EU





## **Ordering Information**



For the detailed listing of country and product specific approvals, refer to the *Approvals Quick Reference Guide* (108M1756) available from <u>Bently.com</u>.

#### **Electric Driven TK-3e**

#### 177313-AA-BB-CC

<b>A:</b>	Scale	Units

01	English
02	Metric
B: Power	r Cord Type
01	American
02	European
03	Brazilian
C: Agen	cy Approvals

#### 00

#### Air Driven TK-3g

None

#### 177314-AA-BB

#### **A: Scale Units**

01	English
02	Metric

#### **B: Agency Approvals**

00

#### 0 None

#### Accessories

168836	MDS 100 – Data Acquisition CBT (Computer Based Training) Module	



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1631 Bently Parkway South, Minden, Nevada USA 89423 Phone: 1.775.782.3611 (US) or Bently.com/support Bently.com

