TLV *PenCheck*®

MODEL **PK1**

World's first pocketable and economical instrument to incorporate vibration and temperature sensors.
Detects steam, air and gas leaks, bearing problems, or pump cavitation.

Benefits

Multiple function
- Pen-size precision instrument for accuracy and ease of use.
- Analog and digital display plus audible function provides fast and accurate interpretation.
- Band-pass filter eliminates misleading background noise, focussing on high frequencies for improved accuracy over conventional ultrasonic detectors.
- Indicates surface temperature for diagnosis, safety, or valve adjustment.

Steam traps and valves
- Detects steam and air leakage through valves.
- Helps determine steam leakage when compared to properly functioning traps.

Bearings and pumps
- Provides a Crest Factor (CF) value* for analysis of bearing condition and early warning of defects.
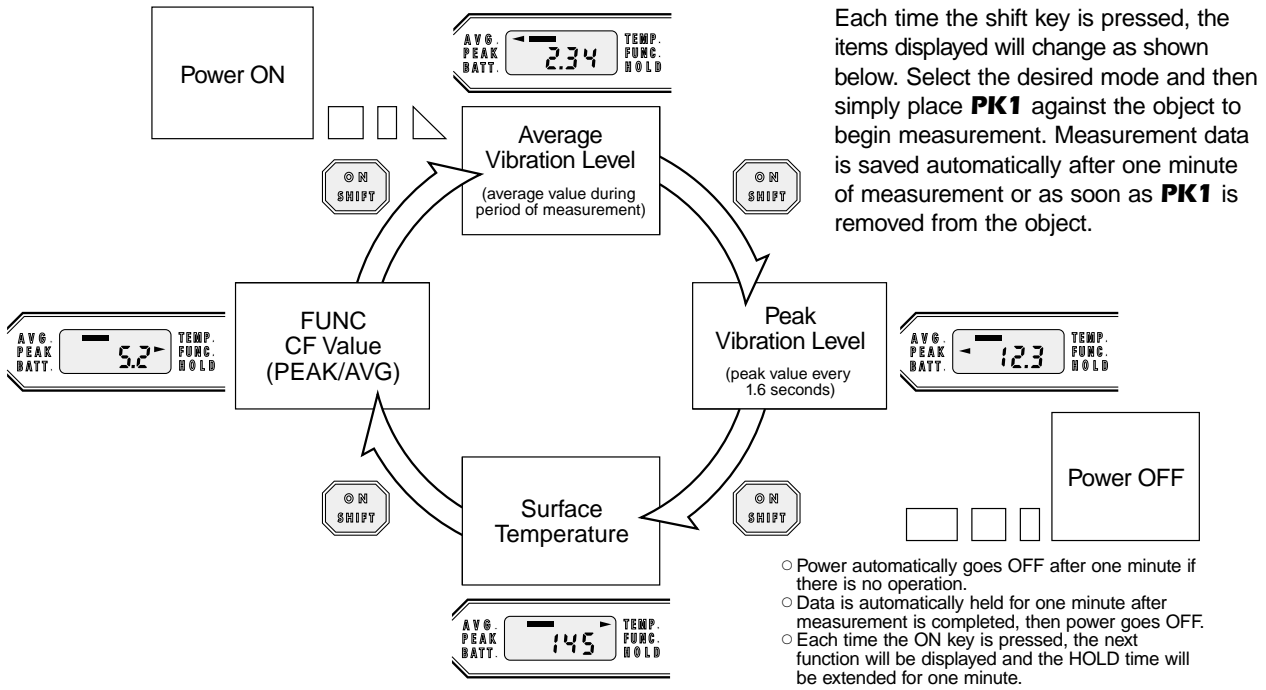- Determines pump cavitation.

Specifications

Temperature Measurement Range		32 – 491°F
Central Frequency		Approximately 40 kHz
Band Width		Approximately 20 kHz (−3dB)
Display	Average Vibration Level	0.00 – 255.0 Scale Reading (AVG)
	Peak Vibration Level	0.00 – 255.0 Scale Reading (PEAK)
	Surface Temperature	32 – 491°F (TEMP)
	CF Value*	0.0 – 199.0 (FUNC)
	Level Indicators	Vibration levels are shown in bar graph form as well as on a digital display.
	Overload	Indicators appear if the vibration level limit is exceeded or if the surface temperature falls outside the allowable measurement range
Measurement "Auto Start"		Measurement begins automatically when the tip of PK1 is placed against the object to be measured
Data Display "Auto Hold"		When the tip is removed from the tested object, data is automatically retained
Auto Power-off		Yes
Power Source**		One (1) lithium battery pack (3CR-1/3N)
Total Battery Use Time		Approximately 5 hours
Weight		Approximately 2.3 oz
Standard Accessories		Hard case, extra battery packs, earphone, manuals, flat file

* CF Value (Vibration Level = Peak ÷ Average).
** A message is displayed when battery voltage is low; when it drops lower, power is automatically cut.
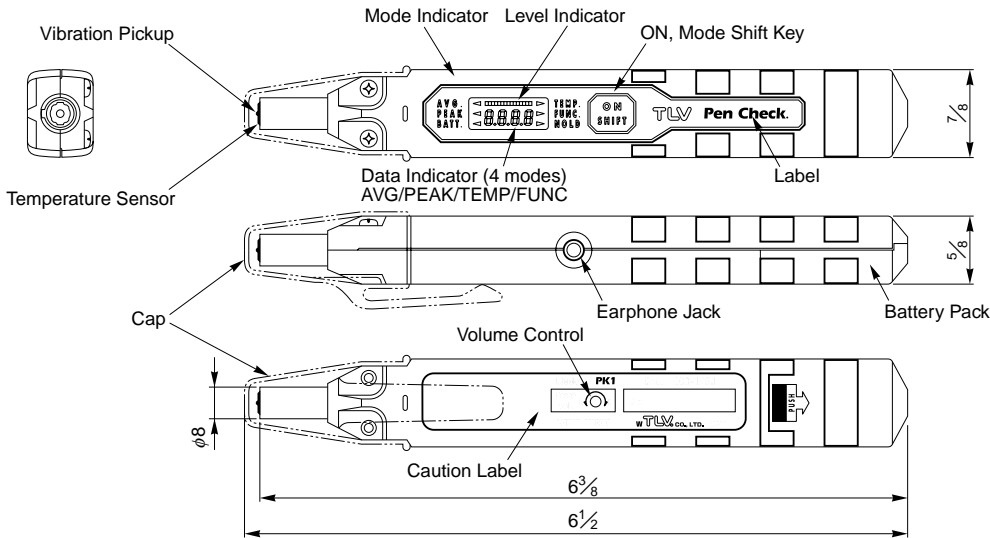
Operating Procedure

Power ON

AVG. PEAK BATT. **2.34** TEMP. FUNC. HOLD

ON SHIFT

Average Vibration Level
(average value during period of measurement)

ON SHIFT

Each time the shift key is pressed, the items displayed will change as shown below. Select the desired mode and then simply place **PK1** against the object to begin measurement. Measurement data is saved automatically after one minute of measurement or as soon as **PK1** is removed from the object.

FUNC CF Value (PEAK/AVG)
AVG. PEAK BATT. **5.2** TEMP. FUNC. HOLD

Peak Vibration Level
(peak value every 1.6 seconds)

AVG. PEAK BATT. **12.3** TEMP. FUNC. HOLD

Power OFF

ON SHIFT

Surface Temperature

ON SHIFT

○ Power automatically goes OFF after one minute if there is no operation.
○ Data is automatically held for one minute after measurement is completed, then power goes OFF.
○ Each time the ON key is pressed, the next function will be displayed and the HOLD time will be extended for one minute.

AVG. PEAK BATT. **145** TEMP. FUNC. HOLD

● Other Display Functions

AVG. PEAK BATT. **2.34** TEMP. FUNC. HOLD — Data Hold Time

AVG. PEAK BATT. **2.34** TEMP. FUNC. HOLD — Battery Voltage Drop
(if voltage drops further, the power will automatically go OFF.)

AVG. PEAK BATT. **2.34** TEMP. FUNC. HOLD — Overload

AVG. PEAK BATT. **Err** TEMP. FUNC. HOLD — Measured Temperature Outside Allowable Temperature measurement range.
(below 32 °F or above 491 °F)

Dimensions (mm)

Vibration Pickup
Temperature Sensor
Mode Indicator   Level Indicator   ON, Mode Shift Key
Data Indicator (4 modes) AVG/PEAK/TEMP/FUNC
Label
TLV Pen Check.
7/8
5/8
Cap
Volume Control
Earphone Jack
Battery Pack
Caution Label
PK1
φ8
6 3/8
6 1/2

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Specifications subject to change without notice.