TLV® Pocket TrapMan®

MODEL PT3

POCKET-SIZE DIAGNOSTIC INSTRUMENT FOR BASIC OPERATIONAL JUDGEMENTS

Features

Compact diagnostic instrument employing ultrasonic and temperature detection for steam trap, valve and bearing inspection.

1. Compact and easy to use for daily maintenance.
2. Simultaneously measures vibration and surface temperature.
3. Large reflective LCD with frontlight for clear display in any conditions.
4. Quickly makes basic judgements for steam traps and valves to help identify where repairs or replacements may be necessary.
5. dB is displayed for bearing inspection to help diagnose operational status of rotating equipment.
6. Certified intrinsically safe: can be used in hazardous areas.
7. Use together with CMRecorder® (Condition Monitoring Recorder) for iOS/ Android for location tagging, inspection data management and reporting.
8. Up to 3 days of use on a single charge. (8 hours per day with frontlight off.)
9. Asset location data can be registered by reading RFID tags with PT3 or QR codes with the CMRecorder app.

Specifications (Diagnosis Instrument)

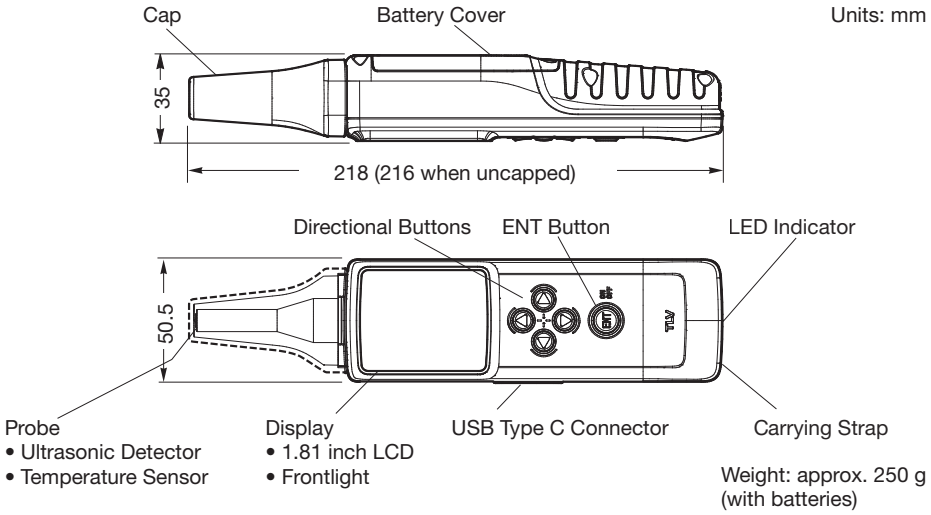
Inspection Type	Steam Trap Diagnosis	Valve Diagnosis	Bearing Inspection/ User defined 1, 2, 3[1]	Audio Monitoring
Applicable Fluids	Steam	Steam, air, and other gases[2]	—	
Mode	Trap	Valve	Bearing	—
Description	Intrinsically Safe: Certified to meet all of the following standards ATEX: CE Ex II3G Ex ic IIB T3 Gc IECEx: Ex ic IIB T3 Gc UL: Class I, Zone 2, AEx ic IIB T3 Gc cUL: Ex ic IIB T3 Gc NEPSI: Ex ic IIB T3 Gc			
Measured Variables	Ultrasonic sound, surface temperature		Shock pulse/32 kHz, surface temperature	Shock pulse/32 kHz, surface temperature, sound
Information Displayed	• Operation judgements: Good, Caution, Leak (Leak-L, Leak-S[3]), Blocked, Low Temp[4], Temperature Adjustment Failure (FAIL ADJ-H, FAIL ADJ-L)[5] • Surface temperature	• Valve seal judgements: Good/Caution/Leak • Surface temperature	• Average vibration acceleration level (AVG) • Peak vibration acceleration level (PEAK) • CF Value[6] • Surface temperature	• Average vibration acceleration level (AVG) • Surface temperature
Measurement Time	15 seconds	10 seconds	Up to 1 minute	Optional
	• Measurement begins and ends automatically • Measurement status is displayed by the LED indicator and in the display		• Measurement begins automatically • Measurement ends after 1 minute or when the probe is removed; data is stored automatically • Measurement status is displayed by the LED indicator after 10 seconds or when the measured value stabilizes	• Measurement begins automatically
Data Memory	3,000 measurement results per inspection type (4 digit Control ID)			—[7]

[1] The diagnosis name can be set via the CMRecorder.
[2] PT3 is certified intrinsically safe for the Ex ic IIB T3 Gc equipment protection level. Use only in applicable environments.
[3] [Leak-L, Leak-S] judgement is only for TLV Steam Traps. [4] There is no [Low Temp] judgement for Temperature Control (Adjustable) Steam Traps.
[5] [Temperature Adjustment Failure] is only for Temperature Control (Adjustable) Steam Traps.
[6] Crest Factor Value = PEAK – AVG
[7] Real-time audio monitoring is available via wireless earphones. (Recording is not possible.)

Specifications (Diagnosis Instrument)

Temp. Measurement	Measurement Range: -40 to 350 °C
Operating Ambient Temperature Range	-10 to 50 °C (0 to 40 °C when charging)
Probe Durability	400,000 cycles
Display	1.81 inch reflective MIP LCD with frontlight
Units	Selectable: MPa & °C, bar & °C, kg/cm² & °C, or psi & °F
Language	English, Chinese (simplified), French, German, Japanese, Spanish
Power	Lithium-ion secondary battery 3.7 V 1000 mAh Battery Life: Up to 3 days of continuous use on a single charge (8 hours of use per day without frontlight) Charging method: USB adapter 5V (USB Type C)
Total Battery Use Time	Approximately 24 hours without frontlight
Protection Class	IP54 (protected against limited dust ingress and against water spray from any direction)
Bluetooth®	Ver 5.0 Class 1
RFID	LF (125 kHz)
Wireless Standards	CE (Europe), FCC (USA), IC (Canada), IMDA (Singapore), MIC (Japan), RCM (Australia), R-NZ (New Zealand), SRRC (China)
Other Standards	Lithium-ion secondary battery: UN38.3 IEC62133-2:2017 Drop test: JISC60068-2-31:2013 Height: 100 cm; Material: concrete Environment: REACH/RoHS2 conformity

Dimensions



Product Components

PT3

Hardware:	Main body with probe
Accessories:	Hex key for battery cover and probe protection cover
Manual:	Instruction Manual (Safety and Explosion-proof Requirements) Instruction Manual (Operation) (PDF file can be downloaded from website)

CMRecorder

Software:	App available free of charge from the App Store, Google Play and other approved sources. App Store is a service mark of Apple Inc., registered in the U.S. and other countries and regions. Google Play and the Google Play logo are trademarks of Google LLC.

⚠CAUTION

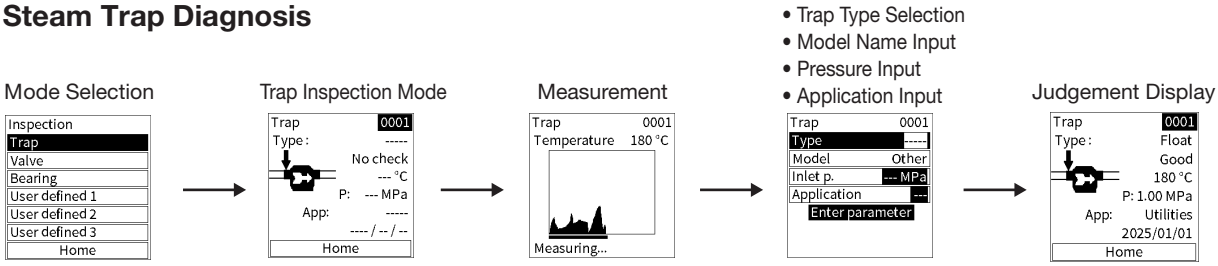
1. Read the instruction manual carefully before use and be sure to follow the instructions.
2. Be sure to charge the battery pack regularly. If the device is not used for a long time with the battery pack installed, fully charge the battery pack once a month. The battery will deteriorate and become unusable.

Option

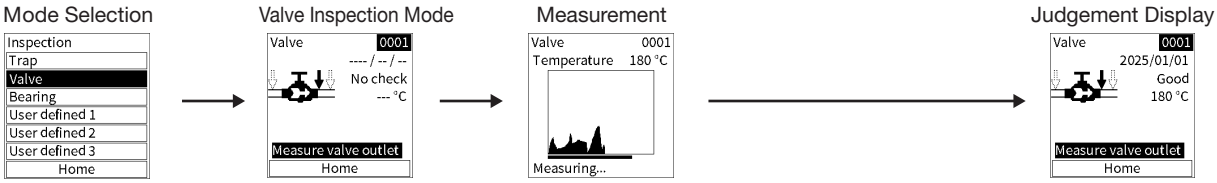
RFID tags	Identification tags for locating and identifying inspection targets

Operation Outline

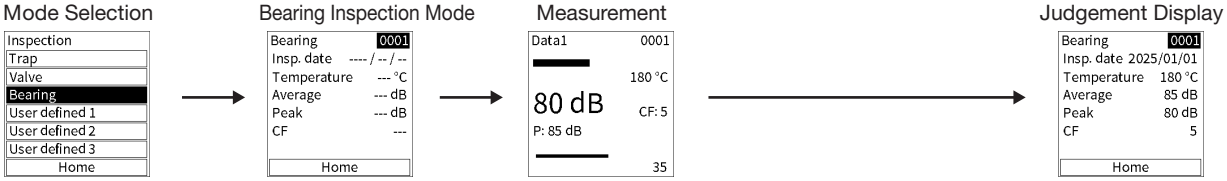
● Steam Trap Diagnosis



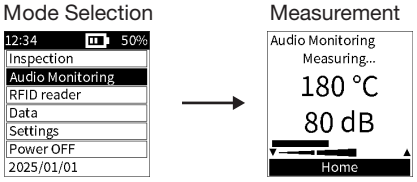
● Valve Diagnosis



● Bearing Inspection

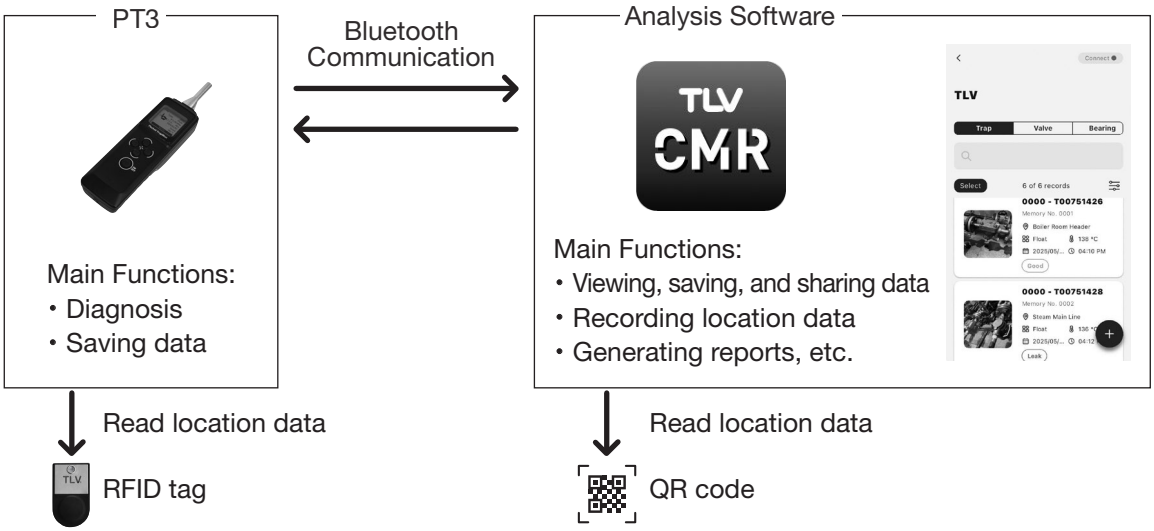


● Audio Monitoring



Note: Actual steps may be different to those shown above.

Using PT3 with CMRecorder



Specifications (Analysis software)

Model	CMRecorder
User Input Fields	Steam Trap Area ID/Location ID/Location Name/Application/Priority/Elevation/Orientation/Operating Pattern/Line Pressure/ Inlet Pressure/Back Pressure/Condensate Recovery/Operating Hours/Operating Days/Frequency/Type/ Model Group/Model/Set Temperature/Condensate Load/Serial Number/Installation Date/Connection Size/ Connection Spec/Quick Connector/Bypass Valve/Inlet Valve/Outlet Valve/Test Result/Inspection Time/Picture/ Other Notes Valve Area ID/Location ID/Location Name/Application/Priority/Elevation/Orientation/Operating Pattern/Line Pressure/ Inlet Pressure/Back Pressure/Condensate Recovery/Operating Hours/Operating Days/Frequency/Type/ Operating Principle/External Leak/Serial Number/Installation Date/Valve Size/Connection Spec/Test Result/ Inspection Time/Picture/Other Notes Bearing/User Defined Area ID/Location ID/Location Name/Priority/Installation Location/Operating Hours/Operating Days/Frequency/ Serial Number/Installation Date/Average Value (Ref)/Peak Value (Ref)/CF Value (Ref)/Inspection Time/Picture/ Other Notes
Report Function (PDF/CSV)	Steam Trap Trap Type Analysis/Application Analysis/Pressure Analysis/Area Analysis/Inspection Summary Table* Valve Inspection Summary/Reference Table/Valve Damage Summary/Inspection Summary Table* Bearing/User defined Inspection Summary Table*
Units	Temperature: °C/°F Pressure: MPa, bar, kgf/cm^2, psi
Language	English/French/German/Spanish/Portuguese/Korean/Chinese/Japanese
Hardware Requirements	iOS 14 or greater Android 8.1 or greater

* CSV only

Manufacturer
TLV CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd, to ISO 9001/14001

ISO 9001
ISO 14001
LRQA CERTIFIED

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Products for intended use only.
Specifications subject to change without notice.