



TrapMan®

MODEL TM5N-EX/TrapManager®

MANAGEMENT SYSTEM AUTOMATICALLY JUDGES STEAM TRAP CONDITION FOR EFFECTIVE MAINTENANCE

Benefits

Measurement, judgment, and analysis system consisting of:

- TM5N-EX hardware – a precision ultrasonic and temperature testing instrument in which TLV diagnostic software technology is stored.
 - TrapManager – TLV diagnostic software including a comprehensive Windows based program used to input data and analyze results.
1. TM5N-EX instrument performs three functions: records temperature, ultrasonic levels, and logs data into software.
 2. TrapMan System judges a steam trap's condition by comparing its operating data to laboratory tests of a similar trap held in its memory.
 3. TrapMan judgement is automatic and repeatable.
 4. Data recorded in TM5N-EX transfers easily to the desktop software.
 5. TrapManager allows the data results to be analyzed and summarized into a variety of reports, tables, and graphs.
 6. TrapMan's judgement accuracy has been validated by a globally recognized, independent agency.



Specifications (Diagnosis Hardware)

Model	TM5N-EX*
Description	Intrinsically safe Certified to meet all of the following standards: ATEX : C €2776 II2G Ex ib IIB T3 DEMKO 12 ATEX 1212672X cULus : Class I, Zone 1, AEx ibII B T3 Class I, Zone 1 Ex ibII B T3 File No. E346614 IECEX : Ex ib IIB T3 IECEx UL 12.0016X
Measurement Period	15 seconds (Time period required to hold the probe against the trap)
Automatic Judgement	Good, Leak (Small, Medium, Large), Blowing, Blocked, Low Temperature, Temperature Adjustment Failure
Manual Judgement	Not in S (not in service), L/Gasket (gasket leak), L/Body (body leak), NO CHECK (not inspected)
Memory	Total available registered trap models: 3400 (more than 4000 available in TrapManager). User defined memory presets for registered trap models: 30 models per trap type Number of steam traps that can be tested and survey data memorized at one time: approximately 1600 Information items: 20 (Model, Judgement, Temperature, Pressure, Inspection Data, Application, Installation Data, Connection, etc.)
Display	16 digits x 2 lines, 5 x 7 Matrix LCD
Steam Pressure Range	7 – 999.9 psig (differential pressure of at least 7 psi)
Steam Trap Surface Temperature	32 – 662 °F
Operating Temperature	32 – 104 °F
Humidity Range	20 – 80% RH
Other Features	Registered model search, Display brightness/contrast settings
Power	Main Battery***: Ni-MH 3.6 VDC 750 mAh (AAA eneloop x 3), Backup Battery***: Lithium 36 mAh (holds data for approx. 10 years.) Charger: 2 hour charge (special charger with protection against overcharge) includes battery reconditioning Continuous Operation: 10 hours (with back-light off), 8 hours (with back-light on) Auto Power OFF: Auto Power OFF function if no operation for more than 5 minutes (defaults to enabled, can set to disabled) Resume: Yes (indicates trap No. when power went off).

* The TM5N-EX is approved for use in hazardous locations only while inserted in the leather case. Do not remove the case while in a hazardous location. Product markings are provided on the product enclosure beneath the leather case. For hazardous areas, the TM5N-EX should be used by trained personnel with knowledge of the hazardous locations/classifications.

** The main battery may be replaced by the customer. At time of replacement exchange all batteries for new. New and old batteries should not be mixed. Since the main battery is recyclable, dispose of it in an environmentally friendly manner and according to local regulations. For the backup battery, return unit to TLV for replacement.

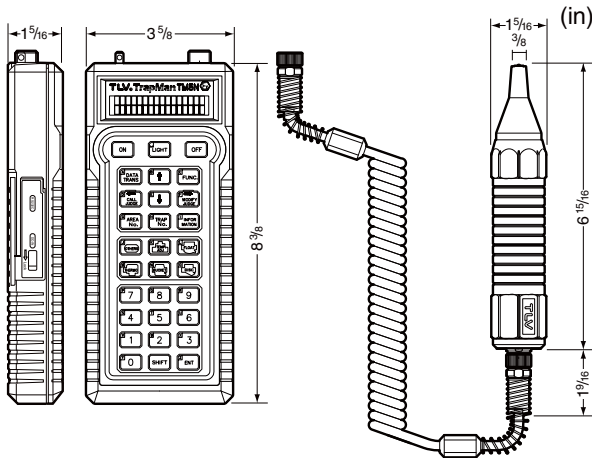
NOTE: This device includes a hardware control/disable function which shuts down the TM5N-EX after 27 months if maintenance is not performed. Because periodic maintenance is necessary in order to maintain highly accurate diagnosis, a warning will be displayed on screen when periodic maintenance is due (2 years from first use). Please contact TLV at this time to request maintenance.

Specifications (Analysis Software)

Model		TrapManager (ver. 3.4.x)*	
Main Features	Management Log	Master Trap List, Failed Trap Reminder List, and Inspection History List can be displayed and maintained.	
	Trap Route	Survey route can easily be set and saved	
	Analysis	The data can be analyzed and saved by selecting various conditions in detail as well as display graphs	
	Report	Includes: Log Details, Inspection History, Failed Trap Reminder List, Trap Route, Surveys, and Trap Code	
	Communication	Automatic data transfer	
PC Requirements	OS	Windows 7, Windows 8 & 8.1, Windows 10	
	CPU	Minimum	800 MHz
		Recommended	1 GHz or higher
	Hard Disk	60 MB Minimum	
	Memory (RAM)	512 MB Minimum	
	CD-ROM Drive	2x (double speed) minimum	
	Display	Minimum	SVGA (800x600) with 256 colors
Recommended		XGA (1024x768) with 16 bit color	

* TrapManager ver. 3.4.x or later is required in order to use the TM5N-EX Diagnostic Unit.
If you are already using the TrapMan system with TrapManager ver. 3.3.x or earlier, you will need to upgrade to ver. 3.4.x or later.

Dimensions



Weight: approx. 1.1 lb

Weight: approx. 0.8 lb

Package

TM5N-EX

- Main Units: Main Body, Coil Cord, Probe
 Accessories: Special Electrical Charger, Protective Leather Case, Belt-loop Holder, Strap, Flat File, Carrying Case, Communications Cable (USB)
 Manual: Pocket Guide, Instruction Manual (pdf file is also included on CD-ROM)

TrapManager

- Software: (CD-ROM)
 Accessories: Hardlock Key (HASP)
 Manual: Quick Start Guide (pdf file on CD-ROM)
 enloop, Windows, and HASP are registered trademarks of Panasonic Group, Microsoft Corporation, and SafeNet Inc., respectively.



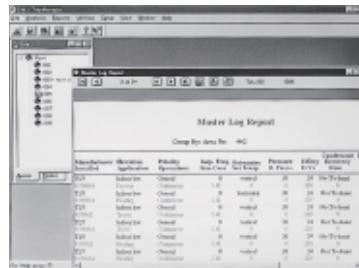
1. Use ONLY the TLV-provided battery charger included in the package for charging the TM5N-EX.
2. The communications cable and HASP included in the package must be used to connect the TM5N-EX to a PC.

Sample Screen of TrapManager

1. Analysis



2. Report



3. Maintenance



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

