



TrapMan®

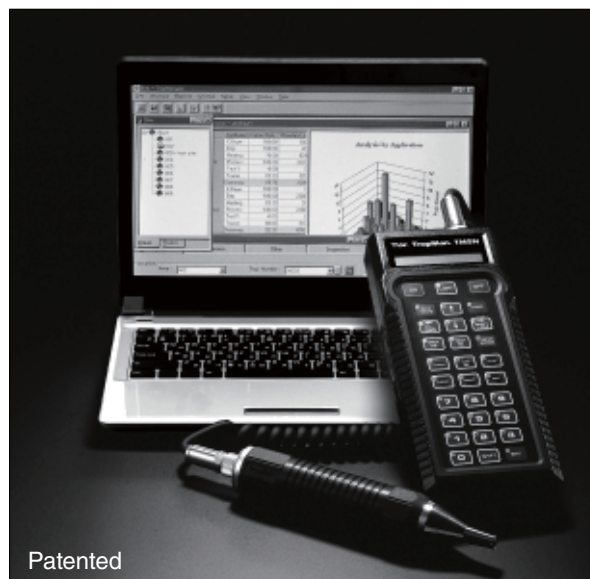
MODEL TM5N/TrapManager®

COMPUTERIZED STEAM TRAP MANAGEMENT SYSTEM FOR PRODUCTIVE MAINTENANCE

Features

Measurement and analysis system consisting of:

- **TM5N** hardware – a precision ultrasonic and temperature testing instrument in which the **TLV** diagnostic technology is stored.
 - **TrapManager** software – a comprehensive Windows based program used for the input of data and analysis of results.
1. **TM5N** instrument combines three instruments in one probe: ultrasonic and temperature measurement plus data logging function.
 2. **TM5N** tests a steam trap by comparing its operation to data from laboratory tests of an identical trap held in its memory.
 3. **TM5N** judgement is automatic and repeatable.
 4. Data from **TM5N** is easily uploaded to the **TrapManager** software.
 5. **TrapManager** summarizes and analyzes the results, making the data available in a variety of reports, tables and graphs.
 6. **TrapMan**'s judgement accuracy has been validated by Lloyd's Register.



Specifications (Diagnosis Hardware)

Model	TM5N	TM5N-EX*
Description	Standard	Intrinsically safe : Certified to meet all of the following standards ATEX : C 0539 II2G Ex ib IIB T3 DEMKO 12 ATEX 1212672X cULus : Class I, Zone 1, AEx ib IIB T3 Class I, Zone 1 Ex ib IIB 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 possible. Call registered models: max. 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 digitsx2 lines, 5x7 Matrix LCD	
Steam Pressure Range	0.05 – 8.0 MPaG (differential pressure of at least 0.05 MPa)	
Steam Trap Surface Temperature	0 – 350 °C	
Operating Temperature	0 – 40 °C	
Humidity Range	20 – 80% RH	
Other Features	Registered model search, Display brightness/contrast settings, Earphone volume control	
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.

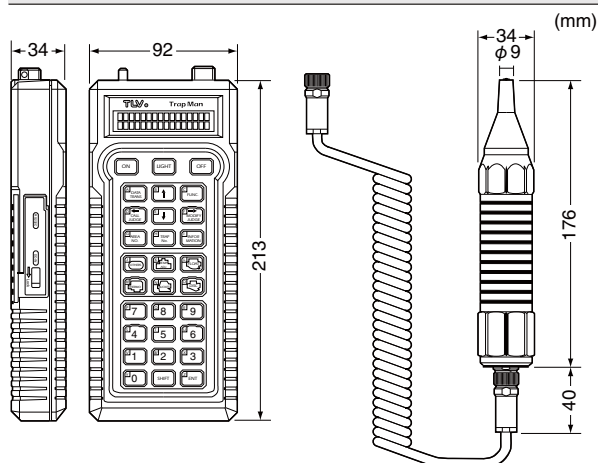
NOTE: This device includes a hardware control/disable function. Because periodic maintenance is necessary in order to maintain highly accurate diagnosis, a warning will be displayed on screen when periodic maintenance is due (2 years from first use). Please contact TLV at this time to request maintenance. If maintenance is not carried out, the unit will be automatically locked.

Specifications (Analysis Software)

Model			TrapManager (ver. 3.4.x)*
Main Features	Management Log		Can display and maintain: All Trap List/Failed Trap Reminder List/Inspection History List
	Trap Route		Survey route can easily be set and saved
	Analysis		Can analyze and save the data by selecting various conditions in detail as well as display graphs
	Report		Can print: Log Details/Inspection History/Failed Trap Reminder List/Trap Route/Surveys/Trap Code, etc.
PC Requirements	Communication		Automatic data transfer
	OS		Windows 2000, Windows XP, Windows Vista, Windows 7
	CPU	Minimum	133 MHz (Win 2000), 300 MHz (Win XP), 800 MHz (Win Vista / Win 7)
		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 (standard) / TM5N-EX (Intrinsically Safe) Diagnostic Units.
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. 500 g

Weight approx. 390 g

Product Components

TM5N/TM5N-EX

Main Units: Main Body, Coil Cord, Probe
Accessories: Special Electrical Charger,
Protective Leather Case, Belt-loop Holder,
Strap, Flat File, Carrying Case,
Earphone (**TM5N** only),
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)

eneloop, Windows, and HASP are registered trademarks of SANYO Electric Co. Ltd., Microsoft Corporation, and SafeNet Inc. respectively.



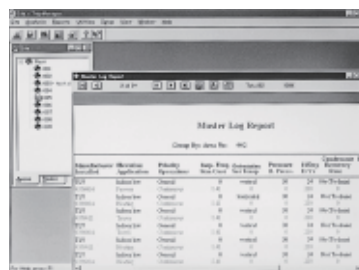
1. Use ONLY the battery charger included in the package when the unit is charged.
2. The communications cable and HASP included in the package must be used when the unit is connected to the PC.

Sample Screen of TrapManager

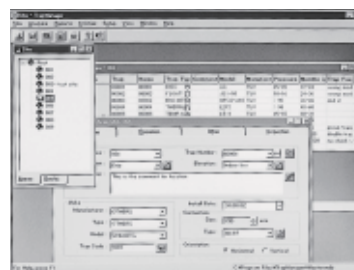
① Analysis



② Report



③ Maintenance



Manufacturer

ISO 9001/ISO 14001

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

