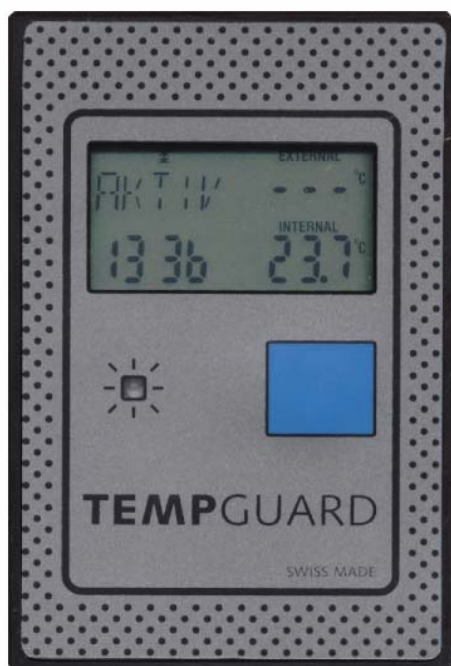


## The "little miracle" for

temperature measurement  
recording and  
evaluation

- exact
- reliable
- automatic
- extremely compact
- time-saving and cost-saving and
- autonomous with integrated information system



### Fields of application :

Cold stores, warming boxes, refrigerators and chest freezers, cold chain monitoring when transporting foodstuffs, medicines and materials, general temperature monitoring on equipment, machinery, engines and motors, in storerooms and archives and in computer rooms etc.

# TEMP GUARD 2000

## TempGuard temperature detector

TempGuard is an extremely rugged, compact, microprocessor-controlled, battery-operated temperature detection module with the size of a cigarette packet. It is capable of detecting and saving over 60,000 measured values over a period of more than two years.

The measured values can be supervised or monitored with freely definable limit values (alarm signals).



Programmed parameters and current measured values, in addition to alarm signals, are displayed on the unit's liquid-crystal display (LCD).

The text field beneath the TempGuard display is a unique feature on the market. All signals, alarms, limit values and a complete menu with all important TempGuard parameters are shown on a clearly legible and easily understandable display. Operation of the TempGuard with the key on the front is very simple.

This simple but effective display affords many advantages:

- No additional detection unit for monitoring is required. The alarms, limit values and start times can be viewed directly.
- Time-saving. A brief press of the key suffices and you are informed of the condition of the stored material or cargo.
- You can check this on site. This is very important, for instance in poor weather, at high temperatures or extremely low temperatures or in rough industrial environments.

The measured values and parameters recorded in the unit are password-protected and can be evaluated by the user with the TempGuard Windows program on any PC.

The TempGuard can be used wherever temperatures need to be registered and also evaluated.

## TEMP LINK 2000

### TempLink interface

The TempLink is a rugged basic unit which links the TempGuard to the PC. The unit features a pod in which the user can position his TempGuard. A high-speed direct link is used for data exchange from the TempGuard to the TempLink circuitry, and data transfer to the PC is performed using a cable which must be connected to the PC's RS232 port. The TempLink does not require an additional power supply since it is powered via the PC port.



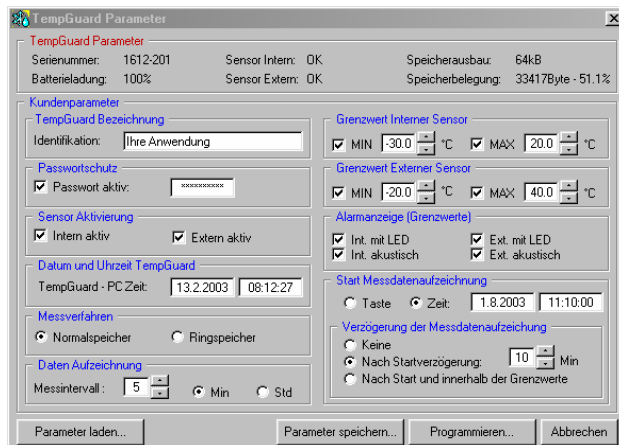
The TempLink performs the following two tasks:

1. Interface for programming the TempGuard directly from the PC (e.g. defining the measuring intervals, determining the limit values or defining the start time etc.).
2. Interface for evaluating the measured data stored in the TempGuard (e.g. graphical and/or tabular logging of the measured data etc.).

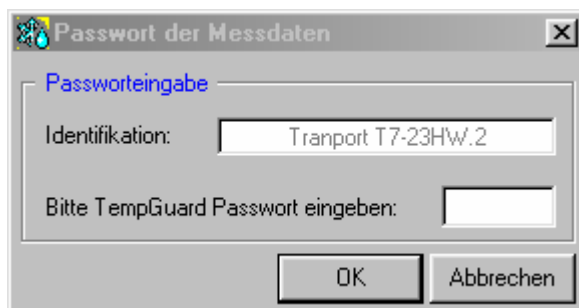
# Programming

## TempGuard programming

The individual TempGuard parameters can be programmed on your PC using the very clear TempLink software running under Windows. All parameters are displayed in one single window on the basis of function (thus doing away with bothersome scrolling or continued clicking) and can be saved on the PC or loaded from the PC with TempLink to the TempGuard.



The TempGuard data can be password-protected. This prevents tampering with the data.



# DATA EVALUATION

## TempGuard measured data evaluation

The measured value data registered or saved in the TempGuard can be retrieved as follows:

### 1. Direct monitoring of the alarm values on the TempGuard

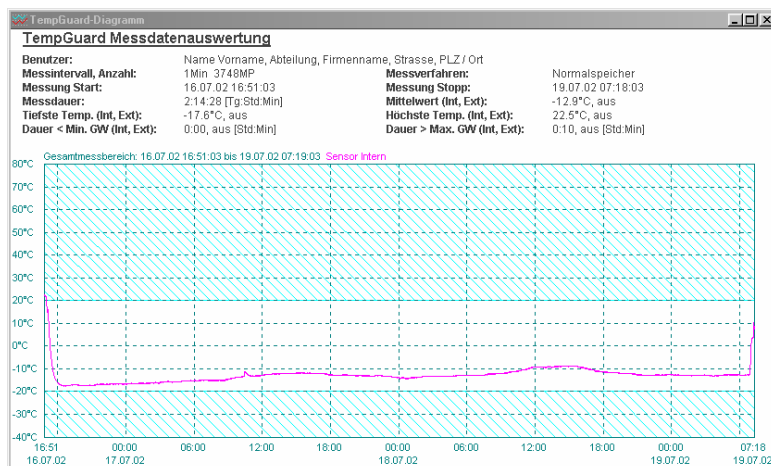
The current measured temperature value is shown on the unit's display. If alarm signals have been registered during monitoring as the result of overshoot or undershoot of the preset limit values, these signals can be viewed on the TempGuard's display at the press of a key.

### 2. Measured data evaluation with the TempLink

Using the TempGuard in the TempLink base station which is connected to a commercially available PC allows the user to evaluate all saved measured data and alarm limits very easily and conveniently.

The TempLink software running under Windows allows the measured data registered to be logged or visualised either graphically or in tabular form. The measured data can be exported to a text file or to an Excel file.

TempGuard Messdatenauswertung																		
Benutzer:		Name Vorname, Abteilung, Firmenname, Strasse, PLZ / Ort																
Modulname:		HOME 3										Modulparameter:		SNR: 1612 SWW: 102				
Speichergröße, Belegung:		64kB, 6.1%										Batteriezustand:		96%				
GW Intern Min, Max:		-20°C, 20°C																
Messintervall, Anzahl:		1Min 3748MP																
Messung Start:		16.07.02 16:51:03																
Messdauer:		2:14:28 [Tg:Std:Min]																
Tiefste Temp. (Int, Ext):		-17.6°C, aus																
Dauer < Min. GW (Int, Ext):		0:00, aus [Std:Min]																
Höchste Temp. (Int, Ext):		22.5°C, aus																
Dauer > Max. GW (Int, Ext):		0:10, aus [Std:Min]																
DATUM	ZEIT	INT	+1m	+2m	+3m	+4m	+5m	+6m	+7m	+8m	+9m	+10m	+11m	+12m	+13m	+14m	+15m	ME
16.07.02	16:51	22.5	22.5	22.1	22.1	22	22	22	21.9	21.8	20.8	19.6	18.7	17.8	17	16.4	15.6	°C
16.07.02	17:07	14.9	16.3	15.5	14.3	12.9	11.5	10	8.6	7.2	5.7	4.2	2.8	1.5	0.3	-0.8	-1.7	°C
16.07.02	17:23	-2.8	-3.3	-4.2	-4.9	-5.7	-6.4	-7	-7.7	-8.1	-9	-9.5	-9.7	-10.3	-10.8	-11.1	-11.8	°C
16.07.02	17:39	-11.9	-12.3	-12.5	-12.8	-13.2	-13.6	-13.7	-14	-14.2	-14.8	-14.8	-14.9	-15	-15.1	-15.2	-15.2	°C
16.07.02	17:55	-15.2	-15.4	-15.6	-15.8	-15.9	-16	-16.1	-16.2	-16.3	-16.5	-16.3	-16.6	-16.7	-16.7	-16.8	-16.9	°C
16.07.02	18:11	-16.7	-17	-17.1	-16.9	-16.9	-17	-17.2	-17.2	-17.3	-17.1	-17.3	-17.3	-17.5	-17.4	-17.4	-17.3	°C
16.07.02	18:27	-17.5	-17.5	-17.5	-17.5	-17.5	-17.6	-17.6	-17.4	-17.5	-17.4	-17.4	-17.4	-17.5	-17.5	-17.5	-17.5	°C
16.07.02	18:43	-17.5	-17.4	-17.6	-17.5	-17.4	-17.4	-17.5	-17.4	-17.3	-17.3	-17.4	-17.3	-17.3	-17.3	-17.5	-17.4	°C
16.07.02	18:59	-17.4	-17.4	-17.3	-17.2	-17.3	-17.2	-17.2	-17.3	-17.2	-17.2	-17.2	-17.2	-16.9	-16.9	-17	-17	°C
16.07.02	19:15	-17	-16.9	-17	-17	-17	-17.2	-16.8	-17	-16.9	-17	-17	-17	-16.9	-17	-17	-16.9	°C
16.07.02	19:31	-17	-16.9	-17	-16.9	-16.9	-16.9	-16.9	-16.9	-16.8	-16.9	-16.8	-16.9	-16.9	-16.9	-16.9	-17.1	°C
16.07.02	19:47	-17	-17.1	-17.2	-17.1	-17.1	-17.1	-17.2	-17.2	-17.2	-17.2	-17.2	-17.3	-17.2	-17.3	-17.3	-17.2	°C
16.07.02	20:03	-17.2	-17.2	-17.4	-17.3	-17.3	-17.3	-17.4	-17.4	-17.4	-17.4	-17.4	-17.4	-17.4	-17.5	-17.4	-17.4	°C
16.07.02	20:19	-17.4	-17.4	-17.5	-17.4	-17.4	-17.3	-17.3	-17.3	-17.4	-17.3	-17.4	-17.5	-17.4	-17.4	-17.4	-17.5	°C



## TEMP GUARD 2000 DATA

### TempGuard

	min.	max.
Measuring range	- 40°C	+80°C
Limit value setting range	- 30°C	+70°C
Resolution	0.1°C	
Accuracy		+/- 0.5°C
Measuring interval	1 minute	24 hours
Number of measured values saved		>60,000
Recording time	1 minutes	>2 years
Start delay	0 minutes	60 minutes
Read-out time for 60,000 measured values		30 seconds
(The read-out time will be shorter accordingly if there are less measured values!)		
Display and indication	Liquid-crystal display + alarm LED + alarm beeper	
Operation	Single-key operation with text menu prompting	
Interface to TempLink	High-speed direct link	
Battery	Environment-friendly lithium battery (containing no heavy metals!)	
Dimensions	90 x 60 x 25 mm (L x W x H)	
Weight	130 g	
Enclosure	IP67	

### TempLink

Operating temperature	0 C	+50 C
Interface to PC	RS232	
Baud rate	38,400 baud	
Power supply	via RS232	
Dimensions	137 x 100 x 45 mm (L x W x H)	
Weight	400 g - 500 g	
Cable length	approx. 2 m	

**Please contact the following address  
for advice and sales:**

Subject to technical modification !