ELPRO

measure, store, alarm, document

Qualified systems

+ Software
+ Accessories
+ Service

Made in Switzerland
for over 15 years

Datalogger

ECOLOG
quality dataloggers

ELPRO

ECOLOG TH1   *Part No. 2423*
Temperature and humidity

The ECOLOG family

ECOLOG dataloggers are the ideal units for documentation of temperature and air humidity. Programmable alarm functions make them suitable for a widespread range of applications.

- Temperature (NTC, PT100) + relative air humidity
- Self-contained logger
- One-year memory capacity (64,000 measured values)
- 2 to 4 channels, programmable alarms
- Large display with autoscroll
- Multifunctional key pad
- Fast read-out to PC and printer

ECOLOG TP2   *Part No. 2425-2T*
2x PT100 temperature -200°..550°C

ECOLOG TH2   *Part No. 2426*
Temperature and humidity, external probe

ECOLOG TP4-L   *Part No. 2425*
4x PT100 temperature -200°..550°C

ECOLOG TH1-M   *Part No. 2423-M*
Temperature and humidity, white housing

ECOLOG
with EEx approval

	SEE 00 ATEX 3115
(Ex)	II 2 G
	EEx ib IIB T4
CE	0499
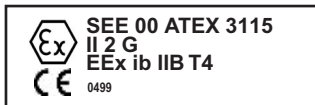
All ECOLOG dataloggers (except TTS) also with approval for EEX zone 1

Type	Part No.
TN2	2420-EX
TN3-P	2420-PEX
TN4	2421-EX
TN4-L	2422-EX
TP2	2425-2TEX
TP4-L	2425-EX
TH1	2423-EX
TH2	2426-EX

Accessories for EEX zone 1:

Type	Part No.
Mounting bracket	2804-C-EX
	2805-C-EX
	2801-C-EX
Flasher lamp	2312
(mount only outside EEX zone 1)	

ECOLOG TTS

The datalogger with GSM connection. In addition to the one-year memory capacity for measured values, it is possible to make inquiries about measured temperatures via mobile phone or to send alarms to a GSM system (alarm center, e-mail, e-fax or mobile phone).

- Datalogger with SMS communication
- Alarms and measured values via SMS to mobile phone
- Automatic e-mail and e-fax
- Large display with autoscroll
- Fast read-out to PC and printer

ECOLOG TTS datalogger with GSM-adapter   *Part No. 2440*
SET Ecolog TTS, datalogger with GSM-adapter   *Part No. 2440-SET*
consisting of: ECOLOG TTS, temperature probe NTC 3090-L15, supply cable, GSM-antenna

     measure, store, alarm, document — for every application

ELPRO

ECOLOG
with all accessories

The brilliant datalogger

It is compact and robust with a large display developed specially for dataloggers.

A self-contained unit, it will record measured climatic data reliably for days, weeks, months or years. If required, you can read out the saved values to the display, a protocol printer or an office PC at any time.

If you need to transport perishable goods in a truck or if you are required to handle delicate chemicals in a laboratory, the ECOLOG datalogger is your reliable partner for a wide diversity of possible applications.

The various models are optimally suited to different uses. Each type is optimized for special applications and for specific measurement ranges.

The excellent cost-performance ratio justifies the success of ECOLOG dataloggers.

The modular design permits subsequent unit extensions with matching accessories for almost all customer applications.

ECOLOG TN4-L   Part No. 2422
4x NTC temperature with Lemo connector
-50°..140°C

ECOLOG TN4   Part No. 2421
4x NTC temperature -50°..140°C

ECOLOG TN3-P   Part No. 2420-P
3x NTC temperature -50°..140°C,
int. -35°..55°C

ECOLOG TN2   Part No. 2420
2x NTC temperature -50°..140°C,
int. -35°..55°C

Alarms

Flasher lamp; xenon red   Part No. 2311-B
Flasher lamp with siren   Part No. 2311-C

Remote alarm receiver   Part No. 2340-R
Remote alarm sender   Part No. 2340-T

Auto telephone dial unit   Part No. 2341-A

Protocol printer

Printer Seiko 414   Part No. 2319
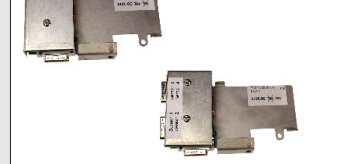
Brackets

Mounting sheet   Part No. 2804-A
Fixation sheet, lockable   Part No. 2804-E
Bracket with clamp for DB15   Part No. 2804-B

Bracket for TNx with terminals Part No. 2804-C
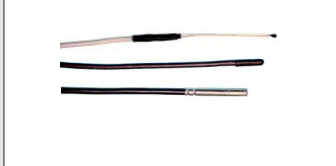*Bracket for TPx with terminals Part No. 2801-C*

Bracket for TNx with RS232 Part No. 2804-CR
Bracket for THx with RS232 Part No. 2805-CR

Fixation sheet with A5 pocket Part No. 2804-D
Housing IP65   Part No. 2350-x

Probes

All temperature probes, see page 5

T / rH Probes

Plug on sensor: humidity and temperature
T -35°..+70°C, rH 0..100%   Part No. 3087
T -35°..+110°C, rH 0..100%   Part No. 3087-B

Special couplers

DB15 coupler, Start/Inpos   Part No. 3032-IS
DB15 coupler, alarm reset   Part No. 3032-EA
DB15 coupler; NTC   Part No. 3032-A
Intermediate piece DB15-Lemo   3032-VN

Weather shield

Weather and radiation protection for humidity
*sensor 3087 und 3088   Part No. 3087-W*

measure, store, alarm, document — with the correct accessories

HOTDOG
for extreme conditions

ELPRO

The HOTDOG family
For recording temperature and humidity

HOTDOG dataloggers have stood the test of time and still provide the simplest solution for a wide variety of applications. Their modular design allows you to use them for specific and customized functions.

- Self-contained datalogger
- Memory capacity for 16,000 measured values
- Data store interval programmable between 2s..2h
- Washable
- Infra-red interface
- Practical accessories

HOTDOG DT1   Part No. 2201
1x temperature internal -40°..+65°C, waterproof, welded housing
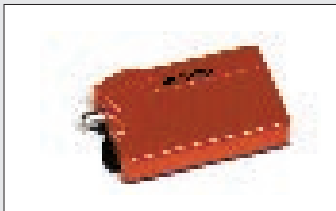
HOTDOG DT2   Part No. 2202
1x NTC temperature -50°..140°C, int. -40°..65°C
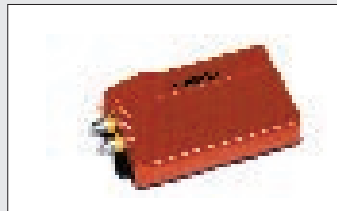
HOTDOG DT3   Part No. 2203
2x NTC temperature -50°..140°C
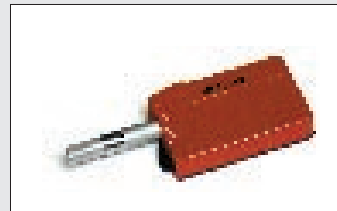
HOTDOG DH1   Part No. 2204
1x internal -40°..65°C, 0..100% rel. humidity

Accessories HOTBOX

In-Position bracket   Part No. 2802

Simple bracket   Part No. 2816

PC interface incl. software   Part No. 2302

All temperature probes, see page 5

HOTBOX HTH *humidity and temperature up to 105°C*
Self-contained datalogger for high temperatures
Robust aluminum housing, memory capacity for 64,000 measured values
3 channels: internal 1x humidity and temperature, external 1x temperature
Ranges: 0%..100%rH, -35°C..+105°C (105°C up to 1 hour, 95°C long-time)

HOTBOX HTH   Part.No. 2601
Accessories Set   Part No. 2810-HT1: PC-data cable, NTC-temperature probe 3010-L03, socket 2611-B, case, elproLOG WIN software

Accessories: PC cable and optional NTC sensors

HOTBOX BKT4
Self-contained datalogger
Robust aluminum housing
Memory capacity for 16,000 measured values
4 channel datalogger for thermocouple type K
Temperature measurement range -80°..+1250°C

HOTBOX BKT4   Measurement range 1250°C   Part No. 2241-A
HOTBOX BKT4-L   Measurement range 350°C   Part No. 2246-A

Accessories:
Isolation box up to 300°C   Part No 2809
Type K sensor 1.5 mm   Part No. 3251-D1.5

Page 3   **measure, store, alarm, document — with proven technique!**

HOTBOX-SE
the individual solution

Universal datalogger HOTBOX-SE

4 channels, 6 inputs
Freely programmable units of measure (e.g. pressure, CO2, m/sec) memory capacity for 64,000 measured values, autoscroll display, sensor suppled by internal batteries 2x 9V = 18V, external sensor supply possible

- Fast PC evaluation
- Online display, user or hyper terminal
- Connection for protocol printer
- Alarm output via installed DC switch
- Universal sensor connection:
    4 pins for 2x NTC temperature probes
    5 pins for 2x 4-20mA signal input
    7 pins for 2x DC signals and supply

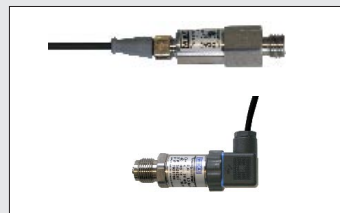|	
HOTBOX-SE	Part No. 2501
Accessory set: case, cable, software	Part No. 2810-SE

Accessories HOTBOX-SE

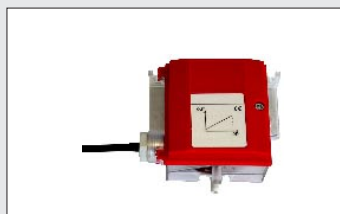*All temperature probes. see 5*

Connector for sensor connection
with 4 pin terminal (2x NTC)   Part No. 2540-P4
with 5 pin terminal (2x 4..20mA)   2540-P5
with 7 pin terminal (2x DC)   2540-P7

Pressure sensor, stainless steel 4..20mA
-1..9 bar G 1/4"   Part No. 3280-A
-1..24 bar G 1/4"   Part No. 3280-B
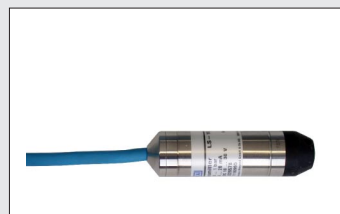*Baro: 0.8..1.2 bar, G 1/2"   Part No. 3255-A*

Air speed 0.3..20 m/s
Output DC 0..2 V   Part No. 3264-C
Output 4..20mA   Part No. 3264-D

Differential pressure sensor in clean rooms
-50..+50 Pa, 4..20mA   Part No. 3260-L

Humidity and temperature
Hygroclip sensor T/rH, DC   Part No. 3088-A
Hygroclip sensor T/rH 5 mm Part No. 3089-A
Extension incl. connector   Part No. 3216-Lxx

Water level sensor with compensation
Level probe from 0..10 m, 4..20mA
*   Part No. 3263-C*

AC current monitoring
Current clamp Mini2 1..150 A, Part No. 3268
Current clamp YCV5 2..500 A, Part No. 3269

CO2 transmitter 0..2000 ppm
0..10V / 4..20mA   Part No. 3271-F
for channel mounting   Part No. 3271-G

CO gas transmitter 0..300 ppm
Output 4..20mA   Part No. 3272-A
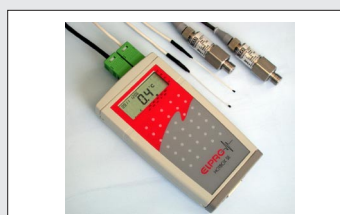

Density of light in dwellings
Light sensor   Part No. 3295

Housing waterproof IP65 for
outdoor applications   Part No. 2350-A

Application: clean room
1x differential pressure +/-50Pa Part No. 3260-L
1x humidity and temperature Part No. 3088-A
1x cable 1 meter   Part No. 3216-L01
1x mounting plate   Part No. 2804-SE1

Application: pressure at compressors
1x pressure sensor -1..9 bar   Part No. 3280-A
1x pressure sensor -1..24 bar   Part No. 3280-B
2x NTC probes -50°..140°C   Part No. 3055-L03

Application: recording climatic data
1x hygroclip sensor   Part No. 3088-A
1x extension 1m   Part No. 3216-L01
1x sensor for air speed   Part No. 3264-D
1x NTC probe -50°..140°C   Part No. 3090-L10

Application: monitoring fresh air
1x sensor for air velocity   Part No. 3264-D
1x current clamp Mini2   Part No. 3268
2x NTC probes -50°..140°C   Part No. 3090-L10

PROBES
measuring temperatures

ELPRO

NTC temperature probes
Resistor probes 3K3A1B
Temperature range -50°..+140°C

	Part No.
	3090-Lxx
	3091-Lxx
	3095-Lxx
	3010-Lxx
	3021-Lxx
	3041-Lxx

	Part No.
	3050-Lxx
	3055-Lxx
	3060
	3093-Lxx
	3094-Lxx
	3025-L00

PT100 temperature probes
IEC751 / EN60751 resistor probes
Temperature range, type-depending -200°..+550°C

	Part No.
	3161-Lxx
	3163-Lxx
	3181-Lxx
	3165-Lxx
	3166-Lxx
	3172-Lxx
	3164-Lxx
	3167-Lxx
	3174-Lxx
	3162-Lxx
	3169-Lxx
	3173-Lxx
	3160
	3171-Lxx
	3159-Lxx
	3168-Lxx

xx...Length of cable in meters

Typ K (NiCr/Ni) thermocouples
EN 60584
Temperature range, type-depending -60°..+1250°C

	Part No.
	3251-D1.5
	3253-S1
	3253-A

Connectors

Loose probe end
xxxx-Lxx

Lemo connector,
mounted
xxxx-Sxx

DB15 connector
incl. soldering of
sensors,
3032-B

DB15 coupler,
self-assembly
3034

Accessories for temperature probes

3211-y   3211-Byy   3095-T

3204-Sxx NTC extension cable

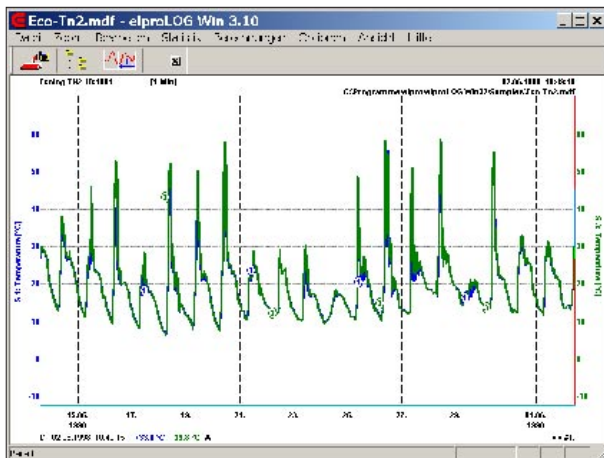3205-Lxx PT100 ML-extension cable

3254 Typ K extension cable

elproLOG WIN, the PC software for all ELPRO datenloggers
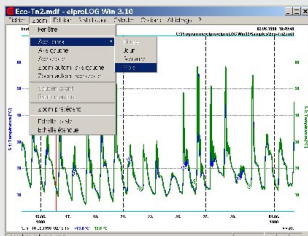
Simple, fast, reliable, plug & play

For all ELPRO dataloggers; capable of automatic adjustment to implemented model
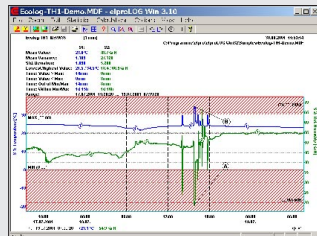
Adaptable to your requirements.

Simple procedure to create easily understandable and valuable documents.

## The choice is yours: simple overview or many details

*Clearly organized menu structure, Multilingual: German, English, French, Spanish, Italian*

Threshold visualization and statistical calculations. Many additional functions for demanding users
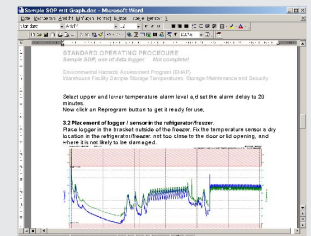

Simple copy / paste function to transfer graphics to Word or EXCEL
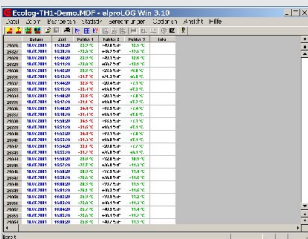
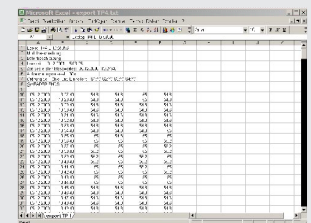*Data presentation in table form with color coding*
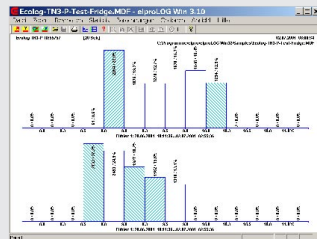
Histogram feature with manual or automatic classification
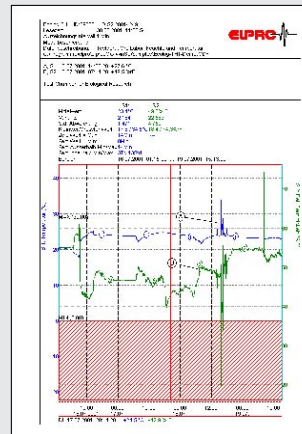
One mouse click for a convincing printout on all commercially available Windows printers

Convincing EXPORT functions enable date reduction for specific time domains

elproLOG WIN evaluation software functions
- Programming for all ELPRO dataloggers
- Data read-out from datalogger
- Printout of all screens with print preview
- Clearly laid-out graphs
- Clearly organized representation in table form
- Status printout with information about datalogger
- Statistical data
- Histogram representation
- Additional functions:
  dew point, F-value, multicurves, free choice of colors, simultaneous presentation of separately recorded graphs, MKT (Mean Kinetik Temperature), Arhenius calculation
- Zoom functions
- Possible to draw marking lines
- Own company logo on all documents
- Data and graph export
- Send e-mail: data file via e-mail to addressee

Security features:
- Software validation in accordance with ELPRO validation manual for 21 CFR 820
- Forgery and manipulation protection
- Coded logger to PC data communication
- Multipath transmission with check sums
- Compact coded data file
- Logger programming protection possible with pin code
- Complies to CFR 21 Part 11, Electronic Records

Network compatibility:
Standard: RS232, USB connection
Can be installed and connected to network via LAN
Operable with TCP/IP - RS module
Depending on type: terminal protocol or telephone dial unit
elproLOG Software, Part No. 2338-CDV and 2338-CVU
Runs on all Windows PCs:
W95, W98, WNT, W2000, WXP
Automatic installation from CD

ELPRO-BUCHS AG, Switzerland

Working with a panorama

Quality and Service:

ELPRO-BUCHS AG:

- ISO 9001 quality system
- Vendor audits, internal audits
- Expert systems

- Friendly company atmosphere
- Good employee training
- Good customer training
- Good work climate

- In-house production and development
- In-house calibration lab
- Modern resources
- Pleasant offices

- Datalogger service since 1989
- Calibration according to all standards
- Repair service for all products
- Customer calibration service
- World-wide distributors

You can return ELPRO units and the batteries for eco-friendly disposal.

Directives and Standards:

ISO 9001:2000	ELPRO SGS certificate no. 80013-1
ATEX	SNCH 01 ATEX 3280 / directive 94/9/EC
EX 1	Approval for EX protection zone 1; (EN 50014 and EN 5002)
CE	EN 50081-2 and EN 50082-2
EN12830 / EN92	Temperature recorder for transport, storage and distribution of foodstuffs
GZ1480	Exceptional approval for calibration
GZ1480/2000	from 10. 4. 2000, BEV, Austria

Integrated Regulations / Recommendations:

FDA	SW validation: 21 CFR 820, 21 CFR 11
GLP	FDA directive 21 CFR 58
GMP	21 CFR 210-211, drugs
	21 CFR 110, human food
FDA	Software validation for GLP applications
HACCP	Hazard Analizis Critical Control Points

measure, store, alarm, document

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