Central Monitoring System with
ECOLOG-NET LAN Dataloggers
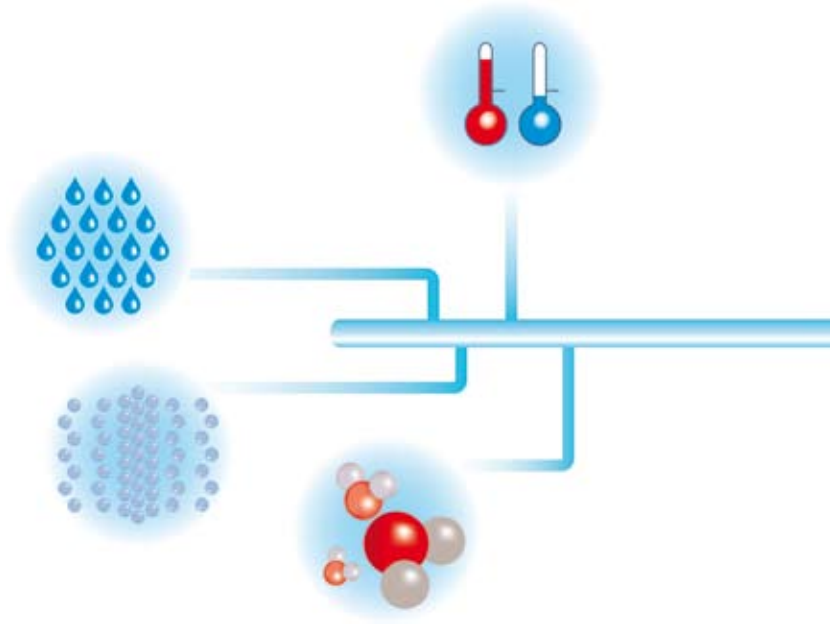
ISO 9001
QUALITY ASSURED FIRM
SGS
80013

ELPRO™ **DataloggingCompany**

Central Monitoring **System**

No more moving from datalogger to datalogger to monitor and download information. Now you can review and analyze recorded temperature, humidity, CO_2, particles or pressure differential data from any PC in your lab and continue to comply with FDA 21 CFR Part 11, GLP, GMP and GAMP 5.

APPLICATONS

Central Monitoring Systems from ELPRO are often used with:
- Cell culture incubators to monitor temperature, humidity, CO_2
- Refrigerators, freezers, ultra-low freezers or liquid nitrogen storage to monitor temperature
- Warehouses to monitor temperature and humidity
- Clean rooms to monitor pressure differential

IS A CENTRALIZED MONITORING SYSTEM COMPLICATED TO DEFINE, SET UP AND USE?
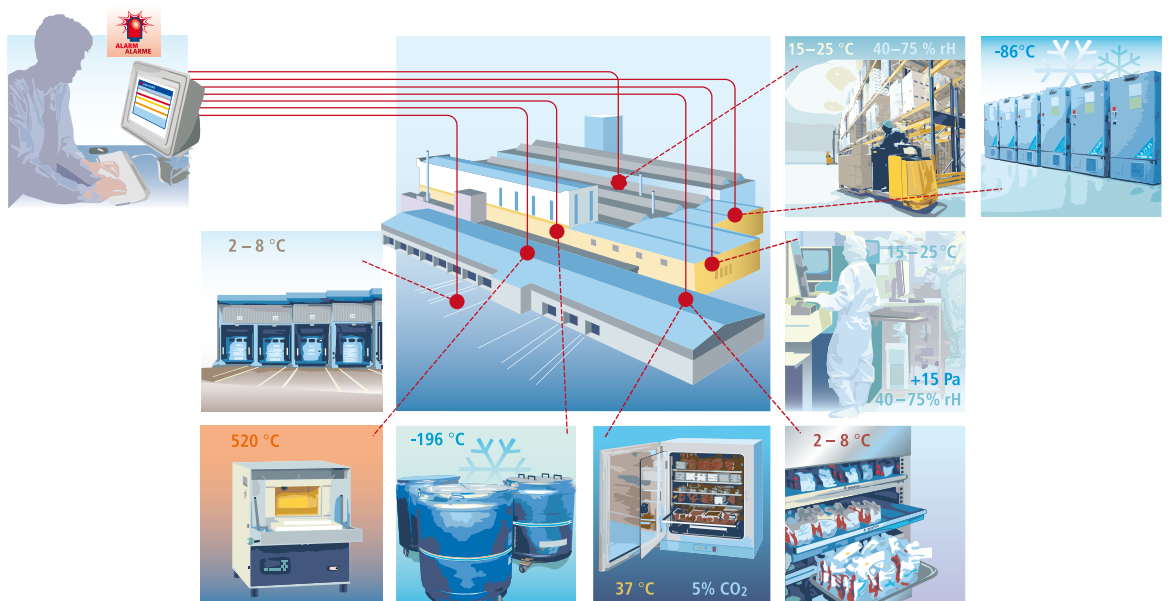
No, because we work with you every step of the way. From analyzing your facility's needs to helping you choose the appropriate dataloggers and sensors. From defining the layout and alarm setup to putting the dataloggers and sensors in place. From setting up the software, dataloggers and alarm limits to testing the entire system. From training your staff to offering continued support.
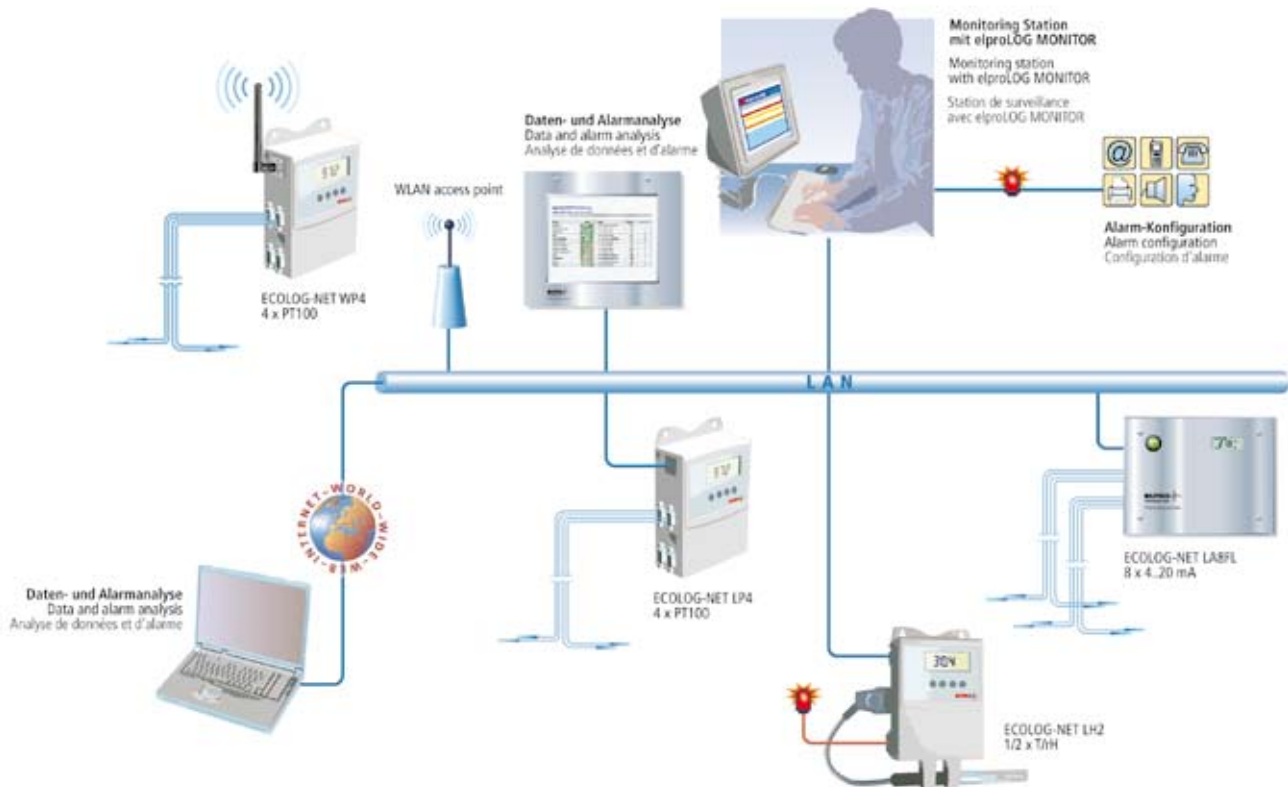
THE RESULT

A network you understand. A Central Monitoring System that works for everyone every day. Contact us today and join the many pharmaceutical and biopharma research labs, the food industry, hospitals, medical institutes and warehouses relying on ELPRO's advanced datalogging solutions.*

You will add a new dimension to your work life – a secure Central Monitoring System that ensures quick and easy access to data from any PC in your company.

*References available upon request.

Monitoring Station
mit elproLOG MONITOR

Monitoring station
with elproLOG MONITOR

Station de surveillance
avec elproLOG MONITOR

Alarm-Konfiguration
Alarm configuration
Configuration d'alarme

Daten- und Alarmanalyse
Data and alarm analysis
Analyse de données et d'alarme

WLAN access point

ECOLOG-NET WP4
4 x PT100

ECOLOG-NET LA8FL
8 x 4..20 mA

L A N

Daten- und Alarmanalyse
Data and alarm analysis
Analyse de données et d'alarme

ECOLOG-NET LP4
4 x PT100

ECOLOG-NET LH2
1/2 x T/rH

ADVANTAGES

- Quality system components
- Fully scalable so the LAN/Wireless LAN (WLAN) is customized for your needs
- Seamless integration into your existing network
- Real-time display of all data points
- Multiple security/alarm features – data safety even if a power failure lasts many months (internal Lithium battery)
- Personal service and reliable support
- Installation, service and training for easy setup and use
- Comprehensive documentation for system IQ/OQ and sample Standard Operating Procedures (SOPs)

COMPLIANCE

- System is fully compliant to 21 CFR Part 11, GMP, GAMP 5, GLP and Annex 11

EASY SETUP

- Out-of-the-box system ensures cost-effectiveness and easy setup

QUALIFICATION

- Detailed validation manual, including IQ/OQ templates for software and dataloggers and sample SOPs

SECURITY

- Alarm capabilities, several alarm levels:
  - Local alarm at the datalogger
  - Central alarm with possibilities for alarm forwarding
- Permanent self-monitoring of the system (together with the alarm interface), which enhances system security
- Redundancy: Data storage and local alarm functionality even if the network connection fails
- Data storage in non-volatile memory

RELIABILITY

Reliable daily performance and a high level of data safety. It is your number one concern. Now you can relax. Temperature, humidity, CO_2 or pressure differential are monitored continuously. At any PC on the network, you have instant access to all your data, including a real-time data display of measured values.

ELPRO's Central Monitoring System continues to log information even if a power failure occurs for many months (Lithium battery). Whether you are on site or off site, available multi-level audible/visual alarm capabilities, such as e-mail, Short Message Service (SMS), voice and fax, ensure that you are notified should a problem occur. And if you need to contact us, we're only a phone call away.

- State-of-the-art datalogger technology
- Robust datalogger design with reliable measurement technology
- Standard products and software developed in GMP-compliant development cycles
- Network technology based on standard network components used in innumerable proven and reliable network devices

EXPANDABILITY

Maybe you already have a LAN or WLAN network. Or, maybe your operations have grown. Now what? We use standard networking technology (TCP/IP) and components to ensure seamless integration into your existing LAN/WLAN network. Our Central Monitoring System is fully scalable so it can easily expand to accommodate your configuration changes. You don't have to start over or disrupt your existing operations. We will work with you every step of the way to ensure a smooth process.

- The system is built using modules for flexibility and can be expanded easily at any time
- The dataloggers can handle standard signals either from PT100 sensors or from 4-20mA transmitters. Therefore, existing equipment can be used together with the monitoring system

SERVICEABILITY

Routine maintenance, such as datalogger battery changes and calibration, are necessary to maintain proper functioning and compliance with regulatory guidelines. Qualified staff at our offices in Switzerland (headquarters), USA/Canada, the United Kingdom, Germany and our distributors are available to provide technical support and expertise. They can perform maintenance, calibration, IQ/OQ tests and protocols on site or you may perform them by using the documentation provided.

ELPRO dataloggers include a two-year warranty for peace of mind. In the United States and Canada, where turnkey installations are typical, we offer one additional year with turnkey installation purchase, SOPs and free lifetime technical support. Contact one of our offices or your distributor for information about warranties and service available in your area.

- Application of sophisticated calibration concepts (sensor exchange or in-process calibration)

elproLOG Software

DETAIL EVALUATION / REPORTS

elproLOG ANALYZE Part No. 2338-CDV

elproLOG ANALYZE QLS Part No. 2335-BL

elproLOG ANALYZE:

- ELPRO datalogger configuration
- Measured data storage
- Statistical data: min/max, mean value, standard deviation, variance
- MKT (Mean Kinetic Temperature), Arrhenius calculation
- Tools for commenting and marking data
- Complete reports in PDF format directly from software

elproLOG ANALYZE QLS

includes all ANALYZE software functions and implements numerous important tools to facilitate your work in qualified environments:

- Automatic audit trail creation at data readout

ONLINE-MONITORING

elproLOG MONITOR Part No. 2330-BL

- Real-time display of readings and alarms
- Alarm and warning notifications
- Audible and visual alarm functionality at local computer
- Forwarding of alarms and warnings via e-mail, telephone, SMS/Fax

- Alarm acknowledge functions
- Automatic, periodic download of data (Autosave)
- Self-monitoring for highest system security

DATA VISUALIZATION VIA INTERNET
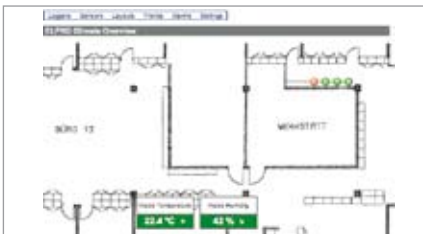
elproLOG MONITOR WebAccess Part No. 3560

- Secure and password-protected access to your information – from any PC anywhere in the world
- Customizable user interface

- Display of data on facility floor plans or photos
- Clearly laid-out graphs and tables
- Data visualization with standard Internet Browser, no additional software installation required on client PC

TRACEABILITY

elproLOG EVENT Part No. 2331-BL

- Central audit trail for all ELPRO software components (elproLOG MONITOR, elpro-LOG ANALYZE, ANALYZE QLS)

- Every entry in elproLOG EVENT is stored with information about the event, user information, date and time
- Data is stored in a tamper-proof database

SECURE AND FLEXIBLE ACCESS CONTROL

elproLOG USER Part No. 2332-BL

- User Management Software for the elproLOG SUITE software system
- Multiple groups of users with freely configurable access rights

- Comprehensive security features for user account management

NETWORKABLE DATALOGGERS

ECOLOG-NET dataloggers are the foundation of the ELPRO Central Monitoring System. The instruments are optimized for recording temperature, relative humidity or 4-20mA signals via a network. The data is stored in the datalogger's internal memory and can be loaded to the PC via the LAN network.

The system offers the highest data safety possible as the datalogger continues working even if a power failure lasts many months, running from its internal Lithium battery. For local alarming, the dataloggers have built-in alarm relays, offering the possibility to raise alarms during any out-of-limits condition.

- Memory for 64'000 readings
- Rugged, metallic housing
- Power supply possible via LAN (PoE, power over Ethernet)
- Every model available with wireless LAN connectivity
- USB service port for local access to the datalogger

ELECT THE RIGHT DATALOGGER FOR YOUR APPLICATION

	Temperatur / Temperature / Température	Relative Luftfeuchtigkeit / Relative air humidity / Humidité relative de l'air	Differenzdruck / Pressure differential / Pression différentielle	Gaskonzentration (CO$_2$) / Gas concentration / Concentration de gaz
Kühlschränke | Tiefkühler / Refrigerators | Freezers / Réfrigérateurs | Congélateurs	● (orange)			
Ultratiefkühler | LN$_2$-Lagerung / Ultra-low freezers | LN$_2$-storage / Réfrigération à température très basse | Stockage LN$_2$	● (orange) ● (green)	● (green)	● (green)	● (green)
Inkubatoren / Incubators / Incubateurs	● (orange) ● (blue) ● (green)	● (blue) ● (green)	● (green)	● (green)
Reinräume / Clean rooms / Salles blanches	● (purple) ● (blue) ● (green)	● (purple) ● (green)	● (purple)	● (purple) ● (green)
Raumklimaüberwachung / Room climate monitoring / Surveillance climatisation	● (orange) ● (blue) ● (green)	● (blue) ● (green)	● (green)	● (green)

Legend:
- ● ECOLOG-NET LP4 & WP4 (orange)
- ● ECOLOG-NET LH2 & WH2 (blue)
- ● ECOLOG-NET LA8 & WA8 (green)
- ● ECOLOG-NET LA8FL & LP4FL (purple)

ECOLOG-NET LP4   ECOLOG-NET LH2   ECOLOG-NET LA8   ECOLOG-NET LP4FL / LA8FL

Clean room monitoring
The clean room compatible design with a front panel made of stainless steel and an integrated indicator (red/green) make the ECOLOG-NET LA8F/LP4F the ideal datalogger for clean room monitoring.

ECOLOG-NET LP4
- 4 channel datalogger for PT100 sensors
- Measurement range from -200 .. 610°C
- Wide range of PT100 probes for different types of applications

ECOLOG-NET LH2
- Datalogger for two combined temperature/relative humidity probes

ECOLOG-NET LA8
- 8 channel datalogger for 4-20mA signals
- Direct supply of the transmitters via the datalogger
- Wide range of different transmitters for Temperature (T), relative humidity (rH), differential pressure (dP), CO$_2$

SENSORS AND ACCESSORIES

As a total solutions provider, ELPRO not only provides high qualitiy dataloggers and software but offers a comprehensive assortment of sensors and transmitters for widespread applications, ranging from low temperature monitoring to clean room documentation. Please visit www.elpro.com for more information.

Applications

LOW TEMPERATURE AND WAREHOUSE MONITORING IN LIFE SCIENCE AND BIOTECHNOLOGY

The ELPRO Central Monitoring System offers ideal possibilities for the secure monitoring of storage processes. Typical applications for the ELPRO system include monitoring refrigerators, freezers, ultra-low freezers and liquid nitrogen storage.

Our validated solution offers redundant data storage, local or central alarming possibilities and easy data evaluation and reporting.

## INCUBATOR MONITORING AND CONTROLLED CLIMATIC CONDITIONS
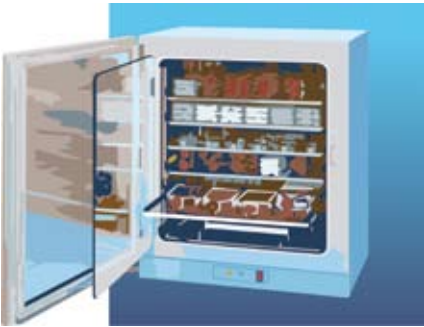
In many incubation processes, climatic conditions are not controlled within narrow limits.

Independently operating datalogger systems with fast responding sensors can often help you analyze and improve these processes.

The ELPRO Central Monitoring System is capable of monitoring temperature, humidity and CO_2 inside an incubator. This detailed documentation allows you to increase repeatability and compare the results of your processes.

CLEAN ROOM MONITORING SOLUTIONS
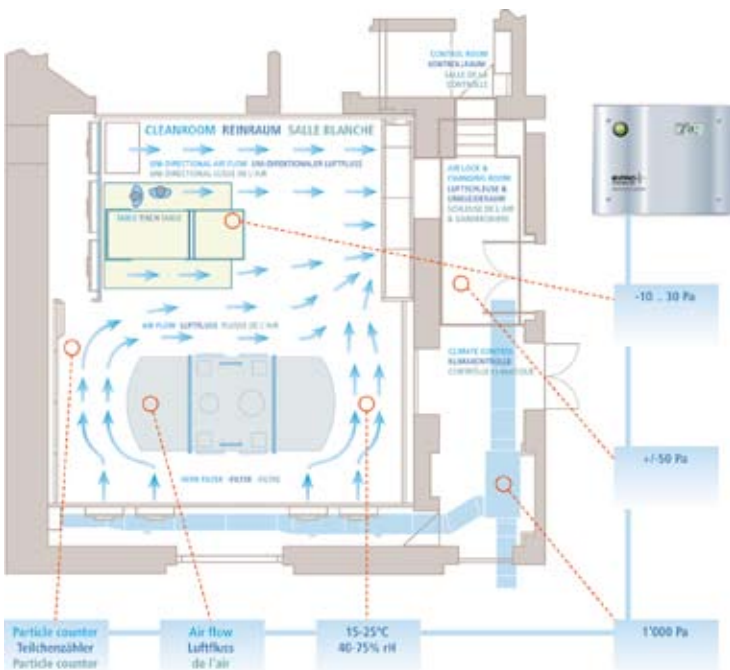
The ELPRO Central Monitoring System is a modular and reliable solution for monitoring all relevant clean room parameters: information such as pressure differential, temperature, relative humidity or particles are continuosly recorded and securely stored.

With one datalogger, up to eight different sensor signals can be monitored. Besides all its network functionality, the instrument features a local display of the measured values and local alarm capabilities.

The transmitters connected to the datalogger can be powered by the datalogger, reducing the time and cost of installation.

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DIRECTIVES & STANDARDS

ISO 9001: 2000
SGS certificate no. CH98/0013

ATEX
SNCH 01 ATEX 3280/Directive 94/9/EC

EX1, CE1258
Approval for EX protection zone 1
(EN50014:1997, EN50020:2002 and
EN1127-1:1997)

CE
EN61000-6-2:2001 and EN61000-6-4:2001

EN12830/EN13485/EN13486
Temperature recorder for
transport, storage and distribution
of foodstuffs and products

GZ1480
Exceptional approval for calibration GZ1480/2000 from
10.4.2000, BEV, Austria

INTEGRATED REGULATIONS
& RECOMMENDATIONS

GMP/GLP/GAMP 5
Software validation in compliance with
21 CFR Part 820, Electronic records
21 CFR Part 11, 21 CFR Part 210/211,
21 CFR Part 110, 21 CFR Part 58

EG/EU
Directive (EC) 37/2005
Directive 2002/95/EC (RoHS)

HACCP
Hazard Analysis Critical Control Points

SERVICE & QUALITY

- **ISO 9001 quality system**
- **Vendor and internal audits**
- **Expert systems**
- **Own production and development**
- **Own calibration laboratory**
- **Calibration according to all standards**
- **Customer calibration service**
- **Modern facilities**
- **Datalogger service since 1989**
- **Repair service**
- **IQ/OQ qualifications**
- **Temperature mapping service**
- **Worldwide distributors**
- **Return of ELPRO instruments and batteries for eco-friendly disposal**

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