

# Technical Specifications for a Good Connection



## PCSS AIR

**Method:**  
scattering light 90°

**Particle size channel:**  
sizes freely selectable  
0.5-5 µm  
max. 2 channels

**Flow volume:**  
28.3 l/min  
controlled

**Data contents:**  
measuring status  
error message  
particle number

**Measured value output:**  
electrical current 4-20 mA  
threshold value exceedance optional

**Measured value memory:**  
none

**Power:**  
230 V/AC power supply / 24 V/DC

**Dimensions (H x W x D)  
weight/material**  
150 x 270 x 220 mm  
5 kg stainless steel

**Accessories**  
wall holder



## ECOLOG-NET

**Device:**  
4-8 channel datalogger

**Measured values:**  
temperature, air humidity and signal stan-  
dard 4-20mA

**Interfaces:**  
Ethernet LAN, WLAN, USB

**Measured value memory:**  
64,000

**Data contents:**  
measured values, status information, alarm  
status and information

**Power:**  
10...30 Volt/DC or PoE, power supply 230 VAC

**Dimensions (H x W x D)**  
141 x 104 x 47 mm



## elproLOG

**System requirements:**  
Administrator rights for software installation  
is required.

CPU:	Pentium 1.5 GHz
Operating system:	Windows 2000 SP4/XP
Internal memory:	512 Mbyte
Hard disk memory:	150 Gbyte
Interfaces:	LAN, USB, COM, depending on device used

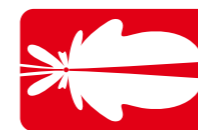
**In compliance with:**  
FDA CFR21 Part11, GxP, GAMP4



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**KLOTZ®**

## A Good Connection



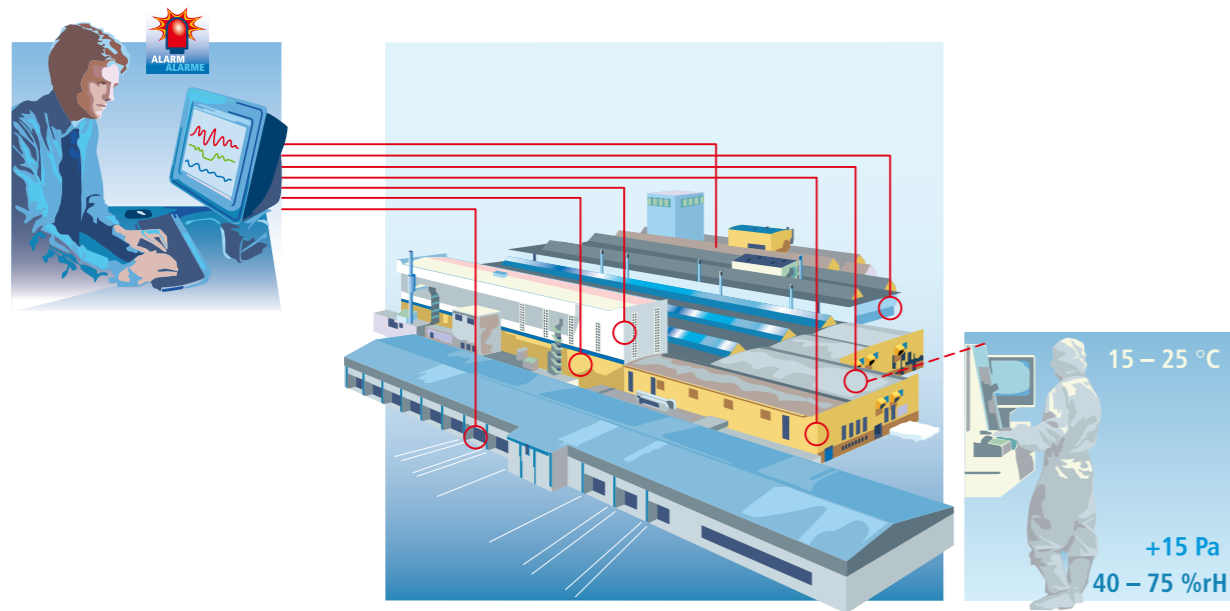
The ELPRO™ Central Monitoring System together with the  
Markus Klotz PCSS AIR Cleanroom Particle Counter

# A good connection

Cleanroom technology cannot do without metrological monitoring facilities. Numerous contamination-sensitive technologies in the pharmaceutical industry, in the medical sector, in the electrical industry, in research and development, and increasingly in the supplier industry are confronted with the high demands on the cleanliness of manufacturing environments. On the other hand, safety aspects in pharmaceuticals and medicine have a great importance, for instance in the manufacturing and handling of cytostatics.

For all these application areas the measuring with air particle counters is an essential part of any quality assurance system for testing the intactness of filters. The key guidelines for the testing of clean areas include: VDI 2083, US Federal Standard 209E, DIN EN ISO14644, DIN 1946, DIN 12950 / 12980, and the FDA and GMP guidelines.

The connection between the particle counting system PCSS air and the data logger Ecolog Net provides a sophisticated monitoring system, which can be supplemented by temperature and humidity sensors.



## Is it difficult to operate a centralized monitoring system?

No, it isn't, because we support you during every single work procedure: needs assessment and optimum selection of data logger and sensors; the design of the network and alarm configuration including the installation of sensors and equipment; the initial operation of the software and the logger as well as testing the complete system; training the personnel and providing support for operation and maintenance of the system.

## The result?

A Central Monitoring System which you understand. Easy to operate and reliable. Contact us and join the many companies that rely on the ELPRO system. They include companies from the pharmaceutical or food sector, research labs and hospitals, institutes, manufacturing facilities and warehouses (reference lists upon request).

Make monitoring and documentation of your important data easier –the ELPRO Central Monitoring System will give you fast and easy access to your measured data on any PC.



## PCSS AIR

Two-channel particle counter

The PCSS is designed as two-channel particle counter and monitors two size classes. Data is logged and stored via Ecolog-Net and elproLOG.

Since the PCSS can carry out time-controlled measurements only, it is necessary that a controlled flow through the sensor is ensured. PCSS air has a built-in pump with 28,3 l/min. Separate parameters can be set for flush, measuring and interval time for each measuring cycle. During the interval phase the laser of the sensor is switched off to increase its life cycle. Each analog output of the two channels can be assigned a target value or maximum value (particle number). For instance, 20 mA = 2000 particles. The measured number of particles per channel is proportional to electrical current (4-20 mA).

For permanent monitoring of the sensor its laser current and the function of the electronics are evaluated by the onboard diagnosis, and in the case of failure the current signals of both channels are set to "zero" → 0 mA.

### Areas of application:

Online monitoring of isolators and laminar flows in the manufacturing of active pharmaceutical ingredients, monitoring of cleanrooms, clean workbenches, quality assurance of filter installations



## ECOLOG-NET

Network-compatible datalogger

Ecolog-Net network loggers are ideal for the logging and documentation of temperature, air humidity, particle concentration and pressure difference.

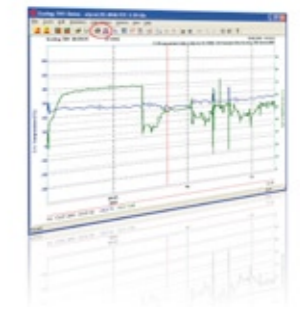
The datalogger logs the data tamper-proof in the internal memory. The dataloggers can be operated or queried from any computer via the available LAN or WLAN network, or via independent Ethernet networks. Alarm and threshold values are conveniently monitored, deviations are recorded and transmitted user-specific. Of course, provided that user approval has been given.

### Areas of application:

Warehouse, cold storage house, chill rooms for pharmaceutical products, refrigerator cabinets and storage rooms for foodstuffs, museums and galleries, technical processes, air-conditioned rooms

### Specifications:

LAN / WLAN with TCP/IP protocol, USB connector for local communication, large data memory with 64,000 measured values, power supply for the LAN network is required, PoE (power over Ethernet) or WLAN possible, depending on model automatic data backup or via activatable emergency power supply. Logger interval, alarm thresholds and all required settings possible on-site.



## elproLOG

Monitoring software

Optimize your workflow and don't waste time having to go to each datalogger to download the measured values. Monitor and analyze cleanrooms, temperatures, air humidity, CO<sub>2</sub> concentration or pressure difference conveniently from any PC in your company. Of course, in compliance with FDA 21 CFR Part 11, GLP, GMP and GAMP4.

The software for central monitoring includes various program packages that complement one another nicely. The required programs elproLOG Analyze, elproLOG Config, and the elproLOG Monitor for continuous actual value display and alarm can be upgraded with the user administration elproLOG User and the event database elproLOG Event.

