

s e r v i c e

**ProMo-III - Monitoring and
process control system for ESPs**

ALSTOM

Power Service



ALSTOM - the Full Service Provider

ALSTOM can provide you with the most complete range of power generation services and equipment worldwide. Present in more than 70 countries, we can offer many options and match even the most complex demands for economical and environmentally friendly solutions.

ALSTOM's Power Service Sector has more than 16,000 specialists in over 200 local service centres around the world.

Our services range from traditional spare parts handling and field service support for individual power plant components up to and including full power plant management.

In a competitive, liberalised environment, power plant owners are under constant pressure to improve the economical performance of their plants.

Recognising that each customer is unique, Power Service offers tailor-made product and service packages designed to suit customers with different needs.

The ultimate way of controlling and monitoring your electrostatic precipitator

ProMo is a true 32-bit software package. Together with standard IBM or equivalent hardware, you can supplement your ESP plant with an operator workstation featuring, among many things, full color graphics, data logging, and alarm handling, which makes supervision and control of electrostatic precipitators easier.

Control becomes more precise and operational reliability is improved.

ProMo - the Supervisor

ProMo is the best choice for supervisory control and monitoring. Connect ProMo into your existing FläktBus network and you will obtain total control of all sub units connected, e.g. EPIC III, SIR. ProMo can also be extended to communicate with PLC's. The remote diagnostic and control feature enables total overview and control of the plant via a modem and telephone.

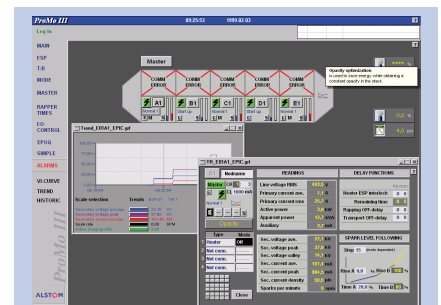
ProMo is delivered with comprehensive manuals for installation, operation, alarm handling etc.

Easy to Use

Whatever your level of experience of computers, ProMo is easy to use. All parameter settings and object controls are in menu guided dialogs. ProMo presents process data in displays, trend views and reports to give you a better overview of your ESP.

ProMo allows you to respond immediately to events as they develop in the process - change operating mode, start or stop selected T/R's, acknowledge alarms, etc.

The ProMo - monitoring and control system can be used with either a mouse, keyboard or both.



ProMo software features

- Intuitive human machine interface
- Real-time process monitoring
- Automatic background alarm management
- 100% data integrity
- Real-time and historical trending
- Pre-configured process displays for ESP-control
- VI-curve function for analyzing and presentation
- Data logging for display in graphic trends or in reports
- On-line diagnostic and control over modem.

Pre-configured Process Displays

ProMo provides pre-configured process displays of your ESP. Once ProMo has been installed and connected to the network, data is automatically presented to you on your display. The process displays provide live process data and give you a detailed overview of how the ESP is operating - from the whole plant down to a single T/R.

Security

Passwords prevent unauthorized personnel from accessing and operating the ProMo system. ProMo has five levels of authorization and allows unlimited number of users with their personal passwords, each one linked to a certain authority level. Each password file is encrypted for maximum security.

Alarm Handling

Consistent alarm handling is one of the most important things in a human machine communication.

The background alarm feature in ProMo provides continuous system monitoring. Alarms are monitored constantly whenever the system is online, so that you will be alerted to any problem, immediately.

The ProMo alarm table is easily activated by opening the Alarm Table window. The Alarm Table gives the operator all the necessary information relating to alarms that have been activated. Each alarm can instantly be reset or acknowledged.

VI-curve Function

This feature is a customized tool for analysis of collected VI-curves. It enables fast and accurate data collection. The VI-curve function lets you also select a control parameter that changes during the collection. The result is presented both as graphs and as numerical values, a perfect tool to maximise your ESP efficiency.

Remote Diagnostics and Control

Let our ALSTOM specialists connect to your plant and help you analyze the fluegas cleaning process. We also make annual service contracts which include electrical inspections every three months, problem investigation, remote tuning and you have access to the latest development information within ESP-control.

The remote connection gives access to VI-curves and trend curves which make diagnostics and control fast and efficient. Plant visits can therefore be reduced to a minimum.

Data Logging

All events, concerning alarms, operator commands, log on and log off, are stored daily. You can specify process signals to be automatically sampled and stored periodically on hard disk. Historical data can then be presented as graphic trend curves or textual reports at desired intervals. This information can be used to show

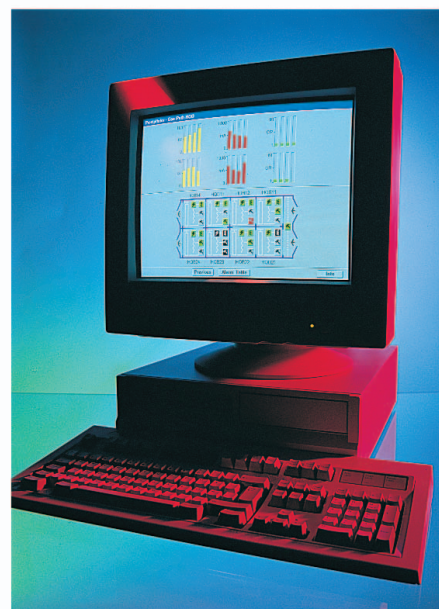
the condition of your ESP and to predict when problems are most likely to occur.

Reports

Sampled data can be brought together into user-defined reports. The operator chooses the sample time and number of displayed values. The report shows the variation of the signals during an hour, a day, a week or up to a month. The reports can be printed out if required.

Trends

Sampled data can also be presented as analog or digital graphic trend curves. The operator can select to view data over a day or an hour. Up to 20 curves can be presented in different colors at any one time. The trend curves can be printed out if required.





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