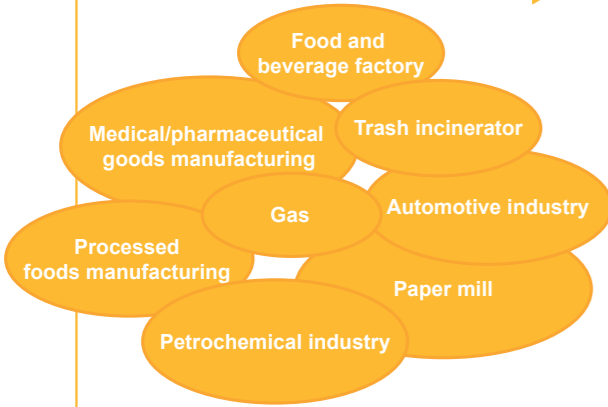


Type of Market



Type of Factory

- Energy-saving monitoring and control in factories
- Compressor efficiency control
- Control of loading onto tank lorries
- Measurement and control of small furnaces
- Temperature monitoring and control of ancillary facilities around furnaces
- Gas leakage monitoring
- Monitoring and control of automobile coating line
- Control of small trash incinerator facilities

Full Support in Japan and Overseas

Support



We provide total support from the installation of a first system to networking and system maintenance using a support network comprised of 50 locations throughout Japan. We also have a global network that includes azbil Group subsidiaries, offices, and dealers to provide the same full support overseas.

Comprehensive Maintenance and Service

Service

- **Hotline Service**
Contact service personnel 24 hours a day, 365 days a year.
- **Emergency Service**
Azbil will send an engineer to the factory, with priority given to process shutdown.
- **Spare Parts Management**
We handle the management of spare parts for the customer and will promptly send replacements as necessary.
- **Periodic Checks**
Checks are performed on functioning, readjustments made, and potential causes of process shutdown eliminated.

Please read "Terms and Conditions" from the following URL before ordering and use.
<http://www.azbil.com/products/factory/order.html>

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Azbil Corporation
Advanced Automation Company

Yamatake Corporation changed its name to Azbil Corporation on April 1, 2012.

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Kanagawa 251-8522 Japan
URL: <http://www.azbil.com>

1st Edition: issued in Mar. 2016-AZ
2nd Edition: issued in Jul. 2018-AZ



Harmonas-FLeX™

Advanced functions in a compact controller opens the way for a higher order of factory automation



System Expandability

A system can be set up by simply connecting the Harmonas-FLeX distributed controller to an Ethernet network. This systematizing allows various operational tools to be integrated smoothly, providing a way to improve operations as needed.

Bringing the advanced functions of a genuine process controller closest to where it is needed in the factory through compact mounting.

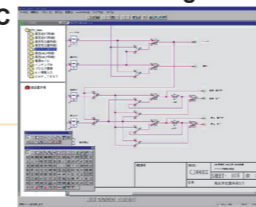


A variety of functions for handling hybrid processes

- Regulatory control for 32 loops
- Expandable to a maximum of 368 input/output points
- Various input/output combinations according to the application
- High-speed processing cycle of 10 msec
- Redundant Ethernet interface as standard equipment
- Modification of control program available during operation

Improved efficiency of control program maintenance

- Display of entire hybrid control system using the function block
- State of program execution can be viewed on logic diagram
- Performance of control program can be checked at an office using the virtual simulation function that runs on a PC
- Drawing template and logic element symbol customization



Highly compact mounting for any factory location

- Minimum case dimensions for mounting controller only: 400 × 400 × 160 mm
- Compact installation on small wall-hang box
- Mountable on an existing self-standing panel
- Easy installation with field wiring only
- Durable physical design that allows operation in an encapsulated panel

Sequence control ◀ Harmonas-FLeX ▶ Logic control

↑ I/O processing

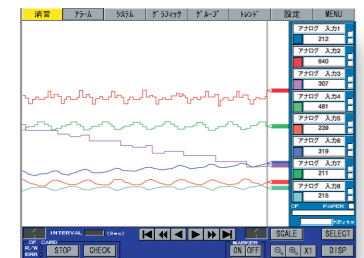
↓ PID control

A controller with a "face" to save space in factory monitoring. In combination with a sophisticated programmable display, graphic monitoring can be done on the factory floor with touch-panel operation.

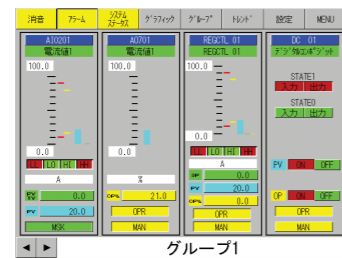
- Various screens to display trends, process alarm history, loop operation, etc., are included as standard display formats.
- Data can be collected and saved for long periods of time using a compact flash card, with digital data logging function included. The data stored on the card can easily be displayed and analyzed on a PC.



Alarm Summary/History Display



Trend Recorder Display



Group Display



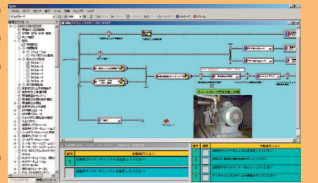
Mounted Programmable Display

* This is a rendered image.

The upper end of the system provides support for improved efficiency of a customer's facilities or work operations.

Operational Support

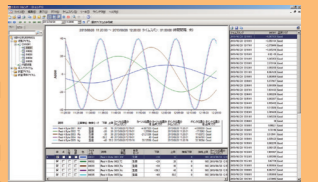
- Operators' knowledge and expertise are incorporated into the system to assure better work performance, contributing to system stability.
- Malfunctions can be analyzed properly, enabling prompt and accurate response to a malfunction. Also, malfunction analysis helps in preventive maintenance.
- Manufacturing loss and delivery loss can be minimized.



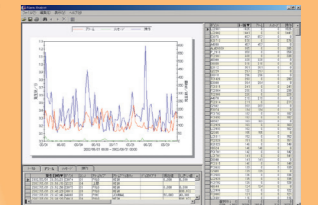
Operations support package

Data Analysis

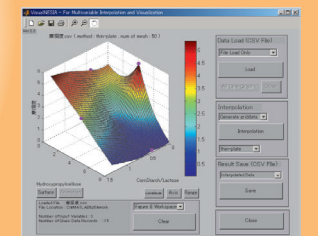
- Trends in manufacturing can be analyzed in detail.
- Operator load is reduced through minimized operator manipulation, reduced personnel-generated alarms, etc.
- Equipment operating rates are improved, product quality rises, and labor is saved.



Real-time database, analysis



Analysis of type of alarm and cause



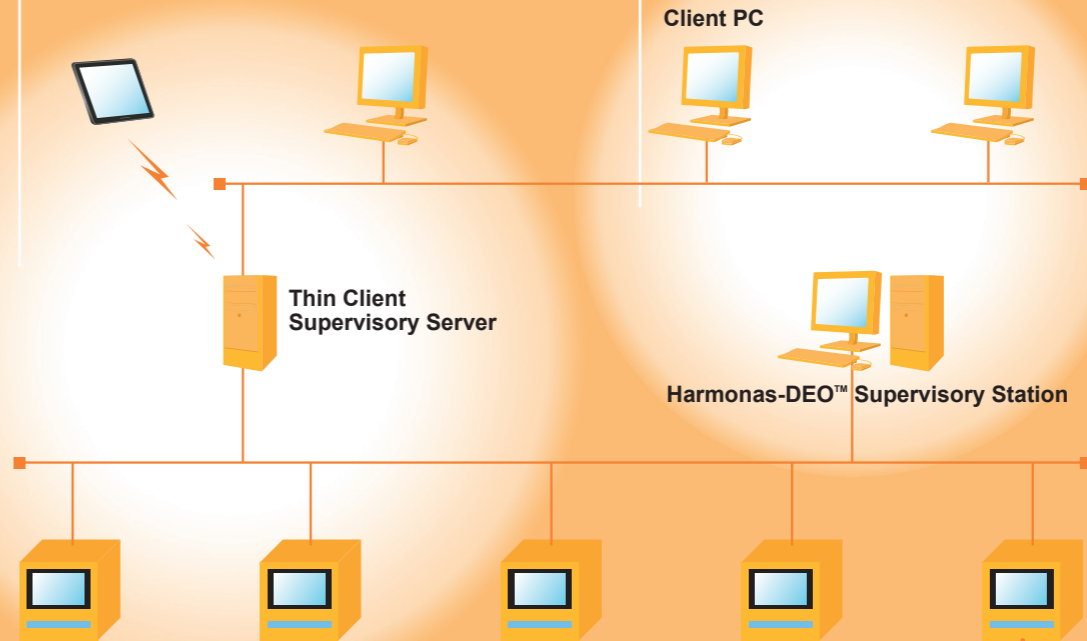
Data is visualized and optimized

Monitoring and Operation

Touch-panel operation on the factory floor, plus:

- Centralized monitoring and operation by PC
- Mobile monitoring and operation

These tools speed up equipment startup, improve the efficiency of physical inspections, and make possible a quick response to malfunctions.



Smooth System Improvement

The Harmonas-FLeX Controller has a standard Ethernet interface for connecting to a network. Full equipment operation without system shutdown, adding controllers, networking, and the introduction of various tools can be achieved step by step for optimal cost performance. Azbil provides strong support for further upgrading equipment and improving stability and operation efficiency according to the customer's plans.

