

# Freelance

Distributed control system for process applications

# With Freelance you'll be right on target

Freelance combines the advantages of both worlds – process control system and PLC. It offers the small design and reasonable price of a PLC together with the entire functionality of a process control system. The integrated environment simplifies engineering, commissioning, maintenance and fieldbus management. The intuitive operator interface enables simple operation and diagnosis of the entire system.

The objective of process industry companies today is clearly defined: increased automation at lower cost. Based on this principle, ABB has redefined compact, scalable control systems, and is today viewed by many as a trend-setter in this industry.

Today, people are impressed by the global success story of Freelance, with more than 15,000 applications covering all industry sectors.

Freelance provides powerful automation that is not only cost-effective in terms of hardware and software, but is also very easy to use. The advanced design of Freelance makes the control system ideal for numerous applications in power, process or environmental technology plants.

AC 700F controller



AC 800F controller



# Minimum engineering Maximum automation



The Freelance control system combines user-friendly engineering with an open, modern system architecture.

In detail, this means:

- Only one tool for engineering, commissioning and diagnosis
- Fieldbus management completely integrated into control system engineering
- Integration of process automation and process electrification
- Potential savings in engineering, commissioning, testing, service and maintenance
- Assembly close to the field: reduction of field wiring and space requirements

## Pre-configured components for the operator level

The engineering of the DigiVis operator level is relatively straightforward. The pre-configured visualization components include:

- Faceplates
- Module diagnostics
- Extended troubleshooting capabilities
- Automatically generated sequence diagrams
- Automatically generated system communication
- Event list and alarm line
- Trend displays with long-term archiving

These components can be used straight out of the box, eliminating time-consuming manual configuration.

## Scalable controllers

The two controllers AC 700F and AC 800F are the core of the Freelance system.

AC 700F is a controller in a small footprint with direct S700 I/O modules that supports Profibus. The AC 800F controller can be equipped with up to four fieldbus modules. If required, these can also be of a different type.

The AC 700F controller expands the scalability of Freelance for smaller applications. The Freelance controller offering provides scope for optimized scalability, thus allowing it to be used in systems ranging from just a few signals to several thousand signals. Both controller types can even be used several times in a single system.

Both Freelance controllers are suitable both for installation in the control room and for use in junction boxes directly in the field.



### User friendly engineering

All tasks – configuration of the controllers and operator interface as well as fieldbus management – are performed quite simply using a single engineering tool, the Control Builder F. All five programming languages specified in IEC 61131-3 are available. Users especially appreciate how quickly they are able to familiarize themselves with the tool. Supported by a uniform data basis throughout the system as well as cross reference functions, the Control Builder F enables you to conduct the entire system configuration quickly and easily – including:

- Configuring and parameterizing the field devices and I/Os
- Setting the bus topology and parameters such as transmission rates and addresses

Control Builder F can be used with both controller types (AC 700F and AC 800F).

Freelance supports FDT/DTM and also user-defined hardware templates for the efficient configuration or maintenance of field devices. This eliminates time-consuming tasks of integrating device GSD files. In addition to intuitive graphical parameterization dialogs for intelligent field devices, a DTM also, for instance, offers comprehensive diagnostics functions for efficient maintenance.

### The structure of the field level

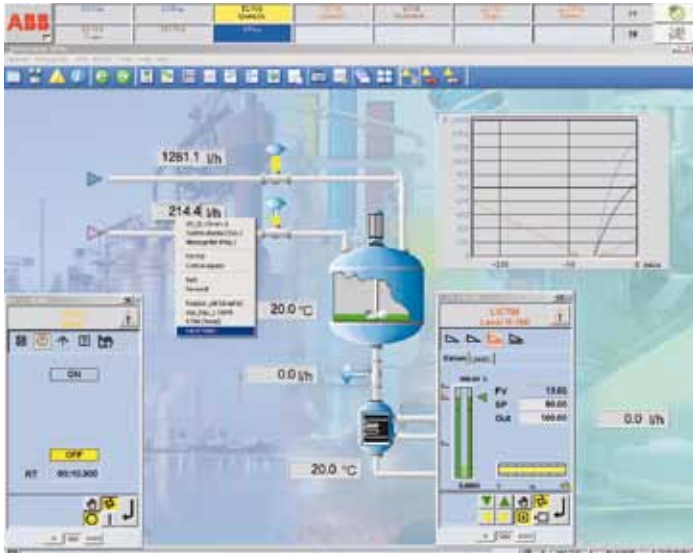
For the field level, ABB offers an extensive selection of devices that are fine-tuned to meet the needs of the relevant area of use. Thanks to established communication standards, integration into Freelance is quite simple. Using Profibus together with the AC 700F or AC 800F controllers, intelligent field devices can be integrated into the system directly using the fieldbus or with the aid of remote I/Os.

### The choice of fieldbus type

In accordance with the concept of plug & produce, Freelance allows the integration of all common fieldbuses – leaving the user free to choose the fieldbus type.

Bus type	AC 700F	AC 800F
PROFIBUS-DPV1	Yes	Yes
FOUNDATION Fieldbus	No	Yes
HART via remote I/O	Yes	Yes
MODBUS Master and Slave	Yes	Yes
CAN for Freelance Rack I/O	No	Yes
Telecontrol protocol IEC870-5	No	Yes

Various types of fieldbus can even be operated in parallel in a single controller. This proves to be a real advantage if the task at hand specifies which fieldbus type is to be used in each case.



### The DigiVis operator interface

DigiVis meets all standard process control requirements with regard to operation and observation at an attractive price. Amongst other things, DigiVis offers the following visualization options:

- Clearly structured faceplates for operator interventions (which can also be combined as required in group displays)
- Trend displays including historical data and long-term archiving
- Alarm pages for specific plant areas, sequence control displays, shift logs, event logs and data archiving
- Standardized system display for system hardware diagnostics
- Free graphic displays that besides standard graphic elements are also supported by bitmaps and a 3D macro library
- Dual monitor operation
- Control aspect for interlocking displays

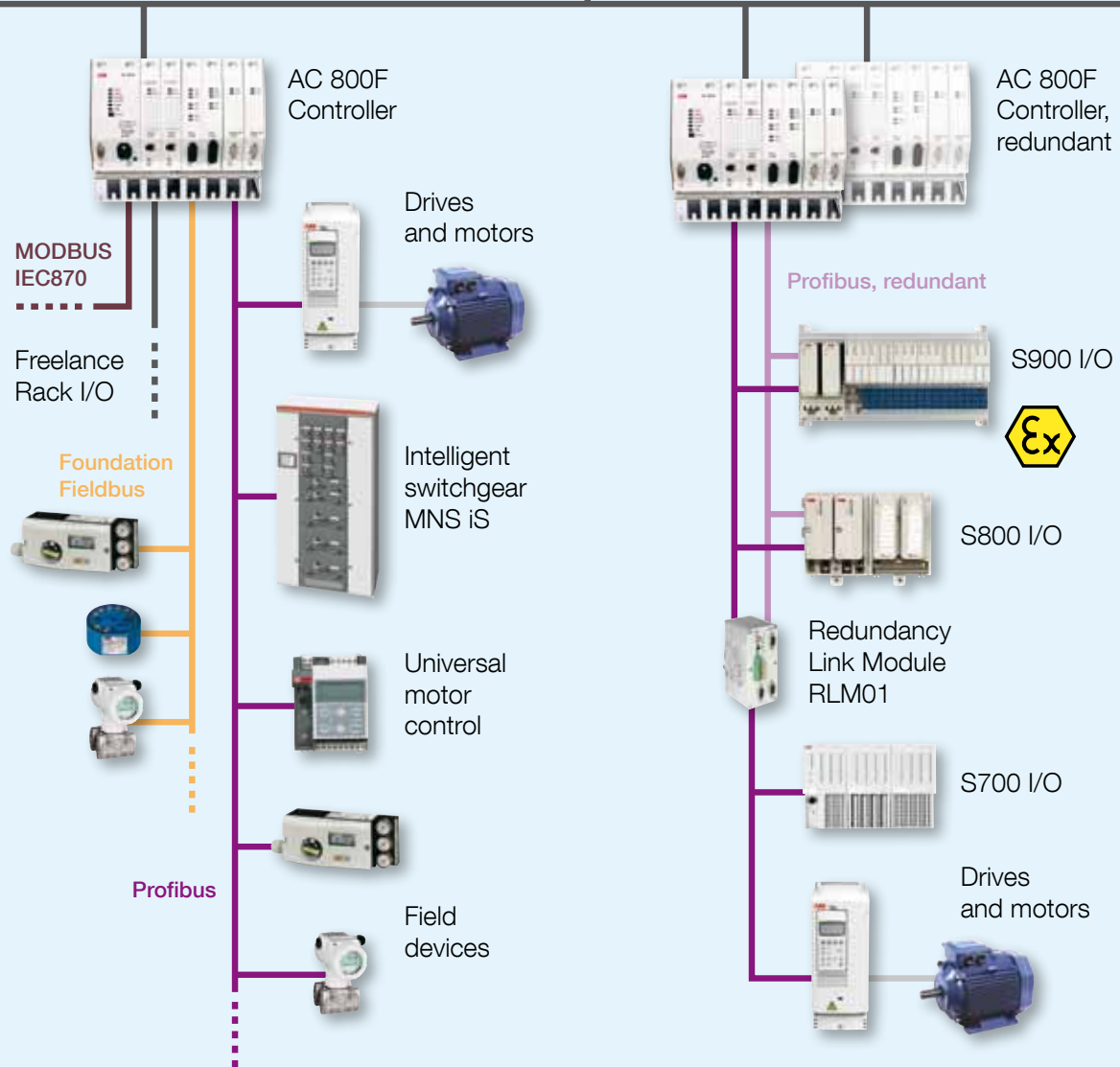
DigiVis configuration is fully integrated in the engineering tool Control Builder F. An optional batch package is also easy to integrate.

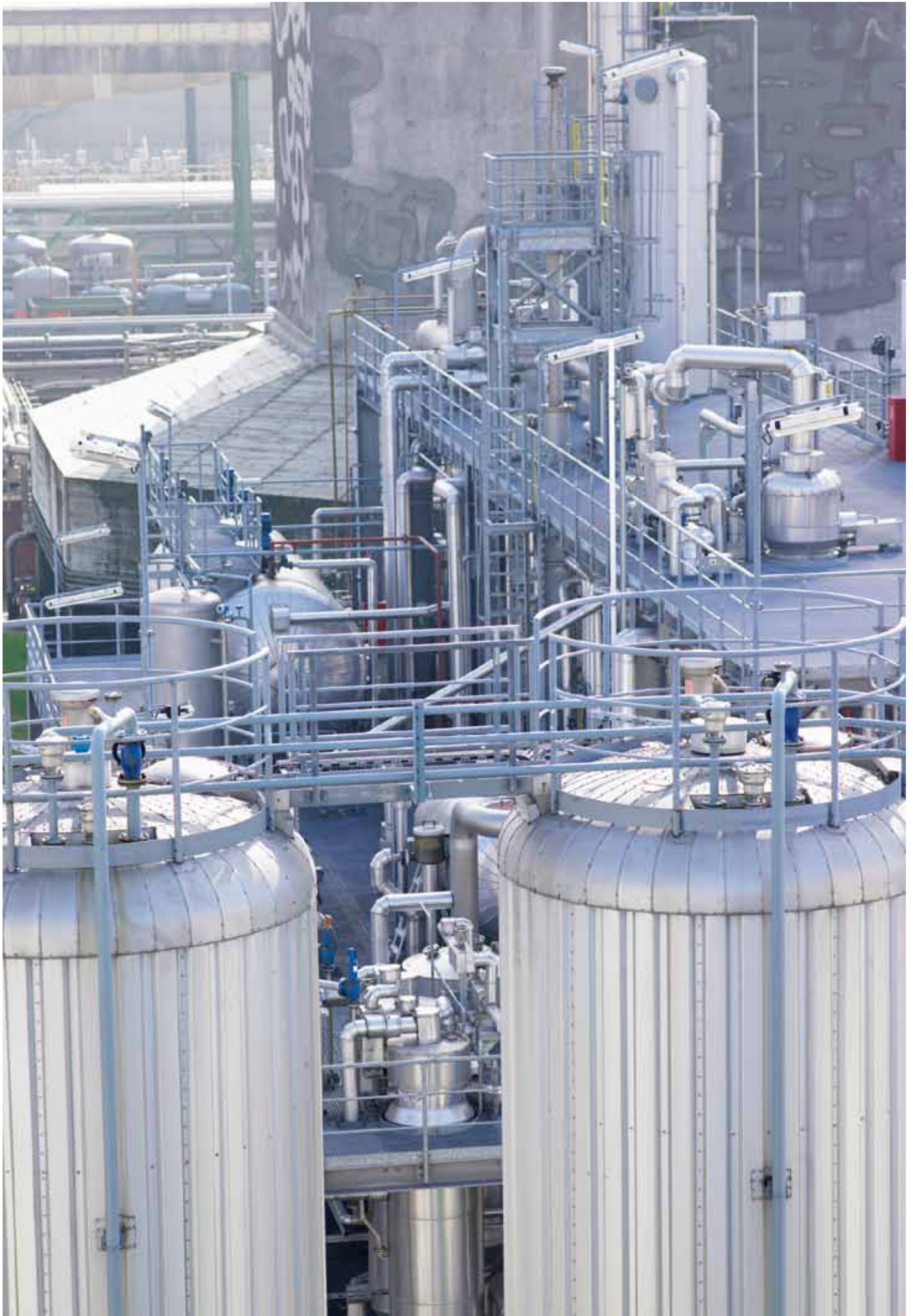


Operator stations:  
Extended operations



Industrial ethernet (optionally redundant)





# You get technology that lasts



## High availability

The technology has proven its worth in industrial use over several years and meets the toughest requirements regarding availability. The hardware can be structured redundantly at all levels. This includes the redundant fieldbus modules, redundant fieldbus lines as well as network and controller redundancy.

## Scalability

From small units with perhaps 8 signals to major systems with more than 10,000 signals: Freelance grows with your plant and can be extended very easily to meet requirements at any time.

## Versatile communication

You can use the following as required: OPC, Ethernet, TCP/IP, PROFIBUS, FOUNDATION Fieldbus, MODBUS, HART or audio instructions to obtain a solution in the event an alarm, video integration or Internet connection.

## Regulatory compliance

With a view to meeting the requirements of regulatory authorities such as the American FDA (Food and Drug Administration) or the EFSA (European Food Safety Authority), Freelance provides a series of features that facilitate the validation procedure.

Examples include:

- Encrypted log and trend data
- Audit trail functions
- Access rights and user administration (security lock)

## Lifecycle management

With the Automation Sentinel Program you can keep your control software up-to-date at all times. At the same time, Automation Sentinel provides a flexible means of ensuring that the latest system software technologies are used. Automation Sentinel helps manage automation software assets with timely delivery of the latest system software releases, thus providing you with better productivity, lower support cost and simpler software management. Migration from traditional control systems to Freelance enables ease-of-use and lower maintenance cost.

## Asset Management

If you want to keep your production plant up and running in the long term, you need information about the availability and degree of wear and tear of your equipment. All of the information necessary for this is available in the Freelance control system. As a result, several customers have been able to avoid making investments that appeared essential but were in fact unnecessary. Freelance allows the use of modern asset management methods for more efficient maintenance and optimization – helping for instance to make optimum use of plant capacity.

# You get a comprehensive customer service

## A comprehensive customer service is worth its weight in gold

Service means a profitable investment in continually maximizing and optimizing the availability, performance, quality and security of a plant. ABB's support covers the following areas:

- Customer Support Services
- Training
- Spare Parts & Logistics, Repair Shops
- Process, Application & Consulting Services

Through the resulting specialization of our employees, we guarantee maximum competence for each task we perform.

Whether it's more traditional service support such as commissioning and maintenance or individual consulting services – the result is measurable customer benefits.

Our comprehensive Life Cycle Services enable us to increase the value of your plant over its entire lifetime. The conventional, reactive service can reduce production downtimes, while the use of new technologies offers an increased number of capabilities for preventive service measures to identify and avoid cost-intensive faults at an early stage. Proactive service such as asset management or ongoing modernization increases the value of our customers' plants and gives them a distinct competitive edge.

Are you interested? Then get in touch with us to obtain more information about the Freelance system and its components.





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