



DEIC - Drive and driven equipment
integrated control
The solution for rotating machinery

Power and productivity
for a better world™



The control device for large rotating machinery

ABB is a worldwide market leader for automation systems and control technologies, supplying solutions and products at all levels of process control and for all types of industries. Large rotating machinery such as compressors, turbines and motors are complex, fragile and expensive equipment that requires specialized control devices. That's why we designed the DEIC (drive and driven equipment integrated control system), the culmination of ABB's experience in rotating equipment from the late 19th century to the present days.

We've even gone a step further: a single device can control and protect the rotating machinery, the process and the feeding electrical system - tasks that were once - carried out by separate control units.

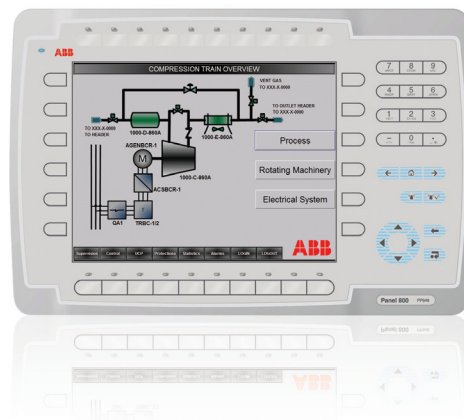
DEIC's software libraries meet customer requirements in accordance with oil and gas industry directives and standards and the hardware has been designed to grant the highest safety and availability. Further, the integrated design reduces footprint and enhances maintenance activity.



The DEIC family, the solution for rotating machinery integrated control

DEIC controllers are designed to provide a complete set of features for medium voltage motors, turbines (gas and steam), compressors, pumps and large fans.

- Integrated control: process, mechanical, electrical control and protection in one device
- Modular software libraries providing complete prebuilt and customizable solutions
- Enhanced protection and alarm management
- Support of all main fieldbus and industrial communication protocols including IEC 61850, the standard for substation automation
- Integration with SCADA networks
- Perfect integration with ABB medium voltage drives
- Reduced footprint, the solution for applications where space really matters



Flexible models for different needs

The DEIC controller family is designed to adapt to customer needs, from remote unmanned oil pumping station to LNG plants. All models deliver precise operation and performance without sacrificing flexibility and maintainability of the system.

| DEIC-700 One device to control and monitor the full train | DEIC-800 The most powerful controller for rotating machinery | DEIC-900 The solution for high-safety requirements |
|--|---|---|
| <ul style="list-style-type: none"> - Fully stand-alone control system - Great integration with ABB or 3rd party automation systems - Works with all DEIC's packages - Single or redundant CPU and I/Os - Embedded HMI (touchscreen or with keypad) - No workstations or servers required | <ul style="list-style-type: none"> - Designed to be integrated in ABB 800xA or Symphony Plus DCS - Great integration with 3rd party automation systems - Works with all DEIC's packages - Single or redundant CPU and I/Os - Embedded HMI (touchscreen or with keypad) - Advanced asset management features | <ul style="list-style-type: none"> - Developed according to IEC 61508 and 61511 safety standards - Designed to be integrated in ABB 800xA or Symphony Plus DCS - Great integration with 3rd party automation systems - Works with all DEIC's packages - Redundant CPU and I/Os - All safety function up to SIL-3 - Embedded HMI (touchscreen or with keypad) - Advanced asset management features |

Each model can be equipped with one or more packages depending on the type of rotating machinery

Compressor and Fans Package

Control, protection, supervision and monitoring for centrifugal, axial and alternatives compressors and for centrifugal fans

Pump Package

Control, protection, supervision and monitoring for oil and water pumps

Electrical and Drive Package

Advanced supervision over the variable-speed drive (VSD) train and the electrical system, plus control and monitoring on the VSD auxiliary systems

Mechanical Package

Monitoring over the rotating shaft, compressor/motor/turbine bearings and vibrations, plus control, supervision and monitoring over the shaft auxiliary systems

Turbine Package

Control, supervision and protection over gas, and steam turbines plus advanced condition monitoring functions.

| | Control | Safety | Monitoring & Diagnostic |
|----------------------------|--------------------------|-----------------------|-------------------------------|
| Process Package | Performance Control | Anti-Surge | Performance Curves Monitoring |
| | Load Sharing | Surge Detection | Process Asset Management |
| Electrical & Drive Package | Cooling Control | Emergency Shut Down | Protections Monitoring |
| | Harmonics Filtering | Unit Control Panel | Drive Monitor™ |
| Mechanical Package | Lubrication Control | Vibrations Protection | Analyst™ (Vibration Analysis) |
| | Jacking Oil Pump Control | Bearings Protection | Mechanical Asset Management |

Example of DEIC packages setup for VSD-driven pipeline compressor

The DEIC family offers a complete set of control and monitoring solutions for industrial rotating machinery, designed with ABB's skill and expertise in integrated control systems.

ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB group of companies operates in around 100 countries and employs more than 135,000 people.

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