



505 PLC Platform Upgrade Gas Turbine / Compressor Controller Upgrade



505 PLC Now Obsolete

Beginning in 2005, Siemens classified the last components of the 505 PLC platform as a “mature” product. This means the product is officially obsolete.

Despite its obsolescence, the 505 system continues to provide robust and reliable control solutions in a wide-range of applications around the world. Petrotech itself over the years has installed a large number of these systems to provide gas turbine and compressor controls for its customers. The popularity of these controllers has resulted in a third-party market-place where both refurbished and new-build components are available to extend the usable service-life of 505 systems.

Petrotech Keeps It Going

At Petrotech, we understand it is hard to justify replacing an obsolete system when it is operating problem-free. The Petrotech approach is to maximize the remaining lifetime use of the installed 505 systems with minimal cost and downtime while at the same time preparing the system for future upgrades.

By replacing just the obsolete processor, Petrotech can quickly upgrade the 505 PLC Platform to a state-of-the art compressor control system.

The Petrotech solution replaces just the 505 processor module. The existing 505 PLC controller program including both the Petrotech Anti-Surge Control (ASC) and the Turbine Fuel Regulator (TFR) Control is ported into a current technology PLC processor, then a dedicated link is established to the existing 505 PLC system. This method is minimally invasive as it only affects the processor module. The entire 505 PLC system is untouched and remains fully functional. For maximum compatibility with end-user new-system guidelines, the Petrotech upgrade solution is supplied in either a Siemens or Rockwell based solution.

Petrotech 505 PLC Upgrade Advantages

- Over 40 years of Petrotech anti-surge expertise
- 100% code transfer— Fully integrated functionality
- IEC-1131 standard programming
- Retain existing 505 PLC system
- Easily increment additional capacity
- New CPU forms base of future system

To upgrade a 505 PLC, the Petrotech project team will convert the legacy assembler-based program to an IEC-1131 standard compliant program. Using IEC-1131 standard programming languages reduces end-user operation and maintenance costs by providing a common methodology across multiple PLC systems. Depending on user choice, Petrotech programs either a Siemens or Rockwell PLC processor or other IEC-1131 compliant system with the new application.

505 PLC Platform Upgrade

At site, the old 505 processor is removed and a communications interface is installed in its place. The new Petrotech-supplied processor executes the legacy system functionality through the new interface exercising the existing 505 PLC system. The new processor now provides a current technology solution to an aging system.

In the future, the new processor will form a base element for replacing the 505 PLC on the user's schedule. This replacement can be accomplished incrementally or all at once. The advantage is that the user rather than the system supplier decides when to replace the system.

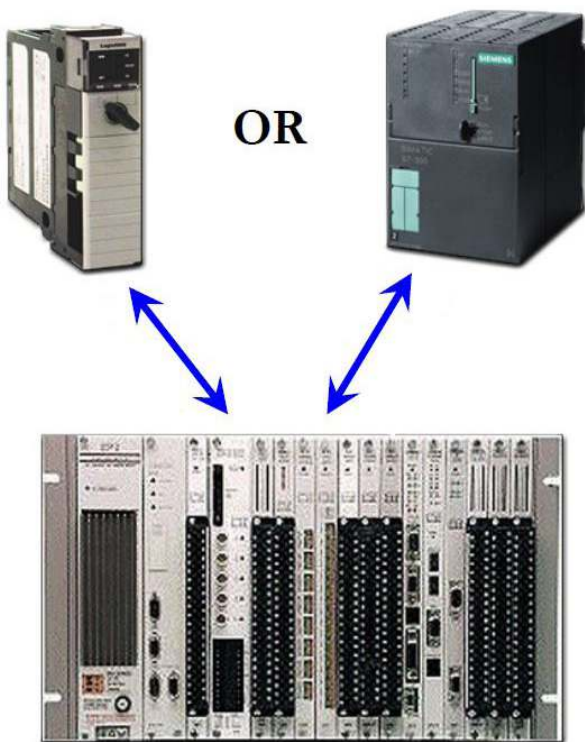
The Petrotech Anti-Surge Control, included in the 505 PLC upgrade, provides consistent and accurate compressor surge protection across a wide range of process gas conditions, resulting in optimum anti-surge protection and elimination of unnecessary recycling. Petrotech's advanced anti-surge protection algorithms automatically compensate for varying molecular weights, temperature, pressure, compressibility and rotational speed. Both the ASC and TFR applications are based upon Petrotech's experience gained in providing thousands of compressor control systems spanning over 40 years.

Contact your Petrotech representative for additional information.

Petrotech's products include integrated control systems for gas, hydro and steam turbines, generators, reciprocating/diesel engines, centrifugal and axial compressors, pumps and all associated ancillary systems.

Our turnkey services include engineering design and project management (software and hardware), instrumentation, control panel fabrication, site I&E services, commissioning, startup and all aftermarket and training services.

For more information about Petrotech's products and services, visit our website at www.petrotechinc.com.



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