



GAS TURBINE CONTROL SYSTEMS

Pre-developed control systems
for gas turbines

Standardised control systems for gas turbines.
Low cost and faster installation.



Turbine Controls Limited

Gas turbine control systems

Standard control systems developed for gas turbines

Designed to replace the existing control panel suite with all control and protection functions:

- PLC controller, simplex, duty/standby or TMR hardware configuration. Programmed with:
 - Fuel governor control
 - Start up sequence control
 - Alarm and trip protection
 - Temperature/pressure monitoring
- HMI hardwired and PC based
- AVR for generating sets
- Generator protection
- Compressor surge control

Systems designed to interface seamlessly with the retained plant enabling:

- Step change in reliability
- Enhanced functionality
- Vastly improved diagnostics
- Improved maintainability

Our team of design engineers use the latest software and design techniques to produce an integrated system that will:

- Minimise the system cost
- Reduce the outage time for installation
- Produce a payback period based in months rather than years

System design

Any non-standard I/O can be included using spare modules and channels which have been pre-wired. This allows other plant devices to be included without costly system re-design.

Control and protection functions include:

- PLC controller programmed with the following functionality:
 - Fuel governor control
 - Start up sequence control
 - Alarm and trip protection
 - Temperature/pressure monitoring
- HMI hardwired and PC based
- AVR for generating sets
- Generator protection or compressor surge control, depending upon drive application

The PLC program also includes the TCL phase matching synchronising software, which greatly reduces synchronising time and hence start-up costs.

The supply can include the TCL EGV gas fuel valve or Posiflow liquid fuel system. Alternatively the controls can interface with the existing fuel valves.

The pre-developed system provides a cost effective solution without the cost associated with a one-off design.

GE Frame 3 and 5

TCL have developed a standard control system for the GE Frame 3 and 5 engines. The system includes the necessary inputs and outputs to interface with any Frame 3 or 5 standard plant devices.

Duplex or triplex mode systems available for increased system integrity.



GE Frame 5 control panel

Ruston TA/TB/TD/Typhoon and Tornado

TCL have developed a standard control system for the Ruston gas turbines in the range 1MW to 6MW. The system includes the necessary inputs and outputs to interface with standard plant devices.

In the case of the TA range all hydraulic control devices are removed and their functions programmed into the PLC. This greatly improves reliability and aids fault finding.



TA control panel

Turbine Controls Limited

52, Kenilworth Drive T +44 (0)116 271 7248
Oadby, Leicester F +44 (0)116 271 7250
LE2 5LG UK sales@tcluk.net
Or visit us at www.tcluk.net