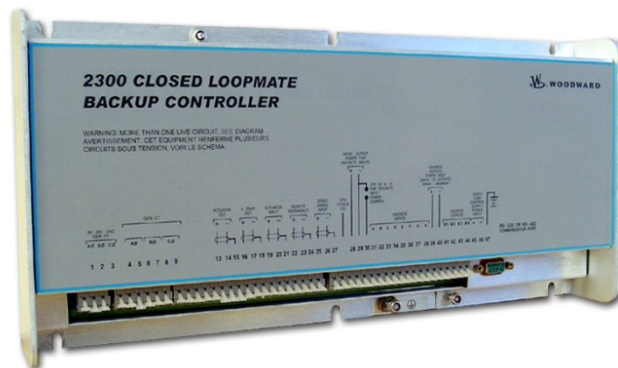


2300 CLM – Closed Loop Mate



Application

The 2300 CLM – Closed Loop Mate was developed for these applications:

- Turbo fans and boiler systems
- Water pumping systems
- Generators in all applications
- Compressors
- Mechanical loads
- All situations where a shutdown will cause a major disruption in the plant

Description

Woodward has developed a new product named 2300 CLM – Closed Loop Mate, which is an actuator signal follower in case of main speed control failure.

This is necessary in many critical plants such as: refineries, petrochemical and steel industries, where a turbine shutdown would cause a major disruption in the plant system.

Even with the low failure rate of Woodward's digital governors, a product that can be a redundant governor will increase plant system reliability.

In this case, the same concept can be applied to generators where using the 2300 CLM can be justified.

The 2300 CLM operation can be summarized as follows. A turbine or engine driving any type of load has a main speed controller. The 2300 CLM is connected to this main speed controller and to the prime mover's actuator. Under normal operating conditions, the 2300 CLM follows (monitors) the actuator output of the main speed controller. If the main speed controller fails, the 2300 CLM assumes control of prime mover speed at that moment and maintains speed at that value. The 2300 CLM setpoint can be changed by discrete inputs, a 4–20 mA remote signal, or via Modbus.

When the main speed controller returns to normal operation, a bumpless transfer will occur, and the 2300 CLM will return to monitoring the actuator output from the main speed controller as before.

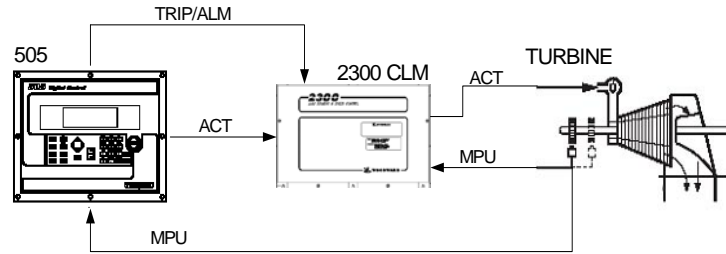
The 2300 CLM was developed as a low-cost unit suitable for a wide range of applications, including the sugar and alcohol industries.

- Modbus®* communications
- Easy programming
- Own PID
- Speed control redundancy (one actuator)
- Mechanical loads or generator applications
- Available for Hazardous Areas
- Main speed control exchange or repair on line

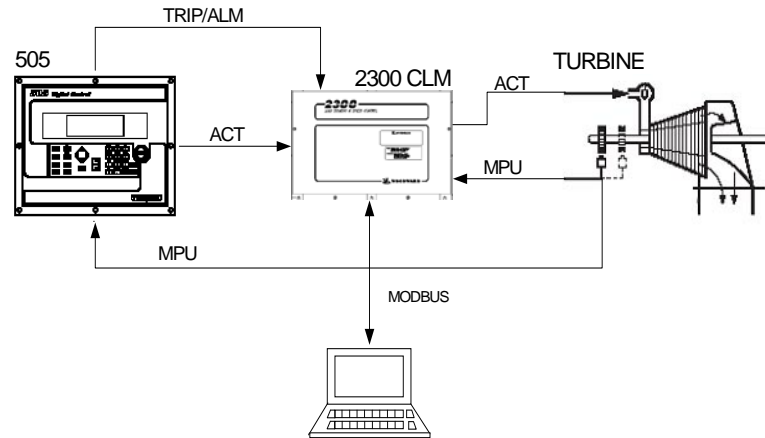
*—Modbus is a trademark of Schneider Automation Inc.

Applications

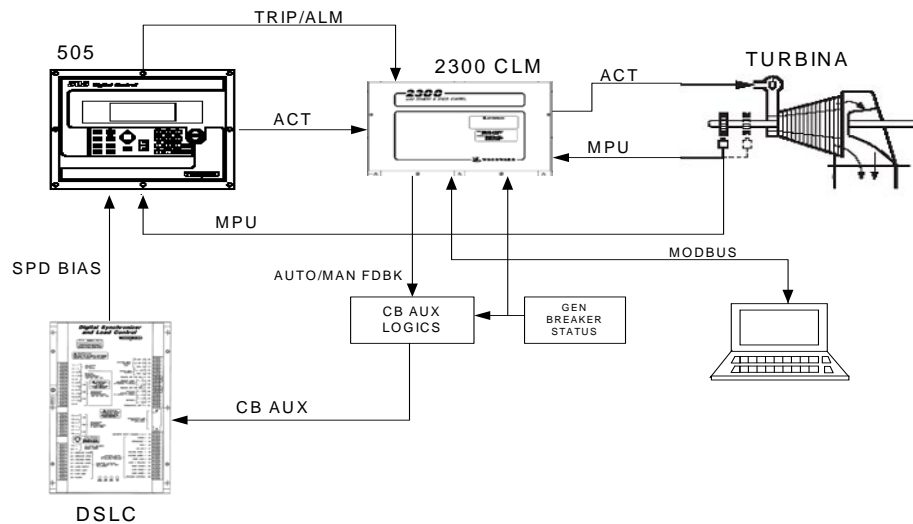
MECHANICAL LOADS



MECHANICAL LOADS AND MODBUS



GENERATORS



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