

# PROTECT YOUR ASSETS

## High-Performance Safety Systems

A total system approach to meet new API670 safety level standards.



### DECADES OF EXPERIENCE INTEGRATED INTO A TOTAL SOLUTION THAT PROTECT YOUR ASSETS

The new API670 standards require a total systems approach to meet the safety levels required in the industry. Woodward is a leader in delivering steam turbine safety systems to meet these new standards. Woodward's SIL-3 enabled safety systems with integrated package of ProTech, QuickTrip, and certified sensors reduce installation costs and allow you to meet the safety requirements for small, medium, or large steam turbine applications.

Woodward turbine safety systems precisely and reliably scan rotor speed and other key turbine operating parameters over 40 times per second. Purpose built with deterministic behavior and fast scan rate safety logic solvers and sensors combined with the speed and reliability of our fully integrated trip block assembly with on-line test capability enable our customers to have a stand-alone SIL-3 safety system you can trust.



#### PROTECH

Woodward ProTech safety logic solvers were designed in collaboration with turbine manufacturers to ensure fast response times required to shut down large, medium and small turbines quickly and safely.



#### QUICKTRIP

Woodward's QuickTrip fault tolerant trip block design makes it ideal for critical steam turbine applications, where turbine up-time and availability are essential. This trip block assembly's 2-out-of-3 voting design provides users with a very high level of system reliability as well as compliance with industry standard API-670.



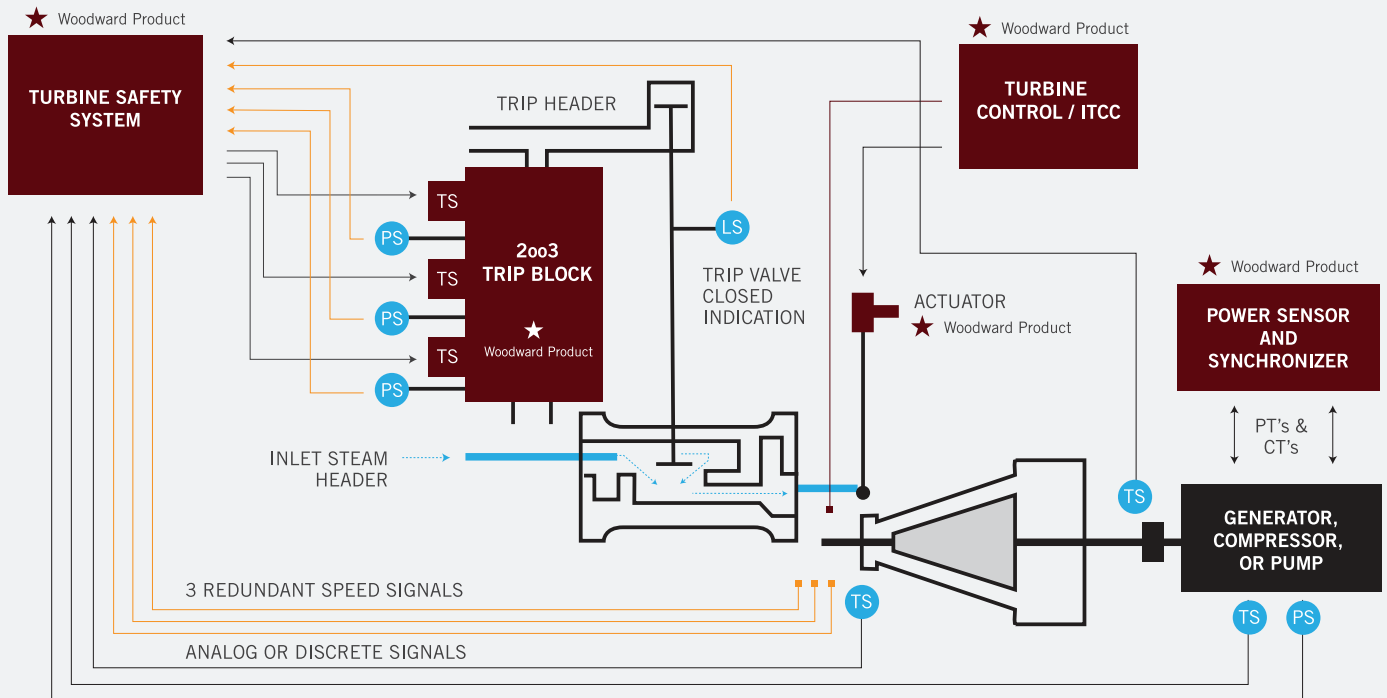
#### SIL SENSORS

Woodward's SIL-3 certified speed sensors provides a complete certified safety system solution when combined with our safety logic solver, trip block and approved trip and throttle valve.



TURBOMACHINERY CONTROL EXPERTS  
Turbines | Compressors | Safety | Actuation





## FIELD PROVEN

With over 40,000 steam turbine controllers installed worldwide, Woodward's control systems have been proven to stand up to harsh steam turbine environments, as well as meet the rigorous control requirements of steam turbine OEMs and users.

Robust product designs are leveraged to ensure long-term operation, no matter what the environment or application.

## OEM QUALIFIED

OEM control system qualification is a stringent process in which details of the control system design, architecture and performance are carefully scrutinized and tested to ensure that OEM turbine performance requirements are met. Qualification includes verification of I/O signal processing accuracy, software algorithms, and control system execution that meet OEM requirements.

## GLOBAL SUPPORT

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