

Casco Systems is an industrial control systems integrator specializing in the automation of power generation and transmission facilities. Casco Systems routinely uses Electro-Sensors equipment for speed monitoring and overspeed detection of hydroelectric turbines and associated generation equipment.

A Spare TR400 Ratemeter Saves the Day

During a storm, Casco Systems received an emergency call from a client. Their hydroelectric plant's speed monitoring system had failed and they were in dire need of assistance. Without accurate speed detection the automated PLC based control system could not operate the generator, resulting in thousands of dollars per hour of lost revenue.

With a spare TR400 in hand we responded and were able to identify and replace a failed speed transmitter. The flexibility of the TR400 to interface with multiple sensor types proved invaluable as we needed to reuse the existing NPN speed pickup. Multiple relay outputs allowed the TR400 to replace the existing transmitter and provide the PLC with status information including creep, overspeed, and 90% speed for excitation. In addition, the 4-20 mA output was used to provide analog speed information to the PLC, CAM Curve control unit, and panel meters. The TR400 analog output was rescaled to a 0-20 mA output to match the existing system, saving the need to recalibrate all of the existing equipment.

The photos below illustrate the existing control system and the temporary installation of the TR400. The TR400 will be permanently installed once time and weather permit.

