HYDROELECTRIC POWER GENERATION
The core of a typical hydroelectric power plant is the turbine. As water runs through the penstock on its way from the reservoir to the outflow, it circulates past the turbine runner. The water flow causes the runner blades to rotate, thereby turning the turbine shaft. The turbine shaft subsequently turns the generator shaft, creating electricity.

Hydro turbines rotate slowly, typically at an operating speed of 75 to 1000 rpm. Turbines are often required to operate at partial load in order to meet fluctuating electricity demands. This part load operation can increase the potential for water pressure pulsations, turbulence and cavitation. Runner components are prone to fatigue and damage because of the errant vibration caused by these fluctuations. In addition to runner components, turbine and generator shafts and bearings are also prone to vibration. Those vibrations can be faults including unbalance, misalignment, bearing fatigue and/or overload and insufficient bearing lubrication.
ICP® ACCELEROMETERS &
4-20 mA TRANSMITTERS

LOW COST ICP® ACCELEROMETERS
MODELS 602D01 & 603C01
- Easy installation in tight spaces
- General purpose, hermetically sealed
- M12 connector version available

LOW COST TRIAXIAL ACCELEROMETER
MODEL 604B31
- General purpose, hermetically sealed accelerometer
- Perfect for permanent mount application

BEARING FAULT DETECTOR
MODEL 682C05
- Provides early warning of bearing and gear faults
- Operates with PLC, DCS, SCADA, alarm and control systems
- Outputs 4-20 mA signals for peak acceleration and overall vibration

PRECISION ICP® ACCELEROMETER
MODEL 622B01
- Full frequency sweep calibration with 5% sensitivity deviation tolerance
- 15 kHz high frequency response ideal for early detection of bearing faults
- Intrinsically safe options available

PRECISION TRIAXIAL ACCELEROMETER
MODEL 639A91
- 13 kHz high frequency response on all three axes
- Extremely small footprint (0.95” x 0.95” excluding the side exit connector)

4-20 MA OUTPUT DISPLACEMENT SENSOR
MODEL 653A01
- Outputs 4-20 mA signal proportional to displacement
- 2 to 40 mil pk-pk measurement range
- 1.5 to 300 Hz frequency range

PRECISION ACCELEROMETERS WITH VELOCITY OUTPUT
MODELS VO622B01 & VO625B01
- 100 mV/ips sensitivity
- Low frequency response ideal for monitoring of slower speed equipment

DUAL OUTPUT VIBRATION & RESISTANCE TEMPERATURE DETECTOR (RTD)
MODELS RTD602D91, RTD602D11
- Ceramic Shear ICP® Accelerometers w/ or w/o integral polyurethane cable
- Sensitivity (±10%): 100 mV/g (10.2 mV/(m/s²))
- Measurement Range: ±50 g (±490 m/s²)