

# CG APPLICATIONS

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<b>Application Note:</b>	<b>May 2010</b>
<b>Market involved :</b>	<b>Conventional energy</b>
<b>Product :</b>	<b>WM40-96</b>
<b>Customer :</b>	<b>Utility</b>
<b>Subject :</b>	<b>Power control on Micro-hydropower plants</b>

## CUSTOMER ISSUE :

A system integrator dealing with an Utility has got the job to remotely monitor 11 micro-hydropower plants located in remote areas.

There is the need to keep all the electrical parameters and other physical variables under control, but also to have historical data available to trace any problem by analysing trends so to understand protection trip causes or fault conditions.

## OUR SOLUTION:

WM40-96, a Modular Smart Power Quality Analyzer which can be equipped with a specific module capable to measure, in addition to all the electrical variables: the stator coil temperature of the alternator and the water flow of the turbine by means of a 20mA signal coming from a flowmeter.

WM40-96 performs the data stamping of all necessary variables, in addition all events such as virtual and real alarms are used to built-up the plant history and are transmitted via Ethernet to the central control system.

## ACHIEVED BENEFITS:

WM40-96 provides one powerful integrated cost-effective solution which is a combination of a metering system and a sort of PLC, being able to manage alarms with combined logic. Practically it means: the basic unit "WM40.AV5.3.H", with the I/O unit "MF.I6.R4" (integrated OR/AND alarm logic), with the unit "MA.T.P" (temperature and flow measurement) and with the unit "MC.ETH.M" (communication port with integrated memory).

The local memory provides a secure data management because in case of communication failure between meter and SCADA, there is no DB loss, therefore information such as graphs can be rebuilt as soon as communication is back again.

