

Level monitoring

When water is present in reservoirs either on or under the surface level monitoring is a key tool used to control and monitor water resources.

Water liquefies from the atmosphere in the form of condensation, rain or snow and will flow into natural reservoirs whose fill level will rise accordingly.

The water in these reservoirs yet requires an accurate level monitoring solution to forecast and control its effects and usage. An accurate level monitoring is required from the time water reaches the soil, first to forecast floods and overflow, and secondly to control the flow and water level in rivers and water level in reservoirs to maintain a stable water supply.

As the water permeates the surface of the Earth it will form underground rivers and reservoirs, termed groundwater resources. These natural reservoirs are exploited as water resources and therefore require level monitoring.

Submersible pressure transmitters are among the most popular level sensors due to their simple deployment and reliability in use in reservoirs, monitoring wells and deep boreholes. They are used for level monitoring in streams, rivers and drainage pipe work systems for flood warning. If combined with a known profile such as a weir, flume or known area open channel they will also allow the calculation of water flow at any given time.

Water level monitoring of natural and man-made reservoirs uses submersible pressure transmitters to provide information about the resources available and to control its use by programming pumps to ensure the adequate amount of water is available in service reservoirs and high-level tanks.

Such transmitters are very easy to use for level monitoring as they will suspend from their cable and simply have to be dropped into the resource. They are usually suspended at the minimum expected level or usable level in the water resource. Any water above this causes a hydrostatic pressure that is measured by the transmitter and that is directly proportional to the water level above it.

In some cases an open ended tube will be located in the resource to guide the hydrostatic level transmitter to the desired location for level monitoring.



This can help the accuracy of the measurements in turbulent water by stabilising, locally, the water around the level monitoring transmitter and preventing it from being affected by the turbulence or even from being drawn into the borehole pump.

Throughout the whole surface phase of 'the water cycle' level monitoring is required to enable, that water resources are managed and utilised sustainably.

Please find further information on this topic on our information platform www.wika.com/hydrostatic-level



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