

Area Velocity Flow Meter: How It Works

Although the term 'area velocity flow meter' may sound rather complicated to some, the basics of how it works are actually not all that complicated. Basically, to begin with, an area velocity flow meter works by continuously measures both the level and velocity of something in order to be able to calculate flow volume in an open channel or pipe, for instance.

There are several different factors that need to be understood in regards to how an area velocity flow meter works, for instance there is the matter of the ultrasonic sensor, which is installed at the very bottom of a pipe or channel, and in order to be able to measure the water level, this ultrasonic sensor works by transmitting ultrasonic pulses which travel through the water and then reflect off the liquid surface.

This ultrasonic sensor is able to precisely measure the exact time that it takes for echoes to be able to return to the sensor, and as well, based on the speed of sound in water, the actual level is then measured with an incredible accuracy. There is then a separate down-looking ultrasonic sensor which can be used for that of highly aerated or more turbulent flow applications, for that matter.

How this device works is that it measures the level by transmitting that of ultrasonic pulses through the air to the liquid surface, again with an incredible accuracy. Furthermore, along with the level sensor itself, a submerged Doppler velocity sensor is used in order to be able to measure the actual water velocity.

Where to Find an Area Velocity Flow Meter

If you are curious in regards to where you can find and consequently purchase an area velocity flow meter, then you can at least rest assured in knowing that there are many options available to you in this regards. One type in particular is that of the AVFM-II area velocity flow meter, which has the following qualities: able to be used for open channels and pipes, no flume or weir required, totalizer and two programmable control relays, and there is also an optional intrinsically safe sensor included.

This device uses that of a submerged ultrasonic sensor in order to be able to continuously measure both that of the velocity and the level in the particular channel. As well, the sensor itself is a completely sealed ultrasonic unit which has no orifices or ports.

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About the Author

For more information on area velocity flow meters visit <http://www.FlowMeterBasics.com/> or <http://FlowMeterBasics.blogspot.com/>