

ADDING PRESSURE SENSORS TO WATER DISTRIBUTION NETWORKS

Background

One of the largest challenges that water distribution networks and water utilities face is “non-revenue water” or the loss of water throughout their network that no one pays for. These losses include real losses from leaks in pipes, joints, and fittings along with apparent losses from metering inaccuracies and unauthorized consumption. This accounts for 30-50% of the water input into the distribution networks.

As the world transitions to become smarter and more connected, water utilities are looking for innovative ways to combat this issue and cut down on non-revenue water.

Solution

Applying pressure sensors at nodes throughout the water distribution network is a practical and cost effective approach to mapping an area’s water network. Once mapped utilities would be able to detect and target areas of unexpected water loss. Hydrants, and commercial and residential water meters are typical nodes to which utilities are looking to incorporate pressure sensors.



Sensata Technologies, a world leader in pressure sensors, has developed the PTE7300 offering low power digital I²C electrical output in a module or a fully hermetic package. The module is intended for customers that would like to have lower costs and more design flexibility while the fully hermetic sensor is rated to IP69K ingress protection featuring a 5-pin M12 connector with gold pins and glass to metal hermetic seal inside the connector. Both packages are drinking water safe compatible.

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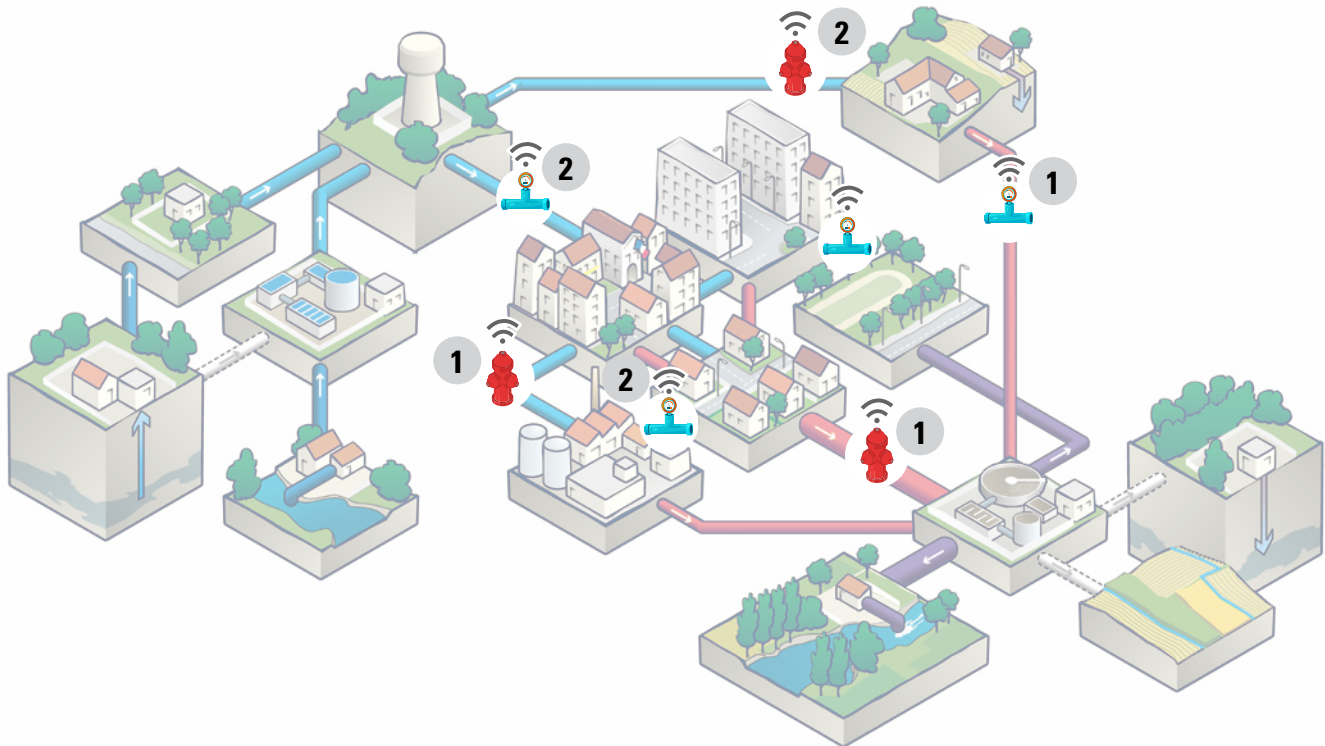


RECOMMENDED PRODUCTS

Reference on Diagram	Product	Features	Function	Brand
1	 PTE7300 Full Sensor	<ul style="list-style-type: none"> Operating pressure range: 0-16 bar to 0-600bar (0-232psi to 0-5800 psi) Low power consumption Plug and play I²C electrical communication Fully hermetic IP69K Glass to metal seal M12 connector with gold pins 	Monitor water distribution network pressure	Sensata Technologies
2	 PTE7300 Module	<ul style="list-style-type: none"> Operating pressure range: 0-16 bar to 0-400 bar (0-232psi to 0-5800 psi) Low power consumption Plug and play I²C electrical communication PCB with pins for easy and flexible integration 	Monitor water distribution network pressure	Sensata Technologies



WATER NETWORK



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