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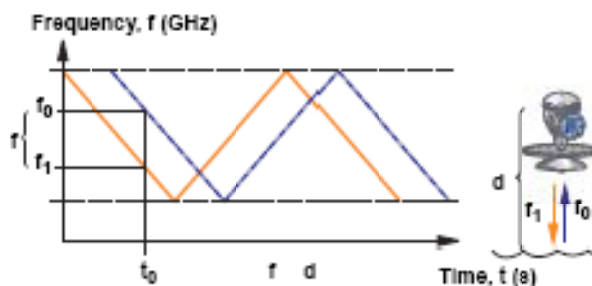
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## ROSEMOUNT 5900S SERIES - A brief description of the equipment:

*Rosemount 5900S Series* is a radar level gauge that provides outstanding reliability with no moving parts and only the antenna/probe inside the tank. Rosemount 5900S, is a non-contact, FMCW based, high-precision gauge for inventory and custody transfer requirements. The radar level gauge measures the distance to the surface of the product. Using tank distances stored locally in the memory of the gauge, it calculates the level of the liquid's surface. The radar gauge/transmitter consists of a transmitter head and an antenna. The transmitter head can be combined with any antenna type in the same gauge series, minimizing spare parts requirements. The enclosure of the transmitter head is air- and watertight to protect against salt spray atmospheres in coastal areas.

The radar gauge transmits microwaves towards the surface of the liquid. The microwave signal has a continuously varying frequency, around 10 GHz for 5900S. When the signal has travelled down to the liquid surface and back to the antenna, it is mixed with the signal that is being transmitted at that moment. The frequency of the transmitted signal has changed slightly during the time it takes for the echo signal to travel down to the surface and back again. When mixing the transmitted and the received signal, the result is a signal with a low frequency, proportional to the distance to the surface. This signal provides a measured value with high accuracy. This is called the FMCW-method (Frequency Modulated Continuous Wave). The FMCW-method is based on a radar sweep with varying frequency.



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The 5900 consists of an aluminum enclosure containing an Electronics Unit (EDB) with communication circuit (PCB CM), microwave unit (RM), signal processing electronics (PCB PM). The external connections are made in a terminal compartment integrated with the housing. A special output is the waveguide passing the microwaves from the microwave unit to the antenna.

Please indicate immediately if you need additional information from us!

Yours Sincerely,

Dajana Prastalo  
Senior E&D Engineer, Approvals

Emerson Process Management  
Rosemount Tank Radar AB  
E&D Department